
**An Integrated and Systemic Law and Economics Approach to
Economic Regulations**

**With an Application to Regulation of Product Markets in Developing
Countries**

By

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To my parents with my deep love, compassion, and gratitude, I dedicate this thesis

To the blessing of tranquility, love, mercy, affection, and intellectual inspiration, my wife, I
also dedicate this thesis

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Chapter

1

Introduction

1. Towards an Integrated and Systemic Law and Economics Approach to Socio-Economic Regulations

1.1. Neoclassical-New Institutional Law and Economics

Post-financial crisis, almost all legal scholars and economists agree that some regulatory intervention in the market economy is justified. They, however, still debate the extent and design of these regulatory interventions; they still debate *how to regulate markets and economic organizations*. Neoclassical-new institutional law and economics approach (for brevity, neoclassical law and economics¹) has dominated positive analysis and normative design of economic regulations in academia and policy arenas. Neoclassical law and economics as a major approach to economic laws represents a form of *applied neoclassical and new institutional economics* as the neoclassical and new institutional economic theories, models and concepts are applied automatically to economic regulatory problems. The rise of the specialized journals in law and economics such as the journal of law and economics, the American law and economics review, the international review of law and economics, the review of law and economics, the European journal of law and economics, the journal of law, economics and organization, journal of legal analysis and the journal of legal studies² have

¹ Chapter 3 will demonstrate that neoclassical-new institutional law and economics, despite being the orthodox approach to legal institutions, is not synonymous with mainstream law and economics. It is not also synonymous with Chicago law and economics. The latter is a neoliberal variant of neoclassical law and economics to which most modern neoclassical and new institutional economists do not subscribe.

² These are the top-tier law and economics journals, some of which are dominated by economists on their editorial board such as the international review of law and economics and the journal of law and economics, and some are dominated by legal economists on their editorial boards such as the journal of legal analysis. Neoclassical law and economics studies are not published only in these journals, they also find home in other interdisciplinary journals such as competition law and economics as well as purely economic journals, whether a general-interests ones such as the American economic review and the European economic review or specialized journals such as the journal of economic behavior and organization.

reinforced the research program of neoclassical law and economics as a straightforward automatic application of neoclassical-new institutional economics to regulatory questions since almost all of these journals either require or strongly prefer formal analysis. The straightjacket of formal analysis gives no space for scholars to stray away from the automatic application of neoclassical economics to analysis and design of economic legal institutions.

1.2. Towards an Integrated Law and Economics Approach to Socio-Economic Regulations

Regulatory reform proposals originated from applying neoclassical law and economics have been subject to intensive critique of behavioral law and economics scholars, heterodox economic communities as well as traditional legal scholars and sociologists. Although non-neoclassical paradigms (such as heterodox economic schools of thought³ as well as legal, sociological and political schools of thought) have advanced important lines of critique to neoclassical law and economics approach to economic regulations, they seem to be stuck into the discourse of critique, and unable to develop an alternative. Some heterodox economists have called for integrating heterodox economic paradigms in order to develop an alternative paradigm to the neoclassical school of thought.⁴ The state of modern economics seems to be far away from developing an alternative paradigm to neoclassical economics, which can then form a basis for an alternative unified heterodox approach to economic regulations.

In addition to establishing a discourse of critique to neoclassical law and economics approach to economic regulations, behavioral law and economics scholars and few legal scholars and economists have attempted to apply behavioral and heterodox economic approaches to regulatory questions.⁵ Behavioral economics is still lacking coherent theoretical and conceptual foundation. Furthermore, heterodox law and economics approaches to economic regulations are, however, under-theorized and under-developed in comparison to

³ A simple way to define heterodox economic approaches is to consider them as the set of approaches that are not neoclassical (non-neoclassical law and economics approaches). This definition overlooks the plurality of modern mainstream economics; hence, it will be refined further in chapter 3 of this thesis.

⁴ Leonhard Dobusch and Jakob Kapeller, 'Heterodox United vs. Mainstream City? Sketching a Framework for Interested Pluralism in Economics' (2012) 46(4) *Journal of Economic Issues* 1040. See also: Julien-François Gerber and Rolf Steppacher (eds), *Towards an Integrated Paradigm in Heterodox Economics: Alternative Approaches to the Current Eco-social Crises* (Palgrave Macmillan 2012) 6.

⁵ See, e.g.: Robin P Malloy and Christopher K Braun, *Law and Economics: New and Critical Perspectives* (P. Lang 1995).

neoclassical law and economics. Comparative capitalism (or as sometimes called varieties of capitalism) literature, for example, is predominantly informal with few supporting empirical evidence. These heterodox approaches are in general at their informal stage. For instance, few studies have applied some insights of complexity economics to legal questions: about 30 articles in legal scholarship written over a period of 15 years starting from the 1990s until 2013.⁶ Complexity economics literature in economics is more extensive but still few studies of this literature are oriented to the application of complexity economics to economic regulations. In sum, none of the heterodox approaches can represent a sufficient approach to economic regulations as they have their own limitations that may even be more fundamental than the limitations of neoclassical law and economics approach.

Due to lack of an alternative economic paradigm to neoclassical economics, legal scholars approaching economic regulatory questions are stuck into two alternatives; they can either join the vogue of automatic application of neoclassical economics to regulatory problems or join the periphery of the critical discourse developed by heterodox economists, sociologists, anthropologists, or critical legal scholars.⁷

Some works on economic regulations are, however, hard to characterize, epistemologically and methodologically under applied neoclassical economics, applied non-neoclassical paradigms, or critical discourses. Most of these works are informal. They tend to approach economic regulatory problems from a neoclassical-new institutional economics perspective. However, these works seem to be open to the insights of non-neoclassical approaches such as old institutional economics, socio-economics, comparative capitalism, political economy,

⁶ For a good account of the literature on complexity theory and law published until 2006, see: <http://jurisdynamics.blogspot.de/2006/07/complexity-theory-in-legal-scholarship.html> (Last Accessed on 6.2.2014). For a more updated overview of works and conferences relating to complexity theory and law, see: <http://computationallegalstudies.com/>. For an introduction to complexity theory and law, see: J. B Ruhl, 'Law's Complexity: A Primer' (2008) 24(4) Georgia State University Law Review; Gregory T Jones, 'Dynamical Jurisprudence: Law as a Complex System' (2008) 24(4) Georgia State University Law Review; and J. B Ruhl, 'Complexity Theory as a Paradigm for the Dynamical Law-and-Society System: A Wake Up Call for Legal Reductionism and the Modern Administrative State' (1996) 45(5) Duke Law Journal.

⁷ Doubtless, some important legal scholars attempted to move beyond critique to construction. For example, Al-Sanhuri, the foremost Egyptian civil law scholar and the drafter of the current Egyptian civil law code enacted in 1984, attempted to incorporate socialist (redistributionary) ideas into the Egyptian civil law, deviating from the legal formalism mainstream at his times. Amr Shalakany, 'Between Identity and Redistribution: Sanhuri, Genealogy and the Will to Islamise' (2001) 8(2) Islamic Law and Society 217–225. However, without an underlying coherent analytical framework, these important constructive projects can be easily subjected to intensive critiques from law and economics perspective for their lack of clear and coherent analytical and theoretical framework and lack of reproducibility. Further, these projects overlook some of the valid concerns raised by the neoclassical-new institutional economic perspective.

complexity economics, Post-Keynesian economics, various schools of legal theory, and social systems theory. These works have therefore been *deviating* from the strict applied microeconomics model of neoclassical law and economics. Acemoglu and Robinson, for instance, argue that current economic policy advice ignores the political implications of regulatory interventions that are preoccupied with correcting market failures.⁸ Political equilibriums may depend on some market failures; removing the latter may change the political equilibrium and result in efficiency losses higher than that resulting from the market failure.⁹ For instance, regulatory interventions that foster labor de-unionization would resolve the market failure of labor unions' monopolistic power; yet, weakening unions would erode the political power of social democratic parties and dominance of business interests in the political game that would install policies involving new forms of market failures that solidify its political power.¹⁰ Similarly, they argue that the first wave of financial deregulation in U.S. might have sound efficiency grounds; however, financial deregulation resulted in a more concentrated and wealthier financial sector, facilitating the rise of its political power that drove an economically inefficient and self-interested second wave of financial deregulations.¹¹ This article of Acemoglu and Robinson exhibits an analysis of the *economic* effects¹² of socio-economic policies and regulations that moved beyond the application of neoclassical-new institutional economics to integrate some insights from the cognitive perspective of political economy.

Consider also the works of Braithwaite and Ayres on responsive regulation, drawing on neoclassical economics, psychological and sociological research, they have developed a theory of regulatory enforcement, at its heart exists their pyramid of regulatory enforcement.¹³ In the area of competition law, Budzinski examines the different economic theories of competition law and argues that an extended economic approach to competition law that builds on this

⁸ Daron Acemoglu and James A Robinson, 'Economics versus Politics: Pitfalls of Policy Advice' (2013) 27(2) *Journal of Economic Perspectives* 173–174.

⁹ *ibid* 175–176.

¹⁰ *ibid* 177–178.

¹¹ *ibid* 182–183.

¹² Acemoglu and Robinson retain the neoclassical normative criterion of efficient allocation of resources for assessing economic policies. The core of their argument is that once we take into account the political changes brought about by these economically efficient policies, we will observe that these political changes will install inefficient policies. Overall, the aggregate welfare loss may be higher than that resulting from the economically inefficient status quo. *ibid* 175–176. By using integrated and systemic perspective, chapter 10 goes beyond economic efficiency as a sole criterion for assessing the economic effects of socio-economic regulations.

¹³ Ian Ayres and John Braithwaite, *Responsive Regulation: Transcending the Deregulation Debate* (University Press 1992) 19–51.

theoretical diversity should be endorsed.¹⁴ Similarly, in the area of corporate governance, He and his co-authors develop an integrative theory of corporate governance by combining the insights of the resource-based theory of the firm and social capital theory in strategic management literature and agency theory in new institutional economics.¹⁵

In the area of financial regulation, Katharina Pistor has also attempted to develop a legal theory of finance by combining some valid insights from financial theory (liquidity volatility¹⁶ and hierarchy of the financial system¹⁷) with some insights from legal theory, economic sociology (particularly the constitutive function of legal institutions¹⁸) and Keynesian economics (particularly the concept of radical uncertainty¹⁹). In addition, through being dismissive of neoclassical economics, Julia Black has also followed an integrative approach to the insights of various social theories to develop an alternative understanding of financial markets. She is worth quoting on this point:

Drawing primarily on institutionalist theories, social network theories, and the sociology of science and technology, including technical systems, I suggest that we can develop a far more enriched, and realistic, conception of markets than the relatively sparse economic model assumes – and furthermore that we need to do so if we are to regulate markets effectively ... The journey to those end points will necessarily have to take us through a number of theoretical fields, and ... I will necessarily have to pick the most promising flowers from those fields and trample heedlessly over the rest. Further, whilst much of the journey will pass through well known ground, it is the synthesis of different elements of these theories that it is hoped will provide the ground for a new and multi-dimensional analysis of markets, facilitate the development of new regulatory strategies, and provide a coherent cognitive and analytical framework in which to analyse

¹⁴ Oliver Budzinski, 'Monoculture versus Diversity in Competition Economics' (2008) 32(2) *Cambridge Journal of Economics* 317–318.

¹⁵ Jinyu He, Joseph T Mahoney and Heli C Wang, 'Firm Capability, Corporate Governance and Competitive Behaviour: A Multi-Theoretic Framework' (2009) 1(4) *International Journal of Strategic Change Management* 293–318. See also the discussion of the insights of the theories of strategic management literature, their implications for corporate governance, and their relation to principal-agent theory of corporate governance in chapter 8 of this thesis and the references cited therein.

¹⁶ Katharina Pistor, 'A Legal Theory of Finance' (2013) 41(2) *Journal of Comparative Economics* 316.

¹⁷ *ibid* 319.

¹⁸ *ibid* 317–318.

¹⁹ *ibid* 316.

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existing strategies which deviate from the neo-classical economic conception.²⁰

This stream of works opens the possibility for developing an alternative approach to economic regulations; this approach addresses economic legal questions by critically complementing the relevant *valid* insights of neoclassical and new institutional economics with the relevant *valid* insights of non-neoclassical paradigms and theories.²¹

This thesis advocates uniting this stream of work under what I call *integrated law and economics approach*. Integrated law and economics (or for brevity, the integrated approach) recognizes that neoclassical law and economics represents the most advanced and richest approach to economic regulations with extensive formal models and econometrical studies. Dismissing neoclassical and new institutional economics as some heterodox economists and non-economists do is to dismiss one of the richest sources of economic knowledge. Instead of dismissing neoclassical law and economics, I am trying to uncover, *as objectively as possible*, the limitations of neoclassical law and economics approach to economic regulations to complement them with valid insights of other approaches. Dismissing neoclassical law and economics approach to economic regulations, at this stage of the development of modern economics, would amount to a fundamental scientific mistake, but accepting the approach despite its limitations and inherent biases would be no less mistake. The essence of integrated law and economics approach is to combine the valid regulatory insights of neoclassical and non-neoclassical approaches to regulatory problems.

Integrated law and economics represents a third way between neoclassical approach on one hand and heterodoxy on the other hand. As the case with almost every *third way* proposals, it would be subject to intensive attack of divergent scholars on both sides.²² Mattei, for example, argues that:

²⁰ Julia Black, 'Seeing, Knowing, and Regulating Financial Markets: Moving the Cognitive Framework from the Economic to the Social' (13 November 2013) 3–5 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2346098> accessed 28 April 2015.

²¹ I am using the term “non-neoclassical paradigms” instead of “heterodox economic paradigms” because integration should not stop at the valid regulatory insights of heterodox economic paradigms, but should also draw on the valid insights of non-economic schools of thought in law, sociology, and political science, given the plurality of schools of thought in these disciplines.

²² Drawing on my personal experience, I have found that integrated law and economics seems to be too heterodox when communicated to neoclassical economists, and too neoclassical when explained to scholars not committed to neoclassical economics (e.g., heterodox economists, sociologists, many political economists, and most legal scholars). I discovered that scholars in each camp have become *ideologically* committed to their schools of thought. Integrated law and economics overcomes these entrenched ideological biases by establishing a fruitful *space of communication* in which critical discourses can flourish and the integration of ideas can take place.

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Law and economics, once transplanted outside of its context of production, displays the high level of ambiguity that allows it to flourish. Conservative scholars admire its intellectual elegance; more progressive and liberal scholars see its potential in subverting the highly formalistic and black letter flavor of local law, and claim that the conservative political bias is something that can be left on the other side of the ocean. Many European scholars are attracted to law and economics, and even when attempting to use it critically, are paving the way to scholarly Americanization and becoming part of the very same world phenomenon of hegemonic imposition that they would like to criticize.²³

Similarly, neoclassical economists may consider integrated law and economics as a Trojan horse, through which the marginalized non-neoclassical ideas can find a space of influence on regulatory analysis and design. Once we overcome ideological biases of both camps, we find out that the advocates of each economic paradigms exaggerate the incommensurability of these paradigms. These paradigms provide distinct cognitive perspective over economic regulations, yet through a process of well-founded critique and argumentation supported by quantitative and qualitative empirical and experimental tests as well as pragmatic tests of usefulness, the invalid insights of these paradigms can be set aside, whereas their valid insights can be integrated.

This thesis goes beyond providing a *unifying methodological characterization* of the above works under integrated law and economics that can overcome their dispersion across separate regulatory areas such as labor law, competition law, financial regulation, and regulatory enforcement studies. Drawing on philosophy of science, economic methodology, and interdisciplinary studies literature, the thesis also advances solid theoretical arguments in support of integrated law and economics approach to economic regulations. Further, it operationalizes the process of application of integrated law and economics to economic laws into well-defined and replicable steps and methods.

In addition to the epistemological value of the theoretical contributions of the thesis regarding integrated law and economics (namely, providing a unifying methodological characterization of the above works deviating from the automatic application of neoclassical economics to economic laws and advancing a methodological justification of integrated law

²³ Ugo Mattei, 'A Theory of Imperial Law: a Study on US Hegemony and the Latin Resistance' (2003) 3(2) *Global Jurist Frontiers* 411–412.

and economics and its operationalization), these theoretical contributions have significant practical implications. Neoclassical law and economics scholars tend to ignore non-neoclassical schools of thought as if they do not exist; their implicit philosophical position is simple and straightforward: neoclassical paradigm is correct and other schools of thought are wrong. In face of this position that almost all law and economics scholar are implicitly committed to, integrated law and economics needs philosophical and methodological *justification* on one hand, and *operationalization* in order to be consistently applied, on the other hand. By establishing both justification and operationalization of integrated law and economics, the onus of justification would shift to neoclassical law and economics scholars. Further, law and economics scholars who tend to be open to the insights of non-neoclassical paradigms can find *an epistemological foundation and reproducible well-defined steps and methods* for undertaking their research. They can thus establish a parallel stream of research that can compete with neoclassical law and economics instead of their scattered works that have no clear methodological or methodical steps in comparison to neoclassical law and economics.

In sum, integrated law and economics has the potential of transforming how law and economics is conducted. Mainstream economists are locked-in their formal requirements of analysis, formalism would hamper their ability to apply integrated law and economics at its initial stage of operationalization that would lack strict formal methods as formal operationalization of the approach would take some time.²⁴ Further, the strong ideological bias of economists, whether neoclassical or heterodox, would make it harder for integrated law and economics to be well-received by them. Legal scholars, on the contrary, are locked in neither formalism nor ideological commitment to specific economic school of thought. They are the best candidates for endorsing the approach of integrated law and economics, particularly this approach enables them to advance genuine and innovative intellectual contributions to economic regulatory studies.

1.3. Towards a Systemic Law and Economics Approach to Economic Regulations

²⁴ Integrated models are the most appropriate formal method of integration. However, these models are difficult to develop. It is however noteworthy that formalism, although important, should not set aside informal analysis as both formal and informal analysis are necessary for developing reliable economic regulations. On the epistemological importance of informal analysis for regulatory design, See: Mohamed Aldegwy and Matthias Thiemann, 'How Economics Got it Wrong: Formalism, Equilibrium Modelling and Pseudo-Optimization in Banking Regulatory Studies' (2015). EAEPE Papers in Evolutionary Political Economy no. 2015-1, 25–30 <http://eaepe.econ.tuwien.ac.at/pepe/papers/PEPE_2015_1.pdf>.

In addition to the integration component of the proposed law and economics approach, I argued in the theoretical part of this thesis that a systemic perspective should complement the micro- and macro-perspectives of mainstream neoclassical law and economics. Neoclassical law and economics approach to economic regulations has been predominantly micro-oriented. It applies neoclassical microeconomics to the analysis and design of legal institutions. Post-financial crisis, Richard Posner has argued that the dominance of micro-perspective in law and economics caused legal scholars to overlook the macroeconomic effects of financial regulation.²⁵ Some legal scholars and economists called for a law and macroeconomics approach to economic regulations prior to the crisis.²⁶ The latter involves the application of macroeconomic theories such as business cycle and economic growth theories to economic regulations. Law and macroeconomics has not been well received by law and economics scholarship, particularly as undertaken by legal scholars, which remained predominantly micro-oriented, however.

Microeconomic and macroeconomic analysis of economic regulations overlook some of the significant insights of institutional schools of thoughts such as comparative capitalism and complexity economics, particularly their *systemic* perspective. Comparative capitalism has placed institutional interdependencies, particularly institutional complementarities at the core of its analytical framework. In contrast, law and economics *reduces legal institutions into external constraints* of individuals' behavior. This reductionist understanding of capitalism *downplays interdependence and hierarchy of legal institutions*. It also does not take into account *institutional change and path dependence* when addressing regulatory questions. It goes even further by abstracting from the sociological, political, and environmental aspects of regulatory issues. Few economists and legal scholars have taken the systemic perspective over legal institutions seriously. For example, in a series of important scholarly works, Reinhard Schmidt and his collaborators approached the analysis of the legal and economic institutions

²⁵ Richard A Posner, 'On the Receipt of the Ronald H. Coase Medal: Uncertainty, the Economic Crisis, and the Future of Law and Economics' (2012) 14(1) *American Law and Economics Review* 268.

²⁶ See, e.g. in economic literature: Brian Goff, *Regulation and Macroeconomic Performance* (Springer 1996). In the legal literature, Mark Kleman argued that social welfare effects of macroeconomic phenomena such as economic growth, unemployment and inflation are significant in comparison to the trivial effects of static allocation efficiency that has been the focus of law and microeconomics. See: Mark Kelman, 'Could Lawyers Stop Recessions? Speculations on Law and Macroeconomics' (1993) 45(5) *Stanford Law Review* 1219–1225.

of German financial system and corporate governance systemically.²⁷ Similar to comparative capitalism literature, these works focus on the analysis of consistency and complementarities of the *institutions* of these systems, while explaining *institutional change* and predicting its future trajectories. These scholarly works do not attempt to explore how to use the systemic approach to *design* the institutional system/network for corporate governance or the financial system, however. Using the systemic approach for tackling institutional/regulatory design questions is the major space these stimulating studies have left open, which this thesis attempts to fill.

Not only systemic thinking has been absent at *the institutional level*, it has also been absent at *the level of socio-economic agents' interaction*. Pre-crisis prudential banking regulation, for example, has focused on regulating financial institutions, but overlooked the regulation of the *interactions* among these entities across the market.²⁸ Some of these interactions were aggressively competitive,²⁹ some were intentionally or accidentally coordinated,³⁰ and both forms of interactions had destructive effects over the financial stability.

Finally, systemic thinking has been ignored in understanding the diverse facets of the regulatory issues. Here, the emphasis is not on integrating the insights of different schools of thought or theories, but on integrating the insights of relevant *economic sub-fields* that share the cognitive perspective of the same economic school of thought. Post-financial crisis, Claudio Borio, a prominent financial economist, advocated a *holistic approach* to economics.³¹ Borio shows that monetary policy and prudential regulation of banks should be coordinated as they are linked through the risk taking channel of monetary policy. He states that:

The exploration of the risk-taking channel, in both its micro and macro aspects, calls for a blending of different intellectual strands. It draws from finance its close attention to the

²⁷ See, e.g.: Reinhard H Schmidt, 'Corporate Governance in Germany: An Economic Perspective' in Jan P Krahen and Reinhard H Schmidt (eds), *The German Financial System* (Oxford University Press 2004). Andreas Hackethal, Reinhard H Schmidt and Marcel Tyrell, 'The Transformation of the German Financial System' (2006) 116(4) *Revue d'économie politique*. Reinhard H Schmidt and Marcel Tyrell, 'What Constitutes a Financial System in General and the German Financial System in Particular?' in Jan P Krahen and Reinhard H Schmidt (eds), *The German Financial System* (Oxford University Press 2004). See also: Ralph P Heinrich, 'A Model of Corporate Governance as a System' (1999) <<http://www.econstor.eu/bitstream/10419/17791/1/271663987.pdf>> accessed 1 July 2015.

²⁸ Charles K Whitehead, 'Reframing Financial Regulation' (2010) 90(1) *Boston University Law Review* 36–37.

²⁹ *ibid* 26.

³⁰ Charles K Whitehead, 'Destructive Coordination' (2011) 96(2) *Cornell Law Review* 346–352.

³¹ Claudio Borio and Haibin Zhu, 'Capital Regulation, Risk-taking and Monetary Policy: A Missing Link in the Transmission Mechanism?' (2012) 8 *Journal of Financial Stability* 248.

measurement and the pricing of risk. It draws on the foundations of monetary economics to differentiate between nominal and real phenomena. It draws on the economics of imperfect information to better understand the nature of contracts and financing constraints as well as potential coordination failures. It could usefully draw on behavioural economics to understand more fully limitations in risk perceptions and incentives. And it draws on macroeconomics to embed these factors into a general equilibrium framework—the only one in which the dynamic, tight and highly non-linear link between the financial system and the broader economy can be properly assessed. Incorporating financial distress in a meaningful way in our macroeconomic tools should be a high priority. All this is a tall order. But even if a holistic approach is bound to remain beyond reach, it should not prevent us from trying to chip away at the questions, through more targeted analytical and empirical exercises.³²

The financial crisis has taught some, unfortunately still few, economists an important lesson. The fragmentation of economics and finance among specialist clubs of microeconomics of banking, macroeconomics of banking, monetary economics, asset pricing, corporate finance and risk management, where each club of scholars addresses their own regulatory and policy questions in isolation of each other, has resulted in *unstable and inefficient regulatory governance of the financial system*. Corporate governance has also been fragmented among the corporate finance and organizational/managerial economics fields of research. A systemic understanding of corporate governance requires the scholar to bring these sub-areas together to inform his regulatory question. Approaching *systemically* the regulation of the financial system or corporate governance is a significant challenge, however. It is even much more challenging for legal scholars and economists to go beyond the regulatory governance of the financial sub-system of capitalism to address systemically the regulatory governance of the capitalist system.

In sum, systemic perspective requires taking a holistic perspective over the institutions and their interdependence, as well as the actors and their interactions. Further, it draws on the different sub-fields of the same economic school of thought to develop a *holistic/systemic*³³ understanding of the regulatory issues in hand.

³² *ibid.*

³³ As chapter 5 demonstrates, methodological holism and systemic thinking are distinct methodological positions in social sciences. To avoid confusing the systemic perspective with holism, I will stick to the terminology “systemic thinking” for the rest of the thesis.

The thesis establishes a solid line of argumentation in support of a systemic approach to economic regulations that critically complements the micro-perspective of neoclassical law and economics. This systemic perspective, if endorsed as I conceptualize it, would give rise to what I call *systemic law and economics (or for brevity, the systemic approach/perspective)*. Despite the difficulty of applying a full-fledged systemic approach to legal institutions of capitalism, I show that the propositions and implications of the systemic perspective outlined in chapter 6 can provide significant regulatory insights. Indeed, institutional complementarity has been the primary analytical concept for systemic analysis of legal institutions in the comparative capitalism literature. One of the most important contributions of this thesis is to develop *further analytical and design concepts* for systemic analysis and design of legal institutions in chapter 6. Legal scholars in *any* area of legal scholarship can use this systemic analytical and design toolkit for systemic analysis and design of legal institutions in their respective fields of law. The applied part (particularly chapters 10, 11, and 12) applies these systemic analytical and design concepts to specific regulatory questions to demonstrate how this systemic analytical and design toolkit can be used in practice.

1.4. Integrated and Systemic Law and Economics

Neoclassical Law and Microeconomics approach to economic regulations applies neoclassical microeconomic to legal institutions. It has therefore two dimensions: the cognitive perspective of the neoclassical paradigm and the micro-perspective of the latter instead of its macroeconomic theory. Instead of the dominance of the neoclassical perspective, I argue for integrated law and economics, and in place of the micro-dimension of neoclassical law and economics, I argue for complementing this perspective with a systemic perspective. By consistently bringing together the dimension of integration with that of systemic perspective in chapter 7, I advocate what I call *Integrated and Systemic Law and Economics Approach* to economic regulations to complement critically neoclassical law and economics.

The advocated approach would result in significant theoretical and practical implications regarding economic regulations. Unfortunately, I could not locate scholarly works that exhibit methodologically a sophisticated implicit application of the approach of integrated and systemic law and economics. Still, few scholarly works exhibit a succinct but illustrative application of integrated and systemic law and economics approach such as Reinhard

Schmidt's "Corporate Governance in Germany: An Economic Approach".³⁴ This scholarly work represents a rare example of what I call *integrated and systemic law and economics approach* as Schmidt was able to combine the valid insights of new institutional economics (such as firm specific human capital investment by labor³⁵) with the valid insights of comparative capitalism (such as the analytical concepts of institutional complementarity and consistency³⁶). Further, he developed an informal systemic analysis of German corporate governance by using the analytical concept of institutional consistency and the evaluative criterion of productive relevance.³⁷

The few scholarly works mentioned above which exhibit implicitly either the integrative or the systemic perspective or both of them represent a clear deviation from the automatic application model of neoclassical economics to regulatory questions. Without developing a clear methodological characterization of these works, grounding this characterization on solid epistemological foundations and operationalizing it into well-defined methodological steps, these works would be perceived as an *anomaly* that are hard to be replicated or passed through to future scholars of law and economics. If some of these few works are well-received, they are seen as a stroke of genius, rather than a coherent and consistent critical complement to neoclassical law and economics. To the best of my knowledge, this thesis is the first serious attempt to move beyond the automatic application model of neoclassical law and microeconomics and the critical discourse of non-neoclassical approaches to develop a critical complement to neoclassical law and economics that would result in alternative well-founded replicable answers to regulatory questions. Hopefully, future generations of law and economics scholars, who are not satisfied with both the applied neoclassical microeconomic model of neoclassical law and economics and the critical but not very constructive discourse of non-neoclassical approaches, could undertake their research following the well-defined methodical process implementing the cognitive perspective of integrated and systemic law and economics. The proposed approach is particularly important for developing countries as both neoclassical and non-neoclassical paradigms have fallen short from guiding successful developmental processes in most developing countries, while the successful developmental experiences of Post-World War II Germany, post-war Japan, and recently China that developing countries try to imitate diverge from any straightforward neoclassical blueprint.

³⁴ Schmidt (n 27).

³⁵ *ibid* 390–392. *ibid* 398

³⁶ *ibid* 389–390.

³⁷ *ibid* 412–416.

Theoretically speaking, however, integrated and systemic law and economics poses some epistemological and methodical challenges such as the way we *combine consistently* the integration and the systemic dimensions of the approach and the way we develop well-defined methodological steps for the operationalization of the approach, which ensure a sufficient degree of reproducibility. Fortunately, interdisciplinary studies scholars have developed an interesting, though still exploratory, literature ignored by both economists and legal scholars, despite the clear interdisciplinary nature of economic regulations. Based on this literature, this thesis was able to address, at least partially, these theoretical and methodical challenges.

2. Integrated and Systemic Law and Economics in Action: Two Applications of the Proposed Approach

The above-mentioned few works that I characterize methodologically as instances of integrated law and economics, systemic law and economics or integrated and systemic law and economics substantiate a “*pudding is in the eating argument*” in support of integrated and systemic law and economics. These works show that the integrated approach as well as the systemic approach can be applied separately.³⁸ Further, some of them show the possibility to combine the integrative and systemic dimensions, giving rise to the two-dimensional approach of integrated and systemic law and economics. The authors of these works, however, may object to my methodological characterization of their works. Further, most of these works do not explicitly follow the methodical steps of *informal or formal*³⁹ application of integrated and systemic law and economics, which are developed in chapter 7, although they may follow some of these steps implicitly. These works are also too few to represent a strong “pudding is in the eating argument” supporting integrated and systemic law and economics approach, particularly most of them exhibit an implicit application of only one of the two dimensions of the approach. Finally, all of these works represent a highly simplified application of integrated and/or systemic law and economics; the relevant schools of thought whose insights are integrated are

³⁸ Chapter 7 examines the relation between the integrated and systemic dimensions of the proposed approach and the possibility of standalone application of each dimension.

³⁹ The methodical steps developed in chapter 7 are necessary for both informal and formal application of integrated and systemic law and economics.. As to formal analysis, these methodical steps are, however, insufficient for formal application of the proposed approach, as this analysis would require developing *formal* analytical frameworks. This challenging task is left for future research projects.

normally limited to two, and the number of institutions and forms of their interdependencies, which are analyzed systemically, are restrictively limited as well.

Therefore, in order to convince the reader of integrated and systemic law and economics approach, the applied part of this thesis (Part III) provides *two* interdependent applications of the proposed approach.

The regulatory question addressed in the applied part could be stated as follows: which model of corporate governance should developing countries such as Egypt adopt? Should they adopt a stakeholder or a shareholder value model of corporate governance? The first contribution of integrated and systemic law and economics, as the applied part of this thesis will show, is that the approach systemically reformulates this research question to become “which models of industrial policy, competition law, and corporate governance should developing countries adopt? Indeed, in case our initial regulatory question concerned the choice of the model of industrial policy, or competition law that developing countries should adopt, integrated and systemic law and economics would have resulted in the same systemic reformulation of the research question. This systemically reformulated research question could be as follows: which *model of regulatory governance of the supply side of product markets* should developing countries adopt? Interestingly, the latter regulatory question is rarely asked or addressed in mainstream law and economics research. This is an important contribution of integrated and systemic law and economics approach; it has created a *new space of new regulatory questions*. That is why I have called for a new area of legal research that can be called “economic regulation theory” that would capture this new space of regulatory research questions. As chapter 4 illustrates, this proposed area of regulatory investigation is one of the fundamental implications of the systemic perspective of the integrated and systemic law and economics approach to economic regulations.

In order to address the question of design of regulatory governance of the supply side of products markets in developing countries,⁴⁰ we need to develop *normative criteria* for informing this regulatory design. Instead of neoclassical welfare economics as the normative basis for design of economic regulations in neoclassical law and economics, I am using integrated and systemic law and economics to develop an integrated and systemic normative

⁴⁰ For brevity, I will use the term “regulatory governance of product markets” instead of the term “regulatory governance of the supply side of the product markets”. The former includes also the governance of the demand side of the product market. As I am excluding the analysis of the governance of the demand side of the product markets, and its interdependence with the governance of the supply side in this thesis, I use the “regulatory governance of products markets” to refer to the governance of the supply side of the products markets, unless explicitly stated otherwise.

framework for informing the regulatory design of product markets institutions. This is the second application of the proposed approach. This application results in an integrated and systemic normative theory for the regulation of product markets that avoid the critiques levelled against the neoclassical normative theory of economic regulations. Indeed, the standalone application in chapters 9 and 10 has been very challenging to develop. The explanation of the neoclassical normative theory of economic regulations, uncovering the pitfalls of this neoclassical theory, and developing an *integrated and systemic* alternative are among the most difficult tasks undertaken in this thesis and among its most important contributions.

Given the integrated and systemic normative framework for the economic regulations of product markets, chapters 11 and 12 develop an integrated and systemic answer to the second application (i.e., the choice of the regulatory governance for the supply side of product markets in developing economies). By doing so, these chapters also develop an integrated and systemic answer to the choice of the corporate governance model for these countries.

In both applications of the integrated and systemic approach, I have followed closely the steps operationalizing this approach developed in chapter 7. These applications demonstrate clearly the critical teeth of the integrated and systemic approach; more importantly, it shows its constructiveness. Chapter 9 uses the integrated and systemic approach to develop a critique of the neoclassical-new institutional normative theory of economic regulations, then, chapter 10 uses the proposed approach to develop an alternative integrated and systemic normative theory of economic regulations. Similarly, chapter 8 uses the integrated and systemic approach to advance a critique of the neoclassical position on the choice of corporate governance model for developing economies. Then, the rest of chapter 8 starting from the section on systemic reformulation of the primary question, chapter 11, and chapter 12 develop a sophisticated line of argument that concludes with *a proposed regulatory governance* for the supply side of product markets in developing countries. This proposed regulatory governance is grounded in a sophisticated, but compelling integrated and systemic line of argumentation.

Four concluding remarks in relation to the application of the proposed approach to the above regulatory questions are in order. First, the integrated and systemic approach when applied to the above regulatory questions has resulted in conclusions different from that mainstream law and economics scholars reach by using neoclassical law and economics. As the reader will have the opportunity to go through the applied part of the thesis, which covers the four chapters (8-12) where these conclusions are discussed, I will not go through these conclusions here.

Second, apart from the distinct answers that the integrated and systemic approach provides to our regulatory questions, the application of the proposed approach has resulted in three important contributions to legal and economic scholarship on socio-economic regulations. By using the proposed approach, chapter 9 challenges the normative theory of neoclassical economics underlying socio-economic regulations; it suggests that we need to think of the normative basis of socio-economic policies and regulations as a *system of values that need to be chosen and legitimated democratically*. Once we think of the normative basis of socio-economic institutions as a system of values, a whole range of challenging questions arise. One of the most important and challenging of these questions is what I call *the assignment problem*. This refers to the problem of the assignment of these values to institutional and policy spheres (socio-economic policies and regulations), given the causal and constitutive relations among these values, the normative/value capacities of institutional spheres, and the wide range of possible designs of these policy and institutional spheres that would transform their normative capacities. I cannot emphasize sufficiently the importance of the assignment question; it suffices to say that I consider this question and my attempt to answer it to be the most significant contribution of the integrated and systemic approach made in this thesis. In addition, by using the proposed approach, this thesis suggests the formal institutionalization of industrial policy so that industrial policy moves from being a discretionary policy sphere to become a legal/formal institutional sphere; similar to corporate and competition laws, an elaborate legal system for industrial policy should be developed. Finally, the thesis briefly proposes a system of corporate governance that is functionally equivalent to, but formally different from, the German model of corporate governance, which developing countries, subject to *contextual* modifications, may adopt.

Third, despite the fact that the insights of comparative capitalism and the theories of development economics seem to dominate the analysis of the applied part, the insights of other economic paradigms have been integrated as well such as neoclassical and new institutional economics, the capabilities approach of Amartya Sen, socio-economics, Schumpeterian economics, and Ordoliberalism. Although the insights of the latter paradigms do not appear strongly as those of comparative capitalism and development economics, they were essential to the conclusions of the applied studies. The applied part should not therefore be interpreted as an exercise of making *development economics or comparative capitalism* relevant to law and economics research that has been dominated by the cognitive perspective of neoclassical and new institutional microeconomics. Indeed, the main lesson of integrated law and economics is that scholars would integrate freely the insights of the schools of thought across

various disciplines that they can show, as objectively as possible, to be both *relevant to question in hand and valid*. As a result, for a given regulatory question, the insights of neoclassical and new institutional economics may dominate our conclusions, if the insights of non-neoclassical paradigms are either weakly relevant or invalid, whereas for other regulatory questions, non-neoclassical paradigms may be more relevant and valid. Integrated law and economics seeks to overcome the ideological biases by creating a space for communication and cross-criticism to reach a better regulatory analysis and design. The integrated approach is based on a commitment to seeking the truth, defined pragmatically as chapter 3 demonstrates, and it has no ideological commitment to or against any school of thought in economics or in any other relevant discipline. Rather, the integrated approach treats all schools of thought as *potentially equal* sources of knowledge that are put thereafter under a strict process of internal, external and cross-critique.

Fourth, not only the applied part should not be read as an exercise of making specific non-neoclassical paradigms relevant to analysis and design of legal institutions, it should not also be interpreted as delimiting the scope of application of the proposed approach to *big* questions. The proposed approach can be applied to *small* as well as *big* questions.⁴¹ The question of

⁴¹ Scott Gordon argues that the toolkit of neoclassical economists, particularly methodological individualism and marginal analysis are appropriate for addressing small questions, but insufficient for addressing big questions such as understanding the laws, if any, that govern the socio-economic system. In principle, he believes that big problems are unanswerable. Scott Gordon, 'The Political Economy of Big Questions and Small Ones' (1975) 1(1) Canadian Public Policy/Analyse de Politiques 105. Similarly, Acemoglu and Robinson argue that economists should not seek to develop general laws of capitalism to explain inequality. However, they do not think that big and complex questions such as inequality are unanswerable. Rather, they seem to take the position that capitalist systems are *ontologically evolutionary and institutionally constituted systems*. Technology evolves over time and thus affects both economic performance and inequality. This is one of the major evolutionary aspect of the capitalist system. *Political institutions* affect *economic institutions* and both of them influence technological evolution and factor prices (and thus the dynamics and evolution of the capitalism system), and thus contributing to economic performance and inequality. See: Daron Acemoglu and James A Robinson, 'The Rise and Decline of General Laws of Capitalism' (2015) 25(1) Journal of Economic Perspectives 20–21. This implies that national capitalist systems with their distinct political and economic institutions and evolutionary path of technological adoption and innovation would exhibit divergent economic performance and inequality levels. No general laws can capture the behaviour and evolution of these national specific capitalist systems. The authors provide several examples to make their point. It suffices here to mention one. Marx predicted in one of his laws of capitalism that industries will tend toward concentration. His law fitted well the trend of industrial concentration in the US. However, due to the increase in industrial concentration, anti-trust regulations were introduced, which succeeded in reversing industrial concentration, rendering Marx's law wrong. *ibid* 6–7. I will not delve further into the question of the answerability of big questions as almost all law and economics scholars would agree that regulatory questions such as the choice of corporate governance model, choice of competition law model or choice of industrial policy model are answerable, given the extensive literature extended for addressing these questions. As far as I know, no one has challenged the answerability of these questions. What systemic analysis shows, however, is that these questions that

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choice of corporate governance model seems to be a bigger question in comparison to the small questions of board structure or hostile takeover defenses, for example. Hence, the reader may be tempted to conclude that the proposed approach fits better the analysis of big questions, whereas neoclassical law and economics is sufficient for addressing small questions. This is incorrect. Regardless of whether the regulatory question is big or small, neoclassical law and economics is insufficient, and it needs to be critically complemented by the insights of the proposed approach. Given the potential mistaken understanding of the application scope of the proposed approach, I have been hesitant in choosing a big question for applying the proposed approach. Big questions illustrate the strengths of the proposed approach at its best and show how it can fundamentally transform our thought patterns, but convey a false image of the inapplicability of the approach to small questions. Small questions cannot stress the significant implications of the approach, but they demonstrate its wide scope of application. In this thesis, I have opted for a somehow big question as a subject for application, but I would encourage law and economics scholars to apply the proposed approach to smaller questions. As chapter 6 argues, the basic trick for doing so is to take the analysis of the environment within which the small regulatory problem is embedded seriously.

Finally, this thesis is somehow lengthy; however, it could not accommodate an in-depth account of both the theoretical and applied analyses. I had to address briefly or leave open many sophisticated and important research questions in both parts of the thesis. . Despite this shortcoming, this thesis has fulfilled its task in introducing a balanced understanding of the theoretical foundations of the integrated and systemic approach to legal institutions of capitalism, which is then supported by indicative, though tentative, applications, allowing for more thorough theoretical investigations and applications of the proposed approach. Indeed, the apparent shortcoming of leaving open many research questions that emerged in the course of theoretical and applied analyses reflects the most important contribution of this thesis: it has given rise to a new stream of important and sophisticated questions and intellectual challenges in relation to analysis and design of economic laws. These research questions were overlooked, marginalized, or non-existent in legal scholarship on economic regulations.

scholars believe to be answerable are dependent on addressing larger questions such as the interdependence among these models. By trying to address the latter, we would be caught in a bigger question until we may reach big questions that may be *unanswerable*. By addressing small questions, researchers are making implicit assumptions regarding these larger complex questions. Systemic thinking forces us to make *explicit* these implicit assumptions. As a result, we end up with the unpleasant but valid conclusion that the excessively difficult big questions that we may have little to say about need to be investigated in order to address small questions.

3. Scope of the Thesis

Neoclassical law and economics has been applied to both economic regulations such as competition and corporate law and non-market regulations such as criminal and family laws. Neoclassical law and economics can be either positive or normative. Positive law and economics analyses the economic effects of legal institutions.⁴² Normative law and economics assumes the task of regulatory design. Based on the normative position of law and economics scholars, they may have a mono-focus on economic efficiency or balance the efficiency concerns with paying attention also to distributional concerns in design of legal institutions.⁴³

Richard Posner advocated the extension of the application of neoclassical microeconomics to analysis and design of non-economic laws, and coined the term *new law and economics* to refer to this extended application of neoclassical economics.⁴⁴ The works of both Gary Becker and Richard Posner applying economic analysis to criminal law are exemplary of the new law and economics in Posnerian sense.⁴⁵ The Posnerian new law and economics has received thorough critiques of legal scholars.⁴⁶ The *commodification* of the values that people cherish in non-market spheres (such as bodily integrity) resulting from the application of market rationality to non-market spheres would degrade these values.⁴⁷ These values are constitutive of the personhood; they are personal attributes and not saleable goods.⁴⁸ Once these values are commodified, the texture of society changes fundamentally; all social spheres such as family, science, health care, education and politics become *markets*, the values in these spheres become *commodities*, social relations and interactions in these spheres become *transactions* and

⁴² Francesco Parisi, 'Positive, Normative and Functional Schools in Law and Economics' (2004) 18(3) *European Journal of Law and Economics* 264–265.

⁴³ *ibid.* The author mentions that the normative law and economics school of Yale has given weight to distributional effects of legal institutions.

⁴⁴ Richard A Posner, 'Economic Approach to Law' (1975) 53 *Tax Law Review* 759.

⁴⁵ See, e.g.: Gary Becker, 'Crime and Punishment: An Economic Approach' (1968) 76(2) *Journal of Political Economy*. Richard A Posner, 'An Economic Theory of the Criminal Law' (1985) 85(6) *Columbia Law Review*.

⁴⁶ Anita Bernstein argues that the rationality assumption has been positively discredited whereas economic efficiency has been normatively rejected. New law and economics has reacted strategically by incorporating the behavioral assumptions of behavioral economics and by widening the scope of economic welfare to include fairness. Such strategic moves underscore the fact that new Posnerian law and economics as based on rationality assumption and economic efficiency has been deconstructed. Anita Bernstein, 'Whatever Happened to Law and Economics?' (2005) 64 *Maryland Law Review* 106–112.

⁴⁷ Margaret J Radin, 'Market-Inalienability' (1987) 100(8) *Harvard Law Review* 1879–1881.

⁴⁸ *ibid.*

individuals become nothing but self-interested *traders*.⁴⁹ This transformation of how we conceive society once we extend law and economics beyond traditional market spheres implicate the acceptance of an inferior concept of human flourishing.⁵⁰ Such commodification critique is referred to as *boundless market critique* indicating the imperialism of markets to non-market spheres.⁵¹

The commodification critique resonates with Walzer's theory of distributive justice according to which there is a particularized context-specific concept of distributive justice in each sphere of the society.⁵² For example, unlike the market sphere that can be governed by the distributive principle of autonomous exchange, in some non-market spheres such as social welfare sphere, the solidarity among individuals should be constitutive of the notion of distributive justice and thus each individual should receive a governmental support according to their *needs*.⁵³ Such pluralist and particularized notions of distributive justice are consistent with the plurality of values underpinning the capabilities approach of Amartya Sen as he conceptualizes well-being and development as the expansion of a plurality of political, social, and economic capabilities of the individual.⁵⁴ Similar to the normative dimension of neoclassical law and economics, the theoretical dimension of the neoclassical school of thought,⁵⁵ particularly rational choice theory, has attracted harsh critiques from legal scholars.⁵⁶

The validity of the normative and positive critiques of neoclassical law and economics depends on whether this approach is applied to economic or non-economic legal institutions. Most of the above critiques of the neoclassical approach are valid in so far they illuminate the shortcomings of the approach in its application to non-economic legal institutions. Their validity would be contested once we delimit the scope of the neoclassical approach to economic regulations. . For example, individuals may not act rationally in non-competitive non-market

⁴⁹ *ibid* 1884–1885.

⁵⁰ *ibid*.

⁵¹ Viviana A Zalizer, 'Beyond the Polemics on the Market: Establishing a Theoretical and Empirical Agenda' (1988) 3, *Sociological Forum* (1988) 3 *Sociological Forum* 621.

⁵² Michael Walzer, *Spheres of Justice: A Defence of Pluralism and Equality* (Basic Books 1983) 10.

⁵³ For an overview of the distributive principles suggested by Walzer, which ensure distributive justice only if they are used in their respective sphere of the society, see: *ibid* 21–26.

⁵⁴ Amartya Sen, *Development as Freedom* (Oxford University Press 1999) 5–6. For his conceptualization of capabilities and functionings, see: *ibid* 75. Similar to Walzer, Sen defends pluralism of values, see: *ibid* 77.

⁵⁵ Chapter 2 outlines the various dimensions of economic schools of thought, which include, inter alia, ontological, methodological, theoretical, and normative dimensions.

⁵⁶ See. e.g.: Martha C Nussbaum, 'Flawed Foundations: The Philosophical Critique of (a Particular Type of) Economics' (1997) 64(4) *The University of Chicago Law Review* 1209–1210. See also: Bernstein (n 46), 206–207.

spheres but do so under the competitive pressures of the market sphere.⁵⁷ Similarly, although the commodification critique can provide some insights for economic regulations, particularly labor regulation, and corporate governance, this critique primarily targets the normative dimension of neoclassical law and economics as an approach to non-economic legal institutions.

Subsequently, any meaningful discussion of neoclassical law and economics approach should take into account whether it is invoked as an approach to economic or non-economic regulations. This thesis is concerned only with the question of analysis and design of economic regulations, and thus its scope is limited to neoclassical law and economics as an approach to these regulations. I would claim however that the *generic* form of the proposed approach discussed below can be applied to the analysis and design of non-economic laws. This thesis, however, does not attempt to establish this claim as it is well-beyond its scope. As the scope of this thesis is limited to analysis and design of economic regulations, I need to define what I mean by economic regulations, their relations to formal and informal institutions of capitalism, governance theory, and regulation theory. The following section addresses this issue.

In addition to the endeavors of extending the application scope of neoclassical law and economics to non-economic laws, it has been argued that neoclassical law and economics should also guide *adjudication*.⁵⁸ Not only legislators and regulators should follow neoclassical law and economics in their design of economic legislations and regulations, courts must also reinterpret (and thus implicitly remake) the law to ensure its economic efficiency, as mandated by neoclassical law and economics.⁵⁹ The law and economics theory of adjudication is highly problematic. Judges do not entertain the required economic expertise for sophisticated application of law and economics. In addition, law and economics theory of adjudication requires the judges to exceed their institutional competence of applying the law to function as implicit regulators,⁶⁰ which undermines the constitutional principle of separation of powers. By taking a Luhmannian social systems perspective, I endorse the position that both regulation

⁵⁷ Elinor Ostrom, 'Background on the Institutional Analysis and Development Framework' (2011) 39(1) *The Policy Studies Journal* 13–14. Ostrom argues that in highly competitive settings where property rights are well-defined, homo-economicus assumption is justified as the evolutionary process that takes place in the competitive setting will weed out agents that do not behave as a homo-economicus.

⁵⁸ For a defense of Kaldor-Hicks efficiency as a normative basis for adjudication, see: Richard A Posner, 'The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication' (1980) 8 *Hofstra Law Review* 492–497. See also: Richard A Posner, 'The Decline of Law as an Autonomous Discipline: 1962-1987' (1987) 100(4) *Harvard Law Review* 778–779.

⁵⁹ Posner, 'Economic Approach to Law' (n 44) 776–778.

⁶⁰ Jules L Coleman, *Markets, Morals, and the Law* (Oxford University Press 2002) 130–131.

and adjudication spheres are structurally coupled semi-autonomous systems, which have their distinctive inner logic and modes of communications. Accordingly, integrated and systemic law and economics is advocated as an approach to *regulation* theory. I *strongly reject* the application of integrated and systemic law and economics approach to adjudication. Further research is required for development of an approach to adjudication theory, particularly when adjudicated laws are of economic nature. This interesting research project falls beyond the scope of this thesis, however.⁶¹

4. Governance Theory, Regulation Theory and Conceptualization of Socio-Economic Regulations

4.1. Governance and Regulation Studies and Definition of *Regulation*

As mentioned above, the scope of this thesis is limited to the question of analysis and design of economic regulations or legal institutions of capitalism, as undertaken by legislators and regulators. Analysis and design of non-economic laws fall outside the scope of this thesis, and adjudication of economic laws falls also outside its scope. In this section, I outline briefly what I mean by economics regulations, and their relation to legal institution of capitalism, regulation theory and governance theory.

Capitalist economies have relied on different models of governance of capitalism such as neoliberal model, welfare state model, regulatory state model, and developmental state model.⁶² These models are not exclusive as most capitalist economies have hybrid models of market economy governance. During the industrial revolution, the British model adopted a *laissez-fair* (night watchman model). In this model, deregulated markets are allocated the task of producing all socio-economic goods and services including public utilities services. Subsequently, U.K moved to adopt the welfare-stabilization state model. Under the latter, the public sector owns and manages public utility services and employs its management of public

⁶¹ A good starting point for this research project is the proposition advanced in chapter 6 based on the insights of systemic thinking. According to this proposition, in the situations where different plausible interpretations of litigated legal norms exist, courts should function as *guardians/agents of justice* in the capitalist economic system.

⁶² There are various classifications of capitalism systems; the above classification would fit the above analysis that focuses on the Continental European shift from the welfare state model to a mixture of welfare and regulatory state models. For an informative critical review of different (institutional) classifications of capitalist economies in comparative capitalism literature, see: Colin Crouch, 'Models of Capitalism' (2005) 10(4) *New Political Economy* 440–452.

utilities and Keynesian macroeconomic policies in stabilizing the macro-economy.⁶³ Due to the high unemployment and inflation rate of the 1980s, Thatcher attempted to move the governance model towards night-watchman state model through privatization of public utilities and deregulation. This movement has not put an end to the welfare state model in Britain as the state continues to provide public goods such as health care and education and follows redistribution policies to the benefit of the poor. The privatization movement eroded the extent of the welfare state because the provision of public utilities services is no longer the responsibility of the state.⁶⁴ In parallel, privatization has given a rise to a new model of governance of capitalism called “*the regulatory state*” as the U.K. and other countries that followed the same path regulated privatized utilities to ensure the quality and competitive prices of and citizens’ broad access to these utilities services.⁶⁵

In parallel to the above, the rise of societal demands for the management of different forms of societal risks and for providing social protection for specific groups has given rise to intensive regulatory network of social regulations such as environmental regulation, safety and occupational health regulation and food regulation. As Sunstein argues, a rights revolution took place according to which citizens have enjoyed extensive social rights beyond the economic right of private property; the state fulfilled these rights through a new set of social regulations.⁶⁶

In sum, the governance models of capitalism had a distinct path of evolution in almost each country. Japan, for example, has evolved from a fascist model of capitalism governance prior to the Second World War to a developmental state model in the post-war period;⁶⁷ this developmental model in turn has been subject to fundamental changes over the past two decades. German model of capitalism governance has evolved from a coordinated market economy⁶⁸ in the post-war period into a transitory transformative phase of disorganization and

⁶³ Karen Yeung, ‘The Regulatory State’ in Robert Baldwin, Martin Cave and Martin Lodge (eds), *The Oxford Handbook of Regulation* (Oxford University Press 2010) 65.

⁶⁴ However, this movement of the rowing functions did not result in the decline of the welfare state model of Western European countries as their tax revenues and public expenditures as a percentage of their GDP remains high and stable. Instead, the governance model of Western European capitalist systems is a mixture of welfare state and regulatory governance.

⁶⁵ John Braithwaite, *Regulatory Capitalism: How it Works, Ideas for Making it Work Better* (Edward Elgar Ltd 2008) 9–11.

⁶⁶ Cass R Sunstein, *After the Rights Revolution: Reconceiving the Regulatory State* (Harvard University Press 1990) 24–26.

⁶⁷ Bai Gao, *Economic Ideology and Japanese Industrial Policy: Developmentalism from 1931 to 1965* (Cambridge University Press 2002) 14–15.

⁶⁸ Peter A Hall and David W Soskice, ‘An Introduction to Varieties of Capitalism’ in Peter A Hall and David W Soskice (eds), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (Oxford University Press 2001) 21–27.

decay of this coordinated model.⁶⁹ Generally speaking, however, in European countries, there has been a strong movement from a governmental ownership and management of utilities to *regulatory governance* of privatized utilities, along with rise of social regulations.

This movement from *government to governance* gave rise to governance and regulatory studies that have focused not only on the governance of privatized utilities but also on the governance of international institutions, corporations, and public administration.⁷⁰ Initially, command-control regulations in the form of legal rules backed by legal sanctions have been the main governance instrument.⁷¹ Due to the extensive limitations of the command-control form of regulatory governance,⁷² governance and regulatory theory scholars have been developing new techniques for regulatory governance such as steering networks, self-regulation, market-based regulatory instruments, enforced self-regulation, and meta-regulation, giving rise to what has become to known as *new governance model of regulation*.⁷³

Accordingly, regulation, whether taking the form of command-control or other new governance forms such as networked (nodal) regulation⁷⁴ or privately enforced regulation,⁷⁵ has become the key mode of governance for capitalist economies. The term “regulatory capitalism” has been carved to indicate a movement from the welfare state model of capitalism to a regulatory model of capitalism.⁷⁶ In response to this rise of regulation, some lawyers, economists and political scientists began to study the phenomenon of regulation and developed a new area of scholarship called “regulation theory or regulatory theory or as sometimes called regulatory studies” that addresses specific set of questions: What is regulation? Why regulations emerge? What should be the objectives of regulation? Which regulatory instruments should be used to achieve regulatory objectives? How the enforcement of regulation can be ensured? How the legitimacy and accountability of public regulatory agencies

⁶⁹ Wolfgang Streeck, *Re-Forming Capitalism: Institutional Change in the German Political Economy* (Oxford University Press 2009) 136–144.

⁷⁰ For a good review of different meanings of governance, see: Kees van Kersbergen and Frans van Waarden, “Governance’ as a Bridge between Disciplines: Cross-disciplinary Inspiration Regarding Shifts in Governance and Problems of Governability, Accountability and Legitimacy’ (2004) 43 *European Journal of Political Research*.

⁷¹ Christine Parker and John Braithwaite, ‘Regulation’ in Peter Cane and Mark V Tushnet (eds), *The Oxford Handbook of Legal Studies* (Oxford University Press 2005) 129–131.

⁷² Robert Baldwin, Martin Cave and Martin Lodge, *Understanding Regulation: Theory, Strategy and Practice* (2nd, Oxford University Press 2012) 107–110.

⁷³ Orly Lobel, ‘New Governance as Regulatory Governance’ in David Levi-Faur (ed), *Oxford Handbook of Governance* (Oxford University Press 2012) 68–71.

⁷⁴ For a discussion of networked responsive regulation, see: Braithwaite (n 65) 94–108.

⁷⁵ For a discussion of private enforcement of regulation, see: *ibid* 64–80.

⁷⁶ *ibid* 11–12.

and other regulators such as self-regulatory agencies can be ensured? How the risks of regulatory failures can be managed?

The concept of governance is, however, broader than regulation; regulation is a specific mode of governance (regulatory governance), but it does not exhaust all modes of governance.⁷⁷ In addition to regulatory instruments of governance, governments still use non-regulatory modes of governance such as public ownership, fiscal and monetary policy, and price interventions through taxation and subsidies in order to undertake their functions of macroeconomic stabilization, price stability, redistribution, and provision of public goods.⁷⁸

The relation between governance and regulation, however, depends on how the scholars of governance and regulation theories define both terms. Regulatory theory scholars have advanced many definitions of regulation including, inter alia, narrow definitions of regulation as a state-centred legal rules backed by legal sanctions (command-control regulation), more decentred definitions of regulation, and very broad definitions that encompass any policy intervention in the society and thus equating regulation with public policy, and governance.⁷⁹ In parallel, governance theory scholars have been struggling with conceptualizing governance, as the concept of governance appears in almost all social sciences and retains diverse definitions across them.⁸⁰ Given the current state of literature in both governance theory and regulation theory, each scholar has to illustrate which definitions of governance and regulation he/she would prefer at the outset of his/her⁸¹ research and the relation between governance and regulation under the selected definitions.

Without going into the conceptual debates about regulation and governance, I opt for the definition of regulation provided by Julia Black, which reads as follows:

Regulation is the sustained and focused attempt to alter the behaviour of others according to defined standards or purposes with the intention of producing a broadly identified outcome or outcomes, which may involve mechanisms of standard-setting, information-gathering and behaviour-modification.⁸²

⁷⁷ John Braithwaite, Cary Coglianese and David Levi-Faur, 'Can Regulation and Governance Make a Difference?' (2007) 1(1) *Regulation and Governance* 1–3.

⁷⁸ *ibid.*

⁷⁹ For a critical review of different definitions of regulation, see: Julia Black, 'Critical Reflections on Regulation' (2002) 27 *Australian Journal of Legal Philosophy* 11–21.

⁸⁰ Peer Zumbansen, 'Governance: An Interdisciplinary Perspective' in David Levi-Faur (ed), *Oxford Handbook of Governance* (Oxford University Press 2012)

⁸¹ As "he/she" and "his/her" are heavy to carry throughout the thesis, I will randomly use "he or she" and "his or her" across the thesis to avoid any concerns for gender bias that a consistent use of "he" and "his" may confer.

⁸² Black, 'Critical Reflections on Regulation' (n 79) 26.

According to this definition, regulation does not include only state promulgated legal rules (e.g., legislations enacted by the parliament and regulations issued by the executive branch of the government or by independent supervisory and regulatory agencies) but also encompasses rules promulgated by any non-state actors such as New York Stock Exchange and the Financial Industry Regulatory Authority (“FINRA”) in US. This definition of regulation implies therefore a decentred rather than a state-centred understanding of regulation.⁸³ Black’s definition also requires the regulating entity to have the intention to regulate and thus affect the behavior of other actors and thus excludes non-intentional rules such as social norms and culture from the coverage of the concept of regulation.^{84, 85}

Given Black’s definition of regulation, I still need to define what I mean by the adjective “*socio-economic*” in socio-economic regulations in order to develop a definition for socio-economic regulations. We turn to this issue in the following section.

4.2. Defining *Socio-Economic* Regulations

⁸³ *ibid.* See also: Robert Baldwin, Martin Cave and Martin Lodge, ‘Introduction: Regulation-The Field and the Developing Agenda’ in Robert Baldwin, Martin Cave and Martin Lodge (eds), *The Oxford Handbook of Regulation* (Oxford University Press 2010) 9–10.

⁸⁴ Black, ‘Critical Reflections on Regulation’ (n 79) 26–27.

⁸⁵ This *decentred intentional* understanding of regulation poses significant challenges to regulatory theory: legitimacy and governability. See: Dimity K Smith, ‘What Is Regulation - A Reply to Julia Black’ (2002) 27(37) *Australian Journal of Legal Philosophy* 43. Mark Bevir, ‘Governance as Theory, Practice and Dilemma’ in Mark Bevir (ed), *The SAGE Handbook of Governance* (SAGE 2013) 13. As regulation is intentional, regulatory entities should be held accountable for their rule-making, monitoring and enforcement powers. Smith (n 85), 43. Further, the process of decentred rule-making results in an evolving complex network of rules beyond the control of the state; this decentred law-making process thus undermines the state’s capacity to steer this network of regulating actors and rules in a way that ensures the attainment of public interest. This ungovernability problem becomes more acute, once we acknowledge the extensive complexity of the socio-economic capitalist system that is populated by numerous heterogeneous agents who interact non-linearly over a complex evolving network of non-linearly interdependent institutions. See Chapter 5 of this thesis for the conceptualization of capitalism as a two-layered network system. In the most extreme vision on ungovernability, Teubner argues that regulations face a trilemma: regulations would be either ineffective or they would destroy the operations and social values underlying the regulated socio-economic system or the regulatory intervention itself would disrupt the coherence and consistency of the legal system. Gunther Teubner, ‘Juridification: Concepts, Aspects, Limits, Solutions’ in Gunther Teubner (ed), *Juridification of Social Spheres: A Comparative Analysis in the Areas of Labor, Corporate, Antitrust, and Social Welfare Law* (de Gruyter 1987) 19–22. See also: Parker and Braithwaite (n 71) 126–129. Indeed, the global financial crisis of 2007-2009 and the numerous corporate governance scandals in developed countries are illuminating examples of some significant failures of the regulatory governance in overcoming the ungovernability problem.

In regulatory studies, regulations, regardless how they are conceptualized, are normally divided into economic and social regulations based on the normative objectives that each regulation seeks to achieve. Economic regulations include, inter alia, tax law, utilities regulation, competition law, corporate governance, banking and capital market regulation. Social regulations include, inter alia, environmental regulation, labor regulation, occupational health and safety regulation and consumer protection regulation.

The distinction between social and economic regulations on basis of the objectives of these regulations is problematic as both social and economic regulations have strong economic and social dimensions and thus are better described as socio-economic regulations. These regulations have strong economic dimension as they have the subject-matter of regulating markets and they thus constitute an interdependent institutional governance of market economy (or if you wish to say, these are the regulations that govern capitalism). Further, as argued in chapter 10 of the thesis, in addition to economic objectives, economic regulations should have non-economic objectives as they have socio-environmental implications. This explains why labor economists perceive labor regulation as an economic regulation of labor markets that should comply with allocative efficiency criterion; otherwise, it would result in high unemployment and rigid labor markets, whereas legal scholars and sociologists emphasize the social function of labor regulation of protecting the interests of weak workers, thereby categorize labor law as a social regulation.⁸⁶

In short, socio-economic regulations could be defined as the set of regulations, conceptualized according to Black's above definition, constitutive and regulative of markets and organizations operating within these markets. In other words, they are the regulations constitutive of the regulatory governance (or of the institutional network as chapter 8 will demonstrate) of the socio-economic system of capitalism. These regulations are economic with respect to their subject-matter, implications/effects and normative objectives, and social with respect to their implications/effects and normative objectives. Throughout the thesis, I will be using these terms interchangeably, "socio-economic regulations", "economic regulations", "regulatory governance of capitalism", "regulatory governance", and "legal institutions of

⁸⁶ Scholars adopting a law and economics approach downplay the non-economic objectives of social regulation as they justify all regulatory interventions with respect to market failures. The difference between social and economic regulation is founded therefore on the difference in the type of market failure that these regulations attempt to correct. Social regulations traditionally address informal asymmetry and negative externalities, while economic regulations tackle monopolies. See: Roger J Bergh and Alessio M Paccès, 'An Introduction to the Law and Economics of Regulation' in van den Berg, Roger and Alessio M Paccès (eds), *Regulation and Economics: Encyclopedia of Law and Economics* (2nd edn. Edward Elgar 2012) 7–9.

capitalism”. All these terminologies should be understood in light of the definition proposed here for socio-economic regulations. Still, this definition leaves out the conceptualization and outlining the features of *constitutive and regulative institutions*, a task that chapter 5 will undertake.

5. Concluding Remarks: Situating the Research Project, Writing Style, and the Generic Form of the Proposed Approach

Prior to starting our intellectual journey into this thesis, I conclude this introduction by three general remarks. First, the reader may wonder how to situate this thesis in the current legal and economic scholarship; to which sub-areas of legal and economic research does this thesis belong? Law and economics scholars tend to apply neoclassical and new institutional economics automatically to regulatory problems, they do not engage in philosophical or methodological discussions. They also do not engage in deep discussions concerning (neoclassical) economic theory, they take it as the undebatable starting point of their analysis. As this thesis challenges their approach and seeks to develop a critically complementary approach to socio-economic regulations, I had to spend extended parts of this thesis engaging in theoretical questions of economic methodology (part I of the thesis) and institutional economics (part II of the thesis) and neoclassical economic theory (particularly chapters 8 and 9 of the thesis). These discussions are alien to almost all law and economics scholars and traditional legal scholars. The thesis in its theoretical part does not thus fit standard applied law and economics scholarship; however, it falls within a stream of research that investigates theoretical foundations of law and economics.⁸⁷ The latter has been concerned mainly with discussions over economic efficiency and rationality assumption.⁸⁸ The theoretical part of the thesis, though going far beyond these issues, is well situated in this stream of research. Further, despite using the proposed approach, the applied part of the thesis (Part III) fits well traditional law and economics research that applies economics to analysis and design of economic regulations. It has however a much broader perspective by bringing in systemic perspective along with the insights of non-neoclassical economic paradigms and theories, sociology and critical legal studies.

⁸⁷ See, e.g., Mark D White (ed), *Theoretical Foundations of Law and Economics* (Cambridge University Press 2009).

⁸⁸ See, e.g. Mark Tunick, ‘Efficiency, Practices, and the Moral Point of View: Limits of Economic Interpretations of Law’ in Mark D White (ed), *Theoretical Foundations of Law and Economics* (Cambridge University Press 2009). Nussbaum (n 56).

Furthermore, since this thesis argues that economic development should be one of the macro-objectives of the regulatory governance of capitalism in developing countries,⁸⁹ integrated and systemic law and economics fills in a significant lacuna in law and development studies: these studies lack an *analytical framework* for analysis of the effects of legal institutions on development.⁹⁰ The proposed approach functions as an analytical framework for law and development that informs the design of a growth enhancing regulatory (and non-regulatory) governance of capitalism.

As shall be discussed in chapter 11, law and development scholarship is caught between opposite positions: neoliberalism and developmental state models of South-East Asian countries. The former finds its analytical framework in the Chicago strand of law and economics. The developmental state model, however, lacks a comparable theoretical framework for identifying economic problems and design of legal institutions that can address these economic problems.⁹¹ Despite their commonalities, developmental state models (e.g., the Japanese, South Korean, and Chinese models) are idiosyncratic context-specific models produced through a pragmatic and experimental approach to regulatory governance of the developmental process.⁹² Without a *theoretical framework* for understanding and conceptualizing the context-specific problems of developing countries and for developing context-specific legal solutions to these problems, the automatic transplant of the successful developmental state models into the legal systems of these countries will most likely fail. Particularly, these developmental models have been highly adaptive, continuously changing over the stages of development, and subject to frequent contestation and changes in policy objectives and means.⁹³ A developmental state model that has been produced without a clear underlying coherent (economic) theoretical framework cannot guide the design of legal institutions in developing economies because

⁸⁹ See the development economics based critiques of the neoclassical normative theory of regulation in chapter 9. See also chapter 10 that develops an integrated and systemic normative framework of economic regulations in developing countries.

⁹⁰ Yong-Shik Lee, 'Call for a New Analytical Model for Law and Development' (2015) 8(1) *Law and Development Review* 11–12. To fill this lacuna, the author proposes a reasonable analytical framework (or more accurately, guidelines) that I will discuss in the applied part and illustrate its relation to the proposed approach. For an outline of this analytical framework, see: *ibid* 30–35.

⁹¹ See the discussion of law and development theories in section 2 of chapter 12 and the references cited therein.

⁹² See the proposal of creating a legal framework for industrial policy in developing countries in section 5 of chapter 12.

⁹³ For an outline of the evolution of industrial policy of post-war Japan, see section 2.1 of Chapter 11.

it cannot provide a coherent theoretical framework for understanding and evaluating these developmental state models, identifying the context-specific socio-economic problems, and developing context-specific legal solutions for them. Particularly, eclectic ex-post rationalizations of these developmental state models made by their exponents fail to provide a coherent theoretical framework for guiding the design of growth enhancing legal institutions of capitalism in developing countries. To be convincing, these rationalizations need to have their epistemological basis in a coherent underlying theoretical framework.

Chapter 11 demonstrates that the integrated and systemic approach can develop a systemic and integrated understanding of the post-war Japanese institutional network; based on this understanding, the proposed approach guides the design of growth oriented institutional network for developing countries in chapter 12. Accordingly, the integrated and systemic approach and not the developmental state model of Japan (or South Korea, for example) becomes our *point of reference*. The successful developmental state experiences provide us with a *rich informational empirical basis*. The integrated and systemic approach provides the theoretical framework for the interpretation of this informational basis, systemic understanding of these successful developmental state models, the conceptualization of the context-specific problems of developing countries, the plausible proposals for their regulatory solutions, and the underlying integrated and systemic reasoning for these legal solutions.

In short, once we recognize economic growth as an objective for legal institutions, the integrated and systemic approach functions as both a *law and economics* as well as a *law and development* theoretical framework. Indeed, the thesis could have been correctly retitled as “Integrated and Systemic Law and Development Approach to Economic Regulations in Developing Countries.” As such, this thesis, by providing a theoretical framework for guiding the design of growth oriented legal institutions in developing economies makes an important contribution to the law and development literature. By doing so, the integrated and systemic approach that finds its epistemological justification in pragmatism⁹⁴ does not exclude the pragmatic and experimental approach underlying the successful developmental state experiences; it rather provides a framework that can guide the idiosyncratic pragmatic and experimental choices of developing countries.

The integrated and systemic approach as a theoretical framework for law and development is limited to the analysis and design of socio-economic institutions of the

⁹⁴ See chapter 4 on the epistemological/methodological foundations of the integrated approach.

capitalist system. I do not claim that the proposed approach would function well as an analytical framework for the analysis and design of the political and social institutions of the political and social systems of the society such as democratic institutions, rule of law and human rights that are essential for enhancing multi-dimensional (social, economic, political and environmental) development. The proposed approach might help in developing an analytical framework for these non-economic institutions, but this is well beyond the scope of this thesis. This thesis is thus well situated in law and development literature; in particular, the stream of law and development that emphasizes the role of the socio-economic legal institutions of capitalism in promoting economic development.⁹⁵

Furthermore, by investigating the (regulatory/institutional) role of the government in the economy, the thesis engages with various questions of public economics (particularly the role of the government in the economy, welfare economics,⁹⁶ and economic policy theory⁹⁷). This is not surprising, given that law and economics is nothing but a branch of public economics that investigates the regulatory role of the government in the economy. Indeed, the integrated and systemic approach, although advanced mainly for economic regulations such as tax law, corporate governance and financial regulation, it can function well, subject to modifications, as an approach to non-regulatory governmental policies such as industrial policy, fiscal and monetary policies. The discussion of industrial policy in the applied part indicates this wide scope of application of the proposed approach as industrial policy has been traditionally conceived as an economic policy area outside of the domain of traditional legal regulations. Furthermore, by investigating how the role played by the government in the economy affects national models of capitalism, the thesis can be located

⁹⁵ *ibid* 3–6. The author suggests that law and development studies should focus on economic development, leaving the discussions of social and political progress to other areas of law such as law and society. The author investigates all possible legal institutions including institutions of the political system that may enhance economic development that he conceptualizes as economic growth. The approach proposed in this thesis has a more limited perspective; it investigates which regulatory governance structures of the capitalist system, which occupies the economic sphere of the society, achieves the objectives that the society desires from this economic sphere. These objectives include, *inter alia*, economic growth. Extending the perspective of the proposed approach to investigate the institutions of the social and political spheres of the society, and how they contribute to development might be possible, but goes beyond the scope of this thesis.

⁹⁶ For a very good overview of welfare economics, see: Edward J Mishan, *Introduction to Normative Economics* (Oxford University Press 1981).

⁹⁷ For an overview of neoclassical economic policy theory at both micro and macro levels, see, e.g.: Nicola Acocella, *The Foundations of Economic Policy: Values and Techniques* (Cambridge University Press 1994).

in both of the discourse on the role of government in the economy and economic policy theory in public economics and that of comparative capitalism in political economy.

The wide discourses where this thesis easily fits reflect the integrated and systemic aspect of the proposed approach. These aspects have brought socio-economic development and capitalism back into law and economics scholarship; meanwhile, it brought also law and economics to the traditional question of public economics concerning the role of government in the economy, as well as comparative capitalism and law and development discourses. Readers with background in economic policy theory or law and development can adopt and apply the proposed approach, *mutatis mutandi*, to their research areas, particularly when this approach is modified and transformed into a *generic integrated and systemic perspective* (more discussions on this generic perspective below). This is both a sign of the integrative and systemic strengths of the proposed approach as it overcomes unjustified fragmentation of knowledge across dispersed sub-areas of research, but it is equally a sign of its sophisticated and complex nature.

Given the numerous sub-areas where this thesis belongs, the reader may ask about the potential readers to whom I am addressing this scholarly work. In fact, it seems natural to address this scholarly work to the scholars engaging with questions of comparative capitalism, economic policy theory and the role of the government in the economy, welfare economics, theoretical foundations of law and economics, law and development, and economic regulations. Given the nature of this scholarly work, this would seem problematic, however. Unfortunately, most of the scholars engaging with the above sub-areas would not read this scholarly work, and if they did, they would not engage with it in any meaningful way. They would neither endorse nor give a constructive critique of this work; they would just ignore this work as if it does not exist. Yet, why would most of these scholars ignore this scholarly work?

Scholars working in the above sub-areas include legal scholars, economists, sociologists, and political scientists. Sociologists and political scientists may be receptive of this scholarly work; however, the questions they are concerned with are not generally the type of regulatory questions this thesis tackles.

With respect to economists, they are of two-types, mainstream and heterodox. As the thesis challenges how neoclassical-new institutional economists approach legal institutions, mainstream economists will not respond to this challenge as long as the challenge has not been put into formal methods where they are presented with mathematical or computational models. Until this formalization takes place, they will simply ignore this

work. Even if confronted with formal integrated and systemic law and economics, the way I envisage how this formalization can be made, which I hint at briefly in chapter 7, would be hardly received by the mainstream as it drifts away from the theoretical core of the neoclassical-new institutional school of thought. Heterodox economists engaging with any of the above sub-areas are better candidate addressee for this work; however, similar to their neoclassical-new institutional counter-parts, some of them who are ideologically committed to their school of thought may ignore this work. Still, some, though few, of them might engage with this work constructively.

On the contrary, legal scholars concerned with socio-economic regulations (such as tax law, banking regulation, capital markets regulation, competition law, corporate governance, environmental regulation, labor regulation) seem to be the most suitable addressees of this scholarly work. Legal scholars have no prior economic ideological commitment to any economic school of thought, and they are pragmatic enough to accept the pragmatic and cognitive philosophical positions underlying the proposed approach. Further, legal research is predominantly informal and thus legal scholars have no problem with lack of formalism at this stage of developing the proposed approach. More importantly, this proposed approach provides them with distinctive voice in academic debates on economic regulations as they lack any constructive analytical framework, other than the neoclassical-new institutional one, for guiding their research on socio-economic regulations.⁹⁸ Paradoxically, as chapter 3 argues, economic analysis of law (particularly if it follows the proposed approach) requires a level of economic knowledge that most legal scholars working on these areas lack. As a result, although legal scholars are the best situated to engage constructively with this scholarly work and more likely to endorse and apply the proposed approach, most of them would find it hardest to do so.

A subset of law and economics scholars in American legal academia seems the most adequate addressees of this thesis. The cited law and economics studies written by legal scholars in this thesis, particularly in chapter 9, would reveal that many of the unproblematic propositions in economics are still highly debated in law and economics literature undertaken by legal scholars. For example, the questions of the relation between morality, economics, and the law, the moral theory underlying neoclassical welfare economics, and the assignment of distribution function to legal institutions have been extensively debated in this literature. Aside from Chicago law and economics scholars,

⁹⁸ These reasons are developed in detail in chapter 3.

Introduction

some American law and economics scholars are still rethinking what most modern economists consider no longer disputable. These law and economics scholars in legal academia, despite few in number, are the main audience of this thesis. Not only most of them have extensive knowledge of economics, they are also not satisfied with some aspects of law and economics approach as it stands and aspire to its refinement. If they were to reorganize around the integrated and systemic approach, they would disturb significantly the standard law and economics scholarship in legal academia, resulting in major challenges to the economic discourse on economic regulations developed in the economic academia.

To conclude on this point, I address this thesis to the scholars engaging with the numerous sub-areas where this thesis is situated; however, I expect that only few economists, mostly heterodox economists and some open-minded mainstream economists would engage constructively with this scholarly work. Conversely, legal scholars would be the most receptive of this scholarly work; still, only the few legal scholars who have a solid economic background would be able to use the integrated and systemic approach in their research.

This problem brings us to the second remark concerning the writing style of the thesis. The analysis in this thesis requires a level of economic discussion that is more extensive⁹⁹ than what is typical in most law and economics research undertaken by legal scholars. To make this scholarly work more accessible to wider legal readership beyond the above subset of law and economics scholars, I have tried my best to explain most of the economic concepts and theories that I use in this thesis. However, the explanation of each of these economic concepts and theories in detail without interrupting the flow of the argument is quite challenging. To resolve this problem, I have used the footnote for explanation purposes; I explain most of the economic concepts or theories used in this thesis informally in the footnote. In addition, technical discussions that are important, but not imperative to the line of argument are relegated to the footnotes. Further, I opted for an elaborate and sometimes repetitive style of writing in order to make the exposition of the ideas as clear as possible; clarity of exposition is more important than decreasing the length of the thesis by relatively few pages. This writing style would enable legal scholars to engage

⁹⁹ This thesis has drawn on economic methodology literature, the neoclassical sub-fields of growth economics, welfare economics, corporate governance, competition economics, and industrial economics. In addition, the thesis has engaged with non-neoclassical schools of thought and theories. Sometimes, some economic issues had to be examined in depth such as economic methodology in part I and welfare economics in chapter 9.

constructively with this thesis. Still, most of them will not be able to apply adequately the proposed approach in their scholarly research in case they are convinced of its usefulness, unless they become proper economists.¹⁰⁰

The third and final remark is that the integrated and systemic law and economics approach to socio-economic regulations seems to involve *bias towards the discipline of economics* that might reflect a deeper bias towards *dis-embeddedness* of the economic sphere of the society. This bias is more pronounced given the above-mentioned broad conceptualization of these socio-economic regulations to include both economic and social regulations. The integration and systemic thinking dimensions of the proposed approach reveal this economics bias. Integration takes place primarily among the insights of economic schools of thought and theories. The systemic perspective is methodologically founded on institutional economics and draws on the systemic insights of some economic schools of thought such as comparative capitalism. Given the dominance of the reductionist approach of neoclassical-new institutional economics in modern scholarship on economic regulations, the proposed approach is an obvious improvement as it mitigates the *economics bias problem*. Particularly, some of non-neoclassical economic schools of thought such as institutional economics and socio-economics call for embeddedness of markets and draws on insights of non-economic disciplines such as sociology. Still, this would not deconstruct the built-in *economics bias* of the proposed approach. To overcome this bias, I suggest that integrated and systemic law and economics approach should be conceived as an initial important step towards *a generic integrative and systemic approach to socio-economic regulations and policies. This generic approach would integrate relevant insights of economic and non-economic schools of thought and draw on the systemic thinking beyond the systemic insights of economic schools of thought*. Indeed, this thesis moves, though marginally, in the direction of this generic approach. For instance, chapter 6 on the propositions of systemic perspective have drawn many insights from complex systems theory that is a generic theory that applies to a wide range of economic and non-economic phenomena. Similarly, the applied part has moved beyond economic schools of thought by drawing on the insights of moral philosophy. In sum, I advocate the proposed approach as an *initial step* toward the *generic integrated and systemic approach* that would deconstruct

¹⁰⁰ Paradoxically, once legal scholars become proper economists, they will be less inclined to engage with this scholarly work or to adopt the proposed approach. Chapter 3 elaborates on these issues.

the *economics bias and its corollary dis-embeddedness bias* in modern scholarship on socio-economic regulations.

6. Organization of the Thesis

This thesis is structured as follows. It is divided into a *theoretical part* that includes parts I and II covering six chapters (namely, chapters 2 to 7) and an *applied part* that includes part III covering five chapters (namely, chapters 8 to 12). The theoretical parts I and II develop the approach of integrated and systemic law and economics, while the applied part puts this approach into action.

Part I establishes the case for integrated law and economics. Part II establishes the case for and operationalizes the systemic approach to analysis and design of legal institutions. Chapter 7 concludes the theoretical part. This chapter synthesizes consistently the integrative and systemic perspectives to give rise to the integrated and systemic approach, and then develops well-defined steps for the application of integrated and systemic approach.

Part III develops tentatively *two applications* of the integrated and systemic approach. Chapter 8 introduces the regulatory question to be addressed and reviews the way neoclassical law and economics tackles this question. Chapters 9 and 10 follow an integrated and systemic approach to develop a normative framework for the assessment and design of the regulatory governance of the supply side of product markets in developing countries. Chapter 11 applies the integrated and systemic approach to the assessment of the institutional consistency of the American, post-war German and post-war Japanese models of governance of the supply side of their product markets. Given the obstacles to legal transplantation of the Japanese and German models in developing countries and the inherent inconsistencies of these models uncovered by the application of the integrated and systemic approach, chapter 12 briefly investigates the most suitable models for regulatory governance of products markets in developing countries. Then, this chapter suggests tentatively the way to overcome the constraints to the legal transplant of consistent regulatory models of product markets in developing countries. Chapter 13 concludes the thesis.

Part I

Integrated Law and Economics

Chapter

2

Plurality of Cognitive Perspectives in Economic Thought

1. Introduction

This part of the thesis advocates what can be called “integrated law and economics”. Integrated law and economics presumes the plurality of cognitive perspectives (perspectival plurality) within and outside economics, which can inform regulatory analysis and design. Given that perspectival plurality, integrated law and economics takes the position that legal scholars should not choose one perspective and discard others; instead, they should integrate the relevant insights of these cognitive perspectives.

If there were no plurality of cognitive perspectives within economics, the line of argument of the integrated approach to socio-economic legal institutions would not hold,¹ unless there are non-economic cognitive perspectives in legal theory, sociology, politics, or other discipline, which can inform the analysis and design of economic regulations. Integrating the insights of economics with that of the cognitive perspectives of relevant non-economic schools of thought is a *weak* form of the integrated approach. This chapter aims to establish the plurality of economic cognitive perspectives, and thus gives rise to the *strong* form of integrated law and economics that focuses

¹ More accurately, the line of argument would still hold in this case, but it would be rhetorically much weaker. As chapter 4 argues, the methodological position of pluralism provides a ground for integrated law and economics. Methodological pluralism dictates that the plurality of cognitive perspectives should be encouraged. If the so-called schools of thought were nothing but concrete models that originated from the same school of thought, the line of argument for integrated law and economics founded on pluralism would still hold, but it would involve the need for constructing competing schools of thought to the existing one. Rhetorically, this position is much less persuasive than showing the perspectival plurality of modern economic thought, and then, using pluralism to argue that this plurality of cognitive perspectives is methodologically desirable, particularly, there is no rational and objective method for choice among these schools of thought. The chapters of this part of the thesis seek to establish the more rhetorically persuasive, although methodologically equivalent, line of argument.

on integrating the insights of these plural *economic* cognitive perspectives. Given the plurality of cognitive perspectives within economics, next chapter investigates how law and economics scholars handle this plurality of cognitive perspectives when addressing socio-economic regulatory questions. This chapter shows that modern law and economics research on economic regulations is not characterized by either the weak or the strong forms of integrated law and economics. Rather, its mode of research takes the form of the dominance and automatic application of neoclassical-new institutional economics to legal institutions. Chapter 4 uncovers the methodological basis for this mode of research of modern law and economics, and develops a methodological/epistemological² line of argument for integrated law and economics as a competing mode of research on socio-economic regulations.

This chapter proceeds as follows. In order to establish the plurality of cognitive perspectives in economic thought, we need first to illustrate what is *a cognitive perspective*. Section 2 proposes a two-layer conceptualization of the concept of cognitive perspective. Given the two-layer conceptualization of the cognitive perspective, section 3 presents a multi-dimensional representation of economic schools of thought. By investigating these dimensions in some economic paradigms, this section establishes the plurality of economic paradigms that gives rise to overall cognitive plurality in modern economic thought (paradigmatic perspectival plurality). Section 4 concludes.

2. What is a Cognitive Perspective? The Two-Layer Structure of Cognitive Perspectives

The prominent philosophers of science, Kuhn, Lakatos, Giere and Longino have developed the important concepts: paradigms,³ scientific research programmes,⁴ and theoretical

² Throughout the thesis, I am using the terms “epistemology” and “methodology” interchangeably.

³ Thomas S Kuhn, *The Structure of Scientific Revolutions* (2nd, University of Chicago Press 1970) 10–11. On Kuhn’s contribution to the philosophy of science, see: Alexander Bird, ‘Thomas Kuhn’ in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2013).

⁴ Imre Lakatos, *The Methodology of Scientific Research Programmes: Volume 1: Philosophical Papers* (John Worrall and Gregory Currie eds., Cambridge University Press 1987) 47–52. For an overview of Lakatos’ methodology of scientific research programmes, see: Mark Blaug, *The Methodology of Economics or How Economists Explain* (2nd, Cambridge University Press 1992) 32–37. For a short application of Lakatosian scientific research programmes to economics, see: *ibid* 203–219.

perspectives.⁵ These concepts, despite their crucial differences, share a minimal common meaning regarding their *cognitive aspect*; they refer to the idea that humans do not perceive (socio-economic) reality directly. They perceive reality through *a cognitive perspective* that mediates between the observer's senses and reality.⁶ Cognitive perspectives are ways of seeing that provide the observer with interpretations of his observations. To simplify the idea to its most basic form, consider economic firms. What kind of knowledge can we gain about the firm directly without a conceptual framework? We can simply provide a very thick description of the firm's employees, their relations, the employers, and the space and time dimensions of the firm's activities. We can even collect engineering information about the machines of each firm of the economy and its energy consumption, etc. However, have we known anything that is *conceptually coherent* about the firm by acquiring these thick descriptions of various aspects of the firm? The answer is clearly no. Lacking this coherent understanding of the firm, legal scholars cannot develop any meaningful laws for economic organizations such as corporations and cooperatives. Similarly, we can gain a very thick description of specific or numerous family members and their relations, however, these thick descriptions are of little help for understanding family as an institution and thus for designing family laws.

To gain a *coherent perception* of the firm or the family, we need a *cognitive paradigm or perspective*⁷ that could generate this *coherent perception*. Depending on the used cognitive perspective, firms can be perceived as a black box that maximizes profits,⁸ a nexus of contracts,⁹

⁵ Ronald N Giere, *Scientific Perspectivism* (Chicago University Press 2006) 13–15.

⁶ Marc d Mey, *The Cognitive Paradigm: Cognitive Science, a Newly Explored Approach to the Study of Cognition Applied in an Analysis of Science and Scientific Knowledge* (D. Reidel Publishing Company 1982) 4. See also: *ibid* 26. Giere (n 5) 15. *ibid* 93–94.

⁷ I will be using the term “cognitive perspective” throughout the thesis because, as shall be argued, the cognitive perspective can be paradigmatic or theoretical and the term “cognitive paradigm”, though correct, may be confusing as it may indicate, wrongly, that only schools of thought have distinctive cognitive perspectives.

⁸ This is the standard neoclassical conceptualization of the firms. Oliver E Williamson, ‘The Theory of the Firm as Governance Structure: From Choice to Contract’ (2002) 16(3) *The Journal of Economic Perspectives* 178. Oliver Hart, *Firms, Contracts, and Financial Structure* (Oxford University Press 1995) 15–16.

⁹ This is the standard new institutional conceptualization of the firm. For an outline of the theory of the firm as a governance structure, see: Williamson, ‘The Theory of the Firm as Governance Structure: From Choice to Contract’ (n 8). See also section 4.1 on the transaction cost theory of the firm (the firm as a governance structure theory) in chapter 8 and the references cited therein.

a legal entity independent from its members,¹⁰ or as a set of capabilities and competences.^{11,12} Indeed, without a cognitive paradigm, scholars trying to develop a thick description of the firm or the family will not be able to distinguish important from useless information; they will collect information randomly.¹³ These thick descriptions will be an amalgamation of dispersed information that lacks any conceptual framework binding them together in a meaningful structure.

The fact that the observers need a cognitive perspective that mediates between the observers and reality to enable observers to gain a coherent perception about reality took some time to be well articulated in philosophy of science.¹⁴ What is less obvious that Kuhn, Lakatos, and Giere have demonstrated is the *two-layer structure* of the cognitive perspective or world-view. Here, institutional economics would be helpful for understanding these *two layers* that mediate between observers and reality. Institutional economists have emphasized the importance of mental maps, these maps determine how individuals perceive their surrounding environment; mental maps *filter* the information they receive from their environment and provide them with *subjective interpretation* of these information.¹⁵ These mental maps reflect the history, beliefs, and ideologies of the individuals. Based on which individuals generate *informal models* that enable them to determine which information to gather and how they interpret this information. These models range from the very simplistic models that most individuals have about economy or politics to the most sophisticated models that hedge fund managers use to inform their investment strategies. These *models/theories* reflect the *mental maps* of the individuals.

¹⁰ This is the traditional legal theory of the firm, which was dominant in legal scholarship prior to the rise of the new institutional economic theories of the firm in legal scholarship.

¹¹ This is the standard conceptualization of the firm in the knowledge-based theories of the firm. See the discussion of the knowledge-based theories of the firm in section 4.3 of chapter 8 and the references cited therein.

¹² At this point, there is no reason to think that these perceptions of the firm are necessarily complementary or contradictory. Chapter 8 will discuss the different theories of the firm and their implications for corporate governance.

¹³ Marc de Mey expresses this idea eloquently, ‘the paradigm is what allows to locate the hidden figure, to identify the meaningful pattern in a set of otherwise unrelated and meaningless lines’ Mey (n 6) 175–176.

¹⁴ The scholarly work of Marc de Mey was among the first important works that introduced *cognitive sciences* to philosophy of science and thus gave a scientific basis for the cognitive mediation role of schools of thought and theories: *ibid.*

¹⁵ Douglass C North, *Institutions, Institutional Change and Economic Performance* (Cambridge University Press 1990) 23–25. John Groenewegen, Antoon Spithoven and Annette van den Berg, *Institutional Economics: an Introduction* (Palgrave Macmillan 2010) 74–75.

For example, consider an experiment reported by Rubinstein. Economics, management, law, mathematics and philosophy undergraduate students were given a difficult problem that a firm's manager confronts: the manager has to choose between firing large number of employees to secure the highest possible profits for the firm, firing moderate number of employees to achieve an average rate of profit, or firing no body and the firm gains zero profits. Almost half of the economics students opted for profit maximization, while almost one third of law and management students and 13-15% of Math and philosophy students chose to maximize profits.¹⁶ Indeed, the largest percentage of law, math and philosophy students in their respective groups chose not to maximize profits. This is a very good example to illustrate the two tiers of the cognitive perspective of each of these students. The dominant school of thought within each of these disciplines is most probably the one that these students have been taught. Let us take the example of the neoclassical school of thought for economic students due to its saliency and coherence, in comparison to the dominant school of thought in legal theory, which is implicit and thus hard to uncover. Neoclassical economics is the first layer of the cognitive perspective that constitutes the mental map of the economic students. Based on this school of thought/mental map, they have developed a *model* for understanding and solving the problem at hand. The model they come up with is a simple and straightforward neoclassical model that would help them determine the optimal number of employees to be fired for profit maximization. This model is a direct consequence of how neoclassical perspective reformulates economic problems as optimization problems subject to constraint. Similarly, George Ritzer demonstrates that there are some major cognitive perspectives within sociology that can correspond to what we nowadays call rational choice (or behavioral perspective), structuralism, Weberian institutionalism.¹⁷ Scholars adopting the first perspective identify and conceptualize any problem in terms of individuals' behavior and seek explanations in terms of their rational action.¹⁸ Structuralists conceptualize the problems and seek their explanations in terms of stable social structures, while perceiving individuals' behavior as irrelevant for explanation because of structural determinism; individuals cannot resist the

¹⁶ Ariel Rubinstein, 'Dilemma of an Economic Theorist' (2006) 64(4) *Econometrica* 878–879.

¹⁷ The author uses the term 'social facts paradigm' to refer to structuralism and the term 'social definition paradigm' to refer to Weberian interpretive institutionalism and the term 'social behavioural paradigm' to refer to rational choice paradigm. George Ritzer, 'Sociology: A Multiple Paradigm Science' (1975) 10(3) *The American Sociologist* 158–163.

¹⁸ *ibid* 163.

forces of the structure in which they are embedded.¹⁹ Weberian institutionalism seeks explanations in terms of interaction of individuals and social structures. In contrast to structuralism, this perspective gives a space for individual agency, and in contrast to behavioralism, it emphasizes the cognitive dimension of interaction as agents interpret the environment in which they are embedded and do not respond to it mechanically.²⁰ For each social problem, each perspective has developed a myriad of theories and models for their conceptualization and explanation. Similar to the above experiment, each of these perspectives represents the first layer of the cognitive perspective that informs the construction of *concrete theories/models* that are the second layer of the cognitive perspective. This two-layer cognitive perspective mediates between the observer and reality and enables the former to make sense of the latter.

Here, we must note that the first layer of the cognitive perspective is indeed a cognitive perspective that enables us to produce concrete models. These concrete models occupying the second layer of the cognitive perspective are also cognitive perspectives that enable us to conceptualize and address the regulatory problem coherently. This implies that the two layers of the *overall* cognitive perspective are nothing but *cognitive perspectives*.

For our purposes, the second layer of the cognitive perspective, concrete models, needs no further investigation. It suffices to note that models are not restricted to formal abstract mathematical models; they include informal narrative models and diagrammatic²¹ and computational models. Further, models are concrete; they represent a specific phenomenon and advance concrete insights in relation to this phenomenon.²² Conversely, the first layer of the cognitive perspective is problematic. In the above examples, neoclassical economics, rational choice theory, structuralism, and Weberian institutionalism were that layer. Accordingly, how can we conceptualize these first layer's cognitive perspectives of the overall cognitive perspectives? Are they concrete models? Are they theories? Or, are they something else? And what difference would that make for my line of argument for integrated law and economics?

¹⁹ *ibid* 158–159.

²⁰ *ibid* 161–162.

²¹ Economists rarely use diagrammatic models. For some examples on the use of these models in economics, see the figures 2 and 3, which represent simple diagrammatic models, in: Robert Boyer, 'Coherence, Diversity, and the Evolution of Capitalisms—The Institutional Complementarity Hypothesis' (2005) 2(1) *Evolutionary and Institutional Economics Review* 60. *ibid* 62.

²² Giere (n 5) 62–63.

To address these questions, we need to investigate the structure of theoretical economic knowledge. Theories and models constitute the theoretical part of any sphere of knowledge such as economics. In addition to theories and models, Kuhn introduced the concept of *paradigm*.²³ Prior to the work of Kuhn in philosophy of science, positivist schools of thought (i.e., logical positivism and positive empiricism) dominated philosophy of science.²⁴ According to positivism, scholars can get access to the objective truth about reality through an objective and rational scientific method; through the application of this method, science makes incremental progress.²⁵ This method enables scholars to distinguish among competing theories; the problem of *theory choice* is thus resolved by the application of this scientific method that is both objective and rational. Logical positivism suggested testing the validity of the theories by confronting their predictions to the empirical evidence. If the latter confirms the prediction, the theory is valid, while positive empiricism (i.e., Popperian falsificationism) dictates that theories are maintained as long as their predictions have not been falsified.²⁶ In this positivist world, there are no *various paradigms*. Knowledge is structured around theories, and the scientific method arbitrates among these theories. Positivism presents a cumulative understanding of progression of knowledge; scholars use objective and rational scientific methods and, over time, they move towards better theories that come close to the truth.

Kuhn has challenged this linear cumulative understanding of knowledge. He introduced the concept of paradigm that underlies the production of science:

Having isolated a particular community of specialists ... , one may usefully ask: What do its members share that accounts for the relative fullness of their professional communication and the relative unanimity of their professional judgments? To that question my original text licenses the answer, a paradigm or set of paradigms. But for this use, unlike the one to be discussed below, the term is inappropriate. Scientists themselves would say they share a theory or set of theories, and I shall be glad if the term can

²³ Kuhn (n 3) 10–11.

²⁴ Blaug (n 4) 3–4.

²⁵ D. W Hands, *Reflection without Rules: Economic Methodology and Contemporary Science Theory* (Cambridge University Press 2001) 72–94.

²⁶ Blaug (n 4) 12–14. For a good account of Popperian perspective in philosophy of science, see: Hands, *Reflection without Rules* (n 25) 275–304. For a critique of Popperian falsification as a prescriptive methodological principle for neoclassical financial economics, see: Reinhard Schmidt, ‘Methodology and Finance’ (1982) 14 *Theory and Decision* 401–403.

ultimately be recaptured for this use. As currently used in philosophy of science, however, ‘theory’ connotes a structure far more limited in nature and scope than the one required here. Until the term can be freed from its current implications, it will avoid confusion to adopt another. For present purposes I suggest ‘disciplinary matrix’.²⁷

Kuhn differentiated between two meanings of the paradigm: paradigm as a world-view/disciplinary-matrix and paradigm as exemplar.²⁸ Kuhn illustrated what he considers to be the main components of the paradigm as a disciplinary matrix, without attempting to provide a complete list of these components. He mentioned four components: symbolic generalizations, metaphysical parts of paradigms (ontological and heuristic models), values, and paradigm-as-exemplar.²⁹ I will try to explain these components briefly with reference to economics since Kuhn has explained them with reference to physics and chemistry. Symbolic generalizations are the general theoretical principles that the scholars of a specific paradigm share. The fundamental theorems of welfare and Coase theorem³⁰ are some of the symbolic generalizations that neoclassical-new institutional economists share. Giere argues, convincingly, that what scholars refer normally to as theories in their discipline are indeed highly abstract models (i.e., general theoretical principles) that cannot apply to specific concrete problems.³¹ The function of these general principles is to guide the construction of concrete (formal or informal) models for (regulatory) problems.³² The metaphysical part of the paradigm refers, inter alia, to the ontological commitments of the scholars of that paradigm. For example, Roberto Marchionatti demonstrates, convincingly, that both Marshall and Keynes perceived the economic system (or more accurately, some economic sub-systems or problems) as a complex system of interdependent elements and as an evolutionary system whose (social, political, institutional and technological) structure evolves over time.³³ Based on that understanding that both Marshall and Keynes emphasized, although they did not use the terminology of complex systems theory, both rejected long and

²⁷ Kuhn (n 3) 182 [emphasis in the original].

²⁸ *ibid* 187.

²⁹ *ibid* 182–187.

³⁰ Both Coase theorem and the first fundamental theorem of welfare will be discussed in chapters 8 and 9.

³¹ Giere (n 5) 61–62.

³² *ibid* 62.

³³ Roberto Marchionatti, ‘J. M. Keynes, Thinker of Economic Complexity’ (2010) 18(2) *History of Economic Ideas* 123–124.

sophisticated abstract reasoning (i.e., mathematization/formalism of economics).³⁴ Rather, they advocated simple abstract reasoning because abstract models cannot develop an understanding of a complex and evolutionary system; they give us insights that we then need to combine sensibly to make sense of the complex and evolutionary economy.³⁵ Similarly, based on this understanding of the economic system, Keynes took the position that entrepreneurs and investors cannot infer probabilities about the future events because in an interdependent evolutionary system, we cannot establish valid inductions for the future based on the past. Based on this, Keynes theorized how economic agents form these expectations under the conditions of radical uncertainty as the starting point for his general theory.³⁶ Further, this methodological point, grounded in the ontological commitment of the complex evolutionary nature of the economy, underpinned Keynes' rejection of econometric analysis when applied to complex problems such as business cycle, while accepting them when applied to simple systems whose variables are independent and their relations are stable over time.³⁷

Shared values component refers to the how scholars perceive the role of explanation and prediction, what are the requirements for determining that a specific prediction is valid, and what is the better theory: the explanatory richer or that has a more accurate quantitative predictions or the simpler and inherently consistent.³⁸

Paradigm as exemplar component describes the procedures for the application (operationalization) of the paradigm as a world-view/disciplinary matrix. The paradigm-as-exemplar provides researchers of the paradigm with well-defined and replicable operational procedures that reflect the paradigm as a world-view, which the researchers can use for identifying and solving new puzzles.³⁹ The exemplar thus has three functions: provide puzzles and provide the way to solve them and provide standards for testing the quality of these solutions. These are internal standards for choice among different puzzle solutions and among diverse theories advanced from within the same paradigm. Here, Kuhn's major contribution is to

³⁴ *ibid* 125–126. *ibid* 133–134

³⁵ *ibid* 124–125. *ibid* 133–134

³⁶ *ibid* 136–137.

³⁷ *ibid* 140–141. The ontological dimension of economic paradigms is discussed further below.

³⁸ Kuhn (n 3) 185.

³⁹ *ibid* 42–48.

introduce the concept of paradigm as a world view that is then operationalized through the concept of paradigm as exemplar.

By introducing the concept of paradigm as a world view/disciplinary matrix and paradigm as exemplar as a component of the former, Kuhn enables us to conceptualize the first layer of the cognitive perspective that mediates between the observer and reality to be *the paradigm as a disciplinary matrix*. This paradigm produces, by using paradigm as exemplar, the concrete (formal or informal) models of the regulatory issue subject to investigation, which constitute the second layer of the cognitive perspective. Giere suggested the concept of *theoretical perspective*. Theoretical perspective refers to the general theoretical principles of a specific paradigm;⁴⁰ they are the symbolic generalizations component of the Kuhnian paradigm. Giere's theoretical perspective is narrower than Kuhn's paradigm as a disciplinary matrix and broader than Kuhn's paradigm as exemplar.⁴¹ If we adopt Giere's theoretical perspective, the latter would be the first layer of the cognitive perspective that informs the construction of concrete models representing the second layer of that perspective.

Yet, what difference would it make if we conceptualize the first layer of the cognitive perspective as Kuhn's disciplinary matrix (paradigm) or as Giere's theoretical perspective? There is no much difference. If we use Kuhn's paradigm as disciplinary matrix, we could say that Keynesian and neoclassical economics has distinct symbolic generalizations dimension (the theoretical dimension) and ontological dimension, and thus both are different paradigms as disciplinary matrices, or in other words, they are *distinct schools of thought*. If we use Giere's theoretical perspective, we would say that the divergence of the theoretical dimension of both Keynesian and neoclassical economics implies that they are distinct *theories*. In both cases, Keynesian and neoclassical economics are *distinct first layer* of the cognitive perspective that informs that construction of concrete models, resulting in two distinct overall cognitive perspectives. Indeed, if both Keynesian and the neoclassical perspective share the same components of the paradigm as a disciplinary matrix, but for the theoretical dimension, they would still represent distinct schools of thought from a Kuhnian perspective, but maybe proximate schools of thought.

⁴⁰ Giere (n 5) 60–62.

⁴¹ *ibid* 82.

However, Kuhn's conceptualization of paradigm as disciplinary matrix enables us to conceive the other differences among Keynesian and neoclassical economics that Giere's theoretical perspective does not enable us to perceive. Indeed, the broader we conceptualize the paradigm by including all the possible components that *constitute* its cognitive perspective, the more we can see the deeper differences among the first layers of overall cognitive perspectives that we may use as legal scholars for approaching legal institutions. Further, we can understand tentatively the degree of proximity among the schools of thought that would depend largely on the number and degree of differences among their comparable dimensions. For these reasons, I will conceptualize the first layer of the overall cognitive perspective as paradigm as a disciplinary matrix.

So far, the above exposition has established three propositions. First, cognitive perspectives are ways of seeing that mediates between observers (legal scholars) and phenomenon (legal institutions); observers have no direct access to reality. Second, theoretical knowledge is structured into paradigms, theories and models; theories and models do not subsume the entire theoretical space of any knowledge. Third, the cognitive perspectives are of two-layer structure; each of these layers is a distinct sub-cognitive perspective. The cognitive perspective of paradigms as disciplinary matrix in Kuhnian framework (schools of thought) or of theoretical perspectives (theories) in Giere's framework that correspond to proximate paradigms in Kuhnian framework occupies the first layer of the overall cognitive perspective. This paradigmatic first layer produces its own concrete models. Accordingly, every distinct paradigm or general theory gives rise to a distinct overall cognitive perspective. Diverse and contradictory concrete models of the same legal institution(s) originating from the same paradigm as a disciplinary matrix do not give rise to distinct overall cognitive perspectives. Doubtless, concrete models still embed distinctive cognitive perspective; however, concrete models that share the same underlying cognitive perspective (the first layer of the overall cognitive perspective) that produced them can be evaluated and compared according to the paradigm as exemplar of this first layer. In other words, Plurality of concrete models of the same concrete problems can be resolved by choosing the best model, which is determined according to the paradigm as exemplar of the cognitive perspective of first layer of the overall cognitive perspective that produced these concrete models.

We can now collapse these propositions into one proposition: Distinct paradigms/schools of thought represent diverse cognitive perspectives that give rise to distinct overall cognitive perspectives whose second layer is the concrete models produced by the corresponding school of

thought/paradigm. These overall cognitive perspectives are ways of seeing that mediates between the observer (legal scholar) and reality (legal institutions). This proposition shows that the schools of thought/paradigms constitutive of the first layer are the most important drivers of plurality of overall cognitive perspectives. Keeping this in mind, we can now turn to investigate plurality of cognitive perspectives in modern economic thought.

3. What is An Economic Paradigm? A Multi-Dimensional Representation of Economic Schools of Thought

In economic thought, the label of a *distinct school of thought* has been attached to neoclassical economics, old institutional economics, new institutional economics, behavioral economics, complexity economics, evolutionary economics, comparative capitalism, socio-economics, ecological economics, Austrian economics, post-Keynesian economics, feminism economics, Marxian and neo-Marxian economics, classical (neo-Ricardian) economics, political economy. Some heterodox economists categorize heterodox schools of economic thought into four main categories: critical institutional economics category (it includes different institutional economic paradigms such as socio-economics, old institutional economics, comparative capitalism, and radical political economy), ecological economics, post-Keynesian economics and feminist economics.⁴² Further, there are some national economic paradigms such as German Ordoliberalism and the French schools of regulation and conventions.

Some economists have suggested or attempted to *partially* synthesize elements of different economic schools of thought such as neoclassical and new institutional economics,⁴³ neoclassical

⁴² Julien-François Gerber and Rolf Steppacher, 'Introduction' in Julien-François Gerber and Rolf Steppacher (eds), *Towards an Integrated Paradigm in Heterodox Economics: Alternative Approaches to the Current Eco-social Crises* (Palgrave Macmillan 2012) 12.

⁴³ Williamson argues that new institutional economics is complementary, and not a substitute, to the neoclassical paradigm. Oliver E Williamson, 'The New Institutional Economics: Taking Stock, Looking Ahead' (2000) 38(3) *Journal of Economic Literature* 600. Williamson argues that there are four levels of socio-economic analysis: social norms, formal institutions such as judiciary, governance structures such as the firm, and resource allocation. He argues that neoclassical economics explains well the forth level that is resource allocation problems and new institutional economics *complements* neoclassical paradigm by analyzing the second and third levels (i.e., levels of formal institutions and governance structures). *ibid* 596–600.

and social economics,⁴⁴ old and new institutional economics,⁴⁵ post-Keynesian and ecological economics,⁴⁶ as well as institutional and ecological economics.^{47, 48}

Given this plurality of *labels* and based on the above analysis, we can now investigate how to best characterize the numerous labels for *distinctive* schools of thought in economic thought. Are they distinct *concrete models* (second layer of the cognitive perspective) that share the same first layer of that cognitive perspective because they share the same components of the paradigm as disciplinary matrix, including its theoretical component?, are they distinct theories or in Kuhnian's terminology proximate paradigms/schools of thought that diverge on their theoretical dimension only?, or are they distinct schools of thought that have deeper differences beyond their theoretical dimension? The answer to this question would determine whether these so-called schools of thought give rise to plurality of overall cognitive perspectives in economic thought. To understand the implications of the different answers to these questions consider, for example, ecological economics. Spash argues that ecological economics is not the same as environmental economics, which is just an application of neoclassical economics to environmental problems; ecological economics is rather a distinct school of economic thought.⁴⁹ Equating ecological economics with environmental economics would imply that ecological economics is *an extension and not an alternative* to neoclassical economics as far as the domain of environmental questions are concerned. To put his argument in the above conceptual framework, he argues that ecological economics is not a set of concrete models that originate from the neoclassical first layer of the

⁴⁴ See, e.g., John Elliotta and Hans Jensenb, 'Can Neoclassical Economics Become Social Economics?' (1996) 26(1) Forum for Social Economics.

⁴⁵ See, e.g., John Groenewegen, Frans Kerstholt and Ad Nagelkerke, 'On Integrating New and Old Institutionalism: Douglass North Building Bridges' (1995) 29(2) Journal of Economic Issues; Paul Vandenberg, 'North's Institutionalism and the Prospect of Combining Theoretical Approaches' (2002) 26(2) Cambridge Journal of Economics; and Malcolm Rutherford, 'The Old and the New Institutionalism: Can Bridges Be Built?' (1995) 29(2) Journal of Economic Issues.

⁴⁶ See, e.g., Tobias Kronenberg, 'Finding Common Ground between Ecological Economics and Post-Keynesian Economics' (2010) 69 Ecological Economics.

⁴⁷ See, for example, the chapters of the following edited volume that have attempted to integrate institutional and ecological economics: Gerber and Steppacher (eds), *Towards an Integrated Paradigm in Heterodox Economics* (n 12).

⁴⁸ Partial integration of economic schools of thought means that an economic school of thought borrows one of the dimensions of another school of thought. These schools of thought are therefore partially integrated. Next chapter will examine partial integration of economic paradigms and distinguish it from complete integration of these paradigms.

⁴⁹ Clive L Spash, 'New Foundations for Ecological Economics' (2012) 77 Ecological Economics 36–37.

overall cognitive perspective. Rather, ecological economics is a distinct first layer cognitive perspective, and thus its concrete models are distinct from those of the neoclassical perspective. As a result, ecological economics, on one hand, and neoclassical economics and its environmental economics concrete models, on the other hand, are distinct *overall* cognitive perspectives.

The question then is how to know whether these so-called schools of thought are distinct paradigms as disciplinary matrix (true schools of thought), or proximate paradigms that share the same dimensions except for the theoretical dimension (different theories/theoretical perspectives in Giere's framework), or concrete models that originate from the same school of thought or theoretical perspective. To do so, we need first to develop a well-developed concept for paradigm as a disciplinary matrix. The components that Kuhn suggested are good starting point but they fall short from being exhaustive. I have attempted below to develop a more exhaustive list of the components of the paradigm/school of thought. Once we have this conceptualization of the components/dimensions of each paradigm, we can then inquire the choices each of the so-called schools of thought made regarding each of these dimensions. I hinted above for example that Keynesian economics have an implicit ontological commitment to a complex and evolutionary understanding of the economic system. We need to investigate the choices made by other so-called schools of thought regarding this and other dimensions. If we found no difference among these so-called schools of thought regarding each of these dimensions, they would be nothing but concrete models that originated from the same school of thought. If there were differences, they would be distinct paradigms, whose proximity to each other would depend largely on the degree of these differences.

Obviously, in one chapter, I cannot go through each of the so-called schools of thought enumerated above to determine their dimensions and then compare them together. I thus take the schools of thought of Keynesianism, institutionalism, ecological and complexity economics as points of reference, and I show some of their differences with neoclassical economics along the eight dimensions constitutive of the schools of thought, which I develop below. Further, Julien-François Gerber and Rolf Steppacher suggested the integration of heterodox schools of thought to come up with an alternative paradigm to the neoclassical school of thought. I have introduced some adaptations to their proposed unified paradigm. Table 2.1 below outlines the dimensions of this proposed paradigm. I also use this hypothetical unified paradigm as a point of reference for the below discussion to show its divergences from the neoclassical paradigm. This is sufficient

for the goal of this chapter that is to demonstrate the plurality of the overall cognitive perspectives within economic thought.

It is noteworthy that the dissimilarities between the hypothetical unified paradigm and the neoclassical one reflect the differences among the paradigms underlying this unified paradigm and the neoclassical school of thought. However, this analysis would *exaggerate the differences* among neoclassical and non-neoclassical paradigms as the unified paradigm compiles all the distinct aspects of its underlying schools, which diverge from the neoclassical perspective. However, this exaggeration is indeed very indicative. As argued in chapter 4, economists should attempt to integrate schools of thought to come up with integrative paradigms; this activity would bring in new overall cognitive perspectives that significantly differ from existing schools of thought. Most importantly, the enumeration of the combined differences across various dimensions of non-neoclassical schools of thought and the neoclassical school of thought shows that integrating the insights of each of the schools of thought underlying the unified paradigm would lead to conclusions that are significantly divergent from the neoclassical conclusions. This is because the *integration of these insights* as dictated by integrated law and economics would reflect these combined differences.

As to the conceptualization of the dimensions/components of the paradigm, I propose a multi-dimensional analysis of schools of thought that does not presuppose a commitment to a specific epistemology/methodology of economics. In this multi-dimensional representation, schools of thought (paradigms) can be conceptualized along key *eight* dimensions: ontology (metaphysical part of the paradigm), epistemology (methodology), methods and techniques, theoretical principles and general theories, language/concepts, paradigm as exemplar, and institutional dimension.

Nonetheless, the above multi-representation seems to reflect a commitment to a specific epistemology of economics as we include, for instance, “ontology” as a dimension of economic schools of thought although many schools of philosophy of science such as pragmatism and social constructivism dismiss the epistemological importance of ontology.⁵⁰ In contrast, the school of

⁵⁰ For a very good account of pragmatism in philosophy of science, see: Hands, *Reflection without Rules* (n 25) 213-240. See also: Marcel Boumans and others, *Economic Methodology: Understanding Economics as a Science* (Palgrave Macmillan 2010) 125–128.

scientific realism advocates the epistemological significance of ontology.⁵¹ We include also the institutional dimension although logical positivism and empiricism consider the institutional structure of a discipline or a school of thought *epistemologically irrelevant*. On the contrary, the sociology of scientific knowledge movement perceives the institutional structure of a discipline or a school of thought as a major determinant of the direction and content of its produced knowledge.⁵² In order not to impose our preferred epistemology on conceptualizing economic schools of thought, we opted for an encompassing representation that includes major dimensions that have been emphasized in different epistemologies.

Given this broad representation of the components of schools of thought, other scholars can modify this representation of the components of schools of thought according to their own methodological position simply by changing the relations between different dimensions. For instance, a social constructivist or a pragmatist would agree that there is an ontological dimension underlying any school of school but he would argue that this ontological dimension has no epistemological significance. In other words, he would think that the ontological dimension should have no effect on the epistemological dimension. A scientific realist can construct the relation between ontology and epistemology differently. In fact, different scientific realists may structure the same relation differently. Almost all epistemologies would agree that the dimensions of economic schools of thought proposed here exist, but they would disagree over their epistemological significance.

The multi-dimensional representation of economic schools of thought represents therefore a “Weberian Ideal Type”⁵³ that could be restructured to fit different epistemologies by presuming different relations between different dimensions. If other scholars modified the components of the paradigm by undermining the epistemological significance of some of these dimensions, the economic schools of thought that diverge only on these dimensions would be no longer distinct.

⁵¹ Tony Lawson has been the major advocate of scientific realism in economics, see, e.g.: Tony Lawson, *Reorienting Economics* (Routledge 2003). For a discussion of the realism position advocated by Tony Lawson, see the chapters in the edited volume: Edward Fullbrook (ed), *Ontology and Economics: Tony Lawson and His Critics* (Routledge 2009).

⁵² For a very good overview of the sociology of scientific knowledge movement, see: Hands, *Reflection without Rules* (n 25) 172-198.

⁵³ This ideal type representation of economic schools of thought will be the benchmark for the discussion of integrated law and economics in the following chapters. For an overview of Weberian ideal types, see: Tore Lindbekk, ‘The Weberian Ideal-Type: Development and Continuities’ (1992) 35(4) *Acta Sociologica*.

They would collapse into the same paradigm. However, this would not undermine the argument made in defense of plurality of economic paradigms in economic thought for four reasons. First, the paradigms that might share the same dimensions after reducing the number of epistemologically relevant dimensions would not collapse into the same paradigm because the relations among these common dimensions may still differ across these paradigms. Second, the below analysis shows that the differences among the neoclassical and non-neoclassical paradigms run across all of their dimensions; reducing the number of epistemologically relevant dimensions would not eliminate these differences. Third, almost all major schools of philosophy of science, except maybe post-modernism, would agree to the epistemological significance of methodologies, methods, paradigm as exemplar, and normative dimensions, and indeed, these are the dimensions where the so-called schools of thought have stark differences. Finally, for the sake of argument, assuming that after reducing the number of the components of paradigms that we are left with few number of truly distinct schools of thought, these few number of distinct schools of thought would give rise to large number of distinct integrated schools of thought because of the high possible logical combinations among these dimensions.

So far, this section has demonstrated that we should conceptualize the dimensions of schools of thought as broadly as possible, and that broad conceptualization shall not undermine the conclusions we reach concerning the plurality of economic schools of thought that give rise to distinct overall cognitive perspectives plurality. I suggest that the dimensions of the schools of thought (paradigms) include ontology, epistemology (methodology), method, theoretical principles and theories, language/concepts, paradigm as exemplar, and institutional dimension. The below section investigates each of these dimensions with reference to neoclassical economics, some dimensions of the institutional, Keynesian, ecological, and complexity schools of thought, as well as the (hypothetical) unified heterodox paradigm depicted in table 2.1 below.

Dimension	Integrated Heterodox Economics	Neoclassical Economics
Ontological	Open Systems Approach	Closed Systems Approach
	Economy as a social construct with its history and specificities	Economy as a deduced structure based on a set of axioms

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	Focus on virtual, real and real-real economic levels	Focus on micro and macroeconomic levels
	Metabolic view of the society	Marginalist view of the economy
Methodological	Methodological pluralism	Methodological Monism, namely, positivism
	Focus on the community within the biosphere (Systemic Thinking – Embeddedness)	Focus on the individual within the national state (Methodological Individualism and Reductionism)
Methodical	Experiential and Algorithmic Knowledge (methodical plurality)	Algorithmic Knowledge (mathematical formalism – Quantitative Methods)
Normative	Social and environmental ethics (incl. needs fulfilled, equitable distribution, sustainability)	Utilitarian ethics (incl. optimal welfare, Pareto efficiency, externalities)
	Value pluralism (incl. incommensurability)	Monetary commensurability
	Bio-physical and social indicators, multi-criteria analysis	Monetary indicators, cost-benefit analysis
	Focus on disadvantaged social groups and classes	Focus on capitalists and managers
Paradigm as Exemplar	Co-evolution, heuristic behavior and satisficing	Optimization
	Circular and Cumulative Causation	(partial and general) equilibrium analysis

Theoretical	Heterogeneous, socio-ecologically embedded and institutionally conditioned agents	Universal self-centered, utility maximizing, rational agents with unlimited wants
	Steady state and selective degrowth	Conventional growth
Conceptual	Property and possession	Focus on private property
	Funds/services, stocks/flows and their control	Natural capital

Table 2.1: Comparison between (integrated) heterodox economics and neoclassical economics. Adapted from Gerber, Julien-Francois and Steppacher, Rolf (2012).⁵⁴

3.1. The Ontological Dimension of Economic Schools of Thought: The Neoclassical Closed Simple Non-Evolutionary Economic Systems vs. Open Complex Evolutionary Systems of the Heterodoxy

The ontological position of an economic school of thought refers to how it perceives the entities of the economic system, their relations, and the general features of the economic system. This is the metaphysical part of the paradigm in the above-mentioned Kuhnian conceptualization of paradigm as a disciplinary matrix. To illustrate this dimension, consider standard neoclassical economics,⁵⁵ it did not presume the existence of entities such as institutions and transaction costs. The economic system has constructed mainly from firms and consumers interacting indirectly through the forces of demand and supply. Both institutions and transaction costs have become well-established ontological entities in modern neoclassical economics after the rise of new institutional economics. This is a clear evolution of the ontological dimension underlying the neoclassical paradigm.

⁵⁴ Gerber and Steppacher, 'Introduction' (n 42) 14.

⁵⁵ As next chapter will illustrate, standard neoclassical economics refers to the *historical* version of neoclassical economics as developed mainly by the scholarly works of Jevons, Walras, and Marshall. For an overview of the intellectual contributions of these scholars, see: Ingrid H Rima, *Development of Economic Analysis* (5th edn, Routledge 1996) 250–268. *ibid* 310–341.

As to the general features of the economic system, Tony Lawson argues that some heterodox schools of economics such as institutional economics paradigms, evolutionary economic paradigm, and Keynesian economics share their ontological position; they share the view that economic system is an open evolutionary system⁵⁶ whereas neoclassical economics adopts a closed system ontological position.⁵⁷ He argues that the ontological position has fundamental implications for the validity of methodologies and methods used by economists. He argues further that the methodologies of neoclassical economics such as equilibrium analysis and formal mathematical deductive modeling do not fit an open system ontology.⁵⁸ The underlying ontological commitments of schools of thought are not in principle observable, unless the scholars make them explicit and build upon them their methodological positions. The examples of Marshall and Keynes above are highly illustrative. Further, Brian Arthur takes an obvious ontological position regarding the nature of the economic system that underlies the complexity economics perspective; according to him, the economic system is an evolutionary and complex system,⁵⁹ while arguing, similar to Lawson, that neoclassical school is an equilibrium economics school of thought that presumes a simple non-evolutionary economic system.⁶⁰ Similarly, by emphasizing the political institutions and technological aspect of the economic system, Acemoglu and Robinson conceptualize the economic system as a *contextualized evolutionary system*.⁶¹ Given this ontological commitment, universal laws of any economic system (e.g., capitalism)⁶²

⁵⁶ Lawson, *Reorienting Economics* (n 51) 171–173. *ibid* 180–181.

⁵⁷ *ibid* 12–13.

⁵⁸ *ibid.* *ibid* 66–68. Tony Lawson, *Economics and Reality* (Routledge 1997) 92–93. *ibid* 98–102.

⁵⁹ W. B Arthur, ‘Complexity Economics: A Different Framework for Economic Thought’ (2013). SFI Working Paper 2013-04-012, 1–2 <<http://www.santafe.edu/research/working-papers/abstract/36df2f7d8ecd8941d8fab92ded2c4547/>>

⁶⁰ *ibid* 2–3. Given this mismatch between the evolutionary complex nature of economic reality and the equilibrium-based neoclassical analysis, Arthur rightly argues that ‘for highly interconnected [evolutionary] systems, equilibrium and closed form solutions are not the default outcomes; if they exist they require justification.’ *ibid* 6.

⁶¹ Daron Acemoglu and James A Robinson, ‘The Rise and Decline of General Laws of Capitalism’ (2015) 25(1) *Journal of Economic Perspectives* 22. *ibid* 24–25

⁶² Neoclassical-new institutional symbolic generalizations/general theoretical principles such as the fundamental theorems of welfare and Coase theorem should not be interpreted as universal economic laws that apply across time and space. They are universal laws that apply to the *abstract toy* systems that economists construct under high unrealistic assumptions. These general principles can be helpful in developing concrete models for contextualized evolutionary sub-systems of the (capitalist) economic system. Due to the plurality of the general theoretical principles across schools of thought, each of these principles can produce contradictory concrete models; the insights of these models should therefore be cross-criticized and then integrated. In short, what neoclassical economics normally considers as universal

are doomed to fail.⁶³ In sum, many heterodox schools of thought such as Keynesian economics, institutional economics, evolutionary economics, and ecological economics seem to be committed to a metaphysical understanding of the economy or some of its sub-systems as open, complex, and evolutionary systems. Conversely, neoclassical economics seems to adopt a closed, simple, and non-evolutionary understanding of the economic system and most of its underlying sub-systems.

3.2. The Epistemological Dimension of Economic Schools of Thought: the Indeterminate Methodological Position of Neoclassical Economics

Each school of thought endorses explicitly or implicitly a methodological/epistemological position that guides its research. Epistemology refers to how we can acquire *knowledge* conceptualized as ‘justified true belief’.⁶⁴ Normative epistemology (methodology) prescribes the *scientific methods* required for the *justification* of the truth of our beliefs; in short, methodology prescribes the methods required for gaining *knowledge*.⁶⁵

The methodologies advocated by the economists belonging to the same school of thought do not determine the methodological position of that school because these economists may support contradicting methodologies. In neoclassical economics, Apriorism has been advocated by Lionel Robbins, Operationalism (called also descriptivism) has been advocated by Paul Samuelson, and *as-if* methodology has been advocated by Milton Friedman.⁶⁶

Similarly, what economists claim to be doing does not determine the actual methodology underpinning their economic paradigm.⁶⁷ Samuelson, for example, has not followed his

laws are indeed theoretical principles/perspectives that generate concrete models and insights for real contextualized sub-systems; this deconstructs any alleged universality of economic thought. On the interpretation of universal laws in science as theoretical perspectives, see: Giere (n 5) 60–62.

⁶³ Acemoglu and Robinson (n 61), 24–25.

⁶⁴ Robert Audi, *Epistemology: A Contemporary Introduction to the Theory of Knowledge* (Routledge contemporary introductions to philosophy, 3rd edn, Routledge 2011) 247.

⁶⁵ Mario Bunge, *Treatise on Basic Philosophy-Volume 5: Epistemology & Methodology I - Exploring the World* (D. Reidel Publishing Company 1983) 4–6.

⁶⁶ For an overview of these methodologies, see: Blaug (n 4) 76–99; Boumans and others (n 50) 42–55.

⁶⁷ Geert Reuten, ‘A Revision of the Neoclassical Economics Methodology: Appraising Hausman's Mill-Twist, Robbins-Gist, and Popper-Whist’ (1996) 3(1) *Journal of Economic Methodology* 39–40.

descriptivism methodology in his scholarly research.⁶⁸ Neoclassical economists claim that they follow the Popperian falsification methodology as expounded by Milton Friedman.⁶⁹ Economic methodologists, however, rightly emphasize that neoclassical economists are not committed in their research to Popperian falsification.⁷⁰ Mark Blaug, for example, claims that neoclassical economists are committed in their research to what he calls ‘innocuous falsificationism.’⁷¹ and argues that the evolution of economics fits partially Lakatosian scientific research programmes.⁷²

Despite their extensive discussions of the methods and techniques they use in their research, neoclassical economists do not discuss explicitly the underlying methodologies informing these methods and their research practice. Subsequently, any account of the methodological position of neoclassical economics would be somehow problematic. However, we could safely argue that neoclassical economics adopts a positivist rather than an interpretive/hermeneutical, critical or social constructivist relativist epistemology.⁷³ On this dimension, neoclassical economics can be contrasted with some heterodox schools of economics that adopt interpretive or critical epistemologies such as some variants of institutional economics. Neoclassical economists also attempt to adopt a form of Popperian falsificationism according to which economic theories are tested by testing their predictions empirically.⁷⁴ Nevertheless, they do not completely commit to this methodology, as it requires abandoning any theory whose predictions have been contradicted by only one empirical evidence.⁷⁵ Further, neoclassical economics relies also on axiomatic equilibrium theories that are unfalsifiable that bring neoclassical economics close to apriorism.. Neoclassical paradigm adopts also empiricism as many empirical studies are conducted for discerning correlations or causal relations despite the lack of any coherent underlying theory.⁷⁶ In

⁶⁸ Boumans and others (n 50) 54–55.

⁶⁹ Blaug (n 4) 111. *ibid* 244. Reuten (n 67) 41.

⁷⁰ Blaug (n 4) 111. *ibid* 238–242. D. W Hands, ‘Popper and Lakatos in Economic Methodology’ in Uskali Mäki, Bo Gustafsson and Christian Knudsen (eds), *Rationality, Institutions and Economic Methodology* (Routledge 1993) 65–66.

⁷¹ Blaug (n 4) 244. See also: Reuten (n 67) 45–47, and see the reference cited therein.

⁷² Blaug (n 4) 244. See also: Boumans and others (n 50) 113–114. In contrast, Hands argues that Lakatosian scientific research programmes can provide insights for studying the history of economic thought, but this Lakatosian perspective fails to describe progress in economic thought or prescribe a proper criterion for theory choice. Hands, ‘Popper and Lakatos in Economic Methodology’ (n 70) 69.

⁷³ For an excellent account of the relation between hermeneutical epistemology and economics, see the chapters of the edited volume: Don Lavoie (ed), *Economics and Hermeneutics* (Routledge 1990).

⁷⁴ Reuten (n 67) 41.

⁷⁵ *ibid*.

⁷⁶ Reuten (n 67) 41.

addition, of Milton Friedman's *as-if* methodology has significantly influenced neoclassical economics. Friedman argued that the realism of the underlying assumptions of the theory does not matter for theory choice; theories should be tested only with reference to their predictions.⁷⁷ As a result, unrealistic models not only populate modern neoclassical economics, but also contribute to policy-making,⁷⁸ which makes the methodological position of neoclassical economics come close to instrumentalism. Furthermore, neoclassical economists commit to formal mathematical analysis; that is why Sheila Dow considers (deductive) formalism the key defining feature of neoclassicism.⁷⁹ Finally, as chapter 5 shall demonstrate in detail, neoclassical economics is deeply committed to methodological individualism and reductionism.

In contrast, in addition to the positivist methodology of neoclassical economics, some institutional schools of thought endorse interpretive and critical epistemologies. Almost all heterodox schools of economics such as institutional economic paradigms, Keynesianism, evolutionary economics and ecological economics are not committed to formalism and reject axiomatic unfalsifiable methodology. Furthermore, many heterodox schools of thought such as institutionalism and Keynesianism emphasize the importance of the realism of the underlying assumptions of their models. This concern with realism led old institutionalists to focus on case studies and thick descriptions of economic reality. Both Keynesianism and institutionalism endorse explicitly, as chapters 5 and 6 shall demonstrate, a systemic perspective, while rejecting reductionism. Accordingly, heterodox schools of thought, particularly, institutional and Keynesian schools and neoclassical economics do not share the same methodological dimension.

3.3. The Methodical Dimension of Economic Paradigms: Neoclassical Quantitative Monism vs. Heterodox Methodical Plurality

⁷⁷ Milton Friedman, 'The Methodology of Positive Economics' in Daniel Hausman (ed), *The Philosophy of Economics: An Anthology* (3rd edn. Cambridge University Press 2008) 149–153.

⁷⁸ Pfliegerer calls the numerous (neoclassical) unrealistic models that assert, mistakenly, its applicability to policy making "chameleons", see: Paul Pfliegerer, 'Chameleons: The Misuse of Theoretical Models in Finance and Economics' (March 2014). Stanford Business School Working Paper no. 3020, 7 <<https://www.gsb.stanford.edu/faculty-research/working-papers/chameleons-misuse-theoretical-models-finance-economics>>

⁷⁹ Sheila Dow, 'Plurality in Orthodox and Heterodox Economics' (2008) 1(2) *The Journal of Philosophical Economics* 79. See also: David Colander, Richard Holt and Barkley Rosser Jr, 'The Changing Face of Mainstream Economics' (2004) 16(4) *Review of Political Economy* 493.

The methodical dimension of any economic school of thought refers to the set of methods and techniques used by their scholars. The methodology adopted by the economic school of thought and its institutional structure determine which methods are considered to be valid within its research community. Neoclassical economics has been dominated by quantitative methods that do not analyze economic phenomena in *real historical* time.⁸⁰ In contrast, heterodox schools of economics such as institutional economic paradigms, evolutionary economics, ecological economics, and Keynesian economics are methodically pluralistic as they are open to qualitative methods, historical analysis, mixed methods, experimental methods, as well as quantitative methods ignored in neoclassical economics such as agent-based modelling and system dynamics (i.e., stock-flow models).⁸¹ Further, these schools of economic thought pay due attention to analysis of economic phenomena in real historical time because of their ontological commitment to understanding economic systems as *path dependent* systems sensitive to their initial conditions.⁸²

3.4. The Normative Dimension of Economic Schools of Thought: A Stark Divergence

The fifth dimension of economic schools of thought refers to their *normative theory*. As we have seen above, Kuhn does not include normative theory as a component of paradigm as a disciplinary matrix as his analysis revolved around natural sciences. The normative dimensions of economic Schools of thought exhibit stark differences. Welfarism is the normative theory underlying neoclassical economics, based on which the welfare criteria of Pareto efficiency and Kaldor-Hicks efficiency have been developed. These criteria are the standard evaluation methods for comparing states of the world in the neoclassical perspective. As chapter 10 discusses these normative issues in detail, it suffices here to note that non-neoclassical schools of thought and theories such as Sen's capabilities approach, ecological economics, Keynesian economics, feminist economics and institutional economic paradigms endorse other normative standards such

⁸⁰ Geoffrey M Hodgson, 'The Reconstruction of Economics - Is There Still a Place for Neoclassical Theory?' (1992) 26(3) *Journal of Economic Issues* 752.

⁸¹ For a very good overview of these numerous methods that are used in heterodox economics, see the chapters in the edited volume: Frederic S Lee and Bruce Cronin (eds), *Handbook of Research Methods and Applications in Heterodox Economics* (Edward Elgar 2016).

⁸² Arthur (n 59) 18.

as capabilities expansion, sustainable development, full employment and fair distribution of income, wealth and power.

3.5. The Theoretical Dimension of Economic Schools of Thought: Stark Differences between Neoclassical and Heterodox Economics

This is the symbolic generalizations or the theoretical principles of the school of thought mentioned above. These theoretical principles include the key theoretical principles, major general theories and analytical concepts and framework of the school of thought. I have mentioned above the fundamental theorems of welfare and Coase theorem as examples of the key general theories of neoclassical-new institutional economics. We can also add the general equilibrium theory (proof of existence and stability of the general equilibrium), Solow growth model and efficient capital market hypothesis to the list.

These major theories have been *the product* of the neoclassical cognitive perspective; neoclassical economists have developed them based on some basic theoretical principles/theories of the neoclassical perspective. Rational choice theory is that core theoretical principle that enables neoclassical economists to use maximization under constraint; a basic and convenient starting point for formal neoclassical mathematical analysis. Neoclassical economists were thus able to combine rational choice with the methodologies of deduction and reductionism (particularly, methodological individualism and reductive institutional individualism)⁸³ to construct these general theories. However, once neoclassical-new institutional economists have produced these theories, they become an input into the theoretical dimension of the paradigm. In other words, they are not of the status of concrete models that occupy the second layer of the overall cognitive perspective of neoclassicism. Due to their general character and their highly unrealistic assumptions, these are symbolic generalizations that organize the way the neoclassical economists *think and see*; they are constitutive of the theoretical dimension of neoclassical economics. This illustrates that schools of thoughts are self-reproducing self-referential systems; they use their own theoretical principles/general theories for producing other theories/general

⁸³ For a discussion of the reductionism, methodological individualism, and the improper reductive institutional individualism of neoclassical law and economics approach to economic regulations, see sections 5, 6, and 7 of chapter 5 and the references cited therein.

principles that enrich their theoretical dimension. *They reproduce themselves*. Further, each of newly produced theoretical principles produces numerous concrete models constitutive of the second layer of the overall cognitive perspective.

In contrast to the rational choice theory of neoclassical economics, heterodox schools of thought have endorsed other theoretical principles. Rational choice theory has come under severe attacks from behavioral economics and its offspring behavioral law and economics, old and new institutional economics and socio-economics. Unlike the mechanistic instrumentally rational, self-interested, and optimizing actor of neoclassical economics, behavioral economics contends that actual economic actors are boundedly rational, boundedly self-interested, and suffer from weak willpower.⁸⁴ Similarly, new institutional economics deviates from the rationality assumption and endorses the behavioral assumptions of bounded rationality and opportunism.⁸⁵ Bounded rationality means that actors are intendedly rational but limitedly so due to informational asymmetry and their limited cognitive ability to process the available information.⁸⁶ Opportunism refers to a self-interested behavior with guile; actors are inclined to behave unethically to take advantage of other actors due to information asymmetry or dependency relations.⁸⁷ Socio-economics endorses a socio-economic conception of the individual according to which individuals are not motivated in their actions by self-interest only but also by ethics and morality.⁸⁸ They are constrained and enabled in their actions by the socio-economic environment in which they are embedded.⁸⁹ In addition, Elinor Ostrom argues that individuals' behavior is a function of their environment; in competitive contexts, individuals behave rationally or more accurately only individuals whose behavior is rational would survive competition and thus

⁸⁴ Christine Jolls, Cass R Sunstein and Richard Thaler, 'A Behavioral Approach to Law and Economics' (1998) 50(5) *Stanford Law Review* 1477–1479.

⁸⁵ Williamson, 'The New Institutional Economics: Taking Stock, Looking Ahead' (n 43) 600–601. Oliver E Williamson, 'Transaction Cost Economics: How It Works; Where it is Headed' (1998) 146(1) *De Economist* 30–31.

⁸⁶ *ibid.* Williamson, 'The New Institutional Economics: Taking Stock, Looking Ahead' (n 43) 600–601.

⁸⁷ *ibid.* 601. Williamson, 'Transaction Cost Economics: How It Works; Where it is Headed' (n 85) 31.

⁸⁸ Mark Lutz, 'Emphasizing the Social: Social Economics and Socio-Economics' (1990) 48(3) *Review of Social Economy* 309–311, and see the reference cited therein.

⁸⁹ *ibid.*

rationality assumption would be warranted in these contexts.⁹⁰ In uncompetitive contexts, individuals may not behave rationally and thus other behavioral assumptions can be employed.⁹¹

With the exception of Keynesianism and maybe classical (neo-Ricardian) economics, most of heterodox schools of economics are theoretically under-developed. Different readings of Keynes' general theory have established well-defined substantive theoretical principles of some heterodox schools of economics such as traditional, new and post-Keynesianism. O'Hara suggests that some heterodox economic paradigms (such as institutional economics, evolutionary economics, and political economy) share some important theoretical principles such as historical specificity, social capital, and complexity.⁹² The convergence of these schools of thought over these theoretical principles suggests the possibility of a coherent economic policy informed by these schools of thought⁹³ and plausibility of an integrative heterodox school of economics. Doubtless, heterodox schools of economics have distinctive theoretical principles and analytical concepts. However, their success in developing these theoretical principles and analytical concepts into general and abstract theories similar those of neoclassical-new institutional economics have been limited.

In contrast to neoclassical economics, their theoretical contributions seem to be poor. Heterodox schools of economics, although attempting to compete with neoclassical paradigm, have not yet developed well-founded and rigorous value, distribution, and growth theories or theories for the firm, the consumer, or the financial markets. For example, comparative capitalism paradigm, as a major institutional economic paradigm, has introduced the theoretical concept of *institutional complementarity*.⁹⁴ Despite the cognitive significance of this analytical concept, comparative capitalism paradigm has not succeeded yet in developing a theory for institutionally interdependent markets. The same applies to old institutional economics. Despite its distinctive theoretical principles, there is no well-established (old) institutional theory of product or financial

⁹⁰ Elinor Ostrom, 'Background on the Institutional Analysis and Development Framework' (2011) 39(1) *The Policy Studies Journal* 13–14.

⁹¹ *ibid.*

⁹² Phillip A O'Hara, 'Principles of Institutional-Evolutionary Political Economy: Converging Themes from the Schools of Heterodoxy' (2007) 41(1) *Journal of Economic Issues* 6–14.

⁹³ *ibid* 29–34.

⁹⁴ For a thorough discussion of the concept of "institutional complementarity", see, Colin Crouch and others, 'Dialogue on 'Institutional Complementarity and Political Economy'' (2005) 3(2) *Socio-Economic Review*, and see section 2.2.2 on institutional interdependencies in chapter 5 and the references cited therein.

markets or the firm. Its institutional theory for labor markets, though more developed,⁹⁵ is still primitive as well.

Because of the theoretical under-development of heterodox schools of thought, some heterodox economists argue that a successful integration of theoretical contributions of these schools would enable them to compete with neoclassical paradigm.⁹⁶ They argue that post-Keynesianism, institutional economics, feminism economics, and ecological economics have made important theoretical contributions to macroeconomics, microeconomics, gender, and sustainability issues respectively.⁹⁷ Their argument, although ambitious due to the inconsistencies among many of the dimensions of these paradigms, reveals the significant theoretical development of neoclassical economics as it has succeeded in constructing somehow general theories for value, distribution, business cycle, growth, financial markets, and the firm; theories that cover major areas of macroeconomics, microeconomics and development economics.. Despite the extensive valid critiques addressed to theoretical contributions of neoclassical economics, it is still the most *theoretically* developed economic paradigm. No other economic paradigm has succeeded in providing a comparable body of theory.

Finally, many scholars of economic schools of thought normally contend that they use their schools of thought to develop *positive* analysis. However, the normative dimension of each school of thought determines the range of *positive* questions that the scholars of this school investigate. Scholars develop theories that would exhaust this normatively delimited range of investigation. The normative dimension/component of each school of thought determines its theoretical focus, and the latter feeds in the normative dimension to solidify the normative dimension and dismiss other normative concerns. Inequality of income, wealth, and power would give excellent example on this intricate relation between normative and theoretical dimensions of the economic schools of thought. In old institutional economics, economics is defined as the *management* of the

⁹⁵ See, e.g.; Bruce E Kaufman, ‘Economic Analysis of Labor Markets and Labor Law: An Institutional/Industrial Relations Perspective’ in Cynthia Estlund and Michael L Wachter (eds), *Research Handbook on the Economics of Labour and Employment Law* (Edward Elgar 2012); and Bruce E Kaufman, ‘Labor Markets and Employment Regulation: The View of the "Old" Institutionalists’ in Bruce E Kaufman (ed), *Government Regulation of the Employment Relationship* (Cornell University Press 1997)

⁹⁶ Gerber and Steppacher, ‘Introduction’ (n 42) 6. See also: Clive L Spash, ‘Towards the Integration of Social, Ecological and Economic Knowledge’ in Julien-François Gerber and Rolf Steppacher (eds), *Towards an Integrated Paradigm in Heterodox Economics: Alternative Approaches to the Current Eco-social Crises* (Palgrave Macmillan 2012) 27–39. *ibid* 45–46.

⁹⁷ Gerber and Steppacher, ‘Introduction’ (n 42) 6.

economy to ensure both creation of wealth (through, for example, efficient allocation of resources) and *fair* distribution of resources.⁹⁸ In contrast, Lionel Robbins defined (neoclassical) economics as ‘the science which studies human behavior as a relationship between ends and scarce means which have alternative uses’;⁹⁹ in other words, it is the study of the efficiency of allocation of scarce resources. Hence, it is not a coincidence that neoclassical economics, despite having a *problematic* theory of income distribution, has no well-developed theory of distribution of wealth or power. This lacuna is a result of the normative underpinning of the school that is centered on efficient allocation of resources.¹⁰⁰ Given that the theoretical outlook of each school of thought involves underlying normative biases, to which extent can we characterize the *overall* picture of the economy that any school of thought generates as *positive*? In contrast to what many scholars of each economic school of thought would argue, it is not a purely positive picture. The inherent normative biases do not permeate only the theoretical dimension of schools of thought, but also their conceptual dimension discussed below. When discussing the incommensurability thesis in chapter 4, we will elaborate on the normative biases of the network of *concepts* (e.g., the concept of the firm) that each school of thought constructs and uses for analysis and design of legal institutions.

3.6. The Conceptual/Linguistic Dimension of Economic Schools of Thought and the Problem of Linguistic Incommensurability

⁹⁸ Bruce Kaufman, ‘The Institutional Economics of John R. Commons: Complement and Substitute for Neoclassical Economic Theory’ (2007) 5 Socio-Economic Review 13.

⁹⁹ Lionel Robbins, *An Essay on the Nature and Significance of Economic Science* (Macmillan and Co. Limited 1932) 15.

¹⁰⁰ The normative dimension of schools of thought has other deeper effects on their theoretical dimension. Due to the normative significance of allocation of resources in neoclassical economics, the theory of value (i.e., the theory of determination of prices and existence and stability of equilibrium prices) has become the central theory of neoclassical economics. This theory perceives the economy as set of market forces of demand and supply that determine prices. Given this theoretical perspective over the capitalist system as a market of demand and supply forces, the question of distribution can be only resolved with reference to this understanding of capitalism as a market economy of demand and supply forces. Neoclassical theory of distribution had thus to *attribute income distribution* to these market mechanisms, resulting in a theory of distribution in which workers and capitalists receive the marginal productivity of their labor and capital in competitive markets. Here, the neoclassical normative focus on allocation of resources has created a theoretical perspective that concentrates on market forces at the expense of political and legal institutions and technology, resulting in a theory of distribution that locates the drivers of income distribution in market forces.

Each economic school of thought has its own distinctive language¹⁰¹ as best exemplified in the *concepts* they use *analytically*.¹⁰² Neoclassical economics employs analytical concepts such as economic efficiency, which have been used *analytically and rhetorically* in law and economics scholarship excessively.¹⁰³ This dimension also includes the basic concepts that may not function as analytical frameworks in the analysis, but are still constitutive of the cognitive perspective of the school of thought as they organize reality into conceptual categories. These conceptualizations include, inter alia, conceptualizing money as a commodity, the firm as nexus of contracts, and transaction costs as costs of consummation and enforcement of the contract. Heterodox schools of economics have also their distinctive *network of concepts*.¹⁰⁴ Even when different schools of thought and theories share similar concepts, they may still differ in the way they conceptualize these concepts; for example, the institutional schools of thoughts in economics, sociology, political science, and law share the concept “institution”, but they conceptualize it differently.¹⁰⁵ Similarly, neoclassical economics, new institutional economics, management studies, and legal theory share the concept “the firm”, but they differ in their conceptualization of the firm.¹⁰⁶

Kuhn has suggested that the linguistic difference between scientific paradigms would constitute a semantic incommensurability.¹⁰⁷ He argues that the concepts of one paradigm cannot be translated adequately to the language of other paradigms. Incommensurability thesis as such presents a challenge to integrating different paradigms. Chapter 4 tackles in more detail the conceptual dimension of schools of thought and the linguistic incommensurability thesis underlying the methodological position of fragmented pluralism and develops counter-arguments to the incommensurability thesis.

¹⁰¹ Sheila C Dow, ‘Structured Pluralism’ (2004) 11(3) *Journal of Economic Methodology*.

¹⁰² For example, see an overview of some of the most important (analytical) concepts and principles in ecological and institutional schools of economic thought in: Gerber and Steppacher, ‘Introduction’ (n 42) 13–24.

¹⁰³ Michael D Murray, ‘The Great Recession and the Rhetorical Canons of Law and Economics’ (2012) 58(2) *Loyola Law Review* 17–18. *ibid* 35–39.

¹⁰⁴ For an overview, see: Gerber and Steppacher, ‘Introduction’ (n 42) 13–24.

¹⁰⁵ For the most famous conceptualizations of “institutions” in institutional schools of thought across the disciplines of law, economics, sociology, and political science see: Daniel H Cole, ‘Varieties of Comparative Institutional Analysis’ [2013] *Wisconsin Law Review*, 388–393, and see the references cited therein.

¹⁰⁶ See sections 4.1, 4.2, and 4.3 on the transaction cost, property rights, and knowledge-based theories of the firm in chapter 8 and the references cited therein.

¹⁰⁷ Kuhn (n 3) 101–102. *ibid* 149. Bird (n 3) s. 4.3, paras. 1–4.

3.7. Paradigm as Exemplar: The Under-development of Paradigm as Exemplar Dimension of Heterodox Economic Schools of Thought

Kuhn has illuminated our understanding of the schools of thought (paradigms) by introducing the concept of *paradigm as exemplar* as an important component of these schools of thought.¹⁰⁸ Paradigm as exemplar refers, mainly, to operationalized analogical thinking.¹⁰⁹ The ontological, epistemological, methodical, theoretical, and normative dimensions constitutive of the world-view (way of thinking/seeing) of a specific paradigm have to be translated into *standardized procedures* that operationalize the cognitive perspective of that paradigm. These procedures also function as the quality standards for research undertaken using the cognitive perspective of this paradigm. Supply and demand equilibrium analysis represents a good instance of paradigm as exemplar¹¹⁰ because it operationalizes the world-view of the neoclassical paradigm that endorses closed non-evolutionary system and market forces as their major *ontological entities* and positivism as its *epistemology* and quantitative analysis as its method. Demand and supply equilibrium analysis has been able to operationalize these dimensions and thus is used across different problems within neoclassical economics such as commodity price determination, analysis of price ceilings effects, housing rent controls, and subsidies.¹¹¹

In contrast to neoclassical economics, some heterodox paradigms such as the evolutionary economics of Thorstein Veblen, the old institutional economics of John Commons, and classical political economy did not succeed at their time in operationalizing their paradigms as a world-view because they failed to develop a paradigm as exemplar. This partially explains their heterodox status because a paradigm that lacks a *paradigm as exemplar* component cannot succeed in locating itself in the orthodoxy or the mainstream.¹¹² Accordingly, Geoffrey Hodgson argues that (institutional and evolutionary) economics can succeed in operationalizing its world-view by using the approaches and methods of biology.¹¹³ Similarly, Brian Arthur argues that

¹⁰⁸ Kuhn (n 3) 42–48. *ibid* 187–191. See also: Bird (n 3) s. 6.4, paras. 2-3.

¹⁰⁹ Kuhn (n 3) 187–191. Bird (n 3) s. 3, paras. 2-6. *ibid* s. 6.4, para. 3.

¹¹⁰ George Argyrous, ‘Kuhn’s Paradigms and Neoclassical Economics’ (1992) 8(1) *Economics and Philosophy* 234–236.

¹¹¹ *ibid* 234.

¹¹² Argyrous (n 110), 244.

¹¹³ Geoffrey M Hodgson, ‘Metaphor and Pluralism in Economics: Mechanics and Biology’ in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997) 142–145.

complexity economics can provide the classical political economy with the theoretical framework it lacks.¹¹⁴

It is important to distinguish paradigm as exemplar from methods because economic schools of thought that share the same methods may have different procedures for approaching their research problems as *these procedures represent an operationalized mixture of the dimensions* of these schools of thought. A sociologist and a neoclassical economist would approach the problem of consumption behavior of economic agents differently even if they adopt quantitative methods because their cognitive paradigms do not share the same ontological, epistemological, theoretical, and linguistic dimensions.¹¹⁵ Further, if schools of thought share the same dimensions, they may still differ on how they operationalize the mixture of these dimensions through their paradigm as exemplar component. Paradigm as exemplar develops through *analogical thinking* as each generation of scholars learn how to operationalize their paradigm as a world-view by following, developing, and refining the procedures established by their predecessors.¹¹⁶ As a result, paradigms as exemplars of each school of thought evolve over time.

Neoclassical economics has developed a paradigm as exemplar that succeeded in operationalizing its cognitive perspective. The neoclassical paradigm as exemplar has been embedded in modern economics education and research. Scholars who fail to comply with the neoclassical paradigm as exemplar cannot publish their scholarly works in top economic journals. On the contrary, most heterodox schools of economics have failed to develop their paradigm as exemplar component. Their Paradigms as exemplars have not been embedded into economic education and research because they are still under-developed. Indeed, the under-development of their paradigm as exemplar may partially explain the under-development of the theoretical dimension of these schools of thought.

3.8. The Institutional Dimension of Economics and Legal Scholarship

Any discipline (e.g., economics, or law) has *institutional frameworks* that govern teaching this discipline (i.e., education), research (i.e., conducting, communication, and evaluation of

¹¹⁴ Arthur (n 59) 17.

¹¹⁵ Argyrous (n 110), 236–243.

¹¹⁶ Kuhn (n 3) 187–191.

research), and academic careers (i.e., appointment and promotion of researchers) in this discipline. These institutional frameworks consist the institutional dimension of this discipline. A discipline such as economics encompasses a myriad of schools of thought; hence, the institutional dimension of economics is common across these schools of thought. In other words, this institutional dimension of the discipline of economics governs the education of each of these schools of thought, the research conducted by using the cognitive perspective of each of these schools of thought, and the academic careers of economists who are competent teachers and scholars of each of these schools of thought. Similarly, the institutional frameworks of legal education, legal research, and careers of legal scholars consist the institutional dimension of the discipline of law.

The institutional dimension of any scientific discipline has significant epistemological implications because it affects the evolution of the schools of thought of the disciplines and the degree of dominance of each school of thought over education and research in this discipline. Thomas Kuhn has argued that *mature* disciplines undergo phases of normal science and revolutions.¹¹⁷ The normal science phase is characterized by a dominant paradigm that is taken as granted and not questioned by the scholars in the discipline. Scholars working within this paradigm are engaged in ‘*puzzle-solving*’ of specific and focused research questions formulated and addressed by using the cognitive perspective of this dominant paradigm.¹¹⁸ When scholars working within a particular paradigm confront significant anomalies that could not be subsumed within their paradigm, new paradigms that account for these anomalies emerge and begin to compete with the dominant paradigm.

Kuhn argued that there is no *one decisive objective method* for choosing among competing paradigms; scholars of each paradigm would therefore attempt to persuade other scholars of their paradigm.¹¹⁹ The paradigm attracting the most significant scholarly support gains dominance and then kicks off a new phase of normal science. Paradigm choice would thus depend on, inter alia, *sociological and psychological criteria*.¹²⁰

¹¹⁷ *ibid* 6–7. Bird (n 3) s. 2, para. 3.

¹¹⁸ Kuhn (n 3) 36–38. Bird (n 3) s. 2, para. 3.

¹¹⁹ Kuhn (n 3) 199–200. For a discussion of incommensurability, which Kuhn considers the primary reason for the lack of an exclusive objective and rational method for *paradigm choice*, see sections 4 and 5.1 of chapter 4 and the references cited therein.

¹²⁰ *ibid* 199–204. Bird (n 3) s. 2, para. 6.

Kuhn, however, argues that the process of persuasion that takes place between scholars is not irrational; it rather includes many rational arguments based on the pragmatic value of the paradigm such as its ability to solve the anomalies faced by other paradigms, its internal coherence, its simplicity, and its fruitfulness.¹²¹ In sum, the choice of one paradigm or its theories over another would not rely only on *rational* considerations due to the incommensurability problem but would rely also on *psychological and sociological* factors.

Kuhn's story opened the door for the sociological turn in philosophy of science advocating that the sociology of any discipline would determine the direction, form, and content of its produced knowledge.¹²² For instance, top economic journals tend to reject qualitative research¹²³ and until recently, reject any models that do not assume rational choice. Since publication in top economic journals is the main *institutional* requirement for a successful academic career in economics, this *institutional* structure of publication reinforces the *dominance* of the neoclassical school of thought over other schools of thought due to the neoclassical commitment to formalism and rational choice. Unlike economics, the institutional framework of publication in sociology does not require rational choice modelling or formal quantitative analysis. As a result, in comparison to economics, the influence of rational choice is more limited in sociology;¹²⁴ sociological schools of thoughts that subscribe to rational choice do not necessarily dominate sociological research and education. Further, sociology becomes open to both schools of thought that employ both quantitative and qualitative methods.

In short, Kuhn's scientific revolution and the sociological turn in philosophy of science establish that the institutional structure of a discipline would determine largely the schools of

¹²¹ Kuhn (n 3) 199. Bird (n 3) s. 2, para. 6.

¹²² Boumans and others (n 50) 122.

¹²³ Neoclassical economics tends to mistrust qualitative evidence. This mistrust can be traced back to the marginalist controversy because case studies demonstrated that managers of the firms in competitive markets do not set prices equal to marginal cost. This was a major challenge to neoclassical theory of perfect competition, a challenge that Milton Friedman sought to address. Friedman (n 77) 153–159. For a discussion of Friedman's methodological contribution to the marginalist controversy, see: Roger E Backhouse, 'Friedman's 1953 Essay and the Marginalist Controversy' in Uskali Mäki (ed), *The Methodology of Positive Economics: Reflections on the Milton Friedman Legacy* (Cambridge University Press 2009). For a defense of the usefulness of case-studies in development economics, see: Ha-Joon Chang, 'Reply to the Comments on 'Institutions and Economic Development: Theory, Policy and History'' [2011] *Journal of Institutional Economics*, 13.

¹²⁴ Kenneth G Dau-Schmidt, 'Economics and Sociology: The Prospects for an Interdisciplinary Discourse of Law' [1997] *Wisconsin Law Review*, 395–402. Still, the rational choice theory has been on the rise in sociology, *ibid* 404.

thought that dominate this discipline. The dominant schools of thought within any discipline do not necessarily reflect scientific superiority of the dominant paradigm, but may reflect, partially, the historically and sociologically contingent institutional structure of the discipline. Many overlooked schools of thought may could have provided better insights, but they were institutionally undermined within the discipline. This important insight of the sociological turn in the philosophy of science has important implications for legal scholarship on economic regulations. As will be argued in next chapter, the institutional structure of legal education and research results in the *dominance of the neoclassical school of thought over law and economics research on economic regulations*.

4. Conclusion: Plurality of Cognitive Perspectives in Modern Economic Thought

This chapter established that legal scholars and economists cannot understand or observe legal institutions directly. Analysis and design of legal institutions require an overall cognitive perspective that mediates between legal scholars and legal institutions. Schools of thought (paradigms) are cognitive perspectives that are constitutive of the first layer of the overall cognitive perspective. By using them, scholars produce the concrete models constitutive of the second layer of the overall cognitive perspective. Therefore, paradigms are the main drivers of diversity and plurality of overall cognitive perspectives. I suggested that paradigms/schools of thought can be conceptualized along eight dimensions: ontological, methodological, methodical, normative, theoretical, conceptual/linguistic, paradigm as exemplar, and institutional dimensions.

A brief comparison between neoclassical, Keynesian, institutional, ecological and complexity economics as well as a hypothetical unified paradigm of heterodoxy demonstrated that there are significant differences between the neoclassical school on one hand, and the latter schools, on the other hand, along all of these dimensions. This establishes the plurality of schools of thoughts (paradigms) in modern economic thought that drives the plurality of overall cognitive perspectives. It is noteworthy here that the inconsistent regulatory insights of these schools of thought, although indicative of plurality of paradigmatic cognitive perspectives, cannot establish such plurality because each school of thought can produce competing concrete models/insights. The fact that the so-called schools of thought produce these inconsistent insights can be considered a supporting but inconclusive evidence on paradigmatic perspectival plurality.

Since the differences among schools of thought are not limited to the theoretical dimension, we cannot attribute the plurality of overall cognitive perspectives to plurality of the theoretical dimensions of schools of thought. In other words, we cannot consider the so-called schools of thought *theories* and thus characterize the plurality of overall cognitive perspectives as *theoretical plurality (plurality of theories)* a la Giere. As emphasized above, even if this were the case, this would imply the proximity of these schools of thought as they share all the other dimensions except for the theoretical dimension. The above analysis demonstrated that this is not the case, and thus it is better to use the terminology of “paradigmatic perspectival plurality” for characterizing modern economic thought in order to reflect the deeper differences among the overall cognitive perspectives in modern economic thought.

This does not imply that schools of thought are diametrical cognitive perspectives. Some schools of thought are proximate to each other than others. New institutional economics seems to be proximate to the neoclassical school to the extent that the latter has been subsumed most of the former. In contrast, Austrian and Marxian economics seem to be distant cognitive perspectives; they would differ on almost every dimension of the eight dimensions. Paradigms can be too proximate that we can perceive them as potentially complementary; Brian Arthur argues that classical political economy and complexity economics are complementary paradigms. The former can enrich the latter with its rich case studies and historical analysis, while complexity economics can fill in the theoretical and methodical lacunae of political economy.¹²⁵ Overall, we cannot claim that economic schools of thought are proximate or distant cognitive perspectives; some of them are too proximate and some are too distant from each other. It is better to think of these as distinct clusters of proximate schools and these clusters are distant from each other. However, we can think of some schools of the same cluster to function as a bridge that may help reducing the distance among these distant clusters. Integration of the insights of distant schools of thought, though challenging, would be the most enriching of the analysis and design of legal institutions.

Two caveats in relation to the above conclusion regarding the plurality of cognitive perspectives in economic thought are in order. First, non-neoclassical schools of thought are not homogeneous; they do not share the same dimensions. Due to space and time limits, the above analysis did not investigate the differences among these non-neoclassical schools of thought. If their differences were to be investigated, they would establish further evidences on the plurality

¹²⁵ Arthur (n 59) 17.

of overall cognitive perspectives in economic thought. Second and most importantly, we have conceptualized paradigms/schools of thought as *a compilation of scattered components/dimensions*. If these dimensions/components differ across schools of thought, these schools of thought would represent distinct cognitive perspectives that would give rise to distinct overall cognitive perspectives. We have not given adequate space for analysis of how these dimensions *relate* to each other. To give a taste of the sophisticated relations among these dimensions, consider neoclassical economics, for example. The neoclassical ontological commitment to closed, non-evolutionary and equilibrium economic system gives epistemological justification for reductionism and deduction methodologies. The normative focus on allocation of resources enables neoclassical economists to combine reductionism, deduction and focus on allocation to come with paradigms as exemplars such as partial and general equilibrium analysis. The latter when combined with the theoretical principle of rational choice gave rise to the major theoretical achievements of the neoclassical paradigm that enriched its theoretical dimension. Due to the self-referential and self-reproduction nature of the theoretical dimension, the latter is growing over time, giving more institutional influence and prestige for neoclassical economics, as it resembles natural sciences over time. The distinct cognitive perspective of neoclassical school of thought emerges from how the *relations* among its dimensions are structured. In case the *relations* of the dimensions of the neoclassical perspective were structured differently, they would give rise to a different distinct cognitive perspective. Similarly, we have not traced adequately the relations among the dimensions of non-neoclassical schools of thought above. This opens the door for refutation of the claim of cognitive distinctiveness of economic schools of thought if someone demonstrates that despite the differences among the dimensions of these schools, the relations among the dimensions of each of these schools are structured in a way that gives rise to a cognitive perspective that is identical across these schools of thought. This excessively difficult task requires an interdisciplinary research at the intersection of cognitive science and philosophy of science. Indeed, I do not imagine how this refutation can be undertaken given that cognitive perspectives are not *observable*. We only observe the dimensions of schools of thought, and we observe the concrete models the cognitive perspective of these schools of thought produce, but we cannot observe the cognitive perspective (the way of seeing) of dimensionally different schools of thought. Anyway, I prefer to lay out the possible paths through

which other scholars may refute my conclusions in order to point out the limits of my line of argument and the possible paths for future research on the issue.

At the conclusion of this chapter, two final remarks are in order. First, If we trace the historical evolution of each of the dimensions of the neoclassical school and how these relations emerged and evolved over time, we would find, to our surprise, how historical accidents, institutional factors and subjectivity of scholars played fundamental roles in the construction of the distinct cognitive perspective of neoclassical economics. For example, Mirowski has demonstrated how the industry-military-research complex in post-world war II transformed neoclassical economics to be obsessed with control, information, and optimization.¹²⁶ Similarly, subjective scholars' choices, historical accidents, and institutional factors guided the evolution of the distinct cognitive perspectives of non-neoclassical paradigms. Humans cannot *construct* an objective perspective that transcends their subjectivity.

Second and most importantly, what the cognitive distinctiveness of economic schools of thought imply? Cognitive perspectives are *ways of seeing*; the uniqueness of the cognitive perspective of schools of thought entails that they can see *some things but cannot see others*. Cognitive perspectives of schools of thought are *partial*. What they enable us to perceive is partial and biased, but not necessarily wrong. Doubtless, it can be wrong as well, particularly, partial understanding if presented as a complete understanding of the phenomenon would entail mistaken conclusions. That is why cross-criticism should precede integration¹²⁷ and it should be included as a step in the operationalization of integrated law and economics.¹²⁸ Section 5.2.1 on partial perspectivism and inherent biases of schools of thought in chapter 4 gives some examples of the partial perspectivism of neoclassical economics. This section demonstrates that the partial perspectivism of the neoclassical economic paradigm results from the way its dimensions are constructed; this section shows how the partial perspective of neoclassical economics enables legal scholars to perceive important aspects of the legal phenomenon, but miss other important aspects.¹²⁹

¹²⁶ Philip Mirowski, *Machine Dreams: How Economics Becomes a Cyborg Science* (Cambridge University Press 2002) 153–231.

¹²⁷ Chapter 4 will discuss cross-criticism and its role in the integrated law and economics approach.

¹²⁸ See the process of operationalization of the integrated approach in chapter 7.

¹²⁹ See section 5.2.1 of chapter 4. See also the discussion of the reductionism and the methodology of reductive institutional individualism of neoclassical economics, which result in neoclassical missing important aspects of legal institutional reality, in sections 5, 6, and 7 of chapter 5.

At this point, the eager reader would legitimately jump to the difficult question “Is there any school of thought that can transcend the partial perspectivism of its cognitive perspective?” The short answer is *resounding no*. Humans have access to reality only through perspectives and perspectives are ways of seeing. These ways of seeing are necessarily partial, unless, we are able to come up with a way of seeing, and prove that this way of seeing enables us to see *every aspect of reality in its wholeness objectively*. This is impossible to prove for many reasons. One of them is that we cannot prove that we see everything objectively out there¹³⁰ simply because we cannot see what the perspective we use does not enable us to see. The best we can do is to integrate the perspectives we have or integrate their insights to come up with the best comprehensive understanding and analysis of legal institutions, which reflect largely what all these perspectives enable us to see. The integrated perspectives and the integrated insights remain *partial*, but they are better than the partial perspectives of each school of thought standing on its own. This discussion goes, however, ahead of our concerns in this chapter to the discussion of the methodological foundations of integrated law and economics in chapter 4.

¹³⁰ As chapter 4 will argue, unlike physical reality, socio-economic reality is not even out there, it is largely constructed by humans. This makes the possibility of developing a perspective for objectively observing the socio-economic reality that we largely and continuously influence an intractable paradox.

Chapter

3

Low and Fragmented Perspectival Plurality of Law and Economics Research: The Dominance and Automatic Application of the Neoclassical Perspective

1. How Do both Economic and Law and Economics Research Address Plurality of Schools of Thought? Or Conceptualizing the Sociological Structure of Plurality in both Modern Economics and Law and Economics

The previous chapter has demonstrated the perspectival plurality of economics. It also established that most of the so-called schools of thought stand for diverse paradigmatic perspectives (schools of thought) and not only theoretical perspectives (theories). In either cases, the most important proposition is that there is plurality of economic perspectives, whether paradigmatic or theoretical.

This chapter investigates how modern economists and modern law and economics scholars address this plurality of perspectives in their research. The decisions made by economists and law and economics scholars regarding how to address the plurality of schools of thought are reflected in their research output. This chapter focuses on law and economics research undertaken by legal scholars (sometimes referred to as legal economists). The analysis would largely apply to law and economics research undertaken by economists. Still, the latter differs in some important aspects from law and economics research undertaken by legal scholars. I will hereinafter use the term “law and economics research” to refer to the research undertaken by both legal scholars and economists, unless I explicitly mention that the analysis is confined to the research undertaken by legal scholars.

Economists’ and law and economics scholars’ decisions regarding how to address perspectival plurality would reflect the institutional structure of economic and legal education and research. It would also reflect the community structure of economists and law and economics scholars.

Community structure refers to the number of communities of scholars organized around specific school of thought, the number of their members and their influence within the area of research. Section 4 of this chapter will address the institutional structure of legal education and research, and how it affects the decisions made by legal scholars as reflected in their research output.

The way economists and law and economics scholars address plurality of schools of thoughts, as reflected in their research, could be conceptualized along three dimensions. These dimensions would capture the sociological structure of plurality in modern economics and law and economics scholarship. The dimension of the degree of plurality stands for the extent these schools of thought are represented in the research output of both modern economics and law and economics research. Based on this dimension, modern economics and law and economics research could exhibit no plurality (i.e., a monistic structure), low, moderate, or high plurality.

Second, given the degree of plurality of both economic and law and economics scholarship, the second dimension captures the second dimension captures how the represented schools of thought and their corollary communities interact with each other. Given the form of interaction, plurality can take three forms: fragmented, critical and integrative. Plurality of cognitive paradigms of modern economics could take three forms: fragmented, critical or integrative. From a normative perspective, these forms of plurality are not methodologically equivalent; some of them may be methodologically superior to the other. Fragmented (generalized), critical, and integrative pluralism refers to the methodological/epistemological position according to which fragmented, critical, and integrative plurality, respectively, should be the methodological norm. The difference between *plurality* and *pluralism* is important to highlight because I will be using the terms “plurality” and “pluralism” a lot. The term “plurality” refers to a *positive* description of (law and economics) scholarship, which reflects the way law and economics scholars tackle the issue of perspectival plurality in economics. I use the term “pluralism” to refer to the methodological positions of fragmented, critical, and integrative pluralism.

Fragmented plurality refers to the situation in which different economic schools of thought do not communicate with each other. Economists working from within each paradigm communicate only with each other and do not communicate with scholarly works produced by other economic schools of thought.¹ Critical plurality refers to the situation in which critical communication among

¹ Vinca Bigo and Ioana Negru, ‘From Fragmentation to Ontologically Reflexive Pluralism’ (2008) 1(2) Journal of Philosophical Economics 129.

schools of thought takes place. This critical communication and reflection aspect of critical plurality takes three forms: internal, external and cross-criticism. Internal critique refers to developing a critique of some dimensions of the school of thought using the cognitive perspective of the school of thought itself. Internal criticism if undertaken by the scholars of the school of thought subject to critique is a form of self-reflexivity. External critique refers to developing a critique of specific school of thought in light of the *cognitive perspective* of other paradigms. In the applied part, chapter 8 will show how internal and external critiques could be developed. This chapter develops these critiques in relation to the concrete regulatory insights and not the dimensions of the neoclassical school of thought, however. Cross-criticism has a *sociological* aspect; it requires a *communicative channel* where the scholars of each school of thought discuss and debate both *the internal and external critiques* made by the scholars of other paradigms. Without this communicative channel, the critiques that the scholars of specific school of thought advance against other schools of thought are nothing but a legitimizing mechanism for their own school of thought. Indeed, fragmented pluralistic research areas may have extensive critiques advanced by each school of thought against other schools of thought. Without thorough debates among the scholars of different schools of thought over these critiques, these research areas, despite being pluralistic, would remain fragmented. Fragmented plurality may take the form of absence of critiques and communication. This form of fragmented plurality does not generate the critical knowledge that the former form generates.

Integrative plurality refers to the situation where scholars attempts to overcome internal and external critiques of specific school of thought by integrating some ideas from other paradigms. This process would result in evolved integrative schools of thought. As will be discussed in next chapter, integration can also take the form of interdisciplinary integration. The latter focuses on the integration of the insights of the schools of thoughts relevant to a concrete regulatory problem and not the integration of these schools of thoughts themselves.

The third dimension of the sociological structure of perspectival plurality captures the way the cognitive resources, influence, and prestige are allocated over various schools of thought, i.e., whether the school of thought is represented in economic scholarship as well as law and economics research. Given that schools of thought that are represented by few and marginal works or that are not represented at all, are allocated almost no cognitive resources, no influence or prestige, we might discern three allocation patterns: normal, even, or power law distribution. Intellectual

resource allocation over schools of thought can take the forms of normal, even, or power law distributions. In the normal distribution form of plurality, a large portion of cognitive resources are distributed over some paradigms, while some paradigms have moderate portion of cognitive resources, and some have low portion of cognitive attention. On the contrary, the distribution may take the form of power law distribution where one paradigm attracts most of the cognitive resources while other paradigms are allocated minimal and/or no intellectual resources. Finally, academic cognitive resources may be distributed evenly among various paradigms.

The most important conclusion of the analysis conducted in this chapter is that the sociological structure of perspectival plurality in law and economics research could be characterized as *monistic automatic application of neoclassical and new institutional economics to analysis and design of legal institutions*. As the below analysis shall illustrate, modern economics has a different sociological structure of perspectival plurality. This non-parallelism between modern economics and law and economics research undertaken by legal scholars could be attributed to the difference between the institutional structure of legal and economic education and research. This institutional structure of legal education and research would *lock-in* law and economics research undertaken by legal scholars in this peculiar structure of perspectival plurality characterized by dominance and automatic application of neoclassical-new institutional economics to legal institutions.

The rest of this chapter proceeds as follows. Section 2 investigates whether the interaction among the schools of thoughts represented in modern economics takes the form of fragmented, critical, or integrative plurality (the second dimension of the social structure of plurality). Section 3 investigates the same dimension in law and economics research. Section 4 investigates the allocation of cognitive resources, prestige, and influence over various schools of thought in modern economics and the degree of plurality in modern economic research (the first and third dimensions of the sociological structure of plurality). Section 5 tackles the same issues in law and economics research. Section 6 situates and traces the evolution of law and economics research program within the broader legal scholarship, and illustrates how the sociological structure of perspectival plurality in law and economics research undertaken by legal scholars has been *non-parallel* to that of modern economics (I call this non-parallelism thesis). The evolution of law and economics research program illustrates how the *institutional structure* of legal education and research resulted in this peculiar sociological structure of perspectival plurality in law and economics research that we observed in sections 3 and 5. It also shows how this institutional structure would lock-in law

and economics research in the research program of the dominance and automatic application of neoclassical-new institutional economics to legal institutions. Section 7 concludes.

2. Fragmented Plurality of Modern Economics

The distinction between fragmented plurality and critical and integrative plurality lies in *communication* among schools of thought. Therefore, modern economics is better characterized by *fragmented* or ‘*scattered plurality*’² because mainstream schools of economics do not communicate with heterodox schools of economics; mainstream economics does not cite scholarly works of heterodox economics whereas the latter works cite the scholarly works of mainstream economics.³ As modern economics has recently moved from neoclassical orthodoxy into mainstream plurality,⁴ schools at the edge of mainstream such as complexity economics began to import some of the insights of heterodoxy and introduce them into mainstream economics. Still, mainstream economists rarely interact with heterodox economics literature. They do not attempt to develop internal or external critiques of non-neoclassical paradigms and they ignore the critiques that non-neoclassical economists advance against the neoclassical paradigm.

In parallel, heterodox economists and scholars at the edge of the mainstream have been engaging in intensive external critiques of neoclassical economics.⁵ The external critiques of neoclassical economics have become therefore the most developed form of external criticism in modern economics. Yet, it is a one-way critique advanced by non-neoclassical schools to neoclassical economics with no neoclassical feedback and discussion of this critique. Cross-criticism of mainstream schools of thought such as neoclassical economics is thus lacking in modern economics; modern economics is fragmentally pluralistic despite these extensive external critiques of neoclassical economics.

² *ibid.*

³ Leonhard Dobusch and Jakob Kapeller, ‘Heterodox United vs. Mainstream City? Sketching a Framework for Interested Pluralism in Economics’ (2012) 46(4) *Journal of Economic Issues* 1042, and see the references cited therein. Randall G Holcombe, ‘Pluralism versus Heterodoxy in Economics and the Social Sciences’ (2008) 1(2) *The Journal of Philosophical Economics* 61.

⁴ John B Davis, ‘The Turn in Economics: Neoclassical Dominance to Mainstream Pluralism?’ (2006) 2(1) *Journal of Institutional Economics* 8.

⁵ Robert F Garnett, ‘Paradigms and Pluralism in Heterodox Economics’ (2006) 18(4) *Review of Political Economy* 523–524. Frederic Lee, ‘The Pluralism Debate in Heterodox Economics’ (2011) 43(4) *Review of Radical Political Economy* 544–545.

Despite the fragmented plurality of modern economics, some recent tendencies for critical reflection and integration within economics could be discerned. Mainstream economists began to engage in critical evaluation of some dimensions of mainstream schools of thoughts with reference to both meta- and non-meta criteria. Few obvious examples would include the works of complexity economists as they advocate superiority of their perspective by reference to meta-criteria such as the open evolutionary system ontology of the economy⁶ and non-meta criteria such as the successes of computational methods and complexity theory in both biology and physics.⁷ Other examples could include the works on limitations of game theoretical analysis⁸ and pitfalls of the randomized control trials.⁹ Most economists undertaking these works may not be aware of the philosophical debates concerning their work. Still, they are in fact adopting the internal and external critiques aspect of the methodological norm of critical pluralism.

Nonetheless, modern economics is far from reflecting critical plurality. Most of the above critiques are concentrated in the schools of thought at the edge of mainstream such as complexity economics, and most of them take the form of internal and not external critiques. Further, cross-paradigmatic debates over external and internal critiques are still lacking.

The above instances of critiques do not imply that mainstream economists subscribe to the methodological norm of pluralism as they may be undertaking this critical reflection to develop one paradigm as the only correct perspective. The methodological position according to which only one perspective is necessarily correct and others are wrong is called monism. These instances of critical reflections may thus be originating from a subscription to monism.

In sum, modern mainstream economists, although they have begun to engage recently in internal criticism of some of the dimensions of their schools of thoughts, the cross-criticism involving communication among economic paradigms is still lacking. As to heterodoxy, they

⁶ W. B Arthur, 'Complexity Economics: A Different Framework for Economic Thought' (2013). SFI Working Paper 2013-04-012, 2–5 <<http://www.santafe.edu/research/working-papers/abstract/36df2f7d8ecd8941d8fab92ded2c4547/>>. John Foster, 'From Simplistic to Complex Systems in Economics' (2005) 29(6) Cambridge Journal of Economics 877–878. J. D Farmer and others, 'A Complex Systems Approach to Constructing Better Models for Managing Financial Markets and the Economy' (2012) 214 The European Physical Journal Special Topics 297.

⁷ Arthur (n 6) 8.

⁸ See, e.g., David M Kreps, *Game Theory and Economic Modelling* (Oxford University Press 1990) 91–132.

⁹ See, e.g., C. B Barrett and M. R Carter, 'The Power and Pitfalls of Experiments in Development Economics: Some Non-random Reflections' (2010) 32(4) Applied Economic Perspectives and Policy.

engage in external critique of neoclassical economics, the latter just ignores these critiques. In this sense, modern economics is best characterized by *fragmented and not critical* plurality. The latter takes the form of *lack of critical communication (lack of cross-criticism)*, along with extensive internal and external critiques of the neoclassical school of thought, while the internal and external critiques of non-neoclassical schools of thought are undeveloped.

As to integration, integration is not a new idea in economics. Integration has been an important mechanism underlying *the evolution* of the neoclassical economic paradigm. Two examples can illustrate this point. Neoclassical economists, namely Hicks and Samuelson have attempted to accommodate Keynes' critique by integrating some of his ideas into neoclassical macroeconomics, resulting in what is famously known as "*the neoclassical synthesis.*"¹⁰ Further, standard neoclassical microeconomics has evolved through integrating insights from both game theory and new institutional economics. For instance, standard neoclassic economics adopted a version of methodological individualism that assumed away individuals' direct strategic interactions (whether competitive or cooperative), and took account only of their indirect interaction through their responses to price mechanism.¹¹ By integrating game theory into their analysis, neoclassical economics has moved beyond non-interactive methodological individualism of partial equilibrium analysis to interactive methodological individualism of game theoretical analysis.¹² Further, neoclassical economists began to extend the analytical boundary of rational choice theory by developing the theory of rational choice under uncertainty. Neoclassical economists have also integrated institutions into their models, although such integration does not exhaust completely the insights of institutional economics because it assumes institutions as external constraints rather than assuming an agent-structure model where agents are not only constrained by institutions but also adapt to, and seek to change these institutions.¹³ These are definite theoretical evolutions of neoclassical economics, which resulted from integrating methods and insights from non-neoclassical theories and schools of thought.

¹⁰ For an overview of neoclassical synthesis, see: Olivier J Blanchard, 'Neoclassical Synthesis' in Steven N Durlauf and Lawrence E Blume (eds), *The New Palgrave Dictionary of Economics* (2nd. Palgrave Macmillan 2008).

¹¹ See the detailed discussion of methodological individualism in section 6 of chapter 5 and the references cited therein.

¹² See the detailed discussion of methodological individualism in section 6 of chapter 5 and the references cited therein.

¹³ See the detailed discussion of methodological individualism in section 6 of chapter 5 and the references cited therein.

Accordingly, standard neoclassical economic school of thought that started with the works of Jevons, Walras, and Marshall¹⁴ has evolved beyond its standard tenets. However, its standard tenets did not die out. Standard microeconomic textbooks are not organized around game theoretical analysis but rather around partial equilibrium analysis at the margin. Models of rational choice under certainty are pervasive in law and economics scholarship. Institutions are downplayed in many neoclassical models. In fact, the works of law and economics scholars do not follow one standard intellectual school of thought. For instance, Posner in his book “Economic Analysis of Law”¹⁵ relied predominantly on standard neoclassical economics whereas in other works, he integrated institutions and culture more seriously in his analysis.¹⁶ Scholars of law and economics are thus adopting different versions of neoclassical economics in their works. Since regulatory implications of their analysis would change fundamentally depending on the version of neoclassical school they adopt, identifying version underlying their analysis (whether standard or some evolved form) would be necessary for evaluating their economic regulatory conclusions.

As regards heterodox economics, although it is characterized by low communication among its schools of thought,¹⁷ there is a recent tendency advocating *paradigmatic* integration.¹⁸ Further, some economists have suggested or attempted to *partially* synthesize elements of different economic schools of thought such as neoclassical and new institutional economics,¹⁹ neoclassical

¹⁴ For an overview of the intellectual contributions of these scholars, see: Ingrid H Rima, *Development of Economic Analysis* (5th edn, Routledge 1996) 250–268. *ibid* 310–341.

¹⁵ Richard A Posner, *Economic Analysis of Law* (8th edn, Wolters Kluwer first published 1973, 2011).

¹⁶ See, e.g., Richard A Posner, ‘From the New Institutional Economics to Organization Economics: With Applications to Corporate Governance, Government Agencies, and Legal Institutions’ (2010) 6(1) *Journal of Institutional Economics*.

¹⁷ Dobusch and Kapeller (n 3), 1045, and see also the references cited therein.

¹⁸ Julien-François Gerber and Rolf Steppacher, ‘Introduction’ in Julien-François Gerber and Rolf Steppacher (eds), *Towards an Integrated Paradigm in Heterodox Economics: Alternative Approaches to the Current Eco-social Crises* (Palgrave Macmillan 2012) 5–6. *ibid* 10–11.

¹⁹ As already mentioned in the previous chapter, Williamson argues that both new institutional and neoclassical economics are complementary and not a substitutes. Oliver E Williamson, ‘The New Institutional Economics: Taking Stock, Looking Ahead’ (2000) 38(3) *Journal of Economic Literature* 600.

and social economics,²⁰ old and new institutional economics,²¹ post-Keynesian and ecological economics,²² as well as institutional and ecological economics.²³

In sum, modern economics, particularly post-financial crisis, has undergone intensive internal criticism but still lacking the practice of strong cross-criticism. Hence, fragmented and not critical plurality is a better characterization of modern economics. Given this sociological structure, we can infer that modern economists do not follow the epistemological position of *critical pluralism*.

In addition, integration is not a new idea in economics as major extensions of neoclassical and heterodox schools of thought have taken place through integration as shown by the history of economics. However, due to low communication among various paradigms of economics, *paradigmatic* integration has never been a well-established epistemological norm in economics. Indeed, the underlying motivations for the above-mentioned instances of integration do not reflect a belief in integration as an epistemological precept. Integrating some of Keynes' ideas was an attempt to *accommodate him* within the neoclassical paradigm. Further, Oliver Williamson has marketed new institutional economics as a complementary rather than an antagonistic approach to neoclassical economics,²⁴ although he has been simultaneously emphasizing the *important* differences between both paradigms.²⁵ Most of the other attempts of integration made by heterodox economists are not only few and non-technical, but also lack specific applications of the high-level general abstract integrated ideas. Further, these few instances of integrative works in the heterodoxy have not been well received even in heterodox economics literature.²⁶

²⁰ See, e.g.: John Elliotta and Hans Jensenb, 'Can Neoclassical Economics Become Social Economics?' (1996) 26(1) Forum for Social Economics.

²¹ See, e.g.: John Groenewegen, Frans Kerstholt and Ad Nagelkerke, 'On Integrating New and Old Institutionalism: Douglass North Building Bridges' (1995) 29(2) Journal of Economic Issues. Malcolm Rutherford, 'The Old and the New Institutionalism: Can Bridges Be Built?' (1995) 29(2) Journal of Economic Issues. See also: Paul Vandenberg, 'North's Institutionalism and the Prospect of Combining Theoretical Approaches' (2002) 26(2) Cambridge Journal of Economics.

²² See, e.g.: Tobias Kronenberg, 'Finding Common Ground between Ecological Economics and Post-Keynesian Economics' (2010) 69 Ecological Economics.

²³ See, e.g., the chapters in the following edited volume that have attempted to integrate institutional and ecological economics: Julien-François Gerber and Rolf Steppacher (eds), *Towards an Integrated Paradigm in Heterodox Economics: Alternative Approaches to the Current Eco-social Crises* (Palgrave Macmillan 2012).

²⁴ Williamson, 'The New Institutional Economics: Taking Stock, Looking Ahead' (n 19) 600.

²⁵ See, e.g.: Oliver E Williamson, 'Why Law, Economics, and Organization?' (2005) 1 Annual Review of Law and Social Science 370–378.

²⁶ For example, Rutherford mentions that his 'attempt to create a discourse between old and new institutionalists ... has [been] met with only limited success ... the two groups [i.e., old and new institutionalists] still talk almost exclusively to themselves and, at least within North America, seem largely

In sum, the sociological structure of plurality in modern economics is fragmented; it neither critical nor integrative. Fragmented plurality takes the form of lack of critical communication (cross-criticism), but it involves extensive literature on internal and external critiques of neoclassical paradigm with undeveloped internal and external critiques of non-neoclassical schools of thought.

3. Low and Fragmented Plurality (Lack of Interdisciplinarity) in Law and Economics Research on Economic Regulations

As the following sections shall establish, law and economics research has a low degree of plurality; few non-neoclassical schools are represented in this research. This plurality lacks both internal, external and cross-criticism. Critical reflection would imply applying both meta-criteria and pragmatic criteria for evaluating different economic (and non-economic) paradigms that legal scholars import their cognitive perspective to bear on analysis and design of legal institutions. Legal scholars, as mainly practically oriented, refrain from such theoretical analysis and commit to apply automatically their chosen economic paradigm to the legal institutions. Legal scholars rarely critically reflect on the dimensions of the theoretical paradigm they are adopting its cognitive perspective. Further, no serious critical reflection over the regulatory insights of specific school of thought is undertaken in light of the cognitive perspective of other schools of thought. In sum, law and economics research cannot be characterized by critical plurality.

The fragmented plurality of law and economics research would naturally result in both lack of integrative plurality and interdisciplinarity because critical plurality is the *initial requirement* for integrative research. The integration failure is somehow drastic in law and economics research. Law and economics scholars have been committed to the *automatic* application of neoclassical economic theories and methods to legal problems.²⁷ Most of them have not only rejected to integrate any insights from legal theory and non-economic paradigms, they have also defended

uninterested in what they might be able to offer each other.’ Malcolm Rutherford, ‘The Prospects of Heterodox Economics: A Comment’ (2000) 22(2) *Journal of the History of Economic Thought* 186–187.

²⁷ Famous law and economics textbooks written by legal scholars are exemplar of this approach of automatic application of the neoclassical theory to legal problems. See, e.g., Posner, *Economic Analysis of Law* (n 15); Robert Cooter and Thomas Ulen, *Law and economics* (5th edn, Pearson Addison-Wesley 2008); and Steven Shavell, *Foundations of Economic Analysis of Law* (The Belknap Press of Harvard University Press 2004).

fiercely their position. For instance, Posner has defended economic efficiency²⁸ and rational choice theory²⁹ and rejected any potential value of moral philosophy for legal scholarship.³⁰ Instead of criticism, refinement, and integration of neoclassical economic paradigm with legal theory and other non-economic paradigms, neoclassical law and economic scholarship has reduced law into an *economic policy instrument*. By failing to adopt critical self-reflection and integration, neoclassical law and economics has been a *cross-disciplinary* research program par excellence. Law and economics research program is thus a form of *informal applied neoclassical microeconomics* under which legal scholars are reduced into *micro-economists in disguise*.³¹

Nonetheless, section 2 of the introduction of this thesis has illustrated that there are few scholarly works at the margin of law and economics research that deviate from the practice of automatic application of neoclassical and new institutional economics to legal institutions. These scholarly works are informal, too few and scattered across separate areas of legal scholarship such as competition law, corporate governance, financial regulation and regulatory enforcement studies. Being rare exceptions, these scholarly works do not justify the integrative plurality characterization of law and economics research. Given the dominance of the automatic application of neoclassical-new institutional economics nature over most of the scholarly works of law and economics research, the latter fits best the fragmented plurality description.

In this sense, the sociological structure of perspectival plurality in both modern economics and law and economics research undertaken by legal scholars takes the form of fragmented plurality. In modern economics, however, there is a wide literature on internal and external critiques of neoclassical economics. In law and economics research, a parallel literature has been produced in legal scholarship, however, as I have noted in the introduction of this thesis, most of these critiques relate to the application of neoclassical and new institutional economics to non-economic legal

²⁸ Richard A Posner, 'The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication' (1980) 8 Hofstra Law Review 492–497.

²⁹ Posner, *Economic Analysis of Law* (n 15) 20–26.

³⁰ Richard A Posner, 'The Problematics of Moral and Legal Theory' (1998) 111(7) Harvard Law Review 1693–1709.

³¹ In the area of corporate law, it has been already observed that the 'U.S. corporate law professors are not actually legal scholars, but rather economists whose field of research is law.' Kristoffel Grechenig and Martin Gelter, 'The Transatlantic Divergence in Legal Thought: American Law and Economics vs. German Doctrinalism' (2007) 30(1) Hastings International and Comparative Law Review 297, and see the reference cited therein.

institutions. Neoclassical-new institutional law and economics seems to be less challenged as an approach to economic regulations in legal scholarship.

4. Allocation of Cognitive Resources, Prestige and Influence over Schools of Thought in Modern Economics

This section investigates the third dimension of the sociological structure of perspectival plurality in modern economics. This dimension relates to the allocation of cognitive resources, prestige, and influence over various economic paradigms. This allocation can take the form of normal, even or power law distribution of cognitive resources, prestige, and influence over the various schools of thought.

Best proxies for the form of distribution of cognitive resources, influence, and prestige would be educational materials, publications in top ranked journals and PhD dissertations in top economic faculties.³² Based on these criteria, economic schools of thought can be categorized into mainstream, the edge of mainstream, and heterodox schools of thought.³³ As a *sociological* category, mainstream economics includes the orthodox school of thought defined as the dominant school of thought as reflected in the textbooks of undergraduate and graduate studies.³⁴ Mainstream economics includes also other schools of thought that are not dominant but highly influential because their scholarly work can be published in top economic journals and represent the frontier of research as evidenced by PhD research projects in top economic institutions.³⁵ Most probably, these schools of thought were heterodox paradigms that have succeeded to move into mainstream economics; they are located at the ‘edge of mainstream economics’³⁶ and the scholars working at the edge of the mainstream are ‘mainstream dissenters’.³⁷ Heterodox schools of economics are those schools which are neither orthodox nor at the edge of the mainstream economics. Their contributions rarely find a place in the economics textbooks or in the top

³² Davis (n 4), 4–6.

³³ *ibid* 4–9. David Colander, Richard Holt and Barkley Rosser Jr, ‘The Changing Face of Mainstream Economics’ (2004) 16(4) *Review of Political Economy* 486–487. Dobusch and Kapeller (n 3), 1036–1037.

³⁴ Davis (n 4), 4–5. Colander, Holt and Rosser Jr (n 33), 495.

³⁵ *ibid* 5–6.

³⁶ *ibid* 486–487. Dobusch and Kapeller (n 3), 1036–1037.

³⁷ *ibid.*

economic journals; rather, heterodox paradigms have their own closed club of scholars, journals, and associations.

At the interwar period, there was no distinction between mainstream and heterodox economics. All schools of thought such as institutionalism and neoclassicism were equally regarded.³⁸ Post World War II, neoclassical economics gained the position of orthodoxy whereas other schools of economics such as Austrian, institutional and Marxian economics became heterodox. At this time, there were no schools at the edge of the mainstream.³⁹ In contrast, modern mainstream economics is highly pluralistic.⁴⁰ Its orthodoxy is occupied by neoclassical economics in its evolved integrative form after integrating game theory and some of the insights of Keynesian economics and new institutional economics.⁴¹ In addition, modern mainstream economics includes also variety of schools of thoughts and methods at its edge such as behavioral economics, experimental economics, behavioral and evolutionary game theory, complexity economics, and computational economics.⁴² Currently, heterodox schools of modern economics include, inter alia, old institutional economics, evolutionary economics, comparative capitalism, socio-economics, feminism economics, ecological economics, Neo-Marxian economics, radical political economy, Austrian economics, Neo-Ricardian economics, Ordoliberalism, and the French economic schools of regulation and conventions.

The above *sociological* classification of the intellectual schools of modern economics is not static; rather it is contingent on the allocation of cognitive resources, influence, and prestige over these schools as evidenced by their effect on educational materials and research. For example, Hudgson argues that if some institutional barriers in academic economic research have been overcome, some economic schools of thought at the edge of the mainstream economics (namely, institutional and evolutionary economics) will move into the heart of mainstream economics to

³⁸Malcolm Rutherford, 'Institutional Economics: Then and Now' (2001) 15(3) *The Journal of Economic Perspectives*

³⁹ Davis (n 4), 8. Colander, Holt and Rosser Jr (n 33), 486–488.

⁴⁰ *ibid* 496.

⁴¹ Davis (n 4), 8. Colander, Holt and Rosser Jr (n 33), 491–492.

⁴² *ibid* 486–487. Davis (n 4), 5–6.

become the new orthodoxy.⁴³ Indeed, the textbooks that reflect this type of *future* orthodoxy have begun to emerge.⁴⁴

The sociological structure of fragmented plurality of modern economics has therefore moved from a distribution close to *a power law distribution of cognitive resources in the post-war period into one that is close to a normal distribution.*

This shift would be more conducive to the evolution of economic knowledge because the normal distribution of cognitive resources is the optimal social structure of plurality (whether fragmented, critical, or integrative). Power law distribution implies that one school of thought dominates research and education, while other paradigms, although they may provide fundamental insights, are marginalized. These marginalized paradigms would also have little chance to be explored sufficiently as few academics are endorsing them. Further, a power law distribution would exacerbate some epistemological problems of fragmented plurality such as paradigmatic biases of the dominant paradigm that will be discussed in next chapter. On the other hand, a uniform distribution of cognitive resources assumes that all economic paradigms have the same plausibility of being correct and assumes that all paradigms are in the same stage of development that enables them to be well-comparable and to accumulate the same influence. This social structure of fragmented plurality (i.e., uniform/even distribution) would be inefficient, however, because some paradigms seem more plausible and well developed. For example, as the previous chapter demonstrates, neoclassical economics is the most developed paradigm in terms of its theoretical and paradigm as exemplar dimensions. Structuring the education and research incentives to ensure even distribution of influence over the economic schools of thought, although they differ in their plausibility and stage of development would involve an inefficient allocation of intellectual resources.

This leaves us with the normal distribution of intellectual resources. This distribution represents the optimal allocation of intellectual capacities in case the intellectual resources are normally distributed according to the degree of plausibility and development of various paradigms. It does not waste intellectual resources by allocating them evenly but it does not inhibit exploring

⁴³ Geoffrey M Hodgson, 'Evolutionary and Institutional Economics as the New Mainstream' (2007) 4(1) *Evolutionary and Institutional Economic Review* 20.

⁴⁴ See, e.g., Wolfram Elsner, Torsten Heinrich and Henning Schwardt, *The Microeconomics of Complex Economies: Evolutionary, Institutional, Neoclassical, and Complexity Perspectives* (Elsevier Academic Press 2015).

less plausible and developed paradigms by allocating all intellectual resources in education and research to one paradigm. If we would establish that normal distribution represents the optimal allocation of cognitive resources, the question would arise about the *allocation mechanism* that would ensure attainment of this allocation.⁴⁵ This question goes beyond the scope of this chapter that inquires the sociological structure of perspectival plurality in modern economics and law and economics research.

5. A Power Law Distribution of Cognitive Resources, Prestige, and Influence over Schools of Thought in Law and Economics Research and A Low Degree of Plurality

Law and economics has a different sociological evolutionary story in comparison to economics. The first great movement of law and economics found its basis in the German historical school of economics⁴⁶ and Darwinian evolutionary theory⁴⁷ and endorsed a cardinal concept of utility functions permitting inter-personal comparisons of utility, based on which this movement of law and economics defended the enactment of legal institutions that have strong income distributional effects to the benefit of the poor.⁴⁸ In this movement, institutional law and economics (old institutional economics) was the orthodox dominant school of thought.⁴⁹

In contrast, the second movement of law and economics as expounded by Aaron Director,⁵⁰ Becker, Posner, and Coase⁵¹ started with the straightforward application of the *standard*

⁴⁵ See, e.g., Shaun P Hargreaves Heap, 'The Economic Consequences of Pluralism' in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997). The author discusses whether *the market* is an efficient allocation mechanism for sustaining *plurality*. He does not however attempt to identify the allocation mechanisms that would sustain specific structures of plurality.

⁴⁶ Herbert Hovenkamp, 'The First Great Law and Economics Movement' (1990) 42(4) *Stanford Law Review* 997–1000.

⁴⁷ *ibid* 1017–1019.

⁴⁸ *ibid* 1000–1013.

⁴⁹ For a short overview of the major intellectual contributions of this school, see: *ibid* 1013–1031.

⁵⁰ Aaron Director's role in the second movement of law and economics was mainly *institutional*; He was the main institutional agent of propagating and institutionalizing the Chicago variant of neoclassical law and economics. In Chicago law school, Director taught anti-trust law from the perspective of the Chicago variant of neoclassical economics, established both the first program in law and economics in a law school in the US and the *Journal of Law and Economics*, which has become the most influential journal in law and economics. see: Nicholas Mercuro and Steven G Medema, *Economics and the Law: From Posner to Post-Modernism* (Princeton University Press 1997) 52–53.

⁵¹ Coase represented a special case in the history of law and economics because his work does not fit within the standard neoclassical paradigm and thus his work has extended the neoclassical paradigm by his

neoclassical economics to legal institutions.⁵² Neoclassical economics at that time, post-World War II was the orthodox school of economics. Other economic methods and paradigms at that time including game theoretical analysis, behavioral economics, and institutional economics were heterodox. As next chapter will show, neoclassical economic paradigm has core tenets such as reductionism, methodological individualism, rational choice theory, and partial equilibrium analysis at the margin. This neoclassical paradigm has evolved through integrating game theoretical analysis as well as fundamental elements from the new institutional paradigm such as transaction cost minimization function of legal rules. The resulting *partially integrative* paradigm, which is still neoclassical in its core tenets, has been representing the *dominant orthodox school of mainstream law and economics*. Accordingly, both mainstream economics and mainstream law and economics have the neoclassical school synthesized partially with new institutional economics and game theory at their core as the orthodoxy.

However, neoclassical economics has become much less influential in modern economics when compared to its status in modern law and economics research undertaken by legal scholars. Some paradigms at the edge of mainstream economics such as behavioral economics are located at the edge of mainstream law and economics as well. However, other schools at the edge of the mainstream of modern economics are under-represented in law and economics scholarship such as Post-Keynesian economics and complexity economics as few legal scholarly works have employed the cognitive perspective of these paradigms.⁵³ In fact, due to its under-representation, the latter paradigms could be deemed heterodox in law and economics research. For instance, there is not a well-established paradigm in law and economics called *complexity economics and law*, whereas neoclassical law and economics, and institutional law and economics, for example, have been well-established paradigms in most scholarly accounts of law and economics paradigms.⁵⁴

institutional insights. In this sense, Coase is one of the pioneers who have contributed to the evolution of the standard neoclassical approach to legal institutions to its evolved integrated version of neoclassical economics.

⁵² Hovenkamp (n 46), 996–997.

⁵³ For a good list of legal works that used the perspective of complexity theory, see: <http://jurisdynamics.blogspot.de/2006/07/complexity-theory-in-legal-scholarship.html> (Last Accessed on 6.2.2014). For an introduction to complexity theory and law, see: J. B Ruhl, ‘Law’s Complexity: A Primer’ (2008) 24(4) Georgia State University Law Review; Gregory T Jones, ‘Dynamical Jurisprudence: Law as a Complex System’ (2008) 24(4) Georgia State University Law Review.

⁵⁴ See, e.g.: Peter G Klein, ‘New Institutional Economics’ in Boudewijn Bouckaert and Gerrit De Geest (eds), *Encyclopedia of Law and Economics, Volume I: The History and Methodology of Law and Economics*

Similarly, heterodox schools of economics such as old institutional economics, evolutionary economics, socio-economics, and ecological economics are also under-represented in law and economics scholarship.

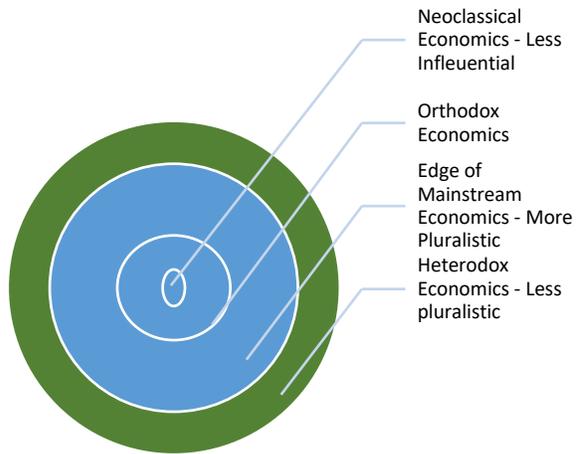


Figure 3.1: Modern Economics

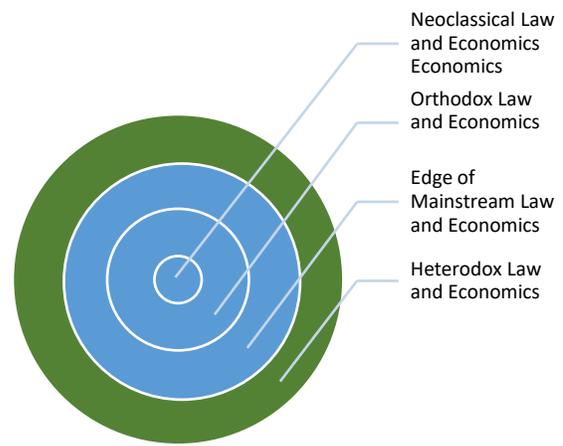


Figure 3.2: Modern Law and Economics

Figures 3.1 and 3.2 reflect the sociological structure of paradigmatic plurality in both modern economics and law and economics research. This structure includes a) a sticky standard neoclassical school; b) Orthodox Dominant School which is a partially integrative paradigm including neoclassical economics, game theory and some elements of new institutional economics and Keynesian economics; c) Heterodox schools at the edge of the mainstream such as behavioral economics and complexity economics; and d) heterodox schools outside the mainstream.

In sum, the evolution of law and economics has undergone three key phases: institutionalism and cardinal utility phase with acceptance of inter-personal utility comparisons and focus on distributional effects of legal rules. Subsequently, the standard neoclassical law and economics

456–480. See also the accounts of Chicago, institutional, and new institutional law and economics in: Mercuro and Medema (n 50) 51–151.

dominated law and economics research. This phase was characterized by rational choice, partial equilibrium analysis at the margin, inappropriate attention to institutional analysis, ordinal conception of utility along with sole focus on efficiency rather than distributional effects of legal rules and rejection of inter-personal comparisons of utility.⁵⁵ In the standard neoclassical phase, all other paradigms were heterodoxy. Currently, many works in law and economics, particularly as undertaken by legal scholars, are still undertaken from this standard neoclassical perspective. The third phase of law and economics research includes neoclassical law and economics as integrated with new institutional economics and game theory as its orthodoxy and behavioral law and economics at its edge. Other economic paradigms at the edge of the mainstream of modern economics such as experimental, complexity and computational economics are under-represented in modern law and economics research. In addition, heterodox schools of modern economics are highly under-represented in modern law and economics scholarship; heterodox schools such as post-Keynesian economics are almost non-existent in law and economics scholarship.

The above description illustrates that the three evolutionary phases of law and economics in legal scholarship are not accurately parallel to the evolutionary phases of economics. Instances of parallelism include the second phase of neoclassicism in law and economics that paralleled standard neoclassical dominance in post-world war II economics. Further, the current orthodoxy in both modern law and economics and modern economics consists of neoclassical economics as synthesized with new institutional economics and game theory. Instances of non-parallelism include the state of modern law and economics that significantly under-represents the economic paradigms located at both the edge of mainstream and heterodox economics. This non-parallelism could be attributed to the fundamental differences between the institutional structures of economic and legal scholarship. It is also natural due to time lag between developments taking place in economics and their importation into legal scholarship. I would call the non-parallelism between modern economics and modern law and economics research, particularly as undertaken by legal scholars, as “non-parallelism thesis”. Non-parallelism thesis takes the form of *over-representation (imperialism)* of neoclassical law and economics in legal research on economic regulations and *under-representation* of other economic schools of thought. This implies that the distribution of cognitive resources, influence, and prestige over economic schools of thought in modern law and economics research undertaken by legal scholars comes close to power law distribution where the

⁵⁵ Hovenkamp (n 46), 1042–1051.

evolved version of neoclassical economics dominates the analysis of legal institutions and other schools of thought, with the exception of behavioral economics, are ignored. Due to this dominance of neoclassical-new institutional economic paradigm and fragmented plurality of law and economics research illustrated in section 3 above, the standard form of mainstream law and economics is a straightforward automatic application of the theories, concepts, analytical frameworks and methods of neoclassical and new institutional economics to analysis and design of legal institutions. The dominance and automatic application of neoclassical-new institutional law and economics represents therefore the sociological structure of perspectival plurality in law and economics research.

6. Institutional Lock-In of the Sociological Structure of Perspectival Plurality of Law and Economics Research (i.e., The Lock-In of the Dominance and Automatic Application of Neoclassical Economics)

To understand why dominance and automatic application of neoclassical-new institutional economics to legal institutions in law and economics research would persist, we need to understand first how this social structure of law and economics have taken place by tracing the evolution of neoclassical law and economics research as a subset of legal research on economic regulations. Figure 3.3 below illustrates the evolution of law and economics research as a subset of legal research on economic regulations. In stage one of neoclassical law and economics evolution, neoclassical economics has been invoked for analysis and design of legal institutions including economic regulations,⁵⁶ resulting in negative and positive reactions among legal scholars.

As to the negative reaction, some legal scholars responded to this neoclassical imperialism by *resisting or ignoring* it. The majority of European legal scholars have continued their *doctrinal* scholarship that has remained the dominant way of undertaking legal scholarship in Europe.⁵⁷ Another mode of soft and implicit resistance has invoked and applied other social sciences such as sociology, politics, anthropology, or non-neoclassical schools of economics (e.g., Austrian, old

⁵⁶ Here, I ignore the discussion of the first law and economics movement because it had minimal influence over legal scholarship.

⁵⁷ Grechenig and Gelter (n 31), 297–302. Thomas Ulen and Garoupa Nonu, ‘The Market for Legal Innovation: Law and Economics in Europe and the United States’ (2007) 59(5) *Alabama Law Review* 1568–1571.

and new institutional economics and comparative capitalism) to legal institutions. Some of these schools of thought have emerged prior to the neoclassical law and economics⁵⁸ and thus their continuity could also be considered as a form of implicit dissatisfaction with the neoclassical law and economics paradigm, otherwise, scholars of these schools could have shifted to neoclassical law and economics. This non-doctrinal form of resistance does not resist interdisciplinary legal analysis. It rather resists implicitly the dominance and sufficiency of neoclassical school of economics as an approach to analysis and design of legal institutions. The “forms of resistance” arrow in the second phase of the evolution of law and economics research depicted in Figure 3.3 represents these forms of resistance.

Both doctrinal and interdisciplinary forms of implicit resistance resulted in high plurality in schools of legal thought that address comprehensively or partially analysis and design of economic regulations. Although non-neoclassical economic paradigms are under-represented in law and economics scholarship, some non-economic paradigms in legal scholarship that are not represented in modern economics have provided fundamental insights for economic regulations such as social system theory,⁵⁹ comparative law⁶⁰ and legal transplant.⁶¹ In comparison to law and economics research, legal scholarship exhibits higher degree of plurality. The plural paradigms represented in legal scholarship are not parallel to those represented in modern economics. The

⁵⁸ For example, law and society movement, an important non-neoclassical school of legal thought, dates back to the works of Max Weber, see: Lawrence M Friedman, ‘Law and Society Movement’ (1986) 38(3) *Stanford Law Review* 764.

⁵⁹ For an overview of social system theory and law, see: Arthur J Jacobson, ‘Autopoietic Law: The New Science of Niklas Luhmann’ (1989) 87(6) *Michigan Law Review*. For applications of social system theory to economic regulations, see the edited volume: Poul F Kjaer, Gunther Teubner and Alberto Febbrajo (eds), *The Financial Crisis in Constitutional Perspective: The Dark Side of Functional Differentiation* (Hart Pub. 2011).

⁶⁰ For a very good overview of comparative law, see the edited volumes: Pier G Monateri (ed), *Methods of Comparative Law* (Edward Elgar 2012). Reinhard Zimmermann and Mathias Reimann (eds), *The Oxford Handbook of Comparative Law* (Oxford University Press 2006).

⁶¹ For a very good overview of legal transplant, see: Daniel Berkowitz, Katharina Pistor and Jean-Francois Richard, ‘The Transplant Effect’ (2003) 51(1) *The American Journal of Comparative Law*. Jonathan M. Miller, ‘A Typology of Legal Transplants: Using Sociology, Legal History, and Argentine Examples to Explain the Transplant Process’ (2003) 51 *The American Journal of Comparative Law*. Zongling M Shen, ‘Legal Transplant and Comparative Law’ (1999) 51(4) *Revue internationale de droit comparé*. Edward M Wise, ‘The Transplant of Legal Patterns’ (1990) 38 *The American Journal of Comparative Law*. For an analysis of legal transplant of some economic regulations, see, e.g.: Tay-cheng Ma, ‘Legal Transplant, Legal Origin, and Antitrust Effectiveness’ (2013) 9(1) *Journal of Competition Law and Economics*. Troy A Paredes, ‘Systems Approach to Corporate Governance Reform: Why Importing US Corporate Law Isn't the Answer’ (2004) 45 *William and Mary Law Review*.

non-parallelism thesis still holds, however, between legal scholarship in general and modern economics as it holds between modern law and economics and modern economics.

Despite its pluralistic nature, legal research on economic regulations exhibits fragmented plurality. The plural paradigms of legal scholarship that could inform economic regulations such as neoclassical law and economics, behavioral law and economics, legal transplant, social system theory, law and development and regulatory studies do not communicate and exchange ideas with each other. As mentioned in the introduction of the thesis, few integrative endeavors have been made. The instances of integration mentioned in the introduction in the areas of financial regulation, competition law, labor regulation, and regulatory enforcement studies attempted to integrate the insights of more than one school of thought. Some integrative projects in legal research have attempted to integrative the schools of thought themselves, and then apply the integrative approach to legal institutions. The example I could find is the attempt to integrate comparative law with law and economics resulting in a new school of law and economics termed “comparative law and economics”.⁶² Unfortunately, few scholars are working on the development of this integrative school and the application of its insights to legal institutions.

In contrast to the negative reaction, some legal scholars welcomed neoclassical law and economics and began to apply economics to legal institutions. Richard Posner has extended the seminal applications of economic analysis of criminal⁶³ and tort law⁶⁴ to other fields of law in his *Economic Analysis of Law* such as property rights⁶⁵ and civil and criminal procedures.⁶⁶ After the publication of Posner’s economic analysis of law, many legal scholars in US and recently in Europe began to join the neoclassical law and economics movement.

⁶² For a good overview of comparative law and economics and some of its applications, see: Ugo Mattei, *Comparative Law and Economics* (University of Michigan Press 1997).

⁶³ The seminal study that applied economics to criminal law is: Gary Becker, ‘Crime and Punishment: An Economic Approach’ (1968) 76(2) *Journal of Political Economy*.

⁶⁴ The seminal study that applied economics to tort law is: Guido Calabresi, *The costs of accidents: A legal and economic analysis* (Yale University Press 1970).

⁶⁵ Posner, *Economic Analysis of Law* (n 15) 39–114.

⁶⁶ *ibid* 757–813.

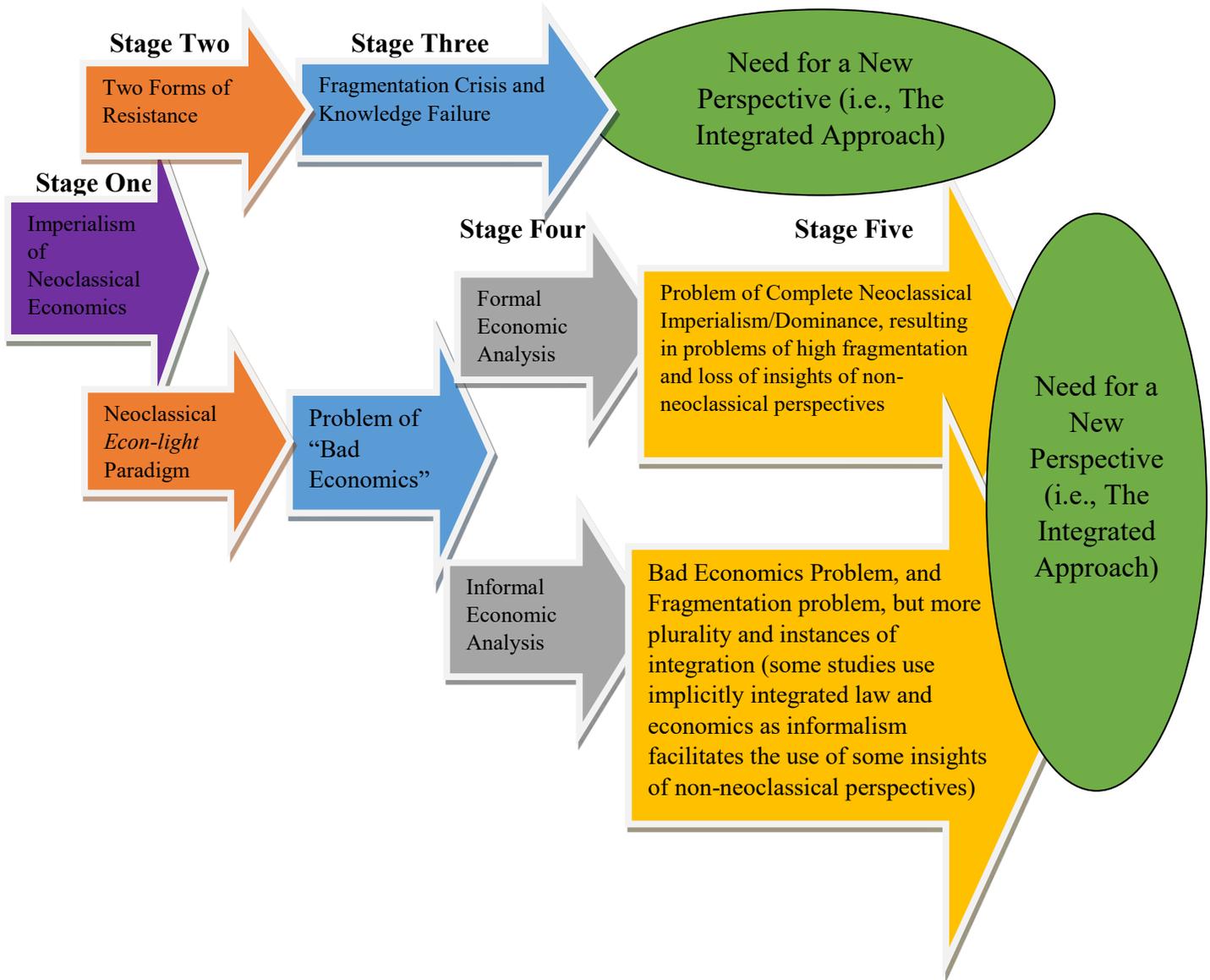


Figure 3.3: Historical Evolution of Neoclassical Law and Economics Research in Legal Scholarship Arrows of the same color belongs to the same stage; for example, the two arrows of the blue color belong to stage three.

Given that legal scholars have no formal training in economics, legal scholars receptive of neoclassical law and economics faced a significant problem; how could they apply neoclassical economics to legal institutions. To overcome this problem, Posner argued that it requires *little and informal* economics to be able to undertake a proper economics analysis of law.⁶⁷ This has been a

⁶⁷ In Posner's words,

successful marketing strategy for law and economics. Most of European and American legal scholars have therefore followed what can be called an “*econ-light approach*” according to which they informally apply neoclassical economic theories, concepts, and insights to legal institutions. The “Econ-light” arrow in the second phase of the evolution of law and economics research depicted in Figure 3.3 captures this response to lack in formal training in neoclassical economics.

Empirical evidence supports the pervasiveness of econ-light paradigm in law and economics scholarship in Europe. European legal scholars are reluctant to publish in international law and economics journals that require formal analysis;⁶⁸ they are more inclined to publish in national law journals that do not require such intensive formal economic analysis.⁶⁹ Most European legal scholars working on law and economics are thus still working within the neoclassical *econ-light* paradigm.⁷⁰ Informal economic analysis has become a common method of law and economics among lawyers as compared to formalism in neoclassical economic research and in law and economics research undertaken by economists.⁷¹

The *econ-light paradigm* has facilitated the imperialism of neoclassical economics to regulatory problems without requiring legal scholars to master the neoclassical school of thought. The result has been a legal scholarship based on low or average quality of neoclassical economic analysis. This average or low quality problem is well documented by the fact that neoclassical economists in their literature reviews of any regulatory problem do not cite the ubiquitous informal

The heart of economics is a knack for looking at problems in a certain way. In many intelligent people this knack is instinctive, or can be acquired in a variety of informal ways. It is clear to me that many academic lawyers have it (and many professional economists do not!), could use it fruitfully in their research, and could impart it effectively to their students. Richard A Posner, ‘Economic Approach to Law’ (1975) 53 Tax Law Review 782.

⁶⁸ Ulen and Nonu (n 57), 1570–1571.

⁶⁹ Ben Depoorte and Jef Demot, ‘The Cross-Atlantic Law and Economics Divide: A Dissent’ (2011) 2011(5) University of Illinois Law Review 1598.

⁷⁰ Many observations underscore this claim. First, many European law and economics scholars rarely cite directly the economic literature; rather, they tend to cite the scholarship produced by American law and economics scholars. Second, European law and economics scholarship undertaken by legal scholars is rarely published in top law and economics journals that normally require formal analysis. Ulen and Nonu (n 57), 1570–1571. Carole M Billiet, ‘Formats for Law and Economics in Legal Scholarship: Views and Wishes from Europe’ (2011) 2011(5) University of Illinois Law Review 1492–1497.

⁷¹ Sheila Dow, ‘Plurality in Orthodox and Heterodox Economics’ (2008) 1(2) The Journal of Philosophical Economics 79; and Colander, Holt and Rosser Jr (n 33), 493. The authors consider formalism the key defining feature of neoclassical economics.

law and economics works on the same problems undertaken by legal scholars. Ironically, Posner has recognized this problem.⁷² We can refer to this problem resulting from econ-light paradigm as the “*bad economics problem*”. This problem is exacerbated by the lack of quality control over law and economics research because most top American law journals are student-run and not peer-reviewed.⁷³

This analysis would predict that law and economics would thrive in regulatory areas that are susceptible to informal applied microeconomic analysis through the use of ‘*commonsensical analogies*’;⁷⁴ These areas such as corporate governance, contract law, securities regulation and competition law normally do not have underlying complex economic theories. Some of these areas have the advantage that their problems could be formulated as contractual problems and thus could be addressed through informal new institutional analysis. Further, some of these areas such as competition law could be analyzed by partial equilibrium or game theoretical analysis. Further, the economic literature on these areas is mostly empirical and it is not so mathematically sophisticated to go through it. It is no coincidence that these are the most thriving law and economics regulatory areas in legal academia. In contrast, economic regulatory areas that are not susceptible to informal applied economic analysis and whose economic theoretical literature is sophisticated such as tax law and banking regulation has been the least thriving areas in law and economics scholarship undertaken by lawyers. As some tax law professors have expressed their concerns that the underlying theory for tax law, namely, optimal tax theory cannot be applied informally to tax law problems in comparison to partial equilibrium and rational choice theory that legal scholars used

⁷² Richard A Posner, ‘Legal Scholarship Today’ (1992-1993) 45 *Stanford Law Review* 1655–1656. Deborah L Rhode, ‘Legal Scholarship’ (2001) 115 *Harvard Law Review* 1339. Indeed, the low quality of interdisciplinary legal scholarship is a serious problem because most interdisciplinary legal scholars tend to lack a deep knowledge of the disciplines they use. See: Desmond Manderson, ‘Some Considerations about Transdisciplinarity: A New Metaphysics’ in Margaret Somerville and David J Rapport (eds), *Transdisciplinarity: Recreating Integrated Knowledge* (EOLSS Publishers Co. Ltd. 2000) 90–91. However, over the last decade, the elite law schools in the US began to hire law professors who have obtained PhD in economics; this mitigated the low quality problem of the law and economics scholarship undertaken by these legal scholars.

⁷³ As a way to mitigate this problem, some interdisciplinary legal journals have established a process of peer review. They include, for example, the *Journal of Law and Economics*, the *Journal of Legal Studies*, and the *Journal of Legal Analysis*. Still, peer reviewed law journals in the US are rare.

⁷⁴ Mark Kelman, ‘Could Lawyers Stop Recessions? Speculations on Law and Macroeconomics’ (1993) 45(5) *Stanford Law Review* 1217.

to apply to other legal areas.⁷⁵ Further, both micro and macro effects of tax law should be analyzed,⁷⁶ but legal scholars are predominantly micro-oriented and have a limited knowledge of macroeconomics.⁷⁷ Same analysis applies to banking regulation as a sophisticated microeconomic and macroeconomic area of scholarship. Legal scholars have thus opted for addressing some questions relevant to taxation or banking regulation that could be susceptible to informal economic analysis such as governance of banks or enforcement of tax law. The specialization trend of legal scholars, particularly in top American law schools, uncovers this tendency to avoid economic and financial regulatory areas whose economic or finance literature is theoretically sophisticated and thus are not susceptible to informal economic analysis.⁷⁸

This analysis would explain other phenomena in legal scholarship in general. For instance, urban planning regulations, transportation regulation and health care law, although fundamentally important, receive marginal attention in law schools.⁷⁹ These areas are not less important than corporate governance or securities regulation but these areas are similar to taxation and banking regulation. They are highly technical areas falling within the specialization of urban planning and economics, transportation economics, engineering and health economics. These areas are not susceptible to informal applied economic and engineering analysis and thus legal scholars have left these regulatory areas almost completely to be examined by urban planners, engineers, and economists specializing in transportation and health economics. If legal scholars went through

⁷⁵ Michael A Livingston, 'Reinventing Tax Scholarship: Lawyers, Economists, and the Role of the Legal Academy' (1998) 53 *Cornell Law Review* 381–383. Alex Raskolnikov, 'Accepting the Limits of Tax Law and Economics' (2013) 98 *Cornell Law Review* 534–537. *ibid* 551–557.

⁷⁶ Yair Listokin, 'Equity, Efficiency, and Stability: The Importance of Macroeconomics for Evaluating Income Tax Policy' (2012) 29(1) *Yale Journal on Regulation* 109–111.

⁷⁷ Richard A Posner, 'On the Receipt of the Ronald H. Coase Medal: Uncertainty, the Economic Crisis, and the Future of Law and Economics' (2012) 14(1) *American Law and Economics Review* 268. Posner argues that the limited knowledge of macroeconomics among legal economists would explain their inability to predict the macroeconomic repercussions of their financial regulatory recommendations.

⁷⁸ I have made a quick survey of law and economics professors in top law schools in the US. I found out that there is a strong tendency to hire economists specializing in the economics of taxation for the position of tax law professors. Further, few legal scholars include banking and financial institutions as their main area of legal expertise and research, in comparison to the large number of scholars who consider corporate and securities regulation to be their main area of research, although they may produce some works on regulation of banks. These findings provide a good proxy for the trend of law and economics research as American law and economics scholars at the top US schools of law set the agenda of law and economics research undertaken by legal scholars around the world. Still, these findings, based on quick informal survey of the webpages of the American law and economics scholars, are tentative; a well-designed empirical analysis of the areas of expertise and research of law and economics scholars around the world is needed.

⁷⁹ Most of the top twenty American law schools do not have law professors specializing in these areas.

these regulations, they certainly would find a range of questions that are interesting doctrinal questions or that are susceptible to informal applied analysis such as questions of legitimacy and enforcement. However, in general, these areas are not as interesting as corporate governance or securities regulations for law and economics analysis because most of their questions are not susceptible to informal applied analysis.

In sum, in addition to the dominance and automatic application of neoclassical-new institutional economics character of law and economics research, these applications as undertaken by legal scholars are of low quality and are thus best characterized as “*bad applied economics*”. This characterization of law and economics research undertaken by legal scholars encompasses two distinct aspects; any of them could manifest itself separately in law and economics scholarship, namely, bad economics and applied cross-disciplinary rather than integrative interdisciplinary aspect of law and economics research undertaken by legal scholars.

Informal analysis combined with average knowledge of economics would result in highly simplistic and mistaken analysis. A proper economic analysis of economic regulations would require a degree in both law and economics. Posner has endorsed this position in his recent works,⁸⁰ particularly after the marketing phase of law and economics has proven to be a success story. However, most law scholars in Europe do not receive formal training in mathematics, statistics, or economics in their undergraduate and postgraduate studies. The programs that incorporate law and economics are few across Europe⁸¹ and they are insufficient to teach the level of economics required for economic analysis of economic regulations in a one-year master’s program or a four-year Doctorate program.

Bad economics problem exists in the US as well. However, it has become less acute because many of top American law scholars have a PhD in economics. Thirty-nine law scholars of the top 100 cited law scholars on Social Sciences Research Network (“SSRN”) on July, 18, 2011 hold a PhD in economics and they are all Americans.⁸² To learn and master economics would be the first response to the bad economics problem. The History of law and economics in U.S. illustrates

⁸⁰ *ibid* 267.

⁸¹ For a good list of the Masters programs in Europe that has an emphasis on economics, see: <http://www.llm-guide.com/europe/concentrations/101/Law%20and%20Economics> (Accessed on 6.2.2014).

⁸² Joni Hersch and Kip Viscusi, ‘Law and Economics as a Pillar of Legal Education’ (2012) 8(2) *Review of Law and Economics* 493–495.

another response that is the collaboration between lawyers and economists.⁸³ Both responses have been emulated in Europe where collaboration between lawyers and economics is taking place⁸⁴ and where some economists are appointed on law faculties.⁸⁵ Due to institutional constraints, the scale of collaborative works between lawyers and economists and the appointment of economists on law faculties have been highly limited in Europe.⁸⁶ As a result, legal scholars in Europe are somehow *stuck in the bad economics problem* due to institutional constraints.⁸⁷ Those who overcome these institutional constraints and emulate the American experience of collaborative research or who master economics move beyond the European bad economics problem into the American form of law and economics characterized by a complete neoclassical economic imperialism of law resulting in what could be termed *neoclassical imperialism (over-representation) problem* that has been discussed above.

As Legal scholars invest their mental and time resources in learning neoclassical economics, they become highly interested in applying their gained knowhow to legal institutions. While doing so, they become *economists in disguise*. They are tempted to publish in peer reviewed internationally recognized law and economics journals⁸⁸ and thus tend to be formal and adhere squarely to the neoclassical paradigm in its standard form or in its evolved partially integrated form. The crisis in this case is more tacit; it is a crisis of complete dominance of neoclassical

⁸³ William M Landes, 'The Art of Law and Economics: An Autobiographical Essay' (1997). Chicago Working Paper in Law and Economics, no. 45, 14 <http://chicagounbound.uchicago.edu/law_and_economics/488/>. The author, however, expresses his surprise that collaboration among legal scholars and economists is not widespread in law and economics scholarship. He argues that the hiring of many legal scholars, who have PhD in economics, by elite law schools in the US explains this lack of collaboration because and these legal scholars already combine both legal and economic expertise.

⁸⁴ Billiet (n 70), 1486–1487. The author gives some examples of law and economics research projects undertaken collaboratively by legal scholars and economists in Europe such as some of scholarly works undertaken under the auspices of the Center for Environmental and Energy Law at the Law Faculty, Ghent University.

⁸⁵ The most notable example is Prof. Dr. Hans Bernd Schäfer, who is Universitätsprofessor (Emeritus) in Bucerius Law School, Hamburg University.

⁸⁶ *ibid.*

⁸⁷ It is noteworthy that bad economics problems, and the lag between European and American legal research does not exist in economic scholarship. The empirical evidence shows the similarity of the participation rate of American and European economists in the international peer reviewed journals of law and economics and the international conferences on law and economics. See: Ulen and Nonu (n 57), 1571, and see also the reference cited therein.

⁸⁸ These journals include, inter alia, The Journal of Law and Economics, Journal of Law, Economics and Organization, and the American Law and Economics Review.

economics where non-neoclassical (economic, legal, or political) cognitive perspectives are downplayed.

So far, the above sections have established the following. The sociological structure of plurality in law and economics research takes the form of fragmented (uncritical and non-integrative) plurality and that the distribution of cognitive resources and influence over various economic schools of thought is something close to a power law distribution, implying a low degree of plurality and dominance of neoclassical-new institutional economics. This social structure of plurality reveals *a dominance and automatic application of neoclassical-new institutional economics to legal institutions*. Law and economics scholars are of two communities: those who master economics (they are few in number, mostly Americans and represent the elite of law and economics scholars) and those who have average knowledge of neoclassical economics (these are the majority of law and economics scholars). The sociological structure of plurality of the first community reveals a stronger degree of dominance and automatic application of neoclassical economics, while that of the latter reveals a lower, but still high, degree of dominance and automatic application along with the low quality of such application. To capture this sociological structure, I will be referring to this social structure of plurality in law and economics research as (low quality) dominance and automatic application of neoclassical economics in law and economics research, or for sake of brevity, (low quality) applied neoclassical microeconomics character of law and economics.

The institutional structure of legal education and research would lock in law and economics research in the monistic dominance and automatic application of neoclassical economics research program. The institutional structure of legal education and research does not provide the required training and incentives for legal scholars to move beyond this social structure of research to a sociological structure of plurality similar to that of modern economics. The latter is characterized by fragmented plurality taking the form of lack of communication, but with extensive internal and external critical literature on neoclassical economics, along with a distribution of influence over the various schools of thought close to normal distribution. Undergraduate legal education has been institutionally organized as professionally oriented that teaches law students doctrinal law to prepare them for professional legal practice.⁸⁹ Traditionally, legal scholarship has been conceived

⁸⁹ Roger van den Bergh, 'Growth of Law and Economics in Europe' (1996) 40 European Economic Review 971.

as being addressed mainly to judges and lawyers rather than regulators.⁹⁰ The shift to interdisciplinary legal studies has taken place without putting into place the corresponding institutional structure of legal education and research.⁹¹ There exists no noticeable change in undergraduate legal education, except for some law schools in the US where students are exposed to some law and economics courses. Post-graduate interdisciplinary programs are not only few but also insufficient to provide legal scholars with sufficient human capital to undertake interdisciplinary research such as law and economics.

Modern economics has become a highly technical discipline, particularly at the edge of mainstream economics that includes inter alia, complexity economics, evolutionary economics, and evolutionary game theory. As a result, informal applications of these schools of thought to legal institutions have become very difficult and challenging, and thus few law and economics scholars, mostly those with PhD in economics, will be able to introduce developments taking place in these schools of thought into legal research. Complexity theory is a good example on the point. Few works in legal scholarship has applied complexity theory to legal institutions and fewer works have applied complexity economics to economic regulations.⁹² Almost all of these scholarly works have applied the insights of complexity theory to legal institutions without any formal mathematical modelling or computational simulation analysis. This initial informal application of complex system theory corresponds to the informal application of neoclassical economics to legal institutions at the starting years of law and economics approach, which has developed into formal analysis later on. Still, it is hard to apply complexity theory to legal institutions informally because the strength of complexity analysis lies in its ability to capture the effects of the interactions taking

⁹⁰ Moreover, it is more difficult for legal scholars to communicate their research to and influence regulators. Edward L Rubin, 'What Does Prescriptive Legal Scholarship Say and Who is Listening to It: A Response to Professor Dan-Cohen' (1992) 63 *University of Colorado Law Review* 372–373.

⁹¹ MacDowell suggests that elite (interdisciplinary) legal scholars seem to be less interested in communicating their scholarship to law students and other legal scholars. Banks McDowell, 'The Audiences for Legal Scholarship' (1990) 40 *Journal of Legal Education* 275. Their scholarship is addresses primarily to the small community that consist of their (elite and interdisciplinary) fellow scholars. *ibid* 263–264.

⁹² For a good account of the literature on complexity theory and law published until 2006, see: <http://jurisdynamics.blogspot.de/2006/07/complexity-theory-in-legal-scholarship.html> (Last Accessed on 6.2.2014). For a more updated overview of works and conferences relating to complexity theory and law, see: <http://computationallegalstudies.com/>. For an introduction to complexity theory and law, see: Ruhl, 'Law's Complexity: A Primer' (n 53). Jones (n 53). See also: J. B Ruhl, 'Complexity Theory as a Paradigm for the Dynamical Law-and-Society System: A Wake Up Call for Legal Reductionism and the Modern Administrative State' (1996) 45(5) *Duke Law Journal*.

place among heterogeneous agents and institutions by exploiting the power of computational simulations.

Informal analysis of legal problems using complexity theory is therefore highly difficult although the application of some insights of complex systems theory to legal problems could be possible. For instance, in chapter 6, we use the complexity theory's insight of the desirability of heterogeneity of agents for the sustainability and adaptability of the social systems to argue for restricting the judicial role to deliver justice rather than maximizing economic efficiency.⁹³ Further, some legal scholars informally applied some insights of complex systems theory to legal institutions.⁹⁴ Further, some of the fundamental insights of Smith, Schumpeter, Hayek, Marshall, and Keynes have been informed by a perception of the economy or of some of its aspects that correspond to what complex economists now characterize as a complex and evolutionary system.⁹⁵

⁹³ See section 6 of chapter 6 and the references cited therein.

⁹⁴ For example, drawing on sensitivity to initial conditions insight of chaos theory (chaotic systems are one type of complex systems) combined with path dependency and punctuated equilibrium in evolutionary theory, Mark Roe argues that the efficiency explanation of the evolution of institutions advanced by law and economics scholars is insufficient and sometimes inadequate for explaining current legal institutions. Mark J Roe, 'Chaos and evolution in law and economics' (1996) 109(3) *Harvard Law Review* 641 667–668. A deep suspicion of both big government and big financial businesses dominated the US political economy; this mistrust (which represents the *initial political-economic conditions of the American economic system*) led to the de-concentration and thus fragmentation of the financial institutions in the US. As a result, American corporations relied on securities markets for financing, while competition in product markets and the disciplinary power of stock markets along with independent boards compensated for the lack of monitoring by financial institutions. European and Japanese political economy did not have the American distrust toward big governments and big banks, and thus their bank-based corporate governance systems could evolve. *ibid* 645. More recently, Angus Corbett argue that systems subject to regulations such as health care system are complex, and thus regulators should use systems thinking for regulating these systems. According to him, the core insight of systems thinking is that regulators should set clear objectives and should attempt to deeply understand the system subject to regulation, particularly the *systemic forces* leading to the problem that the regulation addresses, and to use this knowledge in designing interventions that target the *leverage-points* of the system. These are the points that would change the dynamics of the system. To design and to implement these interventions, the regulator has to experiment and learn through trial and error. Angus Corbett, 'A Systems Approach to Regulatory Excellence' (June, 2015). Paper Prepared for the Penn Program on Regulation's Best-in-Class Regulation Initiative 3–4 <<https://www.law.upenn.edu/live/files/4713-corbett-ppr-bicregulatorediscussionpaper-062015pdf>>. Other informal applications of some insights of complexity theory have been made in the areas of administrative law, adjudication theory, corporate's social responsibility, and environmental regulation. For a good compilation of legal scholarly works that applied some of the insights of complexity theory to legal institutions, see: <http://jurisdynamics.blogspot.de/2006/07/complexity-theory-in-legal-scholarship.html> (accessed 20 August 2015). It is interesting to note that in most of these studies, the scholars are invoking insights directly from complexity theory. They do not use the cognitive perspective of complexity economics that complexity economists have been developing over the last twenty years.

⁹⁵ Roberto Marchionatti demonstrates, convincingly, that both Marshall and Keynes perceived the economic system (or more accurately, some economic sub-systems or problems) as a complex system of

In addition, many heterodox schools of economics such as old institutional economics and comparative capitalism adopt some insights of complex systems theory that chapter 6 builds upon for developing the propositions of the systemic perspective. Still, the informal neoclassical-new institutional analysis of legal institutions is much easier than their informal complex systemic analysis. Consequently, the insights of the schools of thought at the edge of the mainstream economics cannot be introduced adequately through informal analysis into legal research. Only legal scholars with solid quantitative and computational background could apply the cognitive perspective of these schools of thought to legal institutions.

However, legal scholars would incur high investment costs for learning these schools of thoughts because they need to allocate significant amount of their limited time and cognitive resources to this difficult learning process that involves learning advanced levels of mathematics and simulation software programs; these high investment costs would dis-incentivize legal scholars from walking down this path. Particularly, these investments would have uncertain returns due to heterodox status of these schools of thought under the current state of modern law and economics. In addition, the institutional structure of legal academia does not provide the incentive for investing in learning formal techniques because the publication in law journals does not require the rigorous requirements of economic journals. Legal scholars have no incentives to invest in increasing their quantitative analytical abilities because they are not required to publish formal law and economics research for their career advancement.⁹⁶ Instead of producing a formal research paper, they can maximize the use of their limited time resources by publishing two or three informal scholarly works.⁹⁷

interdependent elements and as an evolutionary system whose (social, political, institutional, and technological) structure evolves over time. Roberto Marchionatti, 'J. M. Keynes, Thinker of Economic Complexity' (2010) 18(2) *History of Economic Ideas* 124–125. Based on this understanding of the economic system, Keynes developed his general theory. *ibid* 136–137. Similarly, Brian Arthur argues that the examination of the formation and structural evolution of the economy by Smith, Hayek, and Schumpeter reveals their endorsement of a clear evolutionary understanding of the economic system. He argues therefore that this tradition of political economy can find in complex systems theory its operational analytical framework. Arthur (n 6) 17.

⁹⁶ Ulen and Nonu (n 57), 1594, fn. 178. Indeed, a mathematical (formal) scholarship may be hinder the academic career of European legal scholars given the current structure of legal publication in Europe, which provides little space for publication of interdisciplinary research. Kenneth G Dau-Schmidt and Carmen L Brun, 'Lost in Translation: The Economic Analysis of Law in the United States and Europe' (2006) 44 *Columbia Journal of Transnational Law* 615. *ibid* 619.

⁹⁷ Legal scholars tend to prefer quantity to quality. See: David P Bryden, 'Scholarship About Scholarship' (1992) 63 *University of Colorado Law Review* 643. The institutional structure of legal

The few legal scholars, who have already invested in learning quantitative analysis and mastered the neoclassical economic paradigm, have no incentive to explore other schools of thought. They are already representing the elite of the legal community of law and economics scholars. As a result, both communities of law and economics scholars (those who have solid neoclassical economic background and those who have average knowledge and low quantitative analytical abilities) have either no incentives or no sufficient human capital for applying sophisticated schools of thoughts at the edge of the mainstream of modern economics such as complexity theory or evolutionary and behavioral game theory to legal institutions.

This institutional structure of legal education and research locks in the current state of modern law and economics: neoclassical-new institutional economics occupying the orthodoxy status, and behavioral law and economics standing at the edge of mainstream law and economics, while other schools of thought are non-represented. In other words, the institutional structure locks in the (low quality) dominance and automatic application of neoclassical-new institutional economics research program of law and economics. Consequently, law and economics research undertaken by legal scholars is lagging and expected to continue to lag behind modern economics.

The predicted stagnation of modern law and economics as undertaken by lawyers in comparison to modern economics would be a product of the following combined institutional factors. First, the institutional environment of legal scholarship does not provide proper incentives for investments in the application of sophisticated methods or schools of thought to legal problems. Second, legal scholars lack the adequate human capital required for timely application of new developments in modern economics, as they do not learn quantitative techniques in their undergraduate or graduate studies. They have invested a lot of their efforts and time in order to understand neoclassical economics and thus they would be hesitant to make uncertain investments in other economic paradigms such as complexity theory, for example. To be a certain investment, the economic school of thought has to move into the orthodoxy of modern economics; this would cause law and economics to lag behind modern economics. Finally, the few number of law and economics scholars who apply neoclassical economics to legal institutions gain sufficient prestige

academia provides this perverse incentives structure for legal scholars because there is no weight given to publications in internationally peer-reviewed journals. Billiet (n 70), 1503–1504. Further, the student-run journals in the US fail to ensure quality control. Finally, the peer-reviewed law journals, apart from top interdisciplinary peer-reviewed journals, tend to lack transparent and well-documented criteria about what constitutes a “good” legal research.

of being part of this small community. They have few incentives to explore heterodox schools of economics and apply them to economic regulations. Younger scholars would find it hard to get funding to undertake such exploratory projects that would have little impact on the law and economics research, which is dominated by the neoclassical-new institutional orthodoxy, and thus has little interest in works taking place outside its boundary.

Furthermore, the political-economic ideology of neoliberalism and private funding would provide additional explanations for the dominance of neoclassical paradigm and the diffusion of neoclassical law and economics. Although the neoclassical economic paradigm does not take an ideological stance in support of neoliberalism, neoclassical economics with its emphasis on rationality, methodological individualism, equilibrium, and economic efficiency would provide the best economic arguments in support of neoliberal agenda, if compared with other economic schools of thought such as socio-economics, complexity economics, old institutional economics, and comparative capitalism. Still, the fact that both Milton Friedman and Joseph Stiglitz are neoclassical micro-economists demonstrates well the *internal diversity* within neoclassical economics.⁹⁸ Still, in contrast to a state of the world where neoclassical economic school of thought competes on equal footing with other economic and non-economic approaches to economic regulations, the predominance of the neoclassical economic paradigm ensures that the *diversity* is somehow *disciplined and limited*. Not only neoclassical economics would provide a stream of economic arguments in support of neoliberal economics, but also the neoliberal political ideology and individualist *laissez-faire* culture in the US supports in turn the utilitarian, rational, and individualistic paradigm of neoclassical economics.⁹⁹ Further, neoclassical law and economics would not only be functional in advocating the neoliberal agenda in the neutral disguise of science and positivism but would also help constitute such liberal ideology in legal discourse through neoclassical imperialism of law.¹⁰⁰ Neoclassical paradigm also provides the theoretical arguments for neoliberal agenda promoted at the global level by IMF and the World Bank. Further, Private corporations in the US have channeled millions of dollars for the support of law and economics

⁹⁸ Despite sharing the neoclassical micro perspective, Stiglitz and Friedman diverge on macroeconomics. Friedman was a propagator of monetarism, while Stiglitz is a new Keynesian.

⁹⁹ Amitai Etzioni, 'Socio-Economics Revisited' (1991) 61(1) Sociological Inquiry 69.

¹⁰⁰ Eric Fink, 'Post-Realism, or the Jurisprudential Logic of Late Capitalism: A Socio-Legal Analysis of the Rise and Diffusion of Law and Economics' (2003-2004) 55 Hastings Law Journal 945.

programs at top U.S law schools.¹⁰¹ Such funding secured that not only economics and economists would become neoclassical but also law and lawyers.

In addition to the above drivers of the dominance and imperialistic successes of neoclassical law and economics, the lack of a challenging paradigm that could address the critiques addressed to neoclassical law and economics without losing the valid insights of the neoclassical paradigm contributes to the dominance of neoclassical law and economics approach to economic regulations.

Consequently, non-neoclassical schools of thought have little chance to be introduced to analysis and design of legal institutions. The dominance of neoclassical-new institutional economics would persist. Further, the automatic application of the latter would persist as well. Legal research is conceived as practically oriented research areas, scholarly works that investigate theoretical issues would appear as unwelcomed anomaly. There are low incentives for legal scholars, under current institutional structure of education and research, to reflect on theoretical foundations of the economic paradigms or to integrate the insights of the neoclassical-new institutional law and economics with that of other economic paradigms.

7. Conclusion

This chapter has made *six propositions* regarding modern economics and law and economics research as follows:

- i. Modern economics exhibits fragmented (uncritical and non-integrative) plurality. In modern economics, fragmented plurality takes the form of lack of critical communication (cross-criticism), yet, internal and external critique of neoclassical paradigm is well-developed in modern economics. Internal and external critique of non-neoclassical paradigms is underdeveloped, however.
- ii. Similarly, law and economics research exhibits fragmented (uncritical and non-integrative) plurality. Yet, in law and economics research, fragmented plurality takes the form of lack of communication and lack of internal, external and cross-critiques of both neoclassical

¹⁰¹ Nan Aron, Barbara Moulton and Chris Owens, 'Economics, Academia and Corporate Money in America: The 'Law and Economics' Movement' (1992-1993) 24(27) Antitrust Law and Economics 29; and Fink (n 100), 948.

and non-neoclassical schools of thought, with the exception of few studies criticizing economic efficiency and rational choice theory aspects of neoclassical law and economics as an approach to non-economic laws. Neoclassical-new institutional economics as an approach to economic regulations receives little challenge. It is noteworthy here that cross-criticism in law and economics research as I conceptualize it refers to going through the thought experiment of applying various economic paradigms to the same legal research question. Then, the scholar starts to criticize the answer provided by each paradigm in light of the cognitive perspective of the other paradigms. Part III will provide two detailed applications of this process.

- iii. Both modern economics and law and economics research do not follow the epistemological norm of *integration*. The history of economics, however, exhibits some instances of integrative research. The same is true in legal research on economic regulations. Still, these integrative studies are rare and marginalized. These few instances of integration, whether of schools of thought or of the insights of them, do not justify characterizing modern economics or law and economics research by integrative plurality. They are best characterized by fragmented plurality.
- iv. The allocation of cognitive resources and influence in modern economics over economic paradigms would resemble a normal distribution, while the distribution of cognitive resources over paradigms of law and economics comes close to a power law distribution. In law and economics research, neoclassical-new institutional law and economics is over-represented whereas other economic paradigms are under-represented. Power law distribution implies a very low degree of plurality in law and economics research, as many non-neoclassical schools of thought are almost non-represented in that research.
- v. We can characterize the social structure of law and economics research by *a monistic dominance and automatic application of neoclassical economics to legal institutions*. This is due to the low number of schools of thought represented in law and economics research, the lack of cross-criticism and integration (i.e., fragmented plurality) among these few schools of thought, and the dominance of neoclassical-new institutional school of thought that attracted most of the cognitive resources and influence within law and economics community. The dominance and automatic application of neoclassical economics in the law and economics research is more salient in the elite community of law and economics

scholars. As to the non-elite community encompassing scholars who have no solid economic background, their economic analysis of law is of low quality, if evaluated according to the current standards for evaluation of economic research. Their scholarly work is best characterized as bad economics (or more accurately, it is best described by the dominance and low quality automatic applications of neoclassical economics to legal institutions). This state of law and economics research is *not parallel* to that of modern economics.

- vi. The non-parallelism of the social structure of plurality in modern economics and law and economics research would persist due to the different the institutional structures of legal and economics education and research. The institutional structure of both legal education and research was historically instituted for promoting doctrinal and not interdisciplinary research.

A final remark concerning these six propositions is in order. This chapter has not attempted to provide a *conclusive empirical evidence* to support these propositions. Still, well-designed empirical studies can be undertaken for testing these propositions. We can give some examples on the way these empirical studies can be designed. The proposition that modern economics and law and economics research do not follow the epistemological norm of integration could be tested empirically in two ways. It is possible to construct a co-citation network analysis in which economic journals specialized in publication of works of specific economic paradigms would represent the nodes in the network and the citation across the articles of these journals would constitute the ties.¹⁰² Same analysis could be made in law and economics research as undertaken by legal scholars. However, as there are no specialized journals in various economic paradigms, the nodes would represent clusters of articles falling within specific paradigms rather than journals. If this proposition is correct, the ties between diverse economic paradigms will be weak. Co-citation network analysis would measure the *degree of communication* but not necessarily *the degree of integration*. If the degree of communication is low, it is a good proxy of the low degree of integration. However, if the degree of communication is high, we could assume that most of the citations are positive in the sense that most citations indicate endorsement of the ideas of the cited

¹⁰² On co-citation network analysis, see: Markus Gmür, 'Co-citation Analysis and the Search for Invisible Colleges: A Methodological Evaluation' (2003) 57(1) Scientometrics.

scholarly works and these citing scholarly works would therefore tend to integrate the insights of the cited works into the other paradigms.¹⁰³ Another way to measure the degree of integration is to trace historical evolution of various economic paradigms to see whether these paradigms have evolved through integrating the insights of other paradigms. This chapter has provided a short historical account of the evolution of neoclassical economics by the way of integration of some insights of other schools of thought. The analysis is still incomplete because it has to involve thorough historical account of the evolution of non-neoclassical economic paradigms as well along with focusing on the *role and techniques of integration* in this process.

Similarly, as to the propositions regarding the *allocation of the cognitive resources and influences* over schools of thoughts in both modern economics and in law and economics research, in order to reach these propositions, this chapter has relied on a historical analysis of the evolution of both modern economics and law and economics research. It has also relied on the emerging subjective consensus among economists who have reflected on the issue of allocation of cognitive resources and influence over schools of thought in economics. These propositions, however, could be supported empirically by a descriptive statistics of the number of law and economics works that fall within each of these economic paradigms. Same empirical analysis could be done regarding economic research. However, if the objective is to capture allocation of cognitive resources, the analysis should focus on the distribution of academics (and not articles) over the various paradigms. If the objective is to capture not only allocation of cognitive resources but also influence, then, analysis should focus on distribution of journal articles in top ranked journals over economic paradigms.

In sum, the analysis in this chapter has been sufficient for establishing, though inconclusively, the above five propositions. The suggested numerous empirical studies that could establish a more conclusive empirical evidence would require further two or three chapters to undertake. This clearly goes beyond the scope of this thesis. The suggested empirical studies are good research projects for scholars interested in the sociology of modern economics and law and economics, particularly the sociology of plurality of schools of thought in both of these research areas.

¹⁰³ Alternatively, we can use elaborate methods of co-citation network analysis of formation of scientific communities and academic consensus; in this case, formation of consensus may signal a higher degree of integration of the insights of the schools of thought. See: Uri Shwed and Peter S Bearman, 'The Temporal Structure of Scientific Consensus Formation' (2010) 75(6) *American Sociological Review* 820–824.

If the conclusive empirical studies have shown that my characterization of both modern economics and modern law and economics research is incorrect, and that both economics and law and economics research embraces cross-criticism and integration, then, this would imply that law and economics scholars are practicing *implicitly* integrated law and economics. This possibility is highly dubious that almost all law and economics scholars would agree to be implausible. Yet, for the sake of argument, suppose that many law and economics scholars are implicitly practicing what is called “integrated law and economics”. In this case, the next chapter that provides the epistemological/methodological arguments for integrated law and economics would be justifying this *implicit* practice and thus my advocacy for an integrated law and economics approach to economic regulations should then be read as an attempt to make the implicit practice *explicit*. In this case, more scholars would be encouraged to adopt the integrated law and economics approach because they would perceive their endorsement of this approach as a shift from an implicit practice of endorsing the epistemological norms of cross-criticism and integration, which were neither systemically applied nor epistemologically founded, to an epistemologically grounded and systematically applied version of these norms.

In conclusion, in response to plurality of the distinct cognitive perspectives of the economic school of thought (as established in chapter 2), law and economics scholars have ignored this perspectival plurality. Instead, they have taken a monistic position, according to which they apply the neoclassical school automatically to legal institutions. They have not advanced any epistemological/methodological justifications for this monistic position. This chapter shows that their monist position seems to have been a product of historical accident (the dominance of the neoclassical economics in the post-world war II period when economics has been invoked for analysis of legal institutions) and that the institutional structure of legal education and research has locked in law and economics research in this historical accident. In response to the perspectival plurality, few law and economics studies have deviated from this dominant mode of law and economics research; they follow what I call “integrated law and economics”. The following chapter explains what I mean by the approach of “integrated law and economics”, develops epistemological/methodological defense of this approach, and then describes the institutional changes required in both economic and legal education and research in order to overcome the institutional lock-in problem. Chapter 7 shall then operationalize integrated law and economics by developing a well-defined replicable process for its application to legal institutions.

Chapter

4

The Case for Integrated Law and Economics

1. Introduction

Chapter 2 has demonstrated the perspectival/paradigmatic plurality of economics. Chapter 3 investigated how modern economists and modern law and economics scholars tackle this perspectival plurality. It concluded that law and economics scholars are committed to a monist position that manifests itself in the dominance of neoclassical-new institutional perspective that they apply automatically to legal institutions. Few scholarly works deviates from this mode of law and economics research; they exhibit what can be called “integrated law and economics” approach to legal institutions. This chapter illustrates what I mean by “integrated law and economics”. Here, *Integration* is the focal concept. Tackling the question of “*What to Integrate; or what are the forms of integration?*” can help us therefore in conceptualizing integrated law and economics. To address this question, this chapter distinguishes between *interdisciplinary and transdisciplinary* integration. Based on this distinction, I suggest that integrated law and economics stands for integrating the regulatory insights of relevant schools of thought. This form of integrated law and economics resides on the interdisciplinary concept of integration. Integrated law and economics can also take the form of integrating the relevant schools of thought to come up with an integrative paradigm, then, applies this resulting paradigm to the regulatory question. This form of integrated law and economics rests on the transdisciplinary concept of integration. Transdisciplinary integration does not substitute for interdisciplinary integration, as we will see below.

Unlike modern law and economics research, integrated law and economics responds to perspectival plurality differently. Hence, we need to advance a *methodological/epistemological justification* for integrated law and economics; in other words, we have to address the question, “*Why to integrate?*” The dominance and automatic application of neoclassical economics

coincides with the methodological commitment to monism. The latter dictates that only one school of thought is correct, while others are wrong. Fragmented plurality corresponds to the methodological norm of fragmented pluralism. The latter takes the position that pluralism should be retained, but critical or integrative communication among diverse paradigms is not possible. It is not clear whether law and economics scholars commit to monism or fragmented pluralism. Except for very few scholarly works, what is clear is that in both cases, law and economics scholars do not commit to critical or integrative pluralism in their research. In other words, the methodological justification for the dominance and automatic application of neoclassical economics resides on either *monism or fragmented pluralism*. On the contrary, for justifying integrated law and economics, we have to establish the case for two methodological positions: the pluralism (rather than monism) of (economic) perspectives required for analysis and design of socio-economic regulations, and the integration (rather than fragmentation) of these schools of thought or the integration of their insights. By advancing a convincing line of argument for these methodological positions, this chapter establishes the case for integrated law and economics and answers the question, “why to integrate?”

This brings us to the third question of “How to integrate; or what are the process (methodical steps), methods, and techniques for integration?” chapter 7 addresses this question by developing a process for the application of integrated law and economics.

Finally, the previous chapter has shown that the institutional structure of legal education and research locks in law and economics scholars into the research program of the monist automatic application of neoclassical economics. For the same reasons, it locks them in a reductionist (non-systemic perspective as well). To overcome this institutional lock-in, the final section of this chapter suggests some reforms in the institutional structure of both legal and economic education and research so that law and economics scholars who are convinced by the integrative and/or the systemic perspectives could find a space for applying these perspectives in their scholarship.

This chapter proceeds as follows. Section 2 illustrates the difference between interdisciplinarity and transdisciplinarity, and establishes the distinction between interdisciplinary and transdisciplinary integration. Given this distinction, this section gives an answer to the question of “*What to Integrate?*” To address the question of “*Why to Integrate?*”, section 3 introduces briefly the methodological positions of monism, fragmented pluralism, critical pluralism and integrative pluralism, and the underlying arguments for these positions. It also

illustrates the relation between critical and integrative pluralism on one hand and interdisciplinarity and transdisciplinarity on the other hand. Given that integrated law and economics is epistemologically founded on the methodological norms of *pluralism* (in comparison to *monism* underlying neoclassical law and economics) and *integration* (in comparison to *fragmentation* underlying modern law and economics research), section 4 establishes the case for pluralism of economic perspectives. Section 5, then, develops a line of argument in support of *integration* (vs. *fragmentation*) of the insights of these perspectives for analysis and design of socio-economic regulations. Section 5 outlines the institutional reforms that would give law and economics scholars the space for applying integrated and systemic law and economics. Section 6 concludes the chapter.

2. What to Integrate? Interdisciplinary vs. Transdisciplinary Forms of Integration

Historically, knowledge was organized in an interdisciplinary mode as philosophy was thought to encompass all branches of knowledge. In the nineteenth century, disciplines distinguished their territory and were institutionalized into university departments.¹ By establishing the ethic of narrow academic specialization, the disciplinary mode of knowledge organization has achieved paramount successes in knowledge production.² On the cons side, disciplinary specialization has resulted in *knowledge fragmentation*.³ Despite addressing similar phenomena, disciplines overlook the knowledge produced by each other.⁴ Further, disciplines have been unable to tackle complex interdisciplinary problems adequately because they were not structured around real-world problems; rather, they follow a reductionist approach for addressing these complex problems; they isolate and analyze the aspects of the problem that fits best their disciplinary perspective.⁵

To overcome these limitations of disciplines, interdisciplinary research seeks to develop a more comprehensive answer to research questions. To develop these comprehensive answers, interdisciplinary research process consists of *identifying* the disciplinary insights relevant to the

¹ Julie T Klein, *Interdisciplinarity: History, Theory, and Practice* (Wayne State University Press 1990) 65.

² Allen F Repko, Rick with Szostak and Michelle P Buchberger, *Introduction to Interdisciplinary Studies* (SAGE Publications 2013) 65.

³ Klein (n 1) 20–21.

⁴ Repko, with Szostak and Buchberger (n 2) 79.

⁵ *ibid* 123–124.

research question at hand and *integrating* these insights.⁶ In addition to the integration of relevant disciplinary insights, interdisciplinary research refers also to the integration of relevant insights of the schools of thought within a relevant discipline.⁷ For example, neoclassical economics, behavioral economics and institutional evolutionary economics, as representing distinctive cognitive paradigms within economics, may provide diverse insights for the same regulatory question. Similar to distinct disciplines, each of these schools of thought has its own distinct cognitive perspective because, as already argued in chapter 2, each of them has its own ontological, methodological, normative, theoretical, conceptual, linguistic, methodical, and paradigm as exemplar dimensions.

As chapter 2 has demonstrated, schools of thought should not be confused with methods of research, as the latter constitutes only one dimension of any school of thought. The insights of schools of thought can only be subject to interdisciplinary integration. For instance, neoclassical economists prefer quantitative methods of formal modeling and econometrics whereas behavioral and institutional economists have strong preference for experimental and qualitative methods.

Based on the above, *Integration or synthesis* is the core of interdisciplinary research. If a scholar approaches a problem that traditionally belong to one discipline from the perspective of another discipline, he is not conducting an interdisciplinary scholarship but a *cross-disciplinary* research;⁸ The latter is characterized by a *colonization or imperialism* of cognitive perspective of one discipline to the problems traditionally addressed in another discipline whose insights are then overlooked.⁹

⁶ William H Newell, 'A Theory of Interdisciplinary Studies' (2001) 19 *Issues in Integrative Studies* 15. Repko, with Szostak and Buchberger (n 2) 27–28. Klein (n 1) 188.

⁷ This is because every discipline encompasses numerous perspectives. Repko, with Szostak and Buchberger (n 2) 101.

⁸ Marilyn Stember, 'Advancing the Social Sciences through the Interdisciplinary Enterprise' (1991) 28(1) *The Social Science Journal* 4. For a good account of the major terminologies in interdisciplinary studies, see: Katri Huutoniemi and others, 'Analyzing Interdisciplinarity: Typology and Indicators' (2010) 39(1) *Research Policy*. Tanya Augsburg, *Becoming Interdisciplinary: An Introduction to Interdisciplinary Studies* (2 ed. Kendall/Hunt Pub. 2006) 19–25.

⁹ *ibid.*. Stember (n 8), 4. See also: Jack M Balkin, 'Interdisciplinarity as Colonization' (1996) 53 *Washington and Lee Law Review* 960–961.

Transdisciplinarity, on the other hand, refers to integration of disciplines, sub-fields (specializations) or schools of thought to establish trans-disciplines or inter-disciplines¹⁰ that constitute *new cognitive perspectives*. In this sense, integration of disciplines attempts to establish a new trans-discipline that would provide a better and more comprehensive understanding, explanation, and prediction of the behavior of the phenomena subsumed under at least one of the constitutive disciplines of the trans-discipline. Trans-discipline may even succeed in explaining the domain of inquiry of both of its constitutive disciplines. This is *the disciplinary* form of transdisciplinarity because the transdisciplinary investigation ends up with creating a new discipline. For example, a successful transdisciplinary integration of economics and sociology could result in a new trans-discipline that transcends both economics and sociology and covers their domains of inquiry.

Nevertheless, Dogan and Pahre argue that integration takes place only between sub-fields or sub-sub-fields/specializations (or as they call them fragments) of different disciplines.¹¹ In their view, transdisciplinary integration of disciplines is not possible.¹² They argue that each discipline has its domain of inquiry that is divided into sub-fields that are in turn divided into sub-sub-fields/specializations.¹³ For example, economics includes the sub-fields of microeconomics, macroeconomics, and finance, each of which has their own *specializations* such as monetary and fiscal fragments of the sub-area of macroeconomics, and corporate finance, asset pricing, and banking fragments of the sub-area of finance.¹⁴ A set of phenomena is located at the *margins* of each specialization's domain of inquiry.¹⁵ For a comprehensive and coherent understanding of these phenomena at the margin of some specializations, each of these specializations should contribute to investigating these phenomena.¹⁶ Corporate governance, for instance, is located at

¹⁰ William H Newell, 'Transdisciplinarity Reconsidered' in Margaret Somerville and David J Rapport (eds), *Transdisciplinarity: Recreating Integrated Knowledge* (EOLSS Publishers Co. Ltd. 2000) 42–43, and see the reference cited therein.

¹¹ Mattei Dogan and Robert Pahre, *Creative Marginality: Innovation at the Intersections of Social Sciences* (Westview Press 1990) 63–66.

¹² *ibid* 115–119.

¹³ *ibid* 56–62. See also: *ibid* 85–113.

¹⁴ *ibid* 110–113

¹⁵ *ibid* 65–66.

¹⁶ Dogan and Pahre call this process 'hybridization', see: *ibid* 63–72. See also: Robert R McMurtry, 'Reflections on Transdisciplinarity' in Margaret Somerville and David J Rapport (eds), *Transdisciplinarity: Recreating Integrated Knowledge* (EOLSS Publishers Co. Ltd. 2000) 180–181, and see the reference cited therein.

the margin of a set of specializations that include, inter alia, corporate governance specialization of corporate finance, contract theory, corporate law, contract law, economic criminal law, organizational economics, and environmental studies. These specializations are necessary for tackling the vexing questions of corporate governance, while other specializations of economics and law such as monetary economics or tax law specializations of economics and law such as fiscal macroeconomics and tax law might have almost nothing or little to contribute to corporate governance research. There is no epistemological need for integrating the discipline of economics with that of environmental studies, sociology, or law to examine corporate governance since it is sufficient to integrate its relevant fragments.

In sum, there are two forms of transdisciplinary research: disciplinary based and fragments based. The fragments based form of transdisciplinary research is the most sensible intellectual endeavor, particularly the need for fragments based transdisciplinarity is pressing because the phenomenon by definition falls within a gap between different fragments and cannot be addressed adequately by only one of these fragments.

Given this importance of fragments based transdisciplinarity, we need to investigate what we really integrate when we integrate specializations or fragments. For example, suppose that we attempt to integrate the research on *corporate governance* undertaken in the specialization of corporate finance with the research on corporate governance undertaken in the specialization of organizational economics to create an inter-discipline of corporate governance. In this case, the pertinent questions are, “what do we integrate in this case?”, and “how can we integrate these streams of research?” Kuhn suggested that the scholars of each specialization approach the problems of their specialization by using the paradigmatic cognitive perspective,¹⁷ and thus specializations belonging to the same discipline may have different structure of plurality. For example, in microeconomics, Schumpeterian evolutionary economic school may dominate competition economics, while neoclassical-new institutional economics dominates corporate governance or labor economics. The previous chapters have proceeded on the basis that one paradigm, neoclassical-new institutional economics, dominates all of the specializations of economics. Given the current dominance of neoclassical-new institutional economics in modern economics and law and economics sub-area, this has been a fair description of both economics and

¹⁷ Thomas S Kuhn, *The Structure of Scientific Revolutions* (2nd, University of Chicago Press 1970) 179–180.

law and economics research. With the intrusion of many schools of thought into the edge of the mainstream, we should expect in the near future that in some sub-areas of economics, some schools of thought would be competing with neoclassical-new institutional economics for dominance.

Each specialization has its own distinct structure of plurality. Thus, the integration of the streams of research on corporate governance in the specializations of *finance and organizational economics* implies the integration of the relevant school of thought in finance that gave the rise to this stream of research on corporate governance with the school of thought in organization economics that resulted in the relevant stream of research on corporate governance. Most probably, integration would target the dominant school of each specialization, but it could target other schools of thought as well. In case transdisciplinary scholars attempt to integrate these streams of research on corporate governance, they would face various streams of research in each specialization corresponding to the schools of thought of this specialization. Transdisciplinary scholars have to choose a school of thought (and its corollary stream of thought) from each specialization to be subject to integration. Given that there may be common schools of thought across these specializations, transdisciplinary scholar may either choose the same school from each specialization (and its corollary stream of research in each specialization) or choose different schools.

In case transdisciplinary scholars attempt to integrate these streams of research on corporate governance originating from the same school of thought across these specializations, say the neoclassical-new institutional school, integration would not clearly target the school of thought. Instead, integration in this case would attempt to develop a neoclassical model or theory that could integrate the models and theories of corporate governance scattered across these specializations. In other words, integration would take place the level of theory and modeling. In comparison to integrating diverse paradigms, this may seem to be a straightforward and easy task. Yet, it is not. Specializations normally address different aspect of the same phenomenon, while holding other aspects constant, or assuming them away. To bring these aspects together, scholars need a more holistic/systemic perspective that is sophisticated to undertake, as chapter 6 will show.

In case that transdisciplinary scholars attempt to integrate streams of research originating from different schools of thought, they have to integrate these schools of thought to come with an integrated school of thought that they could use for addressing the corporate governance questions traditionally raised in both streams of research. However, if each school of thought tackles different

aspects of corporate governance, integration would not require integrating these schools of thought, indeed, an inter-discipline can arise from integrating the insights of each school of thought whether informally or through developing integrated models. In this case, transdisciplinary integration does not target the schools of thought themselves but their insights. This case is similar to interdisciplinary integration whose subject is the paradigmatic insights and not the paradigms themselves.

Based on the above, since disciplines and specializations are constituted by streams of research corresponding to the schools of thought of these disciplines and specializations, interdisciplinary integration does not integrate the insights of the disciplines or specializations as traditionally defined in interdisciplinary studies literature. Rather, it integrates the insights of a specific school of thought in each discipline. Consequently, both transdisciplinary and interdisciplinary integration targets *schools of thought*, and not disciplines, sub-fields or sub-sub-fields/specializations. The basic unit subject to integration in interdisciplinary research is the insights of relevant schools of thought, while the basic unit subject to integration in transdisciplinary research is either these schools of thought or their insights. This conceptualization of transdisciplinarity and interdisciplinarity overcome the confusion created by referring to vague constructs such as disciplines, sub-areas, and specializations/fragments.

It seems, *prima facie*, that the subject matter of integration is the key difference between interdisciplinarity and transdisciplinarity. Interdisciplinarity integrates the *insights* of relevant schools of thought, whereas transdisciplinary integration integrates schools of thought.¹⁸ This famous portrait of the difference between interdisciplinarity and transdisciplinarity is not accurate. The above analysis has shown that sometimes, transdisciplinary integration combines the insights of schools of thought; in this sense, it not different from interdisciplinary integration. In addition, the process of interdisciplinary integration involves a creation of a *common ground* between different schools of thought based on which their insights could be integrated.¹⁹ Common ground creation process takes different forms; many of these forms involve the modification of different

¹⁸ Desmond Manderson, 'Some Considerations about Transdisciplinarity: A New Metaphysics' in Margaret Somerville and David J Rapport (eds), *Transdisciplinarity: Recreating Integrated Knowledge* (EOLSS Publishers Co. Ltd. 2000) 86–87.

¹⁹ Newell, 'A Theory of Interdisciplinary Studies' (n 6) 20. Allen F Repko, 'Integrating Interdisciplinarity: How the Theories of Common Ground and Cognitive Interdisciplinarity are Informing the Debate on Interdisciplinary Integration' [2007] *Issues in Integrative Studies*, 6–7.

dimensions of schools of thought such as theoretical or conceptual integration.²⁰ Accordingly, interdisciplinary integration process might *partially modifies* some dimensions of one school of thought through *partial integration* of insights of other paradigms. In these cases, the difference between interdisciplinarity and transdisciplinarity lies in their degree and not their subject of integration.

Transdisciplinary integration of schools of thought, if successful, does not replace interdisciplinary integration. Transdisciplinary integration of schools of thought results in an integrative school of thought. Given the plurality of schools of thought, their transdisciplinary integration would give rise to plurality of integrative schools of thought. This plurality calls for interdisciplinary integration of their insights. Both interdisciplinary and transdisciplinary integration are strengthening each other in positive feedback loop relation conducive to knowledge growth; neither of them can replace the other; particularly, transdisciplinary integration cannot end plurality by creating an overarching integrative school of thought.

Finally, how can we determine whether a specific research question is transdisciplinary/interdisciplinary? The answer is straightforward. The research question is transdisciplinary/interdisciplinary in case that at least two schools of thought that belong to one fragment of a discipline, to different fragments of a discipline (e.g., finance, organizational economics, and management studies in the discipline of economics), or to different disciplines provide (seemingly valid) insights relevant to this research question.²¹ Given this characterization of research questions, almost every research question in social sciences is transdisciplinary/interdisciplinary. Below sections will establish that questions of socio-economic regulatory analysis and design are transdisciplinary/interdisciplinary par excellence.

Scholars can use either transdisciplinary or interdisciplinary integration for approaching transdisciplinary/interdisciplinary questions. As mention above, transdisciplinary integration requires the integration of these schools of thoughts, integration of their insights in case of complementary insights or theoretical or model integration in case that the relevant streams of research originate from the same school of thought. The latter two cases are nothing but transdisciplinary integration of the insights. Interdisciplinary integration takes the form of integrating the insights of these schools of thought. When researchers are faced with diverse

²⁰ *ibid* 13.

²¹ Allen F Repko, *Interdisciplinary Research: Process and Theory* (2nd edn, SAGE 2012) 85–86.

schools of thought with inconsistent insights, the difference between transdisciplinary and interdisciplinary integration becomes salient. Transdisciplinary integration seeks to integrate these schools of thoughts, while the latter aims to integrate their insights.

It is noteworthy that both transdisciplinary and interdisciplinary integration can be of first, second or higher orders.²² For instance, corporate governance requires integration of streams of research on corporate governance in corporate finance, organizational theory, corporate law, economic sociology, and environmental studies. Most of these streams of research, particularly economic sociology and environmental studies, have been advanced through transdisciplinary and interdisciplinary integrations. Integrating their (integrated) insights when approaching corporate governance involves second order integration, namely, integration of insights that have resulted from a transdisciplinary or interdisciplinary process of integration.

Consequently, integrated law and economics can take the forms of interdisciplinary and transdisciplinary integrated approach. Interdisciplinary integrated law and economics stands for integrating the insights of schools of thought, whether neoclassical or non-neoclassical and whether economic or non-economic, relevant to the regulatory question in hand. This form of integrated law and economics resides on the interdisciplinary concept of integration. Transdisciplinary integrated law and economics takes the form of integrating the relevant schools of thought to come up with *an integrative paradigm*, then, applies the resulting paradigm to the regulatory question. This form of integrated law and economics rests on the transdisciplinary concept of integration. As shown above, transdisciplinarity does not substitute for interdisciplinarity, and thus transdisciplinary integrated law and economics would not substitute for the interdisciplinary form of integrated law and economics. Law and economics scholars should focus on interdisciplinary form of integrated law and economics, leaving transdisciplinary integration of schools of thought to economic methodologists and theorists. Accordingly, integrated law and economics takes primarily the form of interdisciplinary integration. This concludes the answer to the question, “What to Integrate?”, and now we can move to the following

²² Dogan and Pahre (n 11) 72. The authors use the term “second generation of hybridization” and “multi-generation hybrids” to denote this phenomenon. I prefer using the term “second order integration” for sake of consistency as I am using the term “integration” rather than “hybridization” to denote integration of relevant disciplinary or paradigmatic insights.

three sections that address the question of “Why to Integrate?” by developing a methodological justification for integrated law and economics.

3. Types of Pluralism (Fragmented, Critical, and Integrative) and Brief Account of Their Methodological Foundations

In the literature on pluralism in economics, plurality and pluralism are distinct concepts. Plurality is a descriptive concept that describes the ontological, epistemological, methodical, or normative positions of economics or of specific economic paradigm.²³ In this sense, paradigmatic plurality is only one type of plurality because the same school of thought may endorse a pluralistic position regarding one of its dimensions. For example, neoclassical economics embraces a monistic normative dimension based on social welfare maximization, while some heterodox schools of economic thought may embrace ethical pluralism founded on incommensurability of values. Similarly, as to the methodical dimension of schools of thought, a heterodox school of thought may accept plurality in methods (e.g., quantitative, qualitative, and mixed methods), while the neoclassical perspective endorses a monistic position of formalism. As mentioned in chapter 2, modern economics is paradigmatically pluralistic because it includes distinct cognitive paradigms.²⁴ Further, some schools of thought exhibit a higher degree of *internal* plurality than others do.

In contrast to plurality, pluralism is a normative methodological percept, according to which plurality should be encouraged in economics; economics should become a pluralistic science.²⁵ According to the norm of pluralism, economists can commit to different ontological and epistemological positions, and adopt diverse research methods such as quantitative, qualitative, and mixed methods without a commitment to formalism.²⁶

²³ Uskali Mäki, ‘The One World and the Many Theories’ in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997) 38.

²⁴ Vinca Bigo and Ioana Negru, ‘From Fragmentation to Ontologically Reflexive Pluralism’ (2008) 1(2) *Journal of Philosophical Economics* 29–131.

²⁵ Warren J Samuels, ‘Methodological Pluralism: The Discussion in Retrospect’ in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997) 308–309.

²⁶ Warren J Samuels, ‘The Case for Methodological Pluralism’ in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997) 74. Sheila C Dow, ‘Methodological Pluralism and Pluralism of Method’ in Andrea Salanti and Ernesto

Monism stands in stark contrast to pluralism. Monism states that only one ontological, methodological, and theoretical position could be true,²⁷ and thus only one economic paradigm that encapsulates these positions should dominate economic research.

Pluralism and monism have diverse implications for the relation between economic paradigms. Monism perceives economic paradigms as competitive and alternative to each other. Economists should opt for the correct paradigm to guide their research. Pluralism argues that economic paradigms could be complementary to each other in relation to specific dimensions and could be contradictory in relation to others. Contradictions of the dimensions and insights of different economic paradigms would open the door for cross-criticism and integration, which would allow the development of more comprehensive and less internally biased economic paradigms.

Plurality of cognitive paradigms of modern economics can take three forms: fragmented, critical, or integrative. From a methodological perspective, these forms of plurality are not methodologically equivalent; some of them may be methodologically superior to the other. Fragmented (generalized), critical and integrative pluralism refers to the normative position that fragmented, critical, and integrative plurality respectively should be the methodological norm.

Fragmented plurality refers to the situation in which different economic schools of thought do not communicate with each other. Economists working from within each paradigm communicate only with each other and do not communicate with scholarly works produced by other economic schools of thought.²⁸ Fragmented plurality can function under either a hostile or a tolerating institutional structure of academia. The current institutional structure of economic education and research tends to be hostile to plurality, which necessitates a more tolerating institutional structure.²⁹ In comparison to monism, fragmented or generalized pluralism requires that the institutional structure of modern economics should be conducive to *all* cognitive paradigms.³⁰

Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997) 89.

²⁷ Ernesto Screpanti, 'Afterword: Can Methodological Pluralism be a Methodological Canon?' in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997) 299–300.

²⁸ Bigo and Negru (n 24), 129.

²⁹ Frederic Lee, 'The Pluralism Debate in Heterodox Economics' (2011) 43(4) *Review of Radical Political Economy* 546–548.

³⁰ *ibid.*

Some economists argue for structured pluralism³¹ or critical pluralism³² to replace both monism and fragmented pluralism. The epistemological foundation for fragmented pluralism is the *non-comparability* between different economic paradigms, which finds its basis in the famous Kuhnian incommensurability thesis.³³ Given this incommensurability, no critical communication among paradigms could exist. In advocating the possibility of critical communication underlying the methodological position of critical pluralism, Dow argues that Kuhn's incommensurability thesis does not mean that different paradigms cannot be compared to each other because their language cannot be translated to each other. Rather, it means that the language of each paradigm can be *imperfectly* translated to each other. Once such translation takes place, communication among these paradigms would be possible. This communication would thus facilitate *rational* comparison of economic schools of thought according to both meta and non-meta criteria.³⁴ Critical pluralism would advance economic knowledge because it ensures cross-fertilization of economic schools of thought through opening up channels for their critical communication.

Integrative pluralism embraces critical pluralism, but goes one-step further. According to integrative pluralism, cross-criticism of economic paradigms would reveal complementarities and tensions among these paradigms.³⁵ Cross-criticism could also resolve some of these tensions and thus facilitate creation of common grounds for integration of these paradigms or of their insights.³⁶ Integrative pluralism requires that the institutional structure of economic research should promote both critical and integrative plurality.

Similar to the broad meaning of plurality that encompasses both plurality of schools of thought and of ontologies, methodologies, methods and normative theories, different forms of pluralism

³¹ Sheila C Dow, 'Structured Pluralism' (2004) 11(3) *Journal of Economic Methodology* 282.

³² Bruce J Caldwell, *Beyond Positivism: Economic Methodology in the Twentieth Century* (George Allen and Unwin 1982) 245–249. Caldwell advocates critical pluralism of methodologies (i.e., *methodological* pluralism); he does not engage with the critical pluralism of schools of thought (i.e., *paradigmatic* pluralism). He seems, however, to consider paradigmatic pluralism to be a consequence of methodological pluralism.

³³ Dow, 'Structured Pluralism' (n 31) 278. Kuhn (n 17) 101–102. *ibid* 149.

³⁴ Dow, 'Structured Pluralism' (n 31) 279.

³⁵ Bigo and Negru (n 24), 134. The authors do not use explicitly the term "integrative pluralism". However, they describe their advocated form of pluralism in economics as *reflexive and integrative*. *ibid* 142. The authors assert the importance of ontologically based cross-criticism, i.e., cross-criticism based on (ontological) meta-criteria. As shall be argued, cross-criticism should be undertaken with reference to both meta-criteria and non-meta criteria such as the usefulness of the paradigm's insights in addressing the regulatory problem at hand.

³⁶ Repko, with Szostak and Buchberger (n 2) 187–188.

has been advocated in economics such as ontological (meta-methodological), methodological, methodical, and theoretical pluralism.³⁷ I would be arguing for critical and integrative pluralism across economic paradigms but I am not going to argue for plurality within the same economic paradigms. In other words, the below arguments are intended to support critical and integrative pluralistic research projects that combine different economic schools of thought. Some scholars have advanced some of the below arguments for advocating “internal pluralism of schools of thought” that dictates that each economic school of thought should adopt a pluralistic ontological, methodological, methodical, or theoretical dimensions.³⁸ Yet, we need not engage with the issue of internal pluralism of schools of thought because it goes beyond the scope of this thesis since we are mainly concerned with establishing the methodological case for cross-paradigmatic critical and integrative pluralism.

Given these distinctions between plurality and pluralism, between monism and pluralism, and between the different forms of pluralism, we can show the relation between *critical pluralism*, *integrative pluralism*, and *interdisciplinarity* particularly the latter two concepts (i.e., integrative pluralism and interdisciplinary) revolve around the concept of *integration*.

With respect to the relation between critical pluralism and interdisciplinarity, Repko and his collaborators suggest that interdisciplinary research presumes that the interdisciplinary researcher endorses the epistemological position of *critical pluralism* because if the researcher endorses

³⁷ For an overview of different forms of pluralism in economics, see the chapters in the edited volume: Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997).

³⁸ Some forms of internal paradigmatic pluralism such as plurality of *methodical*, *theoretical*, and *normative* dimensions within the same school of thought are very appealing methodological positions. Indeed, neoclassical economics should adopt qualitative methods to complement its quantitative toolkit. In addition, each school of thought should advocate variety of competing theories in order to be able to provide better explanation and understanding of economic phenomenon. Further, the normative dimension of economic schools of thought should be pluralistic and contextualized; a sole focus on a specific normative objective is undesirable. For a defense of internal paradigmatic pluralism, see: Samuels, ‘The Case for Methodological Pluralism’ (n 26). Richard B Norgaard, ‘The Case for Methodological Pluralism’ (1989) 1(1) *Ecological Economics*. Still, other forms of internal pluralism of schools of thought such as *ontological* and *methodological* pluralism seem problematic. The primary problem of internal methodological plurality of a school of thought is that the methodological dimension of any school of thought has a major impact on the cognitive distinctiveness of these schools of thought and largely determines their remaining dimensions except for their ontological dimension because methodology is a way of seeing, i.e., a cognitive perspective. Internal methodological pluralism of a school of thought results therefore in an inherent tension among the perspectives of the endorsed methodologies by this school of thought; these tensions can hardly be resolved. For a critique of internal paradigmatic pluralism, see: Clive L Spash, ‘New Foundations for Ecological Economics’ (2012) 77 *Ecological Economics*.

monism, then, her interdisciplinary research would be lacking epistemological justification.³⁹ Instead of seeking to evaluate and integrate the valid insights of the relevant disciplines, the researcher who endorses monism should focus on identifying the right disciplinary perspective because according to monism, only one disciplinary perspective (or theory) is valid, while others are wrong.⁴⁰ In other words, critical pluralism is an epistemological pre-condition for interdisciplinary integration; otherwise, the step of evaluation and cross-criticism in the process of interdisciplinary integration cannot be epistemologically justified.

With respect to the relation between integrative pluralism and interdisciplinarity, integrative pluralism is an epistemological position that consists of two sub positions: (critical) pluralism and integration. The first epistemological position (i.e., pluralism) is a necessary, but insufficient, requirement for epistemological justification of the second epistemological position that is *integration*. Integrative pluralism therefore is the main epistemological position that underlies interdisciplinary and transdisciplinary integration. This reveals the main difference between integrative pluralism and interdisciplinarity: the former is an epistemological position (which consists of two sub-positions), but interdisciplinary research is *a (research) process*⁴¹ of integrating the disciplinary insights relevant to the research problem; this interdisciplinary process finds its epistemological justification therefore in the epistemological positions: pluralism and integration, which constitute *integrative pluralism*.

4. The Methodological Case for Pluralism

The methodological justification for the dominance and automatic application of neoclassical economics resides on either *monism or fragmented pluralism*. On the contrary, for justifying integrated law and economics, we have to establish the case for two methodological positions: the first is the *pluralism* (rather than monism) of (economic) perspectives that are required for analysis and design of socio-economic regulations. The second is the *integration* (rather than fragmentation) of these schools of thought or the integration of their insights in order to analyze

³⁹ Repko, with Szostak and Buchberger (n 2) 143–144.

⁴⁰ *ibid.*

⁴¹ *ibid.* 24. Newell, ‘A Theory of Interdisciplinary Studies’ (n 6) 14. Repko, *Interdisciplinary Research: Process and Theory* (n 21) 69.

and design economic regulations. This section develops a line of argument in support of pluralism, while the following section develops a line of argument in support of integration. The methodological case for pluralism is founded on *the complexity of the socio-economic system, the uncertainty of knowledge, and the heterogeneity of the ontological structure of the socio-economic reality*.

Proponents of pluralism originate from two main camps of philosophy of science: scientific realism (particularly perspectival realism) and postmodernism (particularly pragmatism). Scientific realism has two related axioms: an ontological axiom according to which there is an objective reality independent of the observer (i.e., independent from the subjective perspective of researchers), and an epistemological axiom according to which theories could be tested empirically until we reach the objective truth that mirrors the objective reality.⁴² In Scientific realism, there is one objective independent socio-economic system; there are no multiple economic realities or worlds to explore; the ontological structure of the socio-economic system corresponds to either a closed or an open evolutionary system; it cannot be both. Given the ontological structure of the socio-economic system, a methodology exists that is best suited for theory construction and choice. Scientific realism establishes that there is only one true and complete theory or one set of complementary true theories, which explains the structure, dynamics, and evolution of the socio-economic system. By using the correct methodology, scholars can reach this complete theory or this set of complementary true theories.

Scientific realism embraces a clear monistic position; there is a true objective ontology, a true theory, or set of theories to be reached by adopting the best methodology.⁴³ Economists should adopt the economic school of thought that encapsulates the correct ontological, methodological, and theoretical dimensions, while discarding the others. Nonetheless, some scientific realists advocate methodological and theoretical pluralism on the grounds of two arguments: the complexity and multifacetedness of socio-economic system and uncertainty of knowledge. The socio-economic system is complex and multifaceted; hence, no theory or model can capture all the

⁴² Screpanti (n 27) 299.

⁴³ For this reason, Screpanti argues that scientific realism dictates the endorsement of monism rather than pluralism, see: *ibid* 300–301.

aspects of the socio-economic system;⁴⁴ it is necessary to have complementary simplified models to capture the numerous aspects of the complex socio-economic reality.⁴⁵ This is an argument for *pluralism of theories/models*. From a realist perspective, these concrete models should subscribe to the true theoretical principles of the true school of thought. In other words, if neoclassical economics is the valid school of thought, this argument implies that plurality of concrete *neoclassical* models is required for understanding the multi-facets of the complex socio-economic system. Hence, this argument fails to establish methodological, theoretical, or paradigmatic pluralism.

Giere's scientific perspectivism (or perspectival realism) has significantly enhanced the above argument. As chapter 2 has demonstrated, if we follow scientific realism and endorse that the socio-economic system is objectively independent from the observer, observers still lack a direct access to this independent reality. Perspectives (paradigms or approaches) mediate between observers and the socio-economic system. The knowledge that observers gain about the socio-economic system is perspectival; it is relevant to the perspective the observer uses.⁴⁶ In most cases, these perspectives/paradigms would result in complementary knowledge as they approach different aspects of the same system.⁴⁷ In cases where these perspectives are incompatible (consider behavioral and neoclassical economics as incompatible paradigms), the models developed based on these perspectives can still enhance our understanding of the socio-economic system, as long as these models fit well the data.⁴⁸ Some of the neoclassical models and the behavioral economics models fit well the data, and thus integrating their insights would enhance our understanding of the socio-economic system, despite the incompatibility of these schools of thought.

Moreover, the realist proponents of pluralism advance the uncertainty of knowledge argument. We do not know the methodology that captures best the one objective reality. In face of this

⁴⁴ Mäki (n 23) 40. Leonhard Dobusch and Jakob Kapeller, 'Heterodox United vs. Mainstream City? Sketching a Framework for Interested Pluralism in Economics' (2012) 46(4) *Journal of Economic Issues* 1042.

⁴⁵ Mäki (n 23) 41–42. Dobusch and Kapeller (n 44), 1042.

⁴⁶ Ronald N Giere, *Scientific Perspectivism* (Chicago University Press 2006) 93–94.

⁴⁷ Ronald N Giere, 'Perspectival Pluralism' in Stephen H Kellert, Helen E Longino and Kenneth C Waters (eds), *Minnesota Studies in the Philosophy of Science, Vol. XIX: Scientific Pluralism* (University of Minnesota Press 2006) 31.

⁴⁸ *ibid* 33.

uncertainty, we have to accept methodological pluralism that would result in plurality of complementary and substitute theories.⁴⁹ This argument for pluralism hinges on our uncertain knowledge about whether the methodology suits the economic phenomenon under analysis. If economists are *certain* about the suitability of one methodology to the analysis, other inferior methodologies should be disregarded. Since economists' consensus over one methodology is difficult to achieve, uncertainty of knowledge argument would hold.

In addition to the complexity and uncertainty of knowledge arguments, an ontological argument can be advanced. The economic system is not a unified ontological system in which all its sub-systems share the same properties; the sub-systems of the economic system do not have *identical ontological structure and thus they have different properties, dynamics, and evolution*. Despite the intensive connectedness of the sub-systems of the economic system, each sub-system may have its own peculiar properties that require different (paradigmatic, methodological, or theoretical) cognitive perspectives to explore them.⁵⁰ For instance, Keynesian economics may be best suited for understanding the macro-level of the economic system, whereas neoclassical economics might be best suited for understanding and regulating the micro-level.⁵¹ Similarly, theories/models that incorporate the analysis of radical uncertainty are best suited for analyzing the spheres of the economy replete with radical uncertainty (e.g., investment decisions⁵²), but unnecessary for analyzing other spheres (e.g., consumption decisions). For understanding the socio-economic system, scientific realism requires that the cognitive perspective that suits the

⁴⁹ Mäki (n 23) 42.

⁵⁰ Tony Lawson, *Economics and Reality* (Routledge 1997) 19–20. Tony Lawson argues that social reality involves a narrow event regularities space (i.e., a small sub-system) that would justify deductivism. Apart from this narrow space of event regularities, deductivism would not fit the social ontology. His argument thus implies the heterogeneity of the social ontology.

⁵¹ Giere argues that some theoretical perspectives are more suitable for understanding specific levels of organization of complex systems because scholars are unable to develop a unified reductionist theory of the complex system that explains its various levels. For example, no theoretical perspective has succeeded in explaining the levels of molecules, cells, organs, and whole organisms. Similarly, no theoretical perspective has successfully developed a unified consistent explanation of the micro and macro-levels of the economy where the macro-level phenomena are explained in terms of the micro-level (the so-called micro-foundations). Giere, 'Perspectival Pluralism' (n 47) 34.

⁵² John M Keynes, *General Theory of Employment, Interest and Money* (BN Publishing 1936 reprinted in 2008) 147–148.

ontology of each sub-system should be used for analyzing these sub-systems; in other words, scientific realism mandates *critical* pluralism of schools of thought.⁵³

Scientific realism does not advocate “anything goes” pluralism, according to which each scholar has a complete freedom to make ontological assumptions, adopts any methodological or methodical positions and develop any theory he believes to be suitable for explaining the economic phenomenon. Rather, scientific realism endorses a critical pluralism approach. In the latter, meta-criteria such as ontological nature of the phenomenon under analysis⁵⁴ and non-meta criteria such as internal consistency and practical utility of the perspective such as its successes in predicting the change in the socio-economic system or in introducing changes into the system are employed to evaluate the relevant (paradigmatic, theoretical or methodological) perspectives. Sheila Dow calls this form of pluralism ‘structured pluralism’.⁵⁵

In addition to scientific realism, postmodernism (particularly pragmatism), another major school of philosophy of science, can develop a further line of argument for pluralism. In contrast to scientific realism, postmodernism distinguishes between objective reality and objective truth; according to post-modernism, the former exists independently of the observer’s subjectivity, but the latter does not because in their attempt to capture the objective truth, researchers *construct models* that mimic the real world; modelling is, however, an activity of *subjective constructiveness of reality*.⁵⁶ Due to the subjectivity involved in theorizing and modeling, it is not possible to decide whether a specific theory mirrors the objective reality, i.e., whether one theory or one methodology results in the objective truth.⁵⁷ Methodologists therefore should abandon their pursuit of the methodology that can evaluate the theories’ ability to reflect the objective truth about the economic system. It is only possible to decide whether a method or a theory is a good instrument for changing the world.⁵⁸ Consequently, in the pragmatist variant of postmodernism, the comparison of models

⁵³ Tony Lawson, ‘On Criticizing the Practices of Economists: A Case for Interventionist Methodology’ in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997) 30. Dow, ‘Structured Pluralism’ (n 31) 285–286. Bruce J Caldwell, ‘Comment: Varieties of Pluralism’ in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997) 101.

⁵⁴ Lawson, *Economics and Reality* (n 50) 15–16. It is noteworthy that Tony Lawson is the major advocate of scientific realism in the economic methodology literature.

⁵⁵ Dow, ‘Structured Pluralism’ (n 31) 282–287.

⁵⁶ Screpanti (n 27) 301.

⁵⁷ *ibid.*

⁵⁸ Samuels, ‘Methodological Pluralism: The Discussion in Retrospect’ (n 25) 309.

and theories should be based on pragmatic criteria. According to these criteria, the better theory or model would be the better instrument in changing the world.⁵⁹ Theories should not be evaluated according to meta-criteria such as meta-methodologies/ontological criteria, methodologies or methods because the latter are scientific subjective constructs created by researchers to help them construct theories. Theories are in turn merely subjective scientific constructs (tools or instruments) to be used for changing the world.

Therefore, postmodernism rejects any role for methodology or meta-methodology (ontology) in science.⁶⁰ Some schools of postmodernism, therefore, advocate “*anything goes*” pluralism. This is a position known as methodological anarchism.⁶¹ Other variants of postmodernism such as pragmatism advocate assessing methods and theories on basis of pragmatic criteria, namely, their utility in introducing desirable change in the world,⁶² and thus tends to support a form of structured pluralism.

Hence, scientific realism and pragmatism tend to justify critical/structured pluralism.⁶³ They differ in the criteria they endorse for cross-criticism. In scientific realism, the critique of schools of thought, theories and models should be based on non-meta-criteria, while according to the perspectival realism variant of scientific realism, both meta and pragmatic criteria should be used. In pragmatism, critique should be advanced solely on the basis of non-meta pragmatic criteria. Pragmatic and perspectival realism thus overlap in their emphasis on the importance of pragmatic criteria for critical communication among schools of thought.

The divergence of realism and pragmatism over the *criteria of criticism* does not affect their agreement over the *epistemological superiority of critical pluralism* over both monism and fragmented plurality. Further, both scientific realism and pragmatism, as being the most important

⁵⁹ D. W Hands, *Reflection without Rules: Economic Methodology and Contemporary Science Theory* (Cambridge University Press 2001) 227–228.

⁶⁰ Screpanti (n 27) 304. Marcel Boumans and others, *Economic Methodology: Understanding Economics as a Science* (Palgrave Macmillan 2010) 154.

⁶¹ In philosophy of science, Feyerabend has been the key advocate of methodological anarchism. He defended his position in his famous work: Paul K Feyerabend, *Against Method* (4th ed. Verso 2010).

⁶² Hands, *Reflection without Rules* (n 59) 227–228.

⁶³ Screpanti rejects the pragmatic and realist arguments made in defense of pluralism, but he accepts pluralism on ethical basis. He argues that it is inconsistent with scientific freedom to impose certain ontological, methodological, or methodical position on the scholars. Screpanti (n 27) 306. I sympathize with this ethical argument, but it falls short of establishing an *epistemological* case for pluralism.

epistemologies in modern philosophy of science, do not object to integrative pluralism as a step following critical pluralism.

In sum, the methodological percept of pluralism of (paradigmatic, theoretical, and methodological) perspectives is well founded on the dominant philosophies of science: scientific realism (particularly perspectival realism) and the pragmatic school of post-modernism. Monism seems to be an obsolete position. In the context of modern economics, monism would involve the establishment that neoclassical-new institutional economics is the correct perspective for understanding and explaining the complex capitalist system and for analysis and design of socio-economic regulatory governance of that system, while establishing that other perspectives are wrong. This is a much stronger methodological position than the position of pluralism. I cannot envisage how mainstream economists can substantiate this position. Indeed, there is no feasible way for establishing this position. Kuhn has illustrated that paradigm choice cannot be made solely on basis of rational and objective criteria.⁶⁴ Each paradigm has produced a wide range of theories and models, in light of which economists select and interpret empirical data. These theories and models are successful when judged according to the methodological standards (paradigm as exemplar) of the paradigm that produced them. According to these standards, each paradigm has also its own anomalies or failures. Given this perplexing picture, how can we determine which perspective is correct given that each perspective is *partially* correct.

Furthermore, empirical evidence cannot resolve the paradigm choice problem. The same set of empirical observations can fit different paradigms; this is a problem in the philosophy of science well-known as Duhem-Quine under-determination problem⁶⁵ and well-known in social sciences as observational equivalence or identification problem.⁶⁶ Under-determination impedes the solution of theory choice problem as the same empirical facts are consistent with the explanations and predictions of the theories subject to comparison, or at least they fit partially the explanations and predictions made by each of these theories.⁶⁷ This becomes a more difficult problem in case of comparing paradigms because each paradigm produces a large number of concrete models; at

⁶⁴ Kuhn (n 17) 199–204.

⁶⁵ For an overview of the under-determination problem, see: Kyle Stanford, ‘Underdetermination of Scientific Theory’ in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2016)

⁶⁶ For an overview of identification problem in social sciences, see: Charles F Manski, ‘Identification Problems in the Social Sciences’ (1993) 23 *Sociological Methodology*.

⁶⁷ Stanford (n 65) s. 3.2, para. 1.

least some of the concrete models that each paradigm generates would fit the existing empirical evidence. The problem of paradigm choice becomes more acute when we take into account the inconclusiveness of any empirical claim of correlation or causality, which is manifested in the contradictory empirical findings that populate economic literature.⁶⁸

More fundamentally, trying to prove that a specific paradigmatic perspective is correct, while others are wrong presupposes that we adopt a specific perspective based on which we can evaluate schools of thought. If we adopt the perspective of pragmatism, Popperian falsification or scientific realism for choice of the correct school of thought, our choice would hinge upon *the philosophical perspective* that we have adopted. Yet, how can we prove that only one of these philosophical perspectives is correct, while others are wrong? We need a perspective for evaluating these philosophical perspectives. This is clearly an *infinite regress* problem.

In conclusion, pluralism is well founded on the perspectival realism and pragmatist schools of thought in philosophy of science. Further, establishing the case for monism seems unfeasible. Neoclassical law and economics scholars attempting to establish the case for monism have to overcome insurmountable obstacles: the mixed picture of successes and failures of each school of thought when evaluated according to its own methodological standards, Duhem-Quine underdetermination problem, inconclusiveness of empirical evidence and the infinite regress problem. Given these overwhelming obstacles, constructing a line of argument for monism seems implausible. Accordingly, this section has established the fragility of monism as a methodological norm underlying the dominance and automatic application of neoclassical-new institutional economics to regulatory studies in comparison to the position of pluralism underlying integrated law and economics. Given pluralism, the following section establishes the methodological case for *integration* over its *fragmentation* alternative.

⁶⁸ Inconsistencies of empirical evidences would rise tremendously if economic journals publish empirical studies that found no statistically significant relations among the investigated variables. If these studies were to be published as they should, many of the established empirical findings in the economic literature might have been undermined. Feynman, a physics noble laureate, argues that scientific integrity dictates opening the institutional space for the publication of these empirical results; otherwise, our empirical knowledge of reality would be highly distorted. Richard P Feynman, 'Cargo Cult Science' (1974) 37(7) *Engineering and Science* 12–13.

5. The Methodological Case for Interdisciplinary Integration

The methodological case for integrated law and economics resides on the methodological positions of *pluralism and integration*. Instead of pluralism, monism is the position that underlies the mode of law and economic regulatory research that takes the form of the dominance and automatic application of neoclassical-new institutional economics to socio-economic regulations. Given perspectival plurality of economic thought, law and economics scholars can adopt either the methodological position of *integration or fragmentation*. The fragmentation among the few schools of thought that law and economics scholars invoke in modern law and economics research reflects either a commitment to monism or fragmentation. In contrast, integrated law and economics is founded on the methodological percept of integration. This section is sub-divided into two sub-sections; the first demonstrates the weakness of the epistemological basis for fragmentation, which is Kuhnian incommensurability thesis. More importantly, in doing so, this sub-section shows the channels through which the incommensurability problem can be surpassed and thus integration can take place. The second sub-section develops the line of argument giving rise to the methodological case for integration.

5.1. Weakness of the Methodological Basis of Fragmentation and the Ways for Overcoming the Incommensurability Problem

The epistemological foundation for fragmented pluralism is Kuhnian linguistic and methodological incommensurability thesis.⁶⁹ Linguistic incommensurability refers to the fact that similar concepts (such as money or the firm) in different paradigms refer to different entities in reality.⁷⁰ This fundamental insight of Kuhn can be illustrated further by developing examples from economics instead of drawing on the examples that Kuhn has advanced in physics and chemistry.⁷¹ Social reality is populated by social facts such as institutions and social structures; they include, inter alia, money, interest rate, inflation, unemployment, natural rate of unemployment, the firm,

⁶⁹ Dow, 'Structured Pluralism' (n 31) 278.

⁷⁰ Kuhn (n 17) 101–102. See also: *ibid* 149.

⁷¹ *ibid* 101–102.

and contracts). These social facts are either product of *intentional design* or historical evolution. Social scientists face the major problem of *conceptualizing* these social facts. To conceptualize these social facts, they have to tackle tough questions such as “what is the firm?, what is money?, what is unemployment?, what is interest rate?, what is natural rate of interest?, what is normal rate of profit?, What are legal norms?, what are institutions?, what are transaction costs?, what is information?, and what is power?”

Prior to conceptualization, social scientists need to *perceive* these categories in reality; they need first to identify an object in reality and then conceptualize this object using a specific category that they have created. This seems to be problematic from a cognitive perspective because we cannot see/perceive what we do not know; we must know what we are going to see/perceive in order to be able to see/perceive it.⁷² To illustrate this point, consider the following example. When somebody contracts with others to undertake specific job and contracts with a creditor to finance the project and contracts with a supplier for supplying the inputs, nobody saw anything but a set of contracts, but modern new institutional economists could see *a firm* resulting from this nexus of contracts.⁷³ They would perceive labor contracts as hierarchical; this hierarchical nature of these contracts gives rise to and distinguishes the *firm from the market*.⁷⁴ The conceptualization of the firm itself needed to develop in order to perceive a firm in these nexus of contracts. In other words, to perceive a firm in these nexus of contracts, we need to conceptualize the firm as a nexus of contracts first; otherwise, we will not be to see a firm. To see a firm, we need to conceptualize the firm first; in this sense, *conceptualization precedes perception*; more accurately, conceptualization determines perception.

Yet, to conceptualize the firm as a nexus of contracts, we need a perspective from which the firm could be conceptualized as such. Most problematically, this perspective itself is affected by the fact that economists have already conceptualized the relations between the entrepreneur, the workers, the suppliers, and the creditors as *contracts*. Contract is another basic concept that has been created. Further, the creditor relation cannot be conceptualized as a contract without

⁷² Marc d Mey, *The Cognitive Paradigm: Cognitive Science, a Newly Explored Approach to the Study of Cognition Applied in an Analysis of Science and Scientific Knowledge* (D. Reidel Publishing Company 1982) 15–17.

⁷³ See the discussion of the new institutional theories of the firm in sections 4.1 and 4.2 of chapter 8 and see the references cited therein.

⁷⁴ R. H Coase, ‘The Nature of the Firm’ (1937) 4(16) *Econometrica* 387–389. *ibid* 391.

conceptualizing money as a commodity that could be transferred and priced using interest rate. In other words, Conceptualizing the firm as a nexus of contracts was only possible from a perspective in which some relations and objects in reality have been conceptualized as contracts and money, and in this perspective, contracts and money have been given specific conceptualizations. Outside of this (neoclassical-new institutional) perspective, it is hard to conceptualize and thus perceive the firm as a nexus of contracts. For example, in legal theory, the firm (e.g., a corporation) is perceived as a legal person that does not exist in reality but exists in law. This conceptualization of the firm as a legal person comes from the distinctive perspective of law. This perspective has already a conceptual category that legal scholars constructed called legal persons. Without this category/concept, firms could not have been conceptualized as legal persons.

The legal perspective is illustrative of the constitutive power of social sciences that are hard to see in physical sciences. Law created a social fact called legal personality, then, conceptualized some objects in reality (conglomeration of persons who have specific relations and produce something) as a legal person. In other words, what we see in reality is conglomeration of persons who have relations and produce something that both legal scholars and new institutional economists have conceptualized differently. From a communitarian perspective or some religious perspectives, we could see these individuals as a team that has a common objective. From a Marxian perspective, this conglomeration of persons is nothing but a hierarchical organizational structure through which legitimization of the exercise of capitalist power over workers takes place. The latter conceptualization of the firm cannot take place without the concept of *power* in the Marxian perspective.

What does the above analysis implies then? It implies that each (paradigmatic and sometimes theoretical) perspective *conceptualizes the same object in reality differently*. Each of these conceptualizations depends on other conceptualizations advanced by each perspective. As a result, the perspective creates its own world/web of concepts. Neoclassical economic perspective, for example, has conceptualized the same objects of reality in a very peculiar way, and its conceptualization builds on a sophisticated and intricate network of neoclassical concepts. Hodgson in his attempt to conceptualize capitalism has *subjectively* constructed (or did he objectively uncover?) the conceptual web based on which the conceptualization of capitalism would depend:

The guiding narrative is toward the goal of a definition of capitalism ... to understand capitalism we need to understand capital, to understand capital we need to understand money, to understand money we need to understand exchange, to understand exchange we need to understand property, and to understand property we need to understand law.⁷⁵

This sophisticated conceptual web of each cognitive perspective does not imply that when legal scholars inform neoclassical-new institutional economists that the firm is a legal person or that it is a team, they cannot see what they are being told. They can see the point made by legal scholars if they can understand the perspective from which these conceptualizations of the firm come from. If the lawyer explains to neoclassical-new institutional economists what is a legal person means in law, they could perceive the firm as a legal person. However, unless they can fit this concept to their neoclassical-new institutional network of concepts, this conceptualization of the firm would just be irrelevant to their analysis. They will continue to perceive the firm only a nexus of contracts. Using the lens of the new institutional theory of contracts, they would perceive the governance problems of the firm as contractual principal-agency relations that are replete of agency problems due to information asymmetry.

Similarly, conceptualizing the firm as a team for new institutional economists does not fit their rational utility maximization concept of the individual. More problematically, it does not fit the contractual perspective they have over the firm and the relations among individuals in the economy in general, which is a transaction or exchange based conception. These fundamental concepts of exchange, transaction, and contract, which build on each other and connect somehow in a constitutive relation to each other, prevent the neoclassical-new institutional economist from perceiving the firm as a team. For him, a “firm as a team” is nothing but an alien romantic perception of the firm, given the network of concepts constituting the linguistic and conceptual dimension of his neoclassical-new institutional school of thought. The “firm as a team” is an alien perception from the reality that has been *conceptually constructed* by his neoclassical-new institutional perspective. However, the team theory of the firm has some elements that new institutional economists can assimilate in their framework such as the asset specific investments

⁷⁵ Geoffrey M Hodgson, *Conceptualizing Capitalism: Institutions, Evolution, Future* (University of Chicago Press 2015) 19.

by workers.⁷⁶ The new institutional economist can now consider workers' asset specific investments in discussing corporate governance, but at the cost that this discussion has been isolated from the non-neoclassical-new institutional cognitive perspective from which the team theory of the firm originated. In other words, neoclassical-new institutional economist can take into account in its analysis only the insights of other perspectives that are compatible with its existing network of concepts constituting the linguistic/conceptual dimension of its own perspective.

More problematically, social facts are not conceptualized consistently within the same perspective. Consider how neoclassical economists conceptualize banknotes such as euros or dollars in their models. They conceptualize them as *money*, but how do they conceptualize *money*? In barter economy models of general equilibrium, money does not exist, but if it were to exist, it could be introduced only as a measurement of the subjective valuation that each agent attaches to the commodities in the economy.⁷⁷ In other words, the implicit concept of money in these models is that money is *a unit of account*; it is not a commodity because the modelled barter economy has only *physical* commodities.⁷⁸ In financial (neoclassical) economics, money is conceptualized as a *commodity* whose price is the interest rate that is determined on the competitive market.⁷⁹ More problematically, financial economists have created a concept called the natural rate of interest that is the price of money as *a commodity* and conceptualized this rate of interest as reflective of the time preferences of consumption.⁸⁰ Here, money is conceptualized as a *physical commodity*. These two concepts of money are not necessarily consistent. If they were, it would not have been problematic to introduce money as commodity in general equilibrium models.⁸¹ This implies that the underlying network of concepts of the models emanating from the same paradigm (neoclassical economics in our example) might be inconsistent.

⁷⁶ Margaret M Blair and Lynn A Stout, 'A Team Production Theory of Corporate Law' (1999) 85(2) Virginia Law Review 271–274.

⁷⁷ Stephanie Bell, 'The Role of the State and the Hierarchy of Money' (2001) 25(2) Cambridge Journal of Economics 151–153. *ibid* 161. See also: Gunnar Heisohn and Otto Steiger, 'The Property Theory of Interest and Money' in John Smithin (ed), *What is Money?* (Routledge 2000) 76–77.

⁷⁸ Bell (n 77), 151–153. *ibid* 161.

⁷⁹ Heisohn and Steiger (n 77) 76–77

⁸⁰ *ibid*.

⁸¹ Bell (n 77), 161, and see the reference cited therein.

Up until this point, we have established that each school of thought and sometimes some theories within the same school of thought may have their *network of concepts*. Concepts such as contract, money, power, and firm refers to different entities in social reality depending on the school of thought or theory that we use. Kuhnian linguistic incommensurability dictates that we cannot understand the concept of the “firm” in one cognitive perspective unless we learn the language of this perspective.⁸² We cannot understand the firm as a nexus of contracts unless we learn new institutional economics, particularly the new institutional network of concepts and some important theoretical principles such as contracts, the distinction between market and hierarchical contracts, money as commodity, and the theoretical principle of bounded rationality. Similarly, we cannot understand the concept of the firm as a legal person without understanding the network of concepts and assumptions underlying the legal cognitive perspective. Learning the language of each perspective, though difficult, would enable the scholar to perceive what the other scholars using this perspective have perceived.

However, integration involves more than being able to perceive what various schools of thought have revealed; it requires *translation of the concept in one perspective into the conceptual framework of other perspective*. For example, the concept of the firm in non-neoclassical-new institutional perspectives should be translated into a concept within the neoclassical conceptual framework. Only by doing so, neoclassical-new institutional economists can integrate these conceptualizations of the firm into their analysis. In advocating the possibility of critical communication underlying the methodological position of critical pluralism, Dow argues that Kuhn’s incommensurability thesis does not mean that different paradigms cannot be compared to each other because their language cannot be translated to each other. Rather, it means that the language of each paradigm can be *imperfectly* translated to each other. Once such translation takes place, communication among these paradigms would be possible. This communication would thus facilitate *rational* comparison of economic schools of thought according to both meta and non-meta criteria.⁸³

Imperfect translation can be a solution to the incommensurability problem. However, translation is not required for either critical communication or integration of the regulatory insights of relevant schools of thought. Each school of thought (cognitive perspective) would reveal *some*

⁸² Kuhn (n 17) 204.

⁸³ Dow, ‘Structured Pluralism’ (n 31) 279.

aspects of socio-economic reality through their conceptual networks and the models developed based on these networks. For example, the nexus of contracts conception of the firm reveals the contractual/transaction aspects of the relations among the firm's stakeholders. The team conception reveals the communitarian and cooperative aspects of these relations. The legal personality reveals the *collective nature* of the firm and its independence from its members, which might require ascertaining an objective to the firm that underlies the regulation of the relations among its stakeholders.⁸⁴ ..Once we take the conglomeration of individuals as our framework of reference, we can understand *different aspects* of their relations through these various cognitive perspectives.

However, the dividing line between positive and normative analysis becomes blurry at this point. Various perspectives, by ignoring each other, take their position as the right one, from which, they then identify and conceptualize socio-economic problems while using some normative principles. Conceptualization of problems depends on the conceptual network dimension of the cognitive perspective as well as the other dimensions of this perspective, particularly its theoretical and normative dimensions. The resulting conceptualizations of the problems become in turn a part of the conceptual web dimension of the perspective over time. This is a self-referential self-productive process underlying the evolutionary growth of the conceptual web of each cognitive perspective. Regulatory interventions guided by each cognitive perspective to tackle these *perspective dependent problems* would tend to construct and solidify the supposedly positive perception of reality generated by that cognitive perspective. The new institutional perspective by mandating a shareholder value (as the majority of economists do) would result in a firm in which the contractual/transaction aspect becomes more salient. In this regulatory framework guided by this new institutional concept of the firm, the team/cooperative aspects of the stakeholders' relations or the firm's collective nature would be undermined. This would in turn give more credibility to the supposedly *positive* new institutional perspective of the firm as a nexus of contracts. Similar analysis applies to the conceptualization of money as a commodity.

⁸⁴ Indeed, given this collective nature of the firm in *the legal perspective*, Teubner has discussed the collective nature of (market) contractual networks and whether they should be considered and thus regulated as "firms" due to their collective nature, see: Gunther Teubner, "And if I by Beelzebub cast out Devils, ...": An Essay on Diabolics of Network Failure' (2014) 10(4) German Law Journal 129–133.

Moreover, most of these supposedly *positive* concepts are *value laden*; they carry implicit moral connotations that influence policy interventions. They are thick concepts in which the positive and normative propositions are entangled.⁸⁵ Consider the conceptualization of *money as a commodity*. According to this concept, creditors are patient enough to sacrifice current consumption. By doing so, they accumulate savings that are transformed into capital accumulation. Debtors receive the money-commodity. They benefit from that commodity in the present and promise to pay it back while compensating the creditors for their sacrifice in the future. Given their promise, debtors are *morally obliged* to honor their promise. Once money is conceptualized as commodity, creditors become implicitly *good* by extending credit, and debtors become *morally obliged* to honor their promise for repayment of debt. Given the sacrifice of the creditor, debt becomes moral obligation, and not only a legal obligation. If money were conceptualized as a unit of account (not as a commodity), commodification of money through credit relations would require moral justification as it would be unnatural given the unit of account conceptualization of money. Just consider the Greek crisis to understand the moral connotations of the conceptualization of money. The issue can be simply framed in the following question, “Whom should we blame: The Greek government or the German and French banks that extended the loans to this government?”⁸⁶ In the neoclassical perspective, the banks extended loans to the Greek government that concealed information concerning its ability to pay. The banks can hardly be blamed for taking excessive risk by lending to the Greek government. The latter is thus to blame and does not deserve debt restructuring.⁸⁷ Similarly, in the mortgage crisis, both banks and borrowers are to blame. That explains why the US government did not bail out the debtors; debt is a moral obligation that should

⁸⁵ Hilary Putnam, ‘For Ethics and Economics without the Dichotomies’ in Hilary Putnam and Vivian C Walsh (eds), *The End of Value-Free Economics* (Routledge INEM advances in economic methodology vol 13. Routledge 2012) 111–116.

⁸⁶ For example, Blyth argues that German and French banks should be blamed, Mark Blyth, ‘A Pain in the Athens: Why Greece Isn’t to Blame for the Crisis’ *Foreign Affairs* (7 July 2015) <<https://www.foreignaffairs.com/articles/greece/2015-07-07/pain-athens>>.

⁸⁷ Obviously, the German Government has been endorsing this reasoning. Sachs accepts this reasoning, but argues that despite Greece is to be blamed for its inability to repay its debt and does not deserve a debt restructuring, Germany should grant a partial debt relief to Greece because ‘We must not push societies to the breaking point, even when they have only themselves to blame for their indebtedness.’ Jeffrey Sachs, ‘Death by Debt - My Response to The German Finance Ministry’ *Süddeutsche Zeitung (SZ) International* (31 July 2015) <<http://international.sueddeutsche.de/post/125522613465/death-by-debt-my-response-to-the-german-finance>>.

be honored in all circumstances. This moral obligation justifies transforming thousands of the US citizens into homeless and squeezing the Greek population, while bailing out banks.

On the contrary, if money has been conceptualized as a unit of account, interest-bearing credit would have needed a moral justification; particularly, due to the addictive aspects of credit, debtors (governments, private sector and households) seem to be addicted to easy debt and creditors seem to be addicted to expanding credit that makes access to credit as easy as possible.⁸⁸ Both creditors and debtors have perverse incentives for credit/debt expansion. The government is subject to the same perverse incentives, particularly as a debtor due to its deficit bias.⁸⁹ Further, the government is subject to the demands of almost all of its citizens who are either debtors or creditors, to permit the expansion of credit; at least, the financial institutions' demands for reducing regulatory burden for expanding credit are not met by other interest groups that have interest in objecting to these demands. Given these strong incentives in credit-based capitalist economies for unsustainable credit expansion, the moral justification for considering debt as the *borrower's moral obligation* would become fragile. Alternatively, if credit expansion and the resulting financial fragility were understood as a *structural property* of a system, resulting from the *commodification* of money (i.e., conceptualizing money as a commodity in the neoclassical perspective), the *excessive punishment* of debtors would lack any sensible moral grounds.

In other words, paradigmatic and theoretical perspectives construct the economic system while conceptualizing the same system. As specific perspective dominates the design of legal institutions and economic policies, the system conforms more to the conceptual categories of that perspective, and thus gives this perspective more credibility. Given this constitutive power of schools of thought, the integration of their insights involves *a normative choice*. For example, as already discussed, some perspectives over the firm have illustrated the communitarian/cooperative aspect of the relation among the firms' stakeholders, while other perspectives have emphasized the contractual/transactional and self-interested aspects of these relations, and others have shown the collective nature of the firm. In this example, the contentious question at stake is not which perspective captures correctly the reality of the firm. This question is misleading because its

⁸⁸ P. F. 'Why the World is Addicted to Debt' *The Economist* (May 17th 2015) <<http://www.economist.com/blogs/economist-explains/2015/05/economist-explains-20>>

⁸⁹ Abi Adams, 'Deficit Bias: Why We Need to Tie Politicians' Hands ... Loosely' (11 August 2011, blogpost) <<https://abiadams.com/2011/08/11/deficit-bias-101-why-we-need-to-tie-politicians-hands-loosely/>>

answer depends largely on the cognitive perspective that is already dominating the regulatory design. The right question that legal scholars should be asking would be the following: “How can regulators set up the normatively desirable model of corporate governance given the various aspects of the firm revealed by relevant schools of thought, which can constitute a constraint over adopting this model of corporate governance?” In this framework, the insights of relevant perspectives help us in *choosing the normatively desirable economic system that we wish to adopt* and to design the *regulatory framework that implement efficiently this model* by overcoming the *constraints* that these insights reveal. The integration process reflects a *dialectic process* among the insights of various perspectives in order to come up with the regulatory framework that is constitutive and regulative of the economic system that responds to the demands of the people. This constitutive power of schools of thought underlies why integration is more plausible in social sciences than natural sciences. We are using the insights of schools of thought to construct an economic system using, inter alia, legal institutions. Unlike the physical system that exists out there, the economic system is not out there to be discovered; it is discovered and constructed⁹⁰ simultaneously. If various perspectives provide inconsistent insights regarding this system, integration has to overcome these inconsistencies. In law and economics, when we are faced with cooperative and competitive based perspectives of the relations among the stakeholders of the firm, we may not need to determine which perspective is correct; most probably, both perspectives are partially correct. Instead, we need to determine which *concept/insight* that we prefer to *construct* in reality to overcome the constraints revealed by the insights of the other perspective. In other words, we need to examine how to construct a stakeholder model of corporate governance that overcomes the self-interested opportunistic and transactional/contractual aspect of the relations among the firm’s stakeholders, an important insight of the transaction cost theory of the firm. Alternatively, we can investigate how to construct a shareholder value that overcomes the problem of loss of cooperation that implies, inter alia, loss of asset specific investments by the workers revealed by the team theory of the firm.

⁹⁰ On the role of legal institutions (e.g., property rights and corporation’s legal personality and limited liability) in *constituting* the capitalist economic system, see: Simon Deakin and others, ‘Legal Institutionalism: Capitalism and the Constitutive Role of Law’ (April, 2015). The University of Cambridge Faculty of Law Legal Studies Research Paper no. 26/2015, 7–20 <http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2601035>

This does not suggest that the tensions among the insights of schools of thought can always be resolved by relying on the constitutive power of legal institutions without any need for translation. This only suggests that integrated law and economics scholars can overcome the problem of linguistic incommensurability through various channels. In case of inconsistent insights of relevant schools of thought, both *imperfect translation* and the *constitutive power of legal institutions* are plausible channels for transcending the incommensurability problem. Further, integration can take place through ignoring the concrete models or theories of these perspectives that have generated these insights. Instead, the scholar can use the general principles of each perspective for approaching the problem. The general principles of neoclassical-new institutional economics include, inter alia, transaction cost minimization, principal-agent analysis and market failures as an analytical framework. By ignoring concrete models or theories and using the general principles of each perspective, these perspectives may generate complementary insights. These general principles can also guide the development of an integrated model of the problem in question. In case of complementary insights that reveal different aspects of the socio-economic reality, straightforward integration may be possible as long as the system subject to analysis is *common* across these perspectives.

In sum, the linguistic/conceptual incommensurability problem is a serious challenge to integration; however, there are various ways to surpass, through imperfectly, this challenge. The applied part of the thesis illustrates that integration of the insights of schools of thought is plausible. The incommensurability problem implies that such integration cannot be undertaken. After establishing the weakness of the epistemological basis for fragmentation, the following subsections develop arguments for integration. Because some arguments for pluralism presuppose that integration would follow plurality of cognitive perspectives, otherwise, plurality would not enhance our knowledge, some of the justifications for integration such as the complexity of the socio-economic system come close to the arguments elaborated above for defending pluralism.

5.2. The Case for Interdisciplinary Integration

5.2.1. Inherent Biases and Partial Perspectivism of Schools of Thought

The dimensions of each school of thought form through historical accidents and rational, but still subjective, choices of the proponents of the school of thought. Chapter 2 on perspectival plurality has shown how the normative dimension of each school of thought permeates their theoretical and conceptual dimensions and thus affects its supposedly positive understanding of the socio-economic system. Similarly, the institutional structure of education and research affects the evolutionary trajectory of each school of thought and the influence these schools of thought gain. Mirowski, for example, has shown how the industry-military-research complex in post-world war II shifted the focus of neoclassical economics toward information, control, and optimizing agents and policy-making.⁹¹ In short, *every* school of thought has *inherent biases* that reflect the subjective choices of its scholars, its institutional structure, and historical evolution.

Monism would exacerbate the inherent biases of cognitive perspectives because it dictates that the cognitive perspective of one school of thought should dominate regulatory analysis and design. Fragmented pluralism would result in *inconsistent* solutions to the regulatory problem. Each of these solutions embeds the inherent biases of the school of thought that advanced them. Fragmented pluralism would not thus minimize paradigmatic biases, particularly, if fragmented pluralism takes the form of over-representation of one economic paradigm, as it would then approximate monism.

In contrast, critical and integrative pluralism would minimize inherent biases of economic paradigms because it enhances cross-criticism and refinement of the regulatory insights of relevant economic paradigms and thus would result in a less biased and more pluralistic regulatory process.⁹²

⁹¹ Philip Mirowski, *Machine Dreams: How Economics Becomes a Cyborg Science* (Cambridge University Press 2002) 153–231.

⁹² This does suggest that changes in academia would result in one-to-one changes in economic regulatory policy because of the distinct power structures underpinning both the academic and policy making spheres. Still, changes in academia would affect policy-making because of the power of *ideas* in influencing policy making. John L Campbell, 'Ideas, Politics and Public Policy' (2002) 28 Annual review of sociology 22–29 Not only academic ideas are used rhetorically by politicians to justify their policy

Furthermore, the cognitive perspectives of schools of thought are *partial*; cognitive perspectives are ways of seeing and thus they enable scholars to see specific aspects of socio-economic reality, but prevent them from seeing others. Let us take the example of the neoclassical school of thought to illustrate this point. Brian Arthur argues that:

The failures of economics in the practical world are largely due to seeing the economy in equilibrium. If we look at the economic crises of the last 25 years—the debacle that followed the freeing of markets in Russia in 1990, the extensive gaming of California’s energy market after the lifting of regulations in 2000, the collapse of Iceland’s banks in 2008, the ongoing Euro crisis, the Wall Street meltdown of 2008—all these were caused in no small part by the exploitation of the system by a few well-positioned players, or by markets that careened out of control ... Equilibrium thinking cannot “see” such exploitation in advance for a subtle reason: by definition, equilibrium is a condition where no agent has any incentive to diverge from its present behavior, therefore exploitive behavior cannot happen. And it cannot see extreme market behavior easily either: divergences are quickly corrected by countervailing forces. By its base assumptions, equilibrium economics is not primed to look for exploitation of parts of the economy or for system breakdowns.⁹³

By using content and network analysis of the top cited scholarly works on banking regulation and systemic risk covering the period from 1985 to 2014, Aldegwy and Thiemann show that the scholarly works that used partial and general equilibrium formal analysis prior to the financial crisis of 2007 could not see endogenously generated systemic risk. Only the scholarly works that used informal historical or what they call practitioners’ approach were able to see and recommend

agenda, they also affect the policy paradigms that public-spirited policy makers (e.g., public spirited bureaucrats) are using for guiding their decision-making. For an excellent discussion of policy paradigms, see, e.g.: Peter A Hall, ‘Policy Paradigms, Social Learning and the State: The Case of Economic Policy Making in Britain’ (1993) 25(3) Comparative Politics; and Lasse F Henriksen, ‘Economic Models as Devices of Policy Change: Policy Paradigms, Paradigm Shift, and Performativity’ (2013) 7 Regulation and Governance. Accordingly, giving a space for the valid insights of non-neoclassical perspectives in academia would enable these insights to influence the regulatory process, resulting in richer and pluralistic regulatory deliberations.

⁹³ W. B Arthur, ‘Complexity Economics: A Different Framework for Economic Thought’ (2013). SFI Working Paper 2013-04-012, 18 <<http://www.santafe.edu/research/working-papers/abstract/36df2f7d8ecd8941d8fab92ded2c4547/>>

regulating this form of systemic risk prior to the crisis.⁹⁴ The formalist methodology of neoclassical economics and its paradigm as exemplar of equilibrium analysis enabled neoclassical economists to perceive traditional systemic risk (bank runs and panics) and exogenously generated systemic risk.⁹⁵

Similarly, the reductionist approach of neoclassical microeconomics gave neoclassical microeconomists the ability to perceive small parts of the economic system in isolation of each other; however, this reductionist perspective could not perceive the capitalism in its wholeness as a system. Boyer states this point eloquently:

One might anticipate an unprecedented level of expertise and knowledge about the dynamics of capitalism. Quite surprisingly, however, the numerous and sophisticated contributions of modern research deliver either elegant mathematical models or a series of scattered and frequently contradictory empirical results ... but no clear contribution to the understanding of modern society as a whole. This might be an unintentional outcome of the extreme division of labour among social scientists. Alas, there is apparently no “invisible hand” for economic theory.⁹⁶

Not only is the cognitive perspective of neoclassical school partial; the cognitive perspective of every economic or non-economic school of thought is also partial. No school of thought can transcend the partiality of its cognitive perspective. The regulatory insights that these partial cognitive perspectives generate are not necessarily wrong. They are just do not capture all the relevant aspects of the issue at hand. Integration of these insights, after being subjecting them to cross-criticism to filter mistaken insights, would provide legal scholars and economists with more comprehensive analysis and design of legal institutions. They could have been able to see the endogenously generated systemic risk and the inherent instability of the financial system prior to the crisis, and they could have

⁹⁴ Mohamed Aldegwy and Matthias Thiemann, ‘How Economics Got it Wrong: Formalism, Equilibrium Modelling and Pseudo-Optimization in Banking Regulatory Studies’ (2015). EAEPE Papers in Evolutionary Political Economy no. 2015-1, 22–25 <http://eaepe.econ.tuwien.ac.at/pepe/papers/PEPE_2015_1.pdf>

⁹⁵ *ibid.*

⁹⁶ Robert Boyer, ‘The Regulation Approach as a Theory of Capitalism: A New Derivation’ in Agnès Labrousse and Jean-Daniel Weisz (eds), *Institutional Economics in France and Germany: German Odoliberalism versus the French Regulation School* (Springer 2001) 52.

been able to develop a more systemic understanding of contextualized national capitalist systems, and thus transcend the above limitations of the partial perspective of the neoclassical paradigm.

Nonetheless, integration does not imply that we end up with a non-partial perspective over legal institutions; humans cannot transcend the partiality of their cognitive perspectives. Humans can only *improve and broaden* their perception by using multiple perspectives. They cannot transcend their human nature that can perceive socio-economic reality only through a perspective that mediates between them and that reality. Integration is rooted in the humbleness of human cognitive abilities; humans have no direct access to reality. Integration should not allure legal scholars to believe that integration can enable them to transcend their limited cognitive abilities. If integration were able to do so, this would be a paradox; an approach rooted in a belief in the humbleness of the cognitive capacities of humans transforms them into humans with unlimited cognitive capacities.

5.2.2. Inconsistency (Incoherence) Problems

Fragmented plurality results in *two forms of inconsistencies: internal inconsistency of schools of thought and regulatory inconsistencies*. Regulatory inconsistencies take two forms: inconsistency of recommended regulatory interventions in the same institutional domain/regulatory area, and inconsistency of the regulatory interventions in different institutional domains (i.e., inconsistency of the institutional network(s) of capitalism).

First, due to its cognitive distinctiveness, each school of thought develops regulatory analysis and designs that tend to be *inconsistent* with each other. Fragmented pluralism does not address this *cross-paradigmatic inconsistency* problem; each cognitive perspective would develop its recommended socio-economic regulations of product, labor, and financial markets, while ignoring the fact that other perspectives have a completely different regulatory framework for these markets. For example, both neoclassical-new institutional economics and comparative capitalism develop distinct lines of arguments for different systems of regulatory governance of corporations. Similarly, Schumpeterian and neoclassical economics recommend a different regulatory framework for competition in the product market. The case of regulatory inconsistency here takes

the form of contradictions of recommended regulatory interventions in the same institutional domain/regulatory area.

Second, some paradigms evolve into partially integrative paradigms by importing some insights from other paradigms.⁹⁷ Since these integrative efforts are undertaken implicitly without due attention to the dimensional structure of the resulting economic paradigms, the partially integrative paradigm may become a *hodgepodge of inconsistent* dimensions. For example, standard neoclassical school of thought evolved by integrating game theoretical analysis and some insights from new institutional economics. This evolution by integration ignored the inherent tensions between some of the imported ideas (such as bounded rationality or game theoretical analysis) and the dimensions of the standard neoclassical paradigm, which have persisted in the evolved form of the school (such as rational choice and partial equilibrium analysis). This internal inconsistency of the components of the school of thought can be referred to as *internal paradigmatic inconsistency*. Given that law and economics scholar can invoke any of the inconsistent components of the inherently inconsistent school of thought (game theory, partial equilibrium, rational choice or bounded rationality) when they apply this school to legal institutions, the invoked school of thought would result in inconsistent regulatory conclusions regarding similar regulatory questions. Fragmentation would not resolve these inconsistencies. Indeed, it would impede the evolution of the paradigm through integration in the first place. Conversely, integration would overcome these inconsistencies because it would require the scrutiny of the integration process to ensure the *inherent coherence* of the dimensions of the integrated paradigm. Given the consistency of the evolved paradigm, its regulatory insights will tend to be more consistent as well.

Finally, economic paradigms have differential influence over diverse economic regulations in both academic and regulatory policy-making arenas. As to academic research, fragmented pluralism implies that law and economics scholars can draw on the insights of diverse economic paradigms without paying due attention to consistent integration of these insights. Posner is an excellent example on this point. In some of his works, he has been committed to automatic

application of neoclassical economics to economic regulations.⁹⁸ He dismissed new institutional economics as a distinctive economic paradigm.⁹⁹ However, in some of his recent works, he has engaged in a combination of neoclassical and institutional analysis of law.¹⁰⁰ Cross-paradigmatic inconsistent integration is a wide spread phenomenon in social sciences due to multiplicity of paradigms and rise of *pseudo forms of interdisciplinarity* that do not attempts to integrate divergent insights *consistently*. Conversely, integration process tackles precisely these inconsistencies among regulatory insights and attempts to come up with a regulatory design that benefit as much as possible from the tensions among these regulatory insights.

As to policy-making arena, neoclassical law and economics in Europe, for example, has dominated the design of competition law and banking regulation, but failed to achieve the same degree of dominance over labor regulation that still carries the influence of the relevant insights of sociology, political economy, socio-economics and traditional legal theory. This differential influence of fragmented schools of thought over the regulation of product, financial and labour markets results in *inconsistent regulatory governance of capitalism*. This form of inconsistency can be called the *inconsistency/incoherence of the regulatory governance of capitalism or inconsistency of the institutional network of capitalism*. Chapters 6 shall discuss the consistency analysis of institutional network or some of the sub-institutional networks of capitalism in more detail. It suffices to say here that the inconsistency of the institutional network of capitalism may result not only from differential influence of various economic and non-economic paradigms in regulatory policy arenas, but it may also result from adopting regulatory policies grounded on one school of thought that suffers from *internal paradigmatic inconsistencies*. Indeed, if regulators follow an internally coherent economic school of thought for design of regulatory governance of capitalism, they would avoid institutional network inconsistencies resulting from *fragmented plurality*. However, such institutional network would embed other incoherencies/inconsistencies. The inherent biases of each school of thought would result in institutional networks that are

⁹⁸ See, e.g.: Richard A Posner, *Economic Analysis of Law* (8th edn, Wolters Kluwer first published 1973, 2011); and Richard A Posner, 'Some Economics of Labor Law' (1984) 51 *University of Chicago Law Review*.

⁹⁹ Richard A Posner, 'The New Institutional Economics Meets Law and Economics' (1993) 149(1) *Journal of Theoretical and Institutional Economics* 85.

¹⁰⁰ See, e.g., Richard A Posner, 'From the New Institutional Economics to Organization Economics: With Applications to Corporate Governance, Government Agencies, and Legal Institutions' (2010) 6(1) *Journal of Institutional Economics*.

consistent in relation to specific normative objectives, but inconsistent in relation to others. Further, as most schools of thought do not adopt a true systemic perspective, their institutional reforms would fail to construct inherently consistent and complementary institutional network(s) for capitalism. Chapter 6 discusses these issues in detail and the applied part shows how the neoclassical-new institutional school of thought fails to develop consistent institutional network(s) and consistent normative system (multi-evaluative criteria) for capitalism.

In sum, fragmented pluralism results in two forms of inconsistencies: the internal inconsistencies of economic schools of thought that evolved through integration, and the inconsistencies of the regulatory insights of schools of thoughts. The latter takes the form of inconsistencies of recommended regulatory interventions in the same institutional domain or the form of inconsistent institutional networks. Once regulators adopt the inconsistent insights of an internally inconsistent school of thought or diverse schools of thought, the resulting institutional network would involve high degrees of inconsistencies, contradictions, and lack of complementarities. On the contrary, integration avoids some of these inconsistencies and minimizes others. Consistent integration of the insights of a school of thought into another paradigm ensures an internally consistent structure of the evolved form of the latter. Similarly, consistent integration of the relevant insights of relevant schools of thought results in a coherent institutional network that takes into account, as much as possible, these insights and thus overcome the inconsistencies of these insights and the corollary inconsistency of the institutional network informed by fragmented schools of thought.

However, integration of economic paradigms would result in newly integrative paradigms that would have their own inconsistent regulatory insights. Each integrative school of thought would have its own integrative line of argument that is internally consistent, but that may be inconsistent with the line of arguments advanced by other integrative schools of thought. Despite integration, cross-paradigmatic inconsistencies would thus persist. Assuming that we integrate the insights of schools of thought instead of the schools themselves, consistent integration of apparently inconsistent insights can bring together most but not all of these inconsistent insights into an internally consistent integrative line of argument. Against each inherently consistent integrative line of argument, there would be *competing* internally consistent and integrative lines of argument that could be constructed out of the same inconsistent insights and their relevant lines of argument. Cross-paradigmatic inconsistencies would persist in this case as well. In other words,

transdisciplinary and interdisciplinary integration cannot result in an overarching integrative line of argument that puts an end to competing externally inconsistent, but internally consistent lines of argument. Integration would increase the number of these inconsistent and competing lines of argument, while increasing their sophistication reflecting the wide range of schools of thought underlying these integrated lines of argument.

The increase in the number and sophistication of lines of argument may thus exacerbate the cross-paradigmatic inconsistencies. However, integration transforms the inconsistencies that prevailed among fragmented schools of thought into a source for *institutional innovation*. Integration constructs integrative lines of argument out of these inconsistent and fragmented insights; these integrated insights open the door for a better understanding, explanation, prediction, and regulation of the socio-economic phenomena; particularly, integration involves *a process of cross-criticism* of these inconsistent insights that facilitate their refinement.¹⁰¹ The initial step of cross-criticism in the process of integration enables that process to transform the cross-paradigmatic inconsistencies of fragmented pluralism from an epistemological failure into an epistemological opportunity for advancement of analysis and design of legal institutions.

5.2.3. Complexity and Multifacetedness of Socio-Economic Regulatory Governance of Capitalism and its Sub-systems

Interdisciplinary research is required for analysis of any phenomenon that exhibits either multifacetedness¹⁰² or complexity.¹⁰³ A multifaceted phenomenon is that which can be approached *entirely* from different cognitive perspectives. By using the cognitive perspective of one school of thought, the resulting answer of the multi-faceted research question would reflect the *partial*

¹⁰¹ Evaluation (cross-criticism) of the insights is core step in interdisciplinary (integrative) studies. Repko, *Interdisciplinary Research: Process and Theory* (n 21) 234. For a discussion of how the evaluation of the relevant (disciplinary) insights can be made, see: *ibid* 234–254.

¹⁰² Newell, ‘A Theory of Interdisciplinary Studies’ (n 6) 2. Newell considers multifacetedness to be a property of complex systems; therefore, he considers complexity as the only requirement for justifying interdisciplinarity. Margaret A Somerville, ‘Transdisciplinarity: Structuring Creative Tension’ in Margaret Somerville and David J Rapport (eds), *Transdisciplinarity: Recreating Integrated Knowledge* (EOLSS Publishers Co. Ltd. 2000) 98. Somerville captures the multifacetedness of the interdisciplinary problem by referring to the “*different colored lens*” metaphor according to which each discipline represents a distinctive colored lens (i.e., a distinctive cognitive perspective) over the problem.

¹⁰³ Newell, ‘A Theory of Interdisciplinary Studies’ (n 6) 2.

perspective of this school, while ignoring the perspectives of other relevant schools of thought. Accordingly, a more complete understanding of multi-faceted phenomena requires the integration of the insights of relevant schools of thought.

Socio-economic regulations are obviously multifaceted phenomena; law and economics scholars can approach many of socio-economic regulatory questions entirely from the disciplinary perspectives of legal theory, economics, politics, sociology, and anthropology. Further, they can approach most of these regulatory questions from the cognitive perspectives of a myriad of schools of thought within each of these disciplines. This multifacetedness of socio-economic regulations reflects the social, economic, environmental, and ethical aspects of these regulations, which result from the socio-bio physical embeddedness of the capitalist system governed by these regulations. In other words, the multifacetedness of the socio-economic regulations results from the multifacetedness of the capitalist economy and its sub-systems. Diverse economic schools of thought such as neoclassical economics, institutional economics, and Keynesian economics provide distinctive cognitive perspectives over the functioning of the capitalist economic system. The economic system cannot be decomposed from its socio-political and bio-physical environment.¹⁰⁴ It is socially and bio-physically embedded.¹⁰⁵ Therefore, much of *apparently pure* economic issues such as finance, corporate governance, competition, and tax policy are therefore embedded within a network of *socio-political and bio-physical* problems. They are multi-faceted questions.

In addition to multifaceted phenomena, interdisciplinary research is necessary also for an adequate understanding and analysis of complex phenomena. Complexity is a ‘feature of the structure as well as the behavior of a complex system, ... complexity [is] generated by nonlinear relationships among a large number of components’¹⁰⁶ and by the feedback effect of the overall patterns of the complex system on the behavior of its components.¹⁰⁷ In addition, Complex systems

¹⁰⁴ For a discussion of the decomposability of the (two-level institutional and agents’ network) of capitalism, see section 4 of the next chapter, the discussion of system’s boundary in section 6 of chapter 8, and the references cited therein.

¹⁰⁵ Clive L Spash, ‘Towards the Integration of Social, Ecological and Economic Knowledge’ in Julien-François Gerber and Rolf Steppacher (eds), *Towards an Integrated Paradigm in Heterodox Economics: Alternative Approaches to the Current Eco-social Crises* (Palgrave Macmillan 2012) 27–28

¹⁰⁶ *ibid* 7.

¹⁰⁷ Arthur (n 93) 2.

are *organized normally into multi-levelled structure*.¹⁰⁸ For instance, economic system is structured into micro and macro levels in the neoclassical paradigm and into micro, meso, and macro levels in the evolutionary institutional paradigm.¹⁰⁹

Complex problems emerge as part of a wider interdependent package of problems that do not only cut across wide range of variables at the same level of the complex system, but also across its various levels of organization. This would call for an analysis of *the complex system that embeds this interdependent package of problems*. The reductionist approach of isolating the complex problem from its interdependent problems and the system in which these interdependent problems are embedded cannot address adequately that problem.¹¹⁰ However, no single discipline or school of thought can provide a comprehensive/systemic understanding of complex problems because they can explain well only *some* of the non-linearly interconnected variables¹¹¹ or levels of organization¹¹² pertinent to these complex problems, but fail to develop a complex systemic understanding of these problems.

As shall be discussed in-depth in the next chapter, the capitalist economic system is a complex multi-levelled system.¹¹³ Not only economic variables are non-linearly interdependent but also economic agents observe the aggregate patterns of the economic system and respond to these patterns by modifying their preferences and behavior.¹¹⁴ Further, the structure of the capitalist system is in a constant state of evolution.¹¹⁵

Given the multi-facetedness and complexity of the capitalist economic systems and its sub-systems, no single discipline or school of thought can provide a comprehensive analysis of the *multi-facets and large number of variables* relevant to the regulatory governance of capitalism or

¹⁰⁸ This is called the “hierarchy” property of systems. It means that the system has a multi-level organization. Lars Skyttner, *General Systems Theory: Problems, Perspectives, Practice* (2nd edn, World Scientific 2005) 54–55.

¹⁰⁹ Kurt Dopfer, John Foster and Jason Potts, ‘Micro-Meso-Macro’ (2004) 14(3) *Journal of Evolutionary Economics* 266–269.

¹¹⁰ For a discussion of the reductionist perspective of neoclassical law and economics, see section 5 of the next chapter and the references cited therein.

¹¹¹ Newell, ‘A Theory of Interdisciplinary Studies’ (n 6) 16–17.

¹¹² Giere, ‘Perspectival Pluralism’ (n 47) 34.

¹¹³ For a discussion of the multi-levels of capitalism, see section 3 of the next chapter and the references cited therein.

¹¹⁴ Arthur (n 93) 2.

¹¹⁵ John Foster, ‘From Simplistic to Complex Systems in Economics’ (2005) 29(6) *Cambridge Journal of Economics* 876–878.

its sub-systems. For example, in the applied part, it will become clear that neoclassical and new institutional theories of the firm are insufficient for guiding the choice of a corporate governance model. We had to use the insights of knowledge-based theories of the firm in managerial studies and evolutionary economics, the insights of the French regulation school of economics, and the insights of systems thinking in management in order to reach a prima-facie case in support of the choice of stakeholder model of corporate governance for developing countries. Then, we had to use the systemic perspective of comparative capitalism in order to reach a systemically informed choice of corporate governance model for developing countries. Similarly, in order to develop a better normative framework for analysis and design of economic regulations, we had to use the insights of neoclassical welfare economics, development economics, political economy, and different theories of moral philosophy (e.g., utilitarianism, deontological ethics, the capabilities approach of Amartya Sen). Without using all these non-neoclassical theories and schools of thought, our understanding of the issues of corporate governance and the normative framework of economic regulations would have *missed critical aspects* of these issues.

5.2.4. Integration is Necessary For Securing the *Informational Basis* of Conducting A Systemic Analysis and Design of Economic Regulations

So far, we have established that integration enables us to overcome the inherent biases and partial perspectivism of relevant cognitive perspectives, and thus give us more *accurate informational basis/knowledge* about the examined legal issue (e.g., choice of model of corporate governance for developing countries). Furthermore, integration gives us a richer and more comprehensive understanding of the multi-facets and numerous variables relevant to the examined regulatory issue; in other words, it gives us a broader informational basis of this regulatory issue. For example, the non-neoclassical theories such as the knowledge-based theories of the firm and the French regulation school of economics give us a richer informational basis that includes the learning effects and macro-implications of corporate governance systems, which are overlooked in the standard new institutional approach to corporate governance. In short, integrated law and economics provides law and economics scholars with *a richer and more valid informational basis* of the examined regulatory issue.

Obviously, the fact that the integrated approach to economic regulations corrects the biases of our informational basis and enriches such basis is sufficient for endorsing the integrated approach because this is exactly the epistemological goal of any approach to legal institutions, i.e., to enrich and enhance the quality of our knowledge. Although this is correct, the integrated approach has a further epistemological significance; it secures the rich informational basis required for *the systemic* approach to legal institutions. In order to regulate capitalism or any of its complex adaptive sub-systems, we need to have an understanding of the dynamics and evolution of these embedded complex systems and the effects of legal institutions on their dynamics and evolution. As shall be argued in the next chapter, we need to use *a systemic perspective* for understanding, analyzing and regulating the complex multifaceted system of capitalism or any of its sub-systems, but for using this systemic approach, we need *a rich informational basis*.¹¹⁶

As the next part of the thesis will explain in detail the systemic approach to legal institutions of capitalism, we will not discuss systemic law and economics in this section. Suffice it to say here that a systemic approach to legal institutions requires the analysis of the interdependencies among the institutions of capitalism (e.g., interdependencies of corporate governance and environmental regulation), the interdependencies of the sub-systems of capitalism (e.g., interdependencies of labor and financial markets), and the interdependencies of the capitalist economy with its bio-physical environment. Conversely, the reductionist neoclassical law and economics approach to legal institutions overlooks these interdependencies among the sub-systems of the capitalist economy and among the institutions that govern these sub-systems; more accurately, it assumes the decomposability of these sub-systems and institutions so that each institution (e.g., board structure of corporate governance) can be analyzed and designed in isolation of other institutions.¹¹⁷

In order to develop a systemic analysis and design of legal institutions, we need a *valid informational basis much richer* than the informational basis required for a reductionist analysis of legal institutions of capitalism. As already mentioned, the integrated approach provides us with

¹¹⁶ Newell has famously argued that interdisciplinary integration finds its epistemological rationale in complex systems theory because complex systems cannot be understood or analyzed without integrating the disciplinary insights relevant to each sub-system of these complex systems. Newell, 'A Theory of Interdisciplinary Studies' (n 6) 1–3. *ibid* 15–17.

¹¹⁷ See the critique of the reductionism of neoclassical law and economics approach in section 4 of the next chapter and the references cited therein.

a rich and more valid informational basis. For example, a systemic analysis of corporate governance requires the analysis of the firm as a system, but as shall be argued in chapter 6, any socio-economic system has a dual structure of knowledge and incentives. New institutional theories of the firm (e.g., transaction cost theory and properties rights theory) explains well the incentives structure of firm's stakeholders and the way we can align these incentives. However, they fail to tackle the knowledge system of the firm and the sources of its sustained competitive advantage, which are explained well by the knowledge-based theories of the firm.¹¹⁸ Furthermore, a systemic analysis of corporate governance requires the analysis of the interdependences of corporate governance and other institutional domains (e.g., competition law, labor regulation), but no single cognitive perspective can provide us with valid understanding of all these complex interdependencies. As chapter 11 shall reveal, to analyze adequately the (non-embedded and embedded) effects of corporate governance and its interdependencies with other institutional domains, we need the relevant valid insights of many schools of thought (e.g., knowledge-based theories of the firm, the French regulation school of economics, and Schumpeterian economics). Without the valid insights of these schools of thought, we will have a biased and thin informational basis inadequate for undertaking systemic analysis.

The systemic approach to legal institutions finds its methodological justifications, mainly, in institutional, complexity, and evolutionary economics;¹¹⁹ thus, it has *a distinct epistemological ground* distinct from the epistemological basis for integration outlined in this chapter. Since the use of the integrated approach is a methodological requirement for securing the informational basis for systemic analysis, the systemic approach represents a further distinct methodological argument in support of the integrated approach.

¹¹⁸ See the discussion of the new institutional and knowledge-based theories of the firm in sections 4.1, 4.2, and 4.3 of chapter 8 and see the references cited therein.

¹¹⁹ For the arguments made in support of the systemic approach to legal institutions, see the next chapter.

5.2.5. The Regulatory Design Problems (e.g., Choice of Corporate Governance Model, or Regulatory Governance of Capitalism) Cut Across Multi-Levels of Organization

So far, this chapter established that integration provides law and economics scholars with rich and more valid informational basis of the examined regulatory problem, which would overcome the partial perspectivism and bias of a single cognitive perspective, while securing the informational basis required for a systemic analysis of this regulatory problem. In this section, we illustrate that design of economic regulations is a difficult and complex set of interdependent problems that cut across different levels of socio-economic reality. In order to tackle a regulatory design problem (e.g., choice of corporate governance model, or regulatory governance of capitalism), we need to address each of these problems by using *the systemic and integrated approach, otherwise, we will provide biased answers to each of these problems, which result in a very biased and incomplete answer to the regulatory design problem.*

Manfred A. Max-Neef has, convincingly, argued that any *research problem* that cuts across different levels of organization of social (or physical) reality is inherently interdisciplinary (see Figure 4.1 below).¹²⁰ Level one is the empirical level. It aims at positive understanding and explanation of natural and socio-economic phenomena. Physics, biology, chemistry and the supposedly positive economics occupy this level. Positive economics attempts to understand and explain the functioning of the capitalist system that is a complex system of a micro, meso and macro levels of organization. As the previous sections have demonstrated, due to its multifacetedness and complexity, interdisciplinary integration is indispensable for developing an account of the functioning of capitalism or at least each of its sub-systems at the empirical level. Such account of capitalism may take the form of either integrative theory or model of capitalist system or at least each of its sub-systems, which is a necessary condition for any regulatory intervention into the capitalist economic system.¹²¹ Nevertheless, understanding the capitalist system or its sub-systems at the empirical level is a necessary, but not a sufficient, condition for

¹²⁰ Manfred A Max-Neef, 'Foundations of Transdisciplinarity' (2005) 53 Ecological Economics 9.

analysis and design of regulatory governance of capitalism because the problems of regulatory governance of capitalism do not fall entirely within the empirical level (see below).

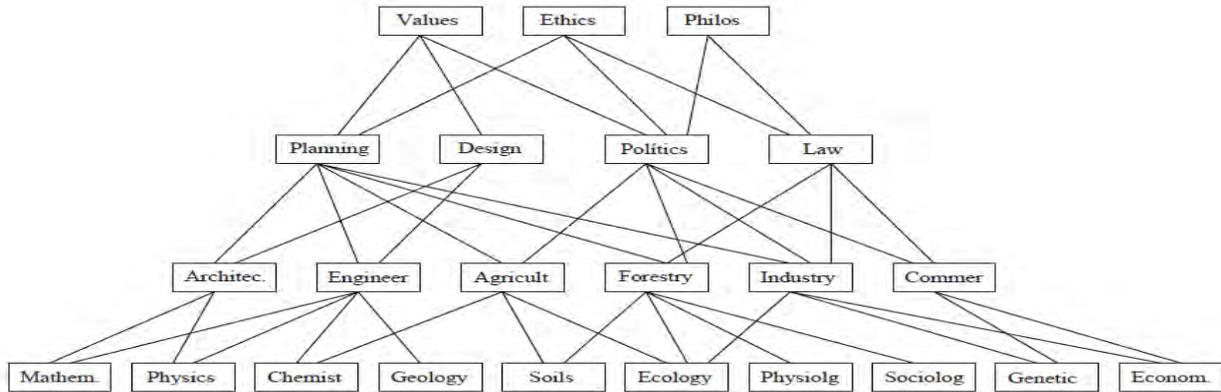


Figure 4.1: Levels of Organization. From Manfred A. Max-Neef (2005)¹²²

The pragmatic level that embeds our technological capacities occupies the next level of organization. “*This level asks and answers the question what are we capable of doing? (with what we have learned from the empirical level)*”.¹²³ This is an engineering level. It illustrates which changes we can bring into the systems located at the empirical level. Given these technical capacities, the normative planning level then determines the changes we *desire or ought to* bring into the empirical level. The highest level is the value level and it guides the construction of normative objectives at the normative level.¹²⁴

Each level consists of highly interdependent complex multi-levelled systems and, as figure 4.1 shows, the complex systems of each of these levels are strongly linked with the systems of other levels. For which reason, Manfred A. Max-Neef argues, convincingly, that all planning disciplines occupying the normative level such as management and law are *interdisciplinary by definition*; a clear understanding of the complex systems occupying each of these four levels of organization and their interdependencies is crucial for investigating the design oriented research questions of these disciplines.¹²⁵ For example, the design of legal institutions requires an underlying value

¹²² *ibid.*

¹²³ *ibid* 7.

¹²⁴ *ibid* 7–8.

¹²⁵ *ibid* 7.

theory based on which the normative basis and objectives of legal institutions are determined. Given this normative basis, legal scholars investigate whether legal norms can meet these normative requirements, or that their normative objectives fall beyond the capacity of legal norms to bring changes into the capitalist system. Then, law and economics scholars investigate how to design the most efficient institutions that can achieve these objectives, given what they know about the capitalist system at the empirical level. In short, the design of socio-economic legal institutions requires investigating questions relevant to the value system, normative system, engineering level and understanding the dynamics and evolution of the capitalist system and the interdependencies of these questions. These are complicated multi-level systems. For example, the scholarly investigation in chapter 10 of the thesis that seeks to develop the normative system for the regulation of the supply side of product markets demonstrates the degree of complexity of the normative systems at the planning level. Similar to the micro, meso and macro levels of the capitalist system, this normative system is stratified into three levels of organization: capabilities expansion level, macro-objectives level and micro-objectives level. The analysis in chapter 10 shows that the integration of the insights of numerous cognitive perspectives relevant to each of these levels of the normative system is necessary for developing that normative system. Similarly, the insights of Keynesian economics may be most relevant and best suited for tackling the questions of the macro-level of the capitalist system, while neoclassical, institutional and evolutionary schools of thought may be best suited for tackling the micro-level, and thus understanding the capitalist system requires integrating the insights of these schools of thought.

In sum, the regulatory governance of capitalism by cutting across different levels of organization requires a due understanding of each of these levels and their interdependencies. Each of these levels constitutes a complex economic phenomenon of their own multi-levels of organization, and thus understanding these systems requires interdisciplinary integration. Accordingly, addressing regulatory governance of capitalism would mandate *an interdisciplinary integrative analysis of second, third or higher orders*.

The fact that regulatory governance of capitalism cuts across multi-levels of organization seems to be abstract. Neoclassical law and economics scholars apply the neoclassical-new institutional economics automatically to regulatory questions. Given their mode of research, it is hard to see how corporate governance, competition law, or banking regulation cuts across the above multi-levels of organization. The reason for this is that the neoclassical perspective has

already developed an answer to most of the complex problems corresponding to each level of organization. At the value level, the neoclassical perspective adopted a consequentialist and welfarist moral philosophy.¹²⁶ At the normative planning level, neoclassical economists developed the welfare criteria of Pareto efficiency and kaldor-hicks as operationalized by cost-benefit analysis.¹²⁷ The neoclassical economic perspective seems, however, to be less productive on addressing the questions of the engineering level. This originates from the neoclassical perspective over economics as a positive and not as an engineering discipline. As far as this engineering level is concerned, the neoclassical perspective adopts general principles for design of legal institutions such as comparative organizational/contractual analysis, optimization of regulatory interventions, and reductionism. Given the attributes of the transaction and each of the plausible governance structure of this transaction (e.g., regulatory governance, market contracts, and the firm), comparative organizational analysis compares the costs of these alternative governance structures.¹²⁸ Regulatory optimization refers to designing legal institutions that maximize the desired regulatory objective at the least possible cost.¹²⁹ Comparative organizational analysis is normally invoked for justifying deregulation based on the high costs of regulatory intervention,¹³⁰ while optimal regulation paradigm hinders the ability of regulations to adapt and respond to the rapid and unanticipated changes in the regulated system.¹³¹ Reductionist analysis of legal institutions misses the correct unit of institutional analysis that is institutional networks (see chapter 5 for a detailed discussion). Concerning the empirical level, neoclassical economics has a well-established core of theories and models in micro and macroeconomics. As mentioned above, these theories and models when informing regulatory design constitute an economic system that comes close to the explanations and predictions of these theories, which shades serious doubt over

¹²⁶ See the discussion and critique of the moral underpinnings of the neoclassical normative theory of economic regulations in section 4.1 of chapter 9 and see the references cited therein.

¹²⁷ See the discussion and critique of the moral underpinnings of the neoclassical normative theory of economic regulations in section 4.1 of chapter 9 and see the references cited therein.

¹²⁸ Oliver E Williamson, 'Why Law, Economics, and Organization?' (2005) 1 *Annual Review of Law and Social Science* 378–379. See also the discussion of comparative organizational analysis in section 5.2 of chapter 10 and see the references cited therein.

¹²⁹ William H Simon, 'Optimization and its Discontent in Regulatory Design: Bank Regulation as an Example' (2010) 4 *Regulation and Governance* 3–4.

¹³⁰ The neoclassical-new institutional economic justifications for economic regulations shall be discussed in-depth in chapter 9 when we examine the neoclassical normative theory of economic.

¹³¹ Aldegwy and Thiemann (n 94) 28–30.

the independent and objective nature of the capitalist economic system since it is obviously constructed and constituted by the same theory that explains it.¹³²

When applying neoclassical law and economics approach mechanically to legal institutions, legal scholars take for granted the answers that the neoclassical perspective advanced to the complex questions at each level of organization. None of these neoclassical answers is satisfactory. They reflect the partiality and biases of the neoclassical perspective at the cost of relevant insights of economic and non-economic perspectives. Integrated and systemic law and economics when applied to the same regulatory question challenges most of the neoclassical positions at each of these levels. Chapter 5 challenges the neoclassical reductionist approach to legal institutions and advocates a systemic approach, chapter 6 argues that formalism and optimization are not necessary for developing reliable regulatory governance, and chapters 9 and 10 challenge the neoclassical choices at the value and normative planning levels. Further, chapters 8 and 11 challenge the neoclassical-new institutional account of the economic effects of legal institutions on the functioning and performance of the capitalist economy at the empirical level. By making explicit the neoclassical choices at these levels of organization, integrated and systemic law and economics not only reveals the subjectivity and partiality of the neoclassical insights, but also uncovers the *subjective* choices that integrated and systemic law and economics scholars would make at these levels of organization. Uncovering the subjectivity and partiality of the relevant insights of the cognitive perspectives opens the door for fruitful and critical debates at each level of organization, which would inform less biased analysis and design of legal institutions.

In conclusion, this and the previous sub-sections have established that economic regulatory questions (questions of regulatory governance of capitalism) *cuts across* multi-levels of organization and that each level of organization encompasses interdependent multifaceted and complex systems. Addressing apparently simple regulatory questions of corporate governance or competition law requires investigating the complex questions at the value, normative planning,

¹³² The fact that capitalism is constituted has far-reaching implications. Law does not only regulate the economic system; it constitutes partially this system. Given this constitutive power, integrated and systemic law and economics can be used for designing economic systems that transcend the dualism of capitalism and socialism. In this thesis, however, I take the constitutive legal institutions of capitalism such as contract law, limited liability of corporations, and private property as given, and thus take the capitalist economic system *as given*. Then, I use the integrated and systemic approach to develop a desirable regulatory governance of *the capitalist* economy of developing countries. Future research that uses the integrated and systemic approach to explore alternatives for capitalism and socialism is needed.

engineering and empirical levels. For addressing the multifaceted questions of each level, we need to integrate the relevant insights of neoclassical and non-neoclassical schools of thought. Once we do so, we might develop a normative system for socio-economic regulations at the normative level (chapter 10 undertakes this task) and develop engineering principles and processes at the engineering level (chapter 6 and 7 develop some of these principles and processes for design of legal institutions). Since the regulatory question cuts across these levels of organization, we need to integrate the *integrated* answers to the questions of each level to be able to address the regulatory question. In this case, integration functions vertically across these levels of organization. The applied part reflects this *vertical* integration as the answers developed for these levels have been brought together for informing the regulatory design of corporate governance in developing countries.

6. Solutions to Institutional Lock-in Problem: Institutional Reforms and A Proposal for New Sub-areas of Economic and Legal Research (Integrative Economics and Economic Regulatory Studies)

Sociology of science scholars argue that the content and form of knowledge depend on, inter alia, the institutional structure of education and research.¹³³ As argued in the previous chapter, the institutional structure of legal education and research locks in law and economics research in the research program of dominance and automatic application of neoclassical economics to legal institutions. Despite its fragile methodological foundations based on monism and fragmented pluralism, this mode of law and economics research would persist due to the current institutional structure of legal and economic education and research. This current institutional structure would not give sufficient space for law and economics scholars to *learn and teach* the integrated and systemic approach and *apply it* to legal problems in their research.

To overcome the persistence of the state of modern law and economics research, which lacks any sound methodological grounds, legal education, research, and academic career advancement should be institutionalized in a manner conducive to cross-criticism and integration (see below).

¹³³ For a good overview of the sociology of scientific knowledge in philosophy of science, see: Hands, *Reflection without Rules* (n 59) 172-198.

As legal scholars lack the required human capital to undertake the regulatory scholarship that goes beyond doctrinal interpretive scholarship, legal education should prepare lawyers for this type of research. Lawyers may follow different career paths in the future and thus it is fundamental not to introduce radical changes in the curriculum of legal education because the current mode of education is suitable for the training of both judges and professional lawyers. In addition, legal scholars may not be necessarily interested in interdisciplinary law and economics; they may be interested in law and sociology, law and politics or law and anthropology. It is not possible to teach all these social sciences in law faculties. It is however fundamental to have one or two courses on economics linked with economic regulations as elementary knowledge of economics is required for the doctrinal scholarship of economic laws for academics, judges and lawyers. Many law schools in Europe and U.S. have already one or two courses on economics; they should change the structure of these courses to include the application of economics to economic laws from integrative and systemic perspective.

Furthermore, undergraduate legal education must include courses on mathematics and statistics as law students need to learn a good level of mathematics and statistics. Judges, acting in their capacity as evidentiary gatekeepers, are obliged to use the *scientific method* for evaluating the relevance and reliability of statistical and scientific evidences presented before them.¹³⁴ In addition, legal scholars who wish to undertake any interdisciplinary research of legal institutions must have sufficient quantitative skills. Further, mathematics and statistics have no ideological bias toward one social science such as economics at the cost of others such as sociology, politics, or anthropology. Simultaneously, law students must be given the opportunity to acquire a joint

¹³⁴ Michael J Saks and David L Faigman, 'Expert Evidence after Daubert' (2005) 1 Annual Review of Law and Social Science 108–110. The gatekeeping obligation of courts to evaluate any evidence submitted to the court requires the judges to have sufficient knowledge of relevant methodology of the production of these evidence to be able to full their gatekeeping obligations. In 1994, the Federal Judicial Center published the first edition of the Reference Manual on Scientific Evidence that has been distributed to the Federal judges in the US to enable them to undertake their gatekeeping functions. See the recently published third edition of the reference manual: Committee on the Development of the Third Edition of the Reference Manual on Scientific Evidence and others, *Reference Manual on Scientific Evidence* (3rd ed, National Academies Press 2011) Caudell and LaRue argue that in addition to the methodological aspects of science, judges need to know the social, institutional, and rhetorical aspects of science to be able to undertake their evidentiary gatekeeping function. David S Caudill and Lewis H LaRue, 'Why Judges Applying the Daubert Trilogy Need to Know About the Social, Institutional, and Rhetorical-and Not Just the Methodological-Aspects of Science' (2003) 45 Boston College Law Review 18–36. This implies that law students should not be taught only statistics and mathematics, as suggested above, but they should be given also a taste of the (linguistic and institutional) dimensions of the schools thoughts expounded in chapter 2.

undergraduate degree in law as a major and other social science discipline (economics, sociology, psychology, or political science) as a minor.¹³⁵

With respect to graduate legal education, it has to include two types of masters: one oriented to practicing lawyers and the other addressed to prospective academic legal scholars. The latter should have specialized masters on interdisciplinary legal scholarship. These interdisciplinary masters should be organized around the area of research and not around the approach, while each master encompasses plurality of approaches to this research area. For example, a Master's degree in corporate law should encompass courses on law and economics of corporate law, critical studies of corporate law, comparative capitalism and corporate law, and maybe integrated and systemic approach to corporate law, etc. The joint PhD programs have to be a common norm to permit legal scholars wishing to follow interdisciplinary work to get a joint PhD in law and economics or in law and sociology and to be able to have legal and non-legal supervisors.

Similarly, the integrated and systemic approach to legal institutions mandates the reorganization of the manner in which regulatory research takes place. In addition to research centers organized around disciplines, some centers should be organized around *topics/research problems* such as corporate governance or taxation. Schools of thought within and across disciplines should be well represented in these centers. For instance, a corporate governance center should have representations from economics, finance, law, anthropology, politics, sociology, and organization theory. This is the only way integrative and systemic analysis of economic regulations could be undertaken.

Currently, research centers that are organized around areas of research rather than disciplines are ubiquitous in U.S. and Europe. Max Planck institute is an excellent example. However, the research groups in these centers are divided by discipline, and thus joint research projects are exceptional. Further, many social sciences are not well represented and the different paradigms of thought within each social science are also not well-represented. Drawing on law as engineering metaphor,¹³⁶ it should be noted that the development¹³⁶ of a new engineering design (new legal rules)

¹³⁵ The joint undergraduate degrees of law and other social sciences are available in some countries such as China, while absent in others such as Egypt. In the US, the applicants for law schools must have an undergraduate degree in any other discipline to qualify for joining law schools. This requirement enabled many law professors in the US to study economics in their undergraduate studies. This partially explains the rapid growth of interdisciplinary legal studies in the US, in comparison to Europe.

¹³⁶ Howarth suggests that the activities undertaken by lawyers (e.g., legal consultation and legal reform recommendations) are similar to engineering; lawyers are therefore akin to engineers. David Howarth, *Law*

would require collaboration of thousands of scientists and engineers of different specializations. Further, hard sciences such as physics and chemistry have moved beyond two or three authorship paradigm of scientific collaboration to research groups of hundreds of researchers working on the same research project.¹³⁷

In this pluralist sphere, scholars will have the space for debating their differences. Both the insights of their schools of thought as well as the underlying dimensions of them shall be subjected to open and critical discussions. The automatic application of neoclassical economics prevalent in law and economics research on economic regulations blocked any serious critical discussion of the dimensions of the neoclassical-new institutional school or their insights. The proposed organization of research shall create a vibrant space for critical plurality that transcend the monism and (low) fragmented plurality of modern law and economics research. Through these critical discussions, some ideas for integration shall emerge, which would giving rise to both integrated paradigms and integrated answers to regulatory questions.

Finally, efficient collaboration among scholars from diverse disciplines and paradigms within the same discipline would require creation of new specializations to facilitate the cross-criticism and integration. I would suggest the establishment of two new areas of research. I call the first “Integrative Economics” and I call the second “Economic Regulations Theory” or “Economic Regulatory Studies”. Integrative economics would be a transdisciplinarity area of research that attempts to integrate economic schools of thought. For example, scholars in this area may attempt

as Engineering: Thinking about What Lawyers Do (Edward Elgar 2013) 67–95. A similar metaphor has been suggested for economic policy, see: David Colander, ‘From Muddling through to the Economics of Control: Views of Applied Policy from J. N. Keynes to Abba Lerner’ (2005) 37 *History of Political Economy* 281. As shall be argued in chapter 6, legal design is a real, and not a metaphorical, systemic engineering design problem; the main difference between engineering and legal design is that given the complex and evolutionary nature of socio-economic systems, the design of legal institutions is a more complex design problem.

¹³⁷ The movement from one or two researchers per research project to big teams of scholars similar to that of the “big science” structure of knowledge production in basic research in physics and biology has its own problems. The big team structure of research undermines the individual voice of the scholar, and tends to suppress their tendency to behave as free and independent thinkers and transform most scholars to a sort of technicians. These are fundamental problems, particularly for a proponent of pluralism like myself. To overcome these problems, in parallel to the above changes, traditional structures for undertaking research should be maintained. Scholars, who do not wish to join “big research teams” and prefer to undertake all or some of their research on an individual basis or in a small team structure, should have the institutional space and support for doing so. This does not run counter what integrated and systemic approach requires, as the work of the latter scholars shall be a *valuable input* into the work of big teams using the integrated and systemic approach.

to integrate old institutional economics, political economy, neoclassical economics, and evolutionary economics to come up with a new integrative economic paradigm that transcends these schools of thought. Integrative economics as such would have economic paradigms as its domain of inquiry and would use integration techniques, including systemic thinking, as its main method of research.

Figures 4.2, 4.3, and 4.4 below show that integrative economics would include two sub-spheres of research. The first is the contestation (cross-criticism) sphere in which various paradigms are criticized and refined in light of the cognitive perspective of other paradigms. The second sphere involves the integration process that would result in new integrative economic paradigms. Integrative economics would shift economics from being a fragmented sphere of knowledge composed of different closed clubs of scholars who interact minimally with each other into a contested and integrative sphere of knowledge; it will transform the form of plurality in modern economics from fragmented to critical and integrative plurality.

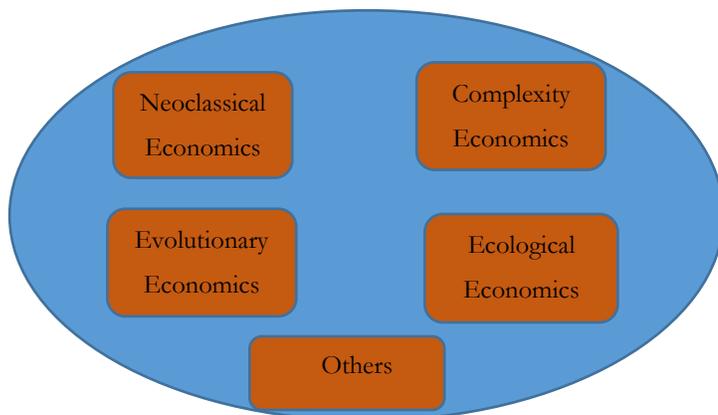


Figure 4.2

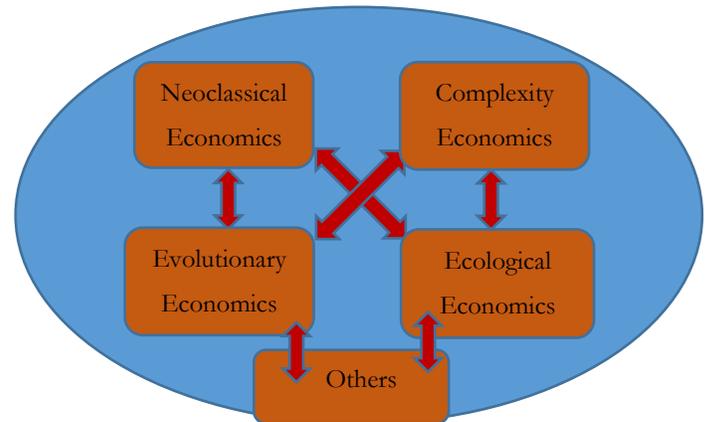


Figure 4.3

Figure 4.2: Economics as a Fragmented Sphere of Knowledge (Fragmented Plurality)

Figure 4.3: Economics as a Contested Sphere of Knowledge (Critical Plurality)

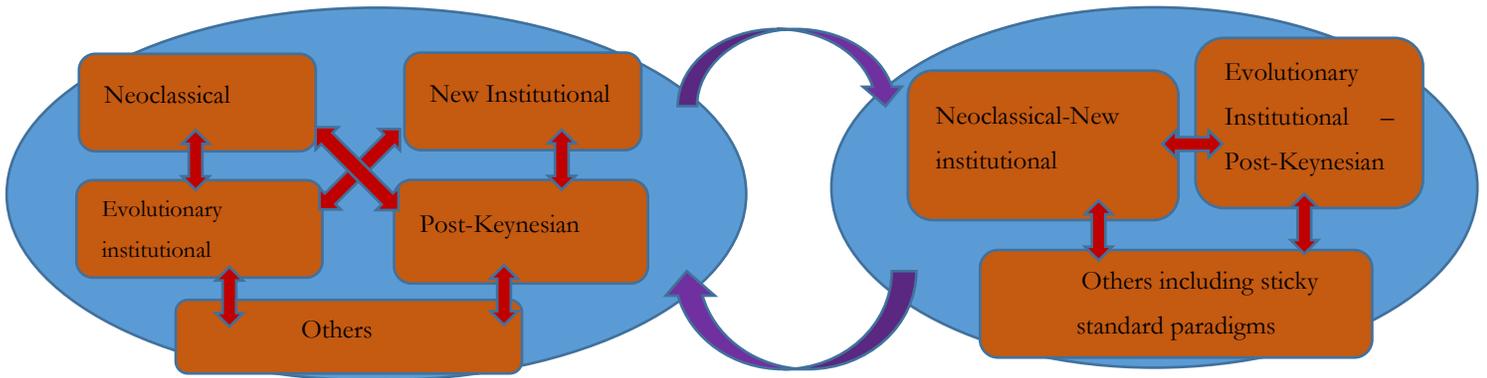


Figure 4.4: Integrative Economics as a Two-Sphere of Knowledge (Contestation/Cross-Criticism and Integration Spheres)

It is noteworthy the standard schools of thought do not die out as long as there are scholars who are still defending a standard paradigm against other integrated paradigms that claim to have absorbed the standard paradigm. Standard schools of thought have a resistance/stickiness tendency. For instance, some economists such as Chicago school of economics could be considered as hard-liner neoclassicists who underestimate the insights of institutional economics. The integration sphere would thus encompass more paradigms in comparison to economics as a fragmented sphere of knowledge. However, as more scholars are attracted to the emerging integrated schools of thought, the intensity of contestation among these schools would increase, while decreasing among standard schools of thought. Further, we should not be expecting one synthetic triumphant paradigm to emerge because of establishing the sub-area of integrative economics. Instead, the latter would result in a myriad of integrative paradigms.

As a result of reflecting the solid epistemological position of integrative pluralism, integrative economics as a two-sphere of knowledge would maximize the stock of economic and enables economics to provide a less biased economic perspective for the analysis and design of economic regulations.

I suggest that in addition to the sub-spheres of contestation and integration, the sub-area of integrative economics should include a sub-sphere of formalizing and applying the systemic thinking that I advocate in the next part of the thesis. This thesis has fallen short of formalizing the systemic perspective. Agent-based modeling and network analysis are interesting and currently

fashionable methods; still, they do not provide an understanding of capitalism as a contextualized complex adaptive and evolutionary system. Particularly, they have significant limitations in approaching analysis and design of institutional networks.

In contrast to the transdisciplinarity nature of integrative economics, the proposed area of “Economic Regulation studies” would be an interdisciplinary rather than transdisciplinary area of research. The objective of this area is not to construct integrated paradigms of economics. Rather, it would have the objective of integrating the insights of existing economic paradigms to address the six research questions outlined in Chapter 6 of the thesis, which constitute the domain of inquiry of economic regulation studies. Chapter 9 uses the proposed approach for tackling one of these six questions, namely, the normative objectives of economic regulations. As mentioned earlier, the process of interdisciplinary work may contribute to the evolution of some schools of thought through integration. Further, transdisciplinary research of integrative economics would develop newly integrated paradigms that economic regulatory scholars can apply directly or further integrate their insights with other paradigms to approach socio-economic regulations. As such, developments of integrative economics and economic regulatory studies enhance each other.

In conclusion, to overcome the institutional lock-in of law and economics research in automatic application of neoclassical law and economics, there is a need for institutional reform of legal education and research. Further, there is a need for establishing new areas of research in economics that I call “Integrative Economics” and in law and economics research, which I call “Economic Regulations Studies”. Naturally, economists are the best suited for undertaking the research agenda of integrative economics, while law and economics scholars, whether legal scholars or economists, are the best suited for undertaking the research agenda of economic regulatory studies outlined in chapter 6.

7. Conclusion

The first part of the thesis has established the paradigmatic and theoretical perspectival plurality in modern economics. In addition to plurality of economic schools of thought that can inform regulatory analysis and design, numerous non-economic schools of thought within law, sociology, politics, organization theory can inform analysis and design of socio-economic regulations. When confronted with this plurality of perspectives, modern law and economics

scholars opted for neoclassical-new institutional school of thought that they have applied automatically to socio-economic legal institutions. This mode of law and economics research lacks any solid methodological foundation. It can be based on the methodological positions of either monism or fragmented pluralism. Both are weak methodological positions. Few scholarly works on socio-economic regulations diverge from the dominance and automatic application of neoclassical economics characterizing modern law and economics research. They exhibit what I called “integrated law and economics”. The latter reacts differently to perspectival plurality. It welcomes plurality of paradigmatic and theoretical perspectives and attempts to make the most out of it through *integration*. Integration can take the form of either interdisciplinary integration of the insights of relevant perspective or transdisciplinary integration of these perspectives themselves that aims to create *integrated perspectives*. This chapter suggests that Economists should undertake the task of integration of economic schools of thought under the auspices of a newly established sub-area to be dedicated to this research program that can be called “integrative economics”, while law and economics scholars should focus on interdisciplinary integration of the insights of relevant theoretical and paradigmatic perspectives.

In contrast to the shaky methodological basis for neoclassical imperialism (i.e., *monism or fragmented pluralism*), integrated law and economics is based on a solid methodological foundation: *pluralism and integration*. Any attempt for establishing that one school of thought is correct and others are wrong according to monism would confront infinite regress problem. Further, there is no objective method for the choice of the correct school of thought, given the mixed picture of successes and failures of each school of thought. Establishing that one school of thought is correct, while others are wrong according to monism seems to be implausible. This implausibility becomes salient when comparing schools of thought that tackle different facets of socio-economic regulations, as this would be like comparing apples to bananas. On the contrary, pluralism has a solid foundation in modern philosophy of science. Both *pragmatism and scientific realism* (particularly *perspectival realism*), the most prominent schools of modern philosophy of science, provide a myriad of solid arguments in support of pluralism. These arguments include, inter alia, the complexity of socio-economic reality, uncertainty of knowledge, and the pragmatic utility of plurality in providing better solutions to real world practical (regulatory in our case) problems.

Similarly, in contrast to the weak position of fragmented pluralism, integration is a well-founded epistemological position. Linguistic incommensurability of schools of thought is the major impediment to the communication and integration of their insights. However, this incommensurability can be overcome: in case of inconsistent insights, it can be overcome through imperfect translation, the constructive power of legal institutions, using the general principles instead of the concrete models of the perspective, and cross-criticism. In case of complementary insights, straightforward integration of these insights would be plausible as long as the system subject to analysis is *common* across these perspectives. To uncover whether the underlying system is common or not, some degree of imperfect translation would be required. In addition, the applied part of the thesis provides “a pudding is in the eating” argument that demonstrates that linguistic incommensurability does not prevent critical communication and integration.

On the contrary, integration of the relevant regulatory insights of relevant paradigmatic and theoretical perspectives has a solid methodological foundation. Each perspective has its own inherent biases. Cross-criticism and integration would help overcome the biases of each perspective to come up with a balanced perspective. Further, when fragmented plurality guides law-making, we end up with inconsistent regulatory governance (i.e., institutional networks) in which some regulations such as competition and banking laws follow the neoclassical perspective, while others such as labor regulation follow other perspectives such as traditional legal theory or sociology. Shifting to monism and thus following only one school of thought for all regulations shall not address the inconsistency problem. The applied part shall show uncover numerous inconsistencies of the institutional network that would be the product of following strictly the neoclassical-new institutional regulatory prescriptions. Furthermore, no one school of thought can adequately provide a solid understanding, explanation, prediction, and regulation of a complex, evolutionary and adaptive system such as capitalism. Pragmatism dictates that the perspective that can address best one aspect of this system is given the lead. Understanding the complex capitalist system or its complex sub-systems such as corporate sphere, product, labor, or financial markets is not sufficient for design socio-economic regulations. The design problem of socio-economic regulations cuts across multiple levels of organization, each of them encompass complex systems and problems that need to be investigated. Only plurality of perspectives can tackle adequately these complex systems and problems.

Subsequently, the methodological case for integrated law and economics has been well established. The above methodological arguments underpinning the case of integrated law and economics can be summed up in one sentence: Understanding the richness and complexity of socio-economic reality demands a comparable richness and plurality of (paradigmatic and theoretical) perspectives. Indeed, putting aside for a moment methodological discussions, the proposition of integrated law and economics appears to be *very intuitive*. However, the exponents of intuitive propositions that fall outside the orthodoxy have to justify their *intuitive* positions,¹³⁸

¹³⁸ Methodological justification is needed for other reasons as well. Intuitive propositions are not necessarily correct; they still need justification. In addition, what some readers may consider to be intuitive, others may consider to be counter-intuitive. Further, legal scholars and applied economists rarely reflect on the methodological foundations of the structure of plurality of their discipline or the dominant perspectives that they take for granted when approaching legal institutions. They understand their task to be “addressing a concrete legal question” rather than examining the cognitive perspective they invoke for undertaking this task. As a result, legal scholars, particularly law and economics scholars, are nothing but *blind consumers* who (consume) apply a perspective whose dimensions and epistemological foundations they do not fully grasp. They also do not know what these dimensions entail, and they do not recognize the historical and institutional processes that brought these dimensions together to give rise to the neoclassical perspective and that account for its current influence. The problem is that those *blind consumers* contend that they are *producing* the right sort of legal institutions. Indeed, they are *servants* of the perspective they apply to legal institutions; they solidify its institutional position in the academic sphere, which feeds in to its influence in law-making sphere. The servant role played by the legal scholar is not unusual in legal scholarship. For decades, many doctrinal legal scholars have been producing voluminous treaties that interpret existing legal norms, without any serious attempts for uncovering or critically challenging the underlying socio-economic perspectives that guided the production of these norms. Doctrinal legal scholars are servant of these underlying perspectives that they did not fully understand and the societal power structures that legitimized these perspectives. Most of interdisciplinary legal studies, particularly law and economics studies have been a new space where legal scholars continue to play the role of servants but in new clothes. Consequently, methodological and moral investigations aim to uncover and challenge the role played by legal scholars as servants to biased perspectives legitimized by existing power structures within academia or policy-making spheres. At least, these investigations call upon legal scholars to understand better their master, i.e., the cognitive perspective and its underlying power structures in academia and policy spheres, which they dedicate their lives to serve. As to economists, they are even in a worse situation. At least, law faculties still have chairs on philosophy and history of law. Economic students are poorly informed by the history of economic thought, the institutional factors that contributed to its evolution, and its underlying moral philosophy and methodology. Most reputable faculties of economics around the world do not have a *single* chair for history of economic thought, economic methodology, normative economics, and economic policy. Doubtless, a deep investigation of these sub-areas of economics requires more than one chair; still, a single chair for all of them rarely exists. Hence, economic students are indoctrinated the neoclassical-new institutional perspective as *a science*. That is why most of them find it hard to recognize that it is indeed an important perspective among many possible important perspectives over the socio-economic system. The result is obvious; they have been playing the same role of devoted servants for this perspective. They rarely think critically about their cognitive perspective absent a crisis similar to the great depression or the current financial crisis. To conclude this footnote, I must note that despite the servant role played by legal scholars and mainstream economists with its numerous negative effects on the state of knowledge and society, their

particularly when these propositions have significant practical (regulatory) implications, as the applied part will demonstrate.

Despite the solid methodological foundation of integrated law and economics, the institutional structure of economic and legal education and research locks law and economics research in neoclassical imperialism. This structure does give any meaningful space for the integrated (and the systemic) approach to socio-economic regulations. To overcome this institutional lock-in, I have suggested some institutional reforms in legal education and research, and proposed the creation of two sub-areas of research: integrative economics and economic regulatory studies.

This brings us to a final question that is “how can legal scholars apply integrated law and economics, or how to *operationalize* integrated law and economics?” Chapter 7 tackles this question along with operationalizing systemic law and economics. At this point, we reach the end of the first part of the thesis and we are ready to investigate the second dimension of the integrated and *systemic* approach in the following part: the systemic perspective.

scholarly contributions are still of social value, because they can be *used* as a *knowledge basis* for the integrated and systemic perspective.

Part II

Systemic Law and Economics

Chapter

5

Toward a Systemic Approach to Legal Institutions of Capitalism: Beyond the Reductionism of Micro and Macro Perspectives of Law and Economics¹

1. Introduction

1.1. The Dominance of Micro-perspective and The Rise of Macro-perspective

As already mentioned in the introduction of the thesis, the *micro*-economic perspective of neoclassical and new institutional microeconomics dominates the analysis and design of legal institutions in law and economics scholarship. The macro-perspective of business cycle theories and economic growth theories have been largely absent from analysis of legal institutions of capitalism in law and economics scholarship prior to the crisis. Law and macroeconomics has not been well-received by law and economics research that remained predominantly micro-oriented. Recently, economists (but not legal scholars) began to explore more seriously macro-implications of economic regulations, and attempt to design macro-efficient legal institutions. These macro-oriented studies of legal institutions are still in their infancy in comparison to law and microeconomics.

Both law and microeconomic and law and macroeconomics are not distinct schools of thought of law and economics; they are rather distinctive strands of neoclassical-new institutional law and economics because law and microeconomics applies neoclassical-new institutional microeconomics to analysis and design of legal institutions, while law and

¹ Earlier versions of this and the following chapter have been presented in the PhD forum at Goethe University, Frankfurt on 15th of February, 2014, the 19th Annual University of British Columbia (UBC) Interdisciplinary Legal Studies Graduate Students Conference in Vancouver, Canada, 8-9 May, 2014, and 1st Vienna Conference on Pluralism in Economics at Vienna Business School, Austria, 10-11 April, 2014.

macroeconomics applies *neoclassical macroeconomics* to legal institutions. For brevity, I will hereinafter refer to both law and microeconomics and law and macroeconomics approaches as law and economics strands. Despite the fact that micro and macro perspectives are strands of the same school of thought that is neoclassical law and economics, they represent distinctive competing and not necessarily complementary perspectives because they may provide inconsistent insights, unless we are able to establish a coherent connection between neoclassical micro and neoclassical macro analysis of legal institutions.

Once we endorse an integrated law and economics approach, we discover that non-neoclassical schools of thought such as Keynesianism provide some valid micro and macro insights over the analysis and design of legal institutions. Similar to neoclassical law and economics, integrated law and economics therefore can have distinctive micro and macro strands as well. However, integrated law and economics inherits the inconsistency problem of the insights of its micro and macro strands, unless it succeeds to resolve this micro-macro tension.

The inconsistencies among micro and macro perspectives of neoclassical law and economics result from the methodological position of each of them that is *reductionism*. Reductionism is an inadequate methodology for analysis of micro and macro effects of legal institutions; further, it cannot adequately guide the design of legal institutions that can efficiently achieve any desirable micro or macro objective. Given the inadequacy of reductionism underlying both neoclassical micro and macroeconomic analysis and design of legal institutions; we cannot expect that the legal institutions designed for maximizing a micro-objective (e.g., economic efficiency) would also maximize a macro-objective (e.g., economic growth).. Indeed, as shall be argued below, legal systems that are composed of legal institutions that are allocatively efficient in isolation of each other may be less efficient than legal systems composed of legal institutions that might not be efficient when analyzed in isolation of each other.

To overcome reductionism, I suggest a systemic approach to analysis and design of legal institutions; this approach is adequate for analysis of both micro and macro effects of legal institutions and for designing micro and macro desirable legal institutions. By transcending reductionism, systemic law and economics, resolves the tension of micro and macro analysis and design of legal institutions. In this chapter, I will focus on demonstrating the limits of

reductionism as a methodology for micro and macro analysis and design of legal institutions and the desirability of an alternative systemic perspective.

Due to time constraints, I will not discuss how the systemic perspective, as an adequate methodology for both micro and macro analysis and design of legal institutions, can transcend the inconsistencies of micro and macro analysis and design of legal institutions because this discussion requires a serious engagement with the relation between micro and macroeconomics (mainly the questions of micro-foundations and aggregation in macroeconomics) that has been debated intensely for more than half a century in economics. Future research is needed for exploring this issue.

To assess the adequacy of reductionism and systemism for institutional analysis and design, we need to understand the *ontology* of legal institutions, i.e., their *definition, features, and relations*. We cannot assess the methodologies used for analysis of the effects and design of *anything* without understanding the ontology of this thing, i.e., its essence and features. The right starting point for investigating the ontology of (legal) institutions is institutionalist theories of thought.

1.2. The Ontology of Institutions: The Overlooked Insights of Institutionalism and Systems Theory in Neoclassical Analysis and Design of Legal Institutions of Capitalism

The research program of institutional schools of thought (for brevity, institutionalism) addresses the questions of the emergence, evolution/change, persistence, *impact, and design* of formal and informal institutions.² The research program of mainstream law and economics engages with *impact analysis and design* of legal institutions. The research program of law and economics is a subset of institutionalism's research agenda.

Despite this clear-cut overlap between the research agendas of institutionalism and law and economics, both microeconomic and macroeconomic analysis of legal institutions of capitalism overlook some fundamental insights of the institutional schools of thought in economics (particularly old institutional economics, evolutionary economics, comparative

² On analyses of institutional impact and institutional change, see: A. A Schmid, *Conflict and Cooperation: Institutional and Behavioral Economics* (Blackwell Publishers 2004.) 11–14.

capitalism, economic-sociology, the French regulation school, and the conventions school), sociology, political science, philosophy, and legal theory. In addition to overlooking some important insights of institutionalism, law and economics strands ignore some significant valid insights of systems theory (e.g., complexity economics and social systems theory). The overlooked insights of institutionalism and systems theory include, inter alia, the sophisticated account of the features and functions of institutions, their interaction with agency, and the systemic perspective of institutionalism and systems theory over the analysis and design of legal institutions.

In chapters 6 and 7, I use the insights of systems theory and institutionalism (particularly the institutional perspective of comparative capitalism) to develop an operationalized systemic approach to analysis and design of legal institutions. If my argument is to be accepted, and law and economics research program endorses a systemic perspective in order to complement critically *the reductionist perspective* of its micro and macro perspectives, law and economics would move beyond the reductionism of micro and macro-perspectives of neoclassical law and economics into what I call “systemic law and economics”. The latter can provide an adequate (and consistent) micro and macro analysis and design of legal institutions.

This chapter is structured as follows. In order to understand how to analyze and design adequately legal institutions, we need to understand the ontology of these institutions; in other words, we need to understand their nature, functions, and interlinkages. Therefore, section 2 outlines the main contributions of institutionalism to our understanding of the institutional phenomenon, particularly the features, functions, and interdependencies of legal institutions. Given the ontology of institutions (their nature, functions, and interdependencies), section 3 argues that the capitalist economy has a two-level structure of institutional and agents’ networks. Given this two-level network structure of the capitalist economy, section 4 argues that the methodology of systemic thinking is the only adequate methodology for analysis and design of specific legal institutions and institutional networks; the alternative methodology of reductionism fails to advance an adequate institutional analysis. Section 5 demonstrates that both strands of neoclassical law and economics embrace a reductionist approach to analysis and design of legal institutions. Section 6 investigates whether methodological individualism, institutional individualism, or structural individualism is the most appropriate *systemic* method for institutional analysis and design. Other methodologies are missing important

elements of the system; they are *reductionist*. They are inappropriate for a systemic analysis and design of legal institutions. This section establishes that the agent-structure analytical framework of structural individualism is the most appropriate systemic framework for institutional analysis and design. Section 7 shows that the analytical toolkit of both strands of neoclassical law and economics reflect the position of methodological individualism. Section 8 concludes.

2. Nature and Features of Institutions in Institutionalism

2.1. Nature of Institutions

Institutions as rules of the game, as equilibrium of the game and as constitutive rules are the most famous three accounts of the (ontological) nature of institutions. As Hindriks and Guala convincingly argued, these accounts are complementary.³

2.1.1. Institutions as Rules of the Game

Institutions are *rules of the game*;⁴ they affect who plays the game, the choice set of the players and the payoffs they receive from playing each strategy available for them.⁵ As rules of the game, they simultaneously constrain and enable specific behaviors.⁶ Given their nature as rules of the game, game theory becomes the main method for analysis of legal institutions.⁷ Criminal sanctions of insider trading, for instance, reduce the expected payoffs of insider

³ Frank Hindriks and Francesco Guala, 'Institutions, Rules, and Equilibria: A Unified Theory' [2014] *Journal of Institutional Economics*, 8–11. Similarly, Amable suggests that a nested/two-tier game structure facilitates the synthesis of the views of the institutions as rules of the game and as equilibrium of the game, see: Bruno Amable, *The Diversity of Modern Capitalism* (Oxford University Press 2003) 33–34.

⁴ Douglass C North, *Institutions, Institutional Change and Economic Performance* (Cambridge University Press 1990) 3.

⁵ *ibid* 3–4.

⁶ John Groenewegen, Antoon Spithoven and Annette van den Berg, *Institutional Economics: an Introduction* (Palgrave Macmillan 2010) 30–31.

⁷ For a non-technical overview of game theory, see: Avinash Dixit, Susan Skeath and David H Reiley, *Games of Strategy* (3rd edn, W. W. Norton & Company 2009). For the use of game theory in analysis of legal institutions, see, e.g.: Douglas G Baird, Robert H Gertner and Randal C Picker, *Game Theory and the Law* (Harvard University Press 1994).

trading and thus constrain this behavior, while enabling equity investment by outside investors.

2.1.2. Institutions as Equilibrium of the Game

Nevertheless, the “*rules of the game*” concept of institutions leaves out the question of emergence and evolution of institutions. Aoki, a prominent institutional economist, suggests that institutions should be perceived as *equilibrium of the game*.⁸ In this view, institutions emerge as an equilibrium of an evolutionary game, the first generation of the players converge over time towards playing the equilibrium of the game, the second generation begins to internalize this equilibrium. It becomes a habit, and over time, habits transform into social norms. Socio-economic agents behave according to these social norms without contemplating whether they are the equilibrium of respective games.⁹ For example, the institutions governing the irrigation systems in rural areas have emerged through interaction among the farmers; farmers begin to irrigate their lands in a specific order and quantity of water. Over time, the order of irrigation and quantities of allocated water become *institutionalized*, and new generations of farmers inherit the behavior of their ancestors, however, the chosen behavior of the ancestors which gave rise to an equilibrium under which each farmer has the right to a specific order and quantity becomes *a social norm* under which each farmer of the new generation has *a property right* to a specific order of irrigation and quantity of water.¹⁰

Institutions as equilibrium of the game provides a conceptualization of *the institutionalization process* under which reflective rational strategic actions of the agents, which give rise to the equilibrium of the game transform into internalized institutionalized actions. The rules of the game and the equilibrium of the game accounts of institutions are complementary.¹¹ Once the equilibrium of the game is institutionalized, the emerging institutions (such as the irrigation system of our example), constrain and enable the behavior

⁸ Masahiko Aoki, *Toward a Comparative Institutional Analysis* (The MIT Press 2001) 26–27.

⁹ *ibid* 10–24.

¹⁰ For similar examples, see: *ibid* 36–39. *ibid* 44–50.

¹¹ Hindriks and Guala, ‘Institutions, Rules, and Equilibria: A Unified Theory’ (n 3) 8–11. Amable (n 3) 33–34.

of economic agents interacting in another game. The institutionalized equilibriums function as rules for other games.¹²

2.1.3. Institutions as Constitutive Rules

The philosophical account of institutions/institutional facts pioneered by the works of Searle diverges from the above economic accounts of institutions. Searle has suggested that institutions are constitutive rules.¹³ Constitutive rules take the form of *X counts as Y in C*. *X* (a piece of paper issued by the Federal Reserve or a person elected according to specific procedures) counts as *Y* (money or the US president) in situation *C* (the United States of America).¹⁴ The physical characteristics and status of the piece of paper cannot enable the functions undertaken by money as a medium of exchange and a store of value. Constitutive rules confer a status function over the piece of paper issued by the Federal Reserve to enable this piece of paper to function as money.¹⁵ For a status function of money to be conferred over the piece of paper, socio-economic agents should collectively accept and recognize the piece of paper issued by the Fed as money.¹⁶ The status function of money confers deontic/normative powers, i.e., rights, obligations, and requirements.¹⁷ For example, the payment in US dollars settles debt obligations among the US residents, and the status function of the US president vests specific rights and obligations upon the person occupying this status function.

Since rules are either constitutive or regulative. Searle excludes regulative rules from the domain of institutional facts. According to Searle:

Rules of the form *X counts as Y in C* are then constitutive of institutional structures. Such rules differ from regulative rules, which are typically of the form 'Do *X*', because regulative rules regulate activities which can exist independently of the rule. Constitutive rules not only regulate but rather constitute the very behavior they

¹² This is the nested/two-tier game structure suggested by Amable: *ibid.*

¹³ John R Searle, 'What is an Institution?' (2005) 1(1) *Journal of Institutional Economics* 19.

¹⁴ *ibid* 7.

¹⁵ *ibid* 6–8.

¹⁶ *ibid.*

¹⁷ *ibid* 10.

regulate, because acting in accordance with a sufficient number of the rules is constitutive of the behavior in question. An obvious contrast is between the regulative rules of driving, such as drive on the right-hand side of the road and the constitutive rules of chess. Driving can exist without the regulative rule requiring right or left; the rule regulates an antecedently existing activity. But chess cannot exist without the rules, because behaving in accordance with (at least a sufficient subset of) the rules is constitutive of playing chess.¹⁸

Similarly, the legal rules conferring the legal personality on corporations, and those defining property rights, without which corporations and markets could not exist, are constitutive¹⁹ and the legal rules regulating the behavior of corporations such as creditor protection are regulative.

Hendriks and Guala argue that constitutive rules are just *reductive* regulative rules: each constitutive rule is a regulative rule.²⁰ The rule that the person elected according to specific procedures count as the US president could be states as follows: the person elected according to specific procedures shall assume specific rights (i.e., he is entitled to undertake specific actions) and responsibilities (he must undertake and avoid specific actions).²¹ The latter is clearly a regulative rule as it sets out the actions that the elected person *can and should* do (i.e., his powers and duties), and the sanctions imposed on him in case he fails to undertake his duties. However, by creating the status function of the “US president” through a constitutive rule, we have economized on language and on cognitive resources expanded in communication.²² By saying that Obama is the US president, we no longer need to articulate his duties and prerogatives. Constitutive rules are *economizing instruments* but they are in essence (ontologically) regulative rules.

¹⁸ *ibid* 9.

¹⁹ Simon Deakin and others, ‘Legal Institutionalism: Capitalism and the Constitutive Role of Law’ (April, 2015). The University of Cambridge Faculty of Law Legal Studies Research Paper no. 26/2015, 8–20 <http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2601035>

²⁰ Hindriks and Guala, ‘Institutions, Rules, and Equilibria: A Unified Theory’ (n 3) 13–16. See also: Joseph Raz, *Practical Reason and Norms* (Oxford University Press 1999) 109.

²¹ Frank Hindriks and Francesco Guala, ‘Understanding Institutions: Replies to Aoki, Binmore, Hodgson, Searle, Smith, and Sugden’ (2015) 11(03) *Journal of Institutional Economics* 519.

²² Hindriks and Guala, ‘Institutions, Rules, and Equilibria: A Unified Theory’ (n 3) 17. Masahiko Aoki, ‘Why is the Equilibrium Notion Essential for a Unified Institutional Theory? A Friendly Remark on the Article by Hindriks and Guala’ (2015) 11(03) *Journal of Institutional Economics* 487.

In short, as for the nature of institutions, institutions are *regulative* rules of the game, which have been institutionalized as a stable equilibrium of a game.²³ Given this nature of institutions, we can turn to investigate their functions and some of their basic features as expounded in institutional schools of thoughts in economics.

2.2. Features of the Institutions

This sub-section is not intended to provide an overview of the intellectual contributions of the institutional schools of thought across the disciplines of law, economics, sociology and political science.²⁴ Rather, I focus briefly on two main contributions of some institutional schools of thought, which relate to the functions of institutions and their interdependencies. Given these (*ontological*) features of institutions, the case for a systemic perspective as a *methodology* for analysis and design of legal institutions can be established.

2.2.1. Functions of the Institutions

As already mentioned, institutions undertake the dual function of constraining and enabling individuals' behavior. As rules of the game, they affect who plays the game, the incentives structure of the players due to its effects on their choice set (i.e., the strategies available to the players), the payoffs of each choice, the level and distribution of information

²³ MacCormick and Weinberger, prominent legal theorists, have used some of the insights of institutionalism, particularly its philosophical strand, to develop an institutional theory of the nature of law. They developed such a theory in their seminal work: Neil MacCormick and Ota Weinberger, *An Institutional Theory of Law: New Approaches to Legal Positivism* (Reidel 1986). MacCormick has provided a recent restatement of the theory in his book: Neil MacCormick, *Institutions of Law: An Essay in Legal Theory* (Oxford University Press 2007). Unfortunately, due to time constraints, I will not discuss the institutional theory of law. Still, some insights of the theory such as the process through which some social practices and positions gain *normativity* and become *institutionalized* will help us uncover a network of dense implicit (social) norms supportive of the stakeholder model of (post-war Japanese) corporate governance. See chapter 8 for an elaboration on this point and chapter 11 for a discussion of the post-war Japanese corporate governance model, and chapter 12 for a discussion of whether and how legal norms can substitute for these social norms in supporting a stakeholder model of corporate governance in developing countries.

²⁴ For a short overview of institutional schools of thoughts in economics, sociology, and political science, see: W. R Scott, *Institutions and Organizations: Ideas, Interests, and Identities* (4th edn, SAGE Publications 2014) 1–18.

in the game.²⁵ Further, institutions affect the preferences of the individuals and may provide preference-independent reasons for action.²⁶ Finally, institutions may affect the mental maps of the players of the game (i.e., how they perceive the game).²⁷

2.2.2. Interdependencies of Institutions (Institutional Networks)

In legal theory, legal institutions are interlinked, but their links are *logical*. Raz highlighted the existence of logical (internal) links that connect legal norms; for example, the legal rule that confers legal personality of the corporation is a *logical pre-requisite* for the legal norms that specify the rights and obligations of the corporation as a legal person.²⁸ The complete institutional network of corporate governance would make no logical sense without the legal norm that confers legal personality and limited liability over the corporation. Logical relations among legal norms are not relevant only for understanding whether the legal system of the corporation is logically coherent. These logical relations are constitutive of the logic underlying the design of the legal system itself; they are manifestations of the *design principles* of the institutional network/legal system. Legal theories and principles developed by legal scholars in each area of legal scholarship are attempts to uncover or construct these design principles. Different Logical relations among the same institutions reflect different plausible legal systems; if we connect the same legal norms logically in a different way, we would come up with new legal system (i.e., an institutional network – see below) that would reflect different design principles.

Comparative capitalism, an important institutional school of thought in political economy, emphasizes a behavioral and not logical type of interdependencies among institutions. These Institutional interdependencies refer to the interactive/interdependent effects of institutions on

²⁵ Aoki, *Toward a Comparative Institutional Analysis* (n 8) 21.

²⁶ Indeed, undertaking an action out of the belief that this is the right thing to do (i.e., undertaking an action based on a preference-independent reason for action such as ethical motivation) is one of the important conditions for a social practice to gain normativity and be transformed into an institution. MacCormick, *Institutions of Law* (n 23) 14–18. On the importance of ethical norms as a preference-independent source of motivation, see: Martha C Nussbaum, ‘Flawed Foundations: The Philosophical Critique of (a Particular Type of) Economics’ (1997) 64(4) *The University of Chicago Law Review* 1211.

²⁷ North (n 4) 22–25. *ibid* 111.

²⁸ Raz (n 20) 112–113.

the behavior of socio-economic agents. These interactive effects of legal institutions may take one of four forms: simple addition, complementarity, inconsistency (contradiction), and substitution. Simple addition relationship among institutions takes place when the legal institutions have the same directional effects on the behavior of the socio-economic agents.

In contrast, the sum of the effects of complementary legal institutions is *more than or different* from the sum of the effects of each institution, assuming the other does not exist. Complementary institutions have either a *quantitative or qualitative* effect. Quantitative complementary effects of legal institutions take place when the effects of specific legal institution is an *increasing function* of the effects of the other institution on the behavior of the socio-economic agents; the combined effect of complementary institutions are therefore *higher than* the sum of the effect of each of them, assuming the other does not exist.²⁹ Qualitative complementarity means that when each of the complementary institutions is endorsed alone, it results in an equilibrium of the game played by the affected socio-economic agents by this institution, which is different from the equilibrium of the game when both complementary institutions are adopted; *qualitative* complementarity results in a *new equilibrium* of the game.³⁰

For example, each of deregulated labor markets and shareholder value model of corporate governance gives incentives for the management to invest in radical innovation and these incentives are stronger than the sum of the effects of each of these institutions when implemented alone (see the below discussion of the varieties of capitalism literature). Complementarity has a quantitative, but not qualitative effect. However, this quantitative conceptualization of complementarities assume that we can discern the effects of each institution (e.g., labor market institutions) in isolation of the institution of the other institutional domain (e.g., corporate governance), then, we can add these isolated (non-embedded) effects together and compare their sum to the sum of the effects of these institutions when they are combined together. This is unrealistic assumption, however. How

²⁹ Robert Boyer, 'Coherence, Diversity, and the Evolution of Capitalisms—The Institutional Complementarity Hypothesis' (2005) 2(1) *Evolutionary and Institutional Economics Review* 48–49. Richard Deeg, 'Complementarity and Institutional Change in Capitalist Systems' (2007) 14(4) *Journal of European Public Policy* 613. Paul Milgrom and John Roberts, 'Complementarities and Fit: Strategy, Structure, and Organizational Change in Manufacturing' (1995) 19(2) *Journal of Accounting and Economics* 181.

³⁰ Aoki, *Toward a Comparative Institutional Analysis* (n 8) 225–229.

can we measure the effects of labor (de)regulation on managerial incentive to invest in radical innovation in isolation of corporate governance institutions? The institutions of corporate governance for each firm affects also these incentives to innovate and each firm must have a corporate governance structure. Accordingly, to have a realistic understanding of complementarity, we must compare the combined effects of deregulated labor markets and a stakeholder model of corporate governance with the combined effects of deregulated labor markets and a shareholder value model of corporate governance. This comparison may reveal that the former institutions result in an equilibrium of the game (e.g., investment in incremental, but not radical innovation except for exceptional cases) that is different from the equilibrium of the other game (e.g., investment in radical innovation). Here, complementary institutions result in a *qualitative* change, i.e., a different equilibrium of the game. This does not suggest that deregulated labor and a stakeholder model are complementary according to this definition because if we shift from existing institutions (e.g., deregulated labor market and a shareholder value model) to this combination, we will have qualitative change in the equilibrium. Qualitative change in equilibrium is necessary, but not sufficient for considering the institutions to be *qualitatively* complementary. The effects of these institutions in isolation of each other must be complementing each other quantitatively or qualitatively at the underlying mechanisms or behavior level. This sufficiency condition will become clear when we discuss below the mechanisms through which institutions produce interactive effects such as complementarities.

Contradictory or inconsistent effects of institutions take place when they have contradictory directional effects on the agent's behavior; a specific institution steers the behavior in one direction whereas the other steers the behavior in the opposite direction.³¹ Substitution effects take place when two institutions have the same directional effect on the agent's behavior, but when these institutions are combined together, their aggregate effect does not exceed the effects of each of them, assuming the other does not exist.³² Accordingly,

³¹ See the discussion of consistency analysis and the four-step process of consistency analysis of institutions in sections 6 and 7 of the next chapter and the references cited therein.

³² The fact that many legal institutions may be substitutes undermines the accuracy of quantitative indices of institutional domains such as corporate governance indices because each of the institutions of corporate governance are given independent weight although some of these institutions are redundant. Sanjai Bhagat, Brian Bolton and Roberta Romano, 'The Promise and Peril of Corporate Governance Indices' (2008) 108(8) Columbia Law Review 1835.

substitute institutions are redundant; redundancy helps to stabilize the equilibrium of the game,³³ but redundant institutions are costly to administer because of the enforcement costs incurred in case of the infringement of any of these redundant institutions.

Using a game theoretical perspective, we can understand the mechanisms through which institutions produce additive, complementary, inconsistent or substitution effects. Institutions affect the agents' behavior through their above-mentioned diverse functions. Some institutions may affect the agents' incentives structure through affecting their choice set and/or the payoffs of each strategy available for each of them. Other institutions may change the agents' behavior by affecting their preferences,³⁴ their mental maps³⁵ or by reducing uncertainty and ambiguity in the game³⁶ or by increasing the disclosed information in the game.³⁷ These various functions of institutions represent the underlying mechanisms and channels through which institutions affect agents' incentives structure and intrinsic motivations, and thus behavior. In short, institutions do not affect the agent's behavior through the same underlying mechanism.

Accordingly, interdependencies of institutions therefore take place at two different levels: the underlying mechanism level and the agent's behavior level. Institutions may be additive, complementary, inconsistent, or substitute at the underlying mechanism level if they affect the same mechanism. For example, different institutions may be reinforcing specific cognitive map at the cost of others, or they may be increasing the payoff of a specific strategy. In case the institutions are affecting diverse mechanisms, and these mechanisms are interlinked, then, these institutions may still be interlinked at the underlying mechanisms level. For example, institutions may affect *information flow*, and the *information flow* mechanism would affect the agents' mental maps, which represent another underlying mechanism.³⁸ Here, the underlying mechanisms are interconnected (sometimes in positive or negative closed feedback

³³ Albert-laszlo Barabási, *Linked: How Everything is Connected to Everything Else and What it Means for Business, Science, and Everyday Life* (Basic Books 2014) 111.

³⁴ Groenewegen, Spithoven and van den Berg (n 6) 60.

³⁵ North (n 4) 22–25. *ibid* 111. Groenewegen, Spithoven and van den Berg (n 6) 74–75.

³⁶ North (n 4) 25. Groenewegen, Spithoven and van den Berg (n 6) 30.

³⁷ For example, (formal or informal) institutions can introduce a third player that functions as an information intermediary in an existing two-player game; the information dissemination function undertaken by this new player would then change the equilibrium of this game. Aoki, *Toward a Comparative Institutional Analysis* (n 8) 73–76.

³⁸ North (n 4) 108. *ibid* 111.

loops³⁹), and thus the set of institutions affecting one of these mechanisms would be affecting the others as well.

If the analyzed institutions do not affect different independent underlying mechanisms, these institutions would not be interconnected at the mechanism level. They may however be interdependent at the behavior level. For example, suppose that a specific institution (*a*) (that represents a shareholder value model of corporate governance, for example) affects the agent's mental map, another institution (*b*) (that represented deregulated labor market) affects her incentives structure, and a third institution (that represents, for example a stakeholder model of corporate governance) affects the information available to the agent. Assume that the underlying mechanisms of mental map affected by a shareholder value model (or information affected by the stakeholder model), and the incentives structure affected by deregulated labor are not directly interlinked, but each of them affects the behavior of the agent directly, i.e., the behavior of the agent is a function of these mechanisms, but these mechanisms are not functionally related.⁴⁰ Suppose further that given these institutions, the equilibrium of the game is (*X*), but the equilibrium of a hypothetical game where a specific institution (*c*) along with institution (*b*) is (*Z*). This example demonstrates that the combined effect of the institutions (*a*) and (*b*) are *qualitatively* different from the effects of (*b*) and (*c*). This abstract example shows that combined institutions may affect agents' behavior although they may not have the interdependent effects on the underlying mechanisms affecting the behavior of the agent. The change in behavior is a result of the isolated effect each institution has on their respective underlying mechanisms (the cognitive maps and the incentive structure in the case of the combination of institutions (*a*) and (*b*) or the available information and the incentive structure in the case of the combination of institutions (*c*) and (*b*)), which is transformed into a change in the way the game is played, which results in a change in its *equilibrium*.

³⁹ See the discussion of the feedback loop structures of complex systems such as economic systems in the section outlining systems theory in next chapter and the references cited therein.

⁴⁰ This is a somehow unrealistic (but not too unrealistic) assumption as the agents' mental maps affect their perception of their available strategies, and also may affect their perception of the payoffs of each strategy. The objective of this assumption is to demonstrate that institutional interdependencies can take place at the level of agents' behavior, even if the underlying mechanisms affected by these institutions may not be interlinked.

This important example relating to independent underlying mechanisms and the previous example relating to interdependent underlying mechanisms for affecting agents' behavior allows us to answer the question why one combination of these institutions may be qualitatively complementary, but not the other although a movement from one combination to the other would produce a qualitative change, i.e., a change in the equilibrium of the game. The answer relates to how these mechanisms affect the strategic choices/behavior of the agent; if the mechanisms complement each other, i.e., if they affect the behavior in the same way, given the functional relation that connects each of them with the behavior/strategic choice, then, the institutions that affect these mechanisms are complementary, otherwise, they are not. In our above example, the shareholder value affects the mental map of the manager so that he perceives every business problem to be a problem of shareholder value maximization and the deregulated labor market affects his incentives so that he has no disincentives to fire or hire employees at will; these changes in mental maps and incentives brought by these institutions complement each other in steering the manager to make the strategic choice of shareholder value maximization. In contrast, a stakeholder model of corporate governance changes the distribution of information in the firm as workers have more access to the financial status of the firm; this enables them to demand fairer share in profits and more job security as long as this does not interfere with long term survival of the firm. This change in the information would give disincentives to the managers to pursue aggressive shareholder value maximization strategy that a deregulated labor markets facilitates. Here, the probability of managerial strategic choices of shareholder value maximization is an increasing function of the managerial freedom in dismissal and recruitment of the employees, an increasing function of a mental map that conceptualizes every business problem to be a shareholder value maximization problem under constraint, and a decreasing function of information sharing with employees. The institutions that affect these mechanisms/independent variables that determine the probability of managerial strategic choices of shareholder value maximization in a way that increases this probability are complementary in relation to shareholder value maximization, otherwise, they are not. Given the strong assumptions made in relation to the above example, shareholder value and deregulated labor market are qualitatively complementary, but a stakeholder model and deregulated labor market are not.

As an analytical concept of the institutional arrangements of capitalism, institutional complementarity as a form of institutional interdependence has received the highest attention in Comparative capitalism literature, particularly the Variety of Capitalism (the “VoC”) approach.⁴¹ Based on the analytical concept of institutional complementarities, the VoC approach classifies developed market economies based on the mode of transactions coordination that the firms employ in the different spheres of their activities. These spheres of activities include financial markets, corporate governance, industrial relations, education system, vocational training, and inter-firm relations including competition law.⁴² If firms rely on market contracts and hierarchies in coordinating their activities, the economic system in which these firms operate is classified as liberal market economy such as the American and British market economies. To the contrary, if firms rely on non-market coordination mechanisms, the market economy in which these firms operate is classified as coordinated market economy such as the German market economy.⁴³

The different spheres of firms’ activities involve different formal and informal institutional structures that may affect the efficiency of each other. *Institutional complementarities*, as introduced by the VoC approach, refer to the fact that the institutions in the different spheres of the firms’ activities complement and reinforce *the effects* of each other on firms’ behavior.⁴⁴ For example, the efficient market for corporate control imposes external control on US firms and incentivizes them to focus on increasing their short run profits and share prices. The US institutions of corporate governance by giving rise to the market for corporate control would require the firms in its persistent search for higher profitable investments to be able to switch its assets and replace their employees in short run. The deregulated labor market in US confers low protection upon the workers against dismissal and thus reinforces the effects of the market for corporate control on American firms’ short-

⁴¹ Peter A Hall and David W Soskice, ‘An Introduction to Varieties of Capitalism’ in Peter A Hall and David W Soskice (eds), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (Oxford University Press 2001) 17–18. Amable (n 3) 54–64.

⁴² Hall and Soskice (n 41) 6–7.

⁴³ *ibid* 8.

⁴⁴ *ibid* 17–18.

run profit maximization strategy. In addition, the equity incentives-based compensation of the CEOs in US reinforces further the short-term profit maximization strategy of US firms. Intensive price competition resulting from the institutions of US model of competition law would strengthen the effects of both the shareholder-value oriented corporate governance and deregulated labor market in incentivizing the firms to maximize their short run profits by cutting costs rather than investing in long-run development of products quality and incremental innovation.⁴⁵ In contrast, the institutional domains of the German model complements each other, a stakeholder model of corporate governance and regulated labor markets reinforce the effects of each other concerning the long term stability of the firm, maximization of the long term firm value, and incremental innovation.⁴⁶

In addition to the research on the classification of the models of capitalism based on the analytical concept of institutional complementarities, empirical and analytical studies tackled the institutional complementarities between distinct institutional spheres of the capitalist economy such as the interaction between corporate governance and industrial relations (the institutions of job security and wage-setting),⁴⁷ and the institutional complementarities between corporate governance and corporate social responsibility.⁴⁸

In sum, institutions do not exist in isolation from each other; they are interlinked logically and they are interdependent in their effects on each of the evaluative criteria of these institutions.⁴⁹ Logical interrelation is a form of institutional interdependency internal to the

⁴⁵ In addition to the complementarities among these institutional domains in relation to their effect on time-horizon of the firm (short-term vs. long term value maximization), these institutional domains tend to be complementary in relation to their effects on human capital investments by workers as they induce general rather than firm specific investments, and their effects on the type of innovative strategies endorsed by the firms as they result in radical rather than incremental innovation. See: *ibid* 28–33. *ibid* 40–41.

⁴⁶ *ibid* 22–27. *ibid* 39–40.

⁴⁷ See, e.g., Martin Hopner, ‘What Connects Industrial Relations and Corporate Governance’ (2005) 3(2) *Socio-Economic Review*.

⁴⁸ See, e.g., Nahee Kang and Jeremy Moon, ‘Institutional Complementarity between Corporate Governance and Corporate Social Responsibility: A Comparative Institutional Analysis of Three Capitalisms’ (2012) 10 *Socio-Economic Review*.

⁴⁹ We always assess the institutional interdependence (e.g., complementarity) with reference to a specific evaluative criterion (e.g., innovation, or income distribution) because the same institutions may be complementary with reference to their effects on a specific evaluative criterion (e.g., innovation), but not with reference to their effects on other criteria (e.g., income distribution). Boyer, ‘Coherence, Diversity, and the Evolution of Capitalisms—The Institutional Complementarity Hypothesis’ (n 29) 63. Deeg (n 29), 614.

legal system, while interdependencies of the effects of legal institutions is a form of interdependency *external* to the legal system. We will return to this important point in detail in the next chapter when we distinguish between internal and external consistency of the legal institutions. We are more concerned about the interdependencies of the effects of the institutions because they are the most relevant to the analysis and design of legal institutions of capitalism. These institutional interdependencies take four main forms: simple addition, complementarity, inconsistency/contradiction, and substitution. The interdependencies of the effects of institutions can result from the interdependencies of the mechanisms underlying the choices of the agents, which are affected by these institutions (underlying mechanisms channel for institutional interdependencies). In case these mechanisms are not interdependent, institutional interdependencies result from how each mechanism affects independently the choices/behavior of the agents, i.e., on the functional relation between these mechanisms and agent's choice or more accurately, the probability of agent's choice. Unlike the other three forms of institutional interdependencies, institutional complementarities received the highest attention in comparative capitalism literature. In next chapter, we will rather focus on another form of institutional interdependency that received little attention that is (in)consistency of legal institutions.

3. Capitalism as an Embedded Complex Adaptive System of a Two-level Network Structure

Based on the above significant insights of institutionalism and the basic insight of complexity economics that capitalism is a complex adaptive system,⁵⁰ we can conceptualize capitalism as an embedded complex adaptive system of *network structure of a minimum of two levels of organization*.

The two-level network of capitalism consists of an institutional and agents' network. The lower network is an institutional network and the higher network is agents' network. The institutional network represents the institutional level, whereas the actors' network represents

⁵⁰ John Foster, 'From Simplistic to Complex Systems in Economics' (2005) 29(6) Cambridge Journal of Economics 877–878. J. D Farmer and others, 'A Complex Systems Approach to Constructing Better Models for Managing Financial Markets and the Economy' (2012) 214 The European Physical Journal Special Topics 297.

the agents' level of the capitalist economic system. Figure 5.1 below represents the institutional network. In this network, each legal rule represents a node.⁵¹ For example, the legal rule prohibiting the abuse of dominance position in competition law would represent a node in this network. The links of the institutional network would represent the form of interdependence among legal institutions with respect to *a specific dependent variable (e.g., specific objective/evaluative or assessment criterion)*.⁵² These links may represent complementarity, contradiction, or substitution of the interlinked legal institutions in relation to allocative efficiency, productive efficiency, innovation, fairness, or distribution of income, wealth or power, etc.⁵³ Accordingly, any legal system such as the German legal system can be represented by the same nodes reflecting the legal rules of this system, however, these rules would constitute different institutional networks depending on the normative criterion used for constructing the *links* among these nodes. The institutional network is therefore *a multiplex network/multi-layer network*, in which 'the same set of nodes are connected via more than one type of links. Each type of links in multiplex networks constitutes the network layer.'⁵⁴

⁵¹ Dai defines the institutional networks as 'the sets of connecting nodes, say, institutions themselves. The links of networks reflect a common structure through which information and resources can flow, can be exchanged, and can be shared among institutions.' Shuanping Dai, *Networks of Institutions: Institutional Emergence, Social Structure and National Systems of Policies* (Routledge 2015) 106. Similarly, Douglass North has conceptualized institutions as *a web*. According to him, 'the institutional constraints [i.e., formal and informal institutions] that define the opportunity set of individuals are a complex of formal and informal constraints. They make up an *interconnected web* that in various combinations shapes choice sets in various contexts.' North (n 4) 67 [emphasis added].

⁵² In chapter 10, we will develop the assessment criteria for the institutional network that governs the supply side of product market; this network includes the institutional domains of competition law, corporate governance, and industrial policy.

⁵³ I wish to thank a lot Prof. Reinhard Schmidt for drawing my attention to the fact that links would be different according to the "*assessment criterion*" used in the process of analyzing or designing the institutional network.

⁵⁴ Kyu-Min Lee, Byungjoon Min and Kwang-II Goh, 'Towards Real-World Complexity: An Introduction to Multiplex Networks' (2015) 88(48) *The European Physical Journal B* 1.

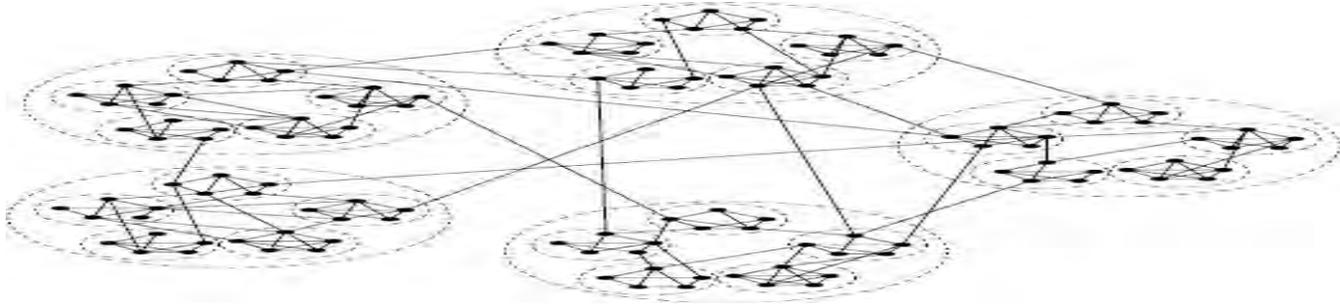


Figure 5.1: The Institutional Network. Adapted from (Dai, 2015).⁵⁵ Source of the clustered network graph: (Kaiser, Görner, and Hilgetag, 2007).⁵⁶

As I have not encountered any scholarly attempt to represent the institutional network of a real capitalist system, I had to speculate about the structure of the institutional network. I think the institutional network would take the form of a clustered network where each cluster would represent the legal institutions of specific institutional domain because the links among the legal institutions belonging to the same institutional domain are more likely to be more than the number of the links among the legal institutions belonging to different institutional areas. For example, the clusters in Figure 5.1 can represent competition law, corporate governance, banking regulation, labor regulation, and securities regulation. Despite its clustered structure, the institutional network is not quasi-decomposable (see below for a discussion of this point).

Figure 5.2 (below) represents capitalism as a multi-level network; the lower network is the institutional network represented in figure 5.1. The higher levels of the network (the second and third levels in figure 5.2) are the levels of *the network of agents* who are interacting with each other over the institutional network. These agents include any information processing entity such as heterogeneous workers, firms, financial institutions, regulators, research institutes, and universities.⁵⁷ The interdependencies among these agents do not refer to their strategic interactions, but mainly to the stable relations/interdependencies that exist

⁵⁵ Dai (n 51) 120.

⁵⁶ M. Kaiser, M. Görner and C. C Hilgetag, ‘Criticality of Spreading Dynamics in Hierarchical Cluster Networks Without Inhibition’ (2007) 9(110) *New Journal of Physics* 4.

⁵⁷ Hartmut Bossel, *Systems and Models: Complexity, Dynamics, Evolution, Sustainability* (Books on Demand 2007) 14. *ibid* 54–55.

among them.⁵⁸ For example, informational links, links among institutionalized positions,⁵⁹ closed feedback loops,⁶⁰ trade, alliances, ownership, credit relations⁶¹ are instances of stable relations that do not represent strategic interactions. Agents interact strategically over the agents' network whose links represent these stable relations/interdependencies; these strategic interactions affect and are affected by these structural interdependencies among the agents.⁶²

Agents' network has multi levels of organization and each level of organization consists of a multi-layer network structure. As to the levels of the agents' network, Brigitte Gay, for example, shows that inter-firm cooperative relations are better modelled as a multi-level network with a network level of firms in the same sector (anti-bodies sector) and network level of the firms in the same industry (e.g., pharmaceuticals);⁶³ the dynamics and evolution of the multi-level agents' network and each of these levels depends on the interactions among these levels.⁶⁴ Given the multi-levels of the agents' network, the structure of the capitalist economic system takes the form of a two-level network; it is a multi-level network. For simplifying the discussion, I will treat the structure of the capitalist economy as a two-level network; this simplification changes nothing of the conclusions of this chapter; indeed, the multi-levels structure of agents' network reinforces these conclusions.

⁵⁸ Robert Ahdieh, 'Beyond Individualism in Law and Economics' (2011) 91(43) Boston University Law Review 67–70. Although Ahdieh emphasizes the importance of interdependencies among the agents, he does not seem to distinguish interdependencies that take the form of strategic interactions from stable relations among the agents. He lumps both of them under the banner of 'interdependencies' without proper distinction between these different forms of the interdependencies among the agents. Stefano Zamagni, 'Economic Reductionism as a Hindrance to the Analysis of Structural Change: Scattered Notes' (2000) 11 Structural Change and Economic Dynamics 201–202. Zamagni argues that 'the core elements on which purposeful individual choices are based (i.e. preferences) evolve themselves as a consequence of repeated social interaction [i.e., stable relations]. What is called for is a redistribution of emphasis away from the individual level of analysis and towards the *relational* one.' *ibid* 202 [emphasis in the original].

⁵⁹ Geoffrey M Hodgson, 'Institutions and Individuals: Interaction and Evolution' (2007) 28 Organization Studies 99. Ahdieh (n 58), 56, and see also the reference cited therein.

⁶⁰ Donella H Meadows, *Thinking in Systems: A Primer* (Earthscan 2009) 89. Piero Mella, *Systems Thinking: Intelligence in Action* (Springer 2012) 21–22.

⁶¹ Frank Schweitzer and others, 'Economic Networks: The New Challenges' (2009) 325(5939) Science 422.

⁶² *ibid*.

⁶³ Brigitte Gay, 'How Do Distinct Firm Assets and Behaviors Shape the Form of Alliance Networks and Provoke Their Instability? A Multi-level Network Analysis' (2015) 16(1) Journal of Innovation Economics and Management 80–81.

⁶⁴ *ibid*.

As to the multi-layers of a specific level of the agents' network, depending on *the links* among the agents at the same level of the agents' network, agents' network would exhibit *diverse structures*. Similar to institutional network, agents' network would have variable structures depending on the point of view of the observer. For example, the post-war Japanese firms in the same sector of the economy were connected by *many links*; some of them involve competition and others may involve cooperation.⁶⁵ Similar to the institutional network, the multiplicity of links that connect the same agents mean that the agents' network is a multiplex network.

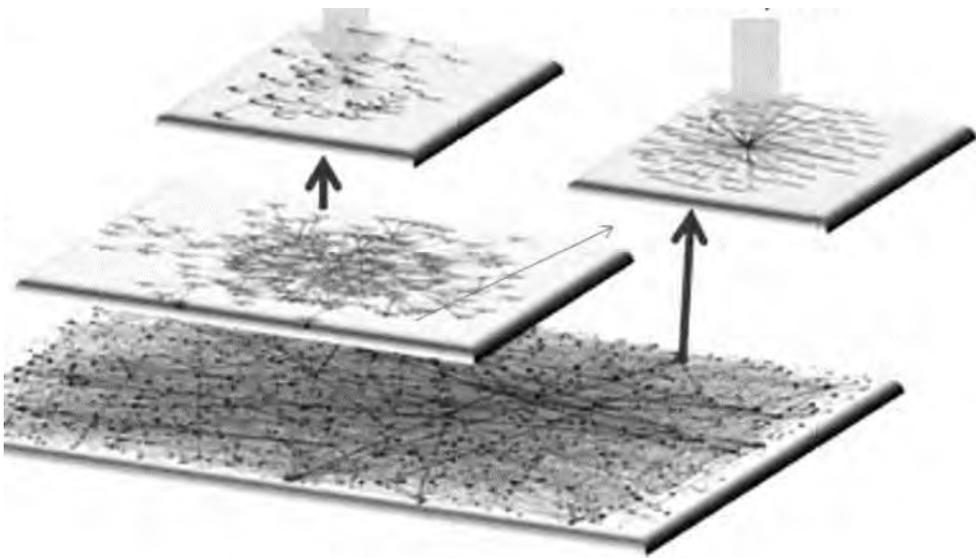


Figure 5.2: Capitalism as a Multi-level Institutional and Agents' Network. Source of the multi-level network graph: Gay, 2015.⁶⁶

The two-level network representation of capitalist system originates from a multi-layered perspective over social reality. In this perspectives, institutions exist independently from agents; they are not internal to agents.⁶⁷ They are not in the minds or memories of the agents.⁶⁸

⁶⁵ See section 2.2.1 on horizontal inter-firm relations in post-war Japanese product markets in chapter 11 and the references cited therein.

⁶⁶ *ibid* 81.

⁶⁷ Hodgson, 'Institutions and Individuals: Interaction and Evolution' (n 59) 104.

⁶⁸ *ibid*.

In spite of this ontological independence of agents and institutions, both are interdependent; particularly, institutions cannot exist without agents.⁶⁹ Hodgson observed that in many cases when scholars invoke institutions and agents for explanation of socio-economic phenomena, either institutions or individuals are *implicitly* reduced to each other; this reduction transforms an institutional individualist explanation into a purely structural (it is called also holistic or collectivist) or a purely individualist explanation.⁷⁰ We will discuss holism and methodological individualism below, it suffices to say here that under structuralism, social structures including institutions are the primary explanatory variables, while agency is downplayed. In contrast, in methodological individualism, structures are downplayed. In other words, in structural analysis, capitalism is understood and analyzed as an institutional network and as an agents' network in methodological individualism. The algorithmic agents of agent-based modeling are good example on this point. As a method for institutional analysis, agent-based modeling represents institutions as algorithms internal to the minds of the agents, and thus reduce independent institutions into programmed rules of action internal to socio-economic agents.⁷¹

The discussion of the ontological independence of institutions has a parallelism in legal theory. According to legal positivism, legal norms exist even if they are ineffective as long as they are validly derived from higher norms: legal norms do not depend in their existence on whether the addressees of the legal norms apply or internalize them.⁷² They are independent from agents. This is however a strict ontological separation of legal norms and agents, which ignores that although institutions and agents are ontologically independent, institutions are dependent in their existence and their interdependencies on socio-economic agents; legal institutions that have existence in books only are hardly existent in reality. Due to the ontological interdependence of institutions and agents, the methodological question of how to

⁶⁹ *ibid.* *ibid* 108.

⁷⁰ *ibid* 105.

⁷¹ By doing so, agent-based modeling endorses a mechanistic understanding of agents, and thus reduces substantially the agency aspect of them as well. See: Philip Mirowski, *Machine Dreams: How Economics Becomes a Cyborg Science* (Cambridge University Press 2002) 450–452. *ibid* 532–535.

⁷² Martin van Hees endorses a more sophisticated legal positivist position and argues that for the legal norm to exist, the legal system to which this norm belongs should be largely efficacious. Martin van Hees, *Legal Reductionism and Freedom* (Kluwer Academic Publishers 2000) 19–25. Still, in this variant of legal positivism, any specific legal norm is ontologically independent from the actions of the addressees of this specific norm.

model that interdependence without downplaying institutions or agency lies at the core of legal institutional analysis (see below).

The institutional network conceptualization of (legal) institutions⁷³ is not really new, however. Understanding institutions as a system/network has been prevalent in traditional legal scholarship. Legal scholars usually refer to legal institutions pertaining to specific domain using the term the *legal system*, *normative system*,⁷⁴ or a *normative order*.⁷⁵ The political economists, Acemoglu and Robinson, use the term *institutional framework* to refer to the *set* of political institutions that influence economic performance and inequality.⁷⁶ Aoki, an institutional economist, uses the term *overall institutional arrangement* to refer to the set of complementary institutions across the institutional domains of the economy.⁷⁷ Robert Boyer seems to use interchangeably the terminologies ‘*institutional architectures*’,⁷⁸ ‘*institutional configurations*’,⁷⁹ and ‘*institutional setting*’⁸⁰ to refer to any set of interdependent institutions, regardless of the form of their institutional interdependence.⁸¹

All these terms share a common feature: they refer to *set of related* institutions; some of these scholars such as Aoki take a clear position on the form of the relations among these institutions: *complementarity*.⁸² However, except for the term “legal system”, these terms do not emphasize institutional interdependence. The term “institutional network” is based on the concept of network in network theory.⁸³ There is no better term to convey and emphasize interdependence than a network. By emphasizing institutional interdependence, the term

⁷³ Dai (n 51) 106.

⁷⁴ Raz, for example, considers legal systems to be one type of normative systems, Raz (n 20) 149–150.

⁷⁵ See, e.g., MacCormick, *Institutions of Law* (n 23) 32. For a discussion of the conditions that give rise to a normative order, see: *ibid* 16–18.

⁷⁶ Daron Acemoglu and James A Robinson, ‘The Rise and Decline of General Laws of Capitalism’ (2015) 25(1) *Journal of Economic Perspectives* 20.

⁷⁷ Aoki, *Toward a Comparative Institutional Analysis* (n 8) 27.

⁷⁸ Boyer, ‘Coherence, Diversity, and the Evolution of Capitalisms—The Institutional Complementarity Hypothesis’ (n 29) 70.

⁷⁹ *ibid* 58–59.

⁸⁰ *ibid* 58.

⁸¹ For an overview of various strands of institutional thought that emphasize the interdependencies of the institutions, and conceptualize therefore institutions *implicitly* as networks, see: Dai (n 51) 25–36.

⁸² Aoki, *Toward a Comparative Institutional Analysis* (n 8) 17.

⁸³ For a brief introduction of the basic concepts of network theory, see: David Easley and Jon Kleinberg, *Networks, Crowds, and Markets: Reasoning about a Highly Connected World* (Cambridge University Press 2010) 1–40. For an informal introduction to network theory, see: Barabási (n 33).

“institutional network” uncovers the fragility of the reductionist approach to analysis of legal institutions; networks cannot be analyzed by deconstructing them, as they will not be networks anymore. They have to be analyzed as *a whole*.

Further, the term “network” leaves open the form of institutional interdependence; it can take the form of simple addition, complementarity or contradiction. By contrast, the term “legal system” conveys the understanding that legal norms composing this system are necessarily coherent.⁸⁴ The term “institutional network” seems to be *neutral* in comparison to the term “legal system” as it does not presuppose a sufficient degree of consistency and coherence among the norms to form something that is worth of being called “legal system”. Further, the term “institutional network” does not carry the internal meaning of consistency traditionally attached to the term “legal system”.⁸⁵

In short, legal institutions and socio-economic agents do not exist in vacuum; they are embedded into *institutional and agents’ networks*. In turn, the two-level institutional and agents’ network represent the ontological structure of the capitalist system. Therefore, the economic performance of capitalist economies depends primarily on the *structures of actors’ and institutional networks*. Designing/structuring these networks has significant effects on the economic performance of the capitalist economy.

Given the two-level institutional and agents’ network (ontological) structure of the capitalist economy, how should Legal scholars and economic scholars analyze and design *specific legal institutions* (e.g., board structure, executive compensation, inside vs. outside directors on the board, or regulation of horizontal mergers)? In other words, given the *ontology* of institutions as interdependent, i.e., as embedded in a network that affects the behavior of large number of agents who are in turn interdependent and organized into a network, what is the *appropriate methodology* for designing and analyzing the impact of specific legal institutions? More importantly, given the interdependence of the institutions, a more important question is to identify the most appropriate methodology for analyzing and designing complete institutional networks (e.g., the institutional network of corporate governance, or of competition law, or even the institutional network of the capitalist economy).

⁸⁴ Neil MacCormick, *Legal Reasoning and Legal Theory* (Oxford University Press 1994) 106.

⁸⁵ For a distinction between internal and external consistency of the institutional network (i.e., legal systems), see the relevant discussion of institutional consistency in section 6 of the next chapter and the references cited therein.

In the following two sections, we will investigate the most appropriate methodology for analyzing and designing specific legal institutions as well as institutional networks of capitalism, given the ontological structure of legal institutions as embedded into a two-level network structure of the capitalist economy. Given this methodological discussion, a critique of neoclassical law and economics approach to analysis and design of specific legal institutions and institutional networks shall follow.

4. Analyzing and Designing Legal Institutions: Reductionism vs. Systemism

In philosophy of both social and natural sciences, the debate among reductionism and systemism as appropriate methodologies for analyzing social and physical systems has been intensive. Reductionism is of two types: ontological and explanatory/methodological.⁸⁶ Ontological reductionism refers to the reduction of an existent entity or relation to other entity or relation.⁸⁷ Ontological reductionism is predominant in law and economics. The reduction of happiness to utility maximization⁸⁸ and trust to reputation⁸⁹ are instances of this form of reductionism. Ontologically, happiness and trust are more complex than their simplified and reduced economic representation. Further, neoclassical economics reduces the multi-dimensions of the human being (i.e., her multi-attributes such as preferences, beliefs, emotions, ethical reasons for action, end,⁹⁰ habits, dispositions and relations,⁹¹ value system

⁸⁶ For an overview of the types of reductionism, see: Richard H Jones, *Reductionism: Analysis and the Fullness of Reality* (Bucknell University Press 2000) 24–28.

⁸⁷ Jones considers this to be a form of conceptual rather than ontological reductionism, *ibid* 27–28. This is not a difference in whether the reduction of an entity or a relation to another is an instance of reductionism, but it is a difference in the way we characterize the type of reductionism involved in this case.

⁸⁸ Zamagni (n 58), 203–204.

⁸⁹ *ibid* 204–205.

⁹⁰ Nussbaum (n 26), 1207–1212.

⁹¹ Zamagni (n 58), 200–202.

that is contingent on the social situation of the individual⁹²) into a *utility function* that represents her *preferences*.⁹³

Neoclassical law and economics needs to overcome these instances of ontological reductionism; we leave the question of how this can be done for future research. Rather, in this section, we are concerned with *methodological (explanatory) reductionism* because it is the antithesis of systemic thinking. Methodological reductionism refers to explaining a phenomenon (e.g., the dynamics or structural evolution of a system) by reference to the properties and the laws that govern the dynamics and the structure of the parts.⁹⁴ According to methodological reductionism, researchers decompose the system under investigation into its small components and analyze each component in isolation of other components, and then construct the parts together again to develop an understanding of the system.⁹⁵

In contrast, systemic perspective emphasizes that the system is more than the sum of its parts.⁹⁶ According to systemic perspective, the dynamics and evolution of the systems depend on *the internal structure and organization* of the system (i.e., the stable relations among its

⁹² To have a hint of the complexity, multi-dimensionality, and contextual contingency of human beings, see section 4.3 of chapter 9 for a discussion of the contingency of the individuals' preferences ordering on the social context and the relevant implications of the context-specificity of preferences for a normative theory of economic regulations and the references cited therein.

⁹³ Instances of ontological reductionism exist as well in traditional legal scholarship. They include for example the reduction of the law into one of its three functions that encompass dispute resolution, coordination of behavior and ameliorative/reform functions. For an exposition and critique of this reductionist approach to law, see: Steven D Smith, 'Reductionism in Legal Thought' (1991) 91 *Columbia Law Review* 77–86. In addition, Reed proposes the reduction of corporate governance into an exclusionary property rights regime, where the relations among firm's stakeholders should be governed by creation and distribution of property rights over the tangible and intangible assets involved in these relations. O. L Reed, 'Nationbuilding 101: Reductionism in Property, Liberty, and Corporate Governance' (2003) 36 *Vanderbilt Journal of Transnational Law* 714–720.

⁹⁴ Willy Østreng, 'Reductionism versus Holism - Contrasting Approaches' in Willy Østreng (ed), *Consilience: Interdisciplinary Communications 2005/2006* (Oslo, Centre for Advanced Study 2007) 12. Jones (n 86) 28.

⁹⁵ Evandro Agazzi, 'Systems Theory and the Problem of Reductionism' (1978) 12 *Erkenntnis* 350–352. Jones (n 86) 28. A similar famous definition of reductionism is that explanation of any level of the system should be made in terms of lower levels, i.e., researchers should seek rock-bottom explanations. Alan Garfinkel, 'Reductionism' in Richard Boyd, Philip Gasper and J. D Trout (eds), *Philosophy of Science* (MIT Press 1991) 444. Andy Denis, 'A Century of Methodological Individualism Part 1: Schumpeter and Menger' . Discussion Paper Series City University London no. 10/02 3
<http://openaccess.city.ac.uk/1490/1/A_Century_of_Methodological_Individualism_part_1.pdf>

⁹⁶ Ervin Laszlo, *The Systems View of the World: A Holistic Vision for Our Time* (2nd edn, Hampton Press 1996) 25. Østreng (n 94) 12.

parts and the levels of the system),⁹⁷ the *interaction* among its parts,⁹⁸ and the interactions among the various levels of the system, and among the parts of the system and the system itself.^{99, 100} Further, the structure of the system and the interactions among its parts are necessary, but insufficient for understanding and explaining the system's behavior over time and structural evolution (i.e., dynamics and evolution). The interactions and, relations and interdependencies among these parts and the parts of the other systems in *the environment of the system* under analysis are also necessary for understanding the system.¹⁰¹ The stable links between the parts of the system and the neighboring systems in its environment constitute *the external structure* of the system.

The comparison between reductionism and systemism depends on the ontological structure of the system subject to analysis.¹⁰² As for linear systems, where the relations among the parts take the form of simple addition, the whole is equal to the sum of its parts; hence,

⁹⁷ Meadows (n 60) 89. Mella (n 60) 21–22. Laszlo (n 96) 17. Garfinkel highlights the importance of the internal structure of the social systems for their explanation, '*Whenever a global property is not simply a sum of N individual properties ..., the explanation of that global property will involve structural presuppositions.*' Garfinkel (n 95) 457 [emphasis in the original].

⁹⁸ Østreg (n 94) 12. W. B Arthur, 'Complexity Economics: A Different Framework for Economic Thought' (2013). SFI Working Paper 2013-04-012, 11 <<http://www.santafe.edu/research/working-papers/abstract/36df2f7d8ecd8941d8fab92ded2c4547/>>. Foster (n 50), 875. It is noteworthy that unlike the dominant conceptualization of explanatory reductionism outlined above, Sarkar develops a model of explanatory reductionism that comes close from the systemic perspective, according to which explanation of the system is made in terms of *the interactions* among its parts. Sahotra Sarkar, 'Models of Reduction and Categories of Reductionism' (1991) 91 *Synthese* 179–180. Still, this broad conceptualization of reductionism does not capture all the aspects of the systemic perspective such as the internal and external structure of the system, and interactions among the levels and layers of the levels of the system, and part-system interactions.

⁹⁹ The examples given in the below discussion on holism/structuralism where the collective/systemic properties of the system (e.g., unemployment rate, inflation rate) or the system itself (e.g., the economic organization) affects the behavior of the parts of the system (i.e., the individuals or the members of the organization) are good illustrations of part-system interactions. Organicism is a famous variant of systems philosophies, which emphasizes part-system causation, see: Archie J. Bahm, 'Five Types of Systems Philosophy' (1981) 6 *International Journal of General Systems* 235–236. Still, these examples show that one can include part-system causal relations by introducing into analysis the interactions of the parts of the system with both the (emergent) properties and structure of the system without subscribing to organicism's strong proposition that systems might behave as wholes that dominate and determine the behavior and properties of their parts. *ibid.*

¹⁰⁰ Russell L Ackoff, 'Science in the Systems Age: Beyond TE, OR, and MS' (1973) 21(3) *Operations Research* 663–664.

¹⁰¹ Foster (n 50), 875. Ackoff (n 100), 664. Ludwig v Bertalanffy, *General System Theory: Foundations, Development, Applications* (George Braziller 1968) 39–41.

¹⁰² Agazzi (n 95), 352–353.

reductionism seems a reasonable methodology for analyzing these systems.¹⁰³ However, in the case of non-linear (or complex) systems whose parts interact non-linearly with each other, the whole is *different* from the sum of its parts; ‘the properties of [these systems] are not fully explained by an understanding of ... [their] component parts.’¹⁰⁴ Hence, reductionist analysis of these systems would commit the famous *fallacy of composition*. Systemic approach is the only adequate methodology for analyzing such (complex) non-linear systems.¹⁰⁵ Further, evolving systems, i.e., systems whose structure changes over time such as the economic system cannot be analyzed reductively; a (complex) systemic perspective is necessary for analyzing these systems¹⁰⁶ because structural evolution can be understood only if the structure of the system and the interactions among the structural elements of the system are captured in the analysis. In short, non-linear and/or structurally evolving complex systems are the object/unit of analysis of the systemic perspective, while aggregates and linear systems are the adequate unit of analysis/object of reductionism.

Still, is there any way through which we can decompose *non-linear and evolving* systems into smaller systems to simplify the task of their analysis? If this is possible, then, reductionism may be adequate for analysis of these systems. According to the near decomposability hypothesis of Herbert Simon, economic system consists of weakly interdependent (quasi-decomposable) sub-systems.¹⁰⁷ This implies that these sub-systems are semi-autonomous that can be analyzed adequately in isolation of each other in most cases.¹⁰⁸

¹⁰³ *ibid* 353.

¹⁰⁴ Richard Gallagher and Tim Appenzeller, ‘Beyond Reductionism’ (1999) 284(5411) *Science* 79.

¹⁰⁵ Melanie Mitchell, *Complexity: A Guided Tour* (Oxford University Press 2009) 22–27. In addition to linear systems and non-linear (complex) systems, some systems lie somehow in-between these two types of the systems. These systems, called aggregates, consist of a single (aggregate) variable such as population. A lot of these systems can be analyzed mathematically by using differential equations. For the definition of aggregates, see: Gerald M Weinberg and Daniela Weinberg, *General Principles of Systems Design* (Dorset House Publishing 1988) 15. For the analysis of aggregates by using differential equations, see: *ibid* 20–24. Still, some of these systems exhibit complex behavior and require complex systemic methods (e.g., computational methods) for their analysis.

¹⁰⁶ Foster (n 50), 876. The author distinguishes between mathematical complexity of the system resulting from the *non-linear interactions* of its parts and the complexity of the system resulting from its constant state of *structural evolution and adaptation* to its environment.

¹⁰⁷ Herbert A Simon, ‘The Architecture of Complexity’ (1962) 106(6) *Proceedings of The American Philosophical Society* 473–475.

¹⁰⁸ *ibid* 477–478.

Despite endorsing quasi-decomposability hypothesis concerning the ontological structure of the sub-systems of the socio-economic reality, Meadows argues that in many cases, the weak interdependencies among these sub-systems may result in significant effects on the behavior and structure of these sub-systems.¹⁰⁹ In these cases, these sub-systems cannot be analyzed adequately in isolation from each other.¹¹⁰

Meadows is quiet correct; still, we need to investigate whether the two-level institutional and agent network is quasi-decomposable in order to determine the epistemological/methodological functions that a systemic perspective should undertake in institutional analysis. Prior to doing so, we need to examine whether the capitalist system consisting of the two-level institutional and agents network is non-linear, otherwise, it would be *entirely decomposable* and there is no need to investigate whether it is quasi-decomposable.

Institutional interdependencies taking the form of complementarity, inconsistencies, and contradictions, and embeddedness are non-linear by their very definition, otherwise, they would be no different from simple addition relations; as already argued, they result in qualitative change of the system as the equilibrium of the game changes under different institutional setups. Further, as interactions among socio-economic agents take the form of closed feedback loops as agents react to the actions of each other over time, and react to the patterns created by their interaction,¹¹¹ their interactions are non-linear.

Given the non-linearity of both institutional interdependencies and agents' interactions, is the two-level network quasi-decomposable? We must distinguish between the institutional and agents' networks. Simon argues that economic systems are quasi-decomposable because economic actors cannot interact simultaneously with a large number of other actors.¹¹² As far as strategic interactions are concerned, this is correct. Both Elinor Ostrom and evolutionary economics seem to endorse implicitly Simon's idea by developing the concepts of "action situation" and "meso-sized groups".¹¹³ In evolutionary economics, the meso-sized groups are

¹⁰⁹ Meadows (n 60) 83–84.

¹¹⁰ *ibid.*

¹¹¹ Arthur (n 98) 2

¹¹² Simon (n 107), 473–475.

¹¹³ Elinor Ostrom, 'Challenges and Growth: the Development of the Interdisciplinary Field of Institutional Analysis' (2007) 3(3) *Journal of Institutional Economics* 245. Elinor Ostrom, 'Background on the Institutional Analysis and Development Framework' (2011) 39(1) *The Policy Studies Journal* 9–10. Wolfram Elsner, Torsten Heinrich and Henning Schwardt, *The Microeconomics*

defined as the unit of analysis where a medium number of agents are interacting intensively.¹¹⁴ In this sense, in evolutionary economics, the economy is perceived to be clustered into arenas of intensive (particularly cooperative) interactions that attract its analytical attention. These action situations demarcate the boundary of the economic sub-system subject to analysis. In evolutionary economics and the actions-situation framework of Ostrom, the focus is on agents' interaction and not institutional interdependence, however, as a basis for demarcating the boundary of institutional analysis. In short, agents' network is in principle decomposable into action situations. The researcher needs to identify the minimum non-decomposable sub-network of the agents' network as her unit of analysis, i.e., the least non-decomposable action situation.

Still, the weak interactions among the least non-decomposable action situations may have significant implications for the dynamics and the evolution of the economic system; in this case, systemic perspective that analyzes these weak links provides a robustness check of the analysis of these action situations. More interestingly, these action situations are quiet complex as they include non-linear interactions of moderate number of heterogeneous (multi-dimensional and multi-attributes) agents; hence, the analysis of these sub-networks of the agents' network still requires a systemic perspective. Further, due to strong interdependencies among the inputs and output markets of the capitalist economy, non-strategic interactions among the agents are, in principle, not quasi-decomposable. As already mentioned, one of the main sources of non-linearity in economic systems is that economic agents react to the overall behavioral patterns they observe; herd behavior is a paramount example of non-linear non-strategic interactions among a large number of economic agents. The quasi-decomposability of the agents' network is thus suspect; at least, one has always to expand the systemic analysis of a specific action situation to include the weak links with other action situations to check the robustness of the analysis.

In contrast to agents' network, the institutional network of the capitalist system is not, in principle, quasi-decomposable. Socio-economic regulations share the subject-matter of their regulation, which is the firm. One cannot imagine an action situation where almost the

of Complex Economies: Evolutionary, Institutional, Neoclassical, and Complexity Perspectives (Elsevier Academic Press 2015) 421–424.

¹¹⁴ *ibid* 426.

complete institutional network of capitalism is not relevant for governing the action situation as long as this action situation has at least one firm as an economic actor. Herbert Simon's argument has ignored these institutional interdependencies, however.

One neoclassical argument for defending the decomposability of the institutional network that we will encounter in chapter 8 in relation to corporate governance choice goes as follows. From a general equilibrium analysis, as long as other institutional domains are optimal, i.e., they are designed to address market failures in their respective market/action situation (e.g., competition law corrects the imperfect competition market failure in product markets), then, researchers need to focus on designing the institutional domain or the specific institution in question to correct the market failures in its respective market/action situation (e.g., designing labor regulation to address solely market failures in labor markets).¹¹⁵ In chapter 8, we will criticize this argument extensively; here, it suffices to mention briefly the crux of the argument advanced in chapter 8. First, for this argument to hold, we must be living in a *first-best* economic system where all market failures can be corrected; as the general theory of the second best shows, this is not the case. Second, assuming that all market failures can be removed, all other institutions in the economy should be designed with the sole objective of correcting market failures for this argument to hold. This is a very strong assumption that does not hold in any market economy.¹¹⁶

Third, even if we assume *unrealistically* that all market failures can be removed and that legal institutions in other institutional domains are designed with the sole objective of correcting market failure, for this argument to hold, these institutions should not be *interdependent*. If these institutions are interdependent, this implies that their *economic effects* will depend on the institutional network in which they are embedded; theoretically, three institutions designed with the sole objective of correcting market failures in isolation of each other may result in an institutional network that fails to correct efficiently the relevant market failures in comparison to an institutional network that is designed systemically (without

¹¹⁵ See section 3 on the internal critiques of the neoclassical approach to the choice of corporate governance model in chapter 8 and see the reference cited therein.

¹¹⁶ For a discussion of these points, see section 3 on the internal critique of the neoclassical approach to the choice of corporate governance model in chapter 8 and see the references cited therein.

decomposition) to correct the same market failures.¹¹⁷ A good example would be corporate governance and environmental regulation; when designed in isolation of each other, we may end up with a shareholder value corporate governance based on the assumption that environmental regulation corrects the negative environmental externalities; however, a shareholder value model may give strong incentives to the management to infringe environmental regulation. A stakeholder model of corporate governance along with less strict and less costly environmental regulation may correct the negative externalities failure more efficiently.¹¹⁸ This critique shows that an economically efficient institutions in isolation from each other may result in economically inefficient institutional network because of institutional interdependencies among these institutions. Indeed, this critique is sufficient for deconstructing the argument that we can decompose the analysis of the institutional network based on the assumption that the institutions other than the institution subject to analysis are optimal because this critique shows that for this argument to hold, economically efficient institutions should not be interdependent, i.e., they should be *decomposable*. This argument thus hinges on the decomposability of the institutions in the institutional network to *justify* the decomposability of these institutions; it is a *circular* argument.

¹¹⁷ This is indeed one of the main insights of the systemic perspective. Ackoff explains this point eloquently, ‘the systems approach ... is based on the observation that, when each part of a system performs as well as possible, the system as a whole seldom performs as well as possible. This follows from the fact that the sum of the functioning of the parts is seldom equal to the functioning of the whole. This can be shown as follows. Suppose we collect one each of every model of available automobile. Suppose further that we then ask some top-flight automotive engineers to determine which of these cars has the best carburetor. When they have done so, we note the result. Then we ask them to do the same for transmissions, fuel pumps, distributors, and so on through each part required to make an automobile. When this is completed, we ask them to remove the parts noted and assemble them into an automobile, each of whose parts is the best available. They will not be able to do so, because the parts will not fit together. Even if they could be assembled, in all likelihood they would not work well together. System performance depends critically on how the parts fit and work together, not merely on how well each performs independently.’ Ackoff (n 100), 264. Ackoff’s insight applies whether the performance of the system (i.e., the car in this example) is evaluated according to one or multiple assessment criteria. While emphasizing one assessment criterion for the performance of the system, namely, economic growth, Schumpeter, who was a natural systemic thinker, makes a similar point, ‘A system—any system, economic or other—that at every given point of time fully utilizes its possibilities to the best advantage may yet in the long run be inferior to a system that does so at no given point of time, because the latter’s failure to do so may be a condition for the level or speed of long-run performance. Joseph A Schumpeter, *Capitalism, Socialism and Democracy* (5th edn, first published 1976, Routledge 2003) 83.

¹¹⁸ For an in-depth discussion of this point, see section 5 on the systemic critiques of the normative theory of economic regulations in chapter 9 and the references cited therein.

Forth, as shall be argued in chapter 9, even if market imperfections can be corrected and that the legal institutions have corrected them successfully, the legal institutions that have the sole objective of correcting market failures may undermine economic growth.¹¹⁹ If the society prefers to have at least one objective in addition to correction of market failures for the regulatory governance of capitalism (e.g., promotion of economic growth), the optimality assumption of other institutional domains becomes irrelevant because the objective of the scholar is to design an institutional network that *balances* these objectives.

In sum, the assumption of the economic efficiency of all institutions save for the institution subject to analysis as a basis for decomposability of the institutional network is *unrealistic, circular, and irrelevant*. Consequently, the institutional network of the capitalist economy is not decomposable or quasi-decomposable.

In conclusion, systemic perspective is the only adequate approach for analysis of legal institutions because of the non-linearity of the relations and interactions among the nodes of the two-level network of the capitalist economy, the non-decomposability of the institutional network, and the non-linear non-decomposable action situations that represent sub-networks of the agents' network. Further, despite the quasi-decomposability of the agents' network, this decomposition may turn out to be mistaken in many cases; a systemic perspective over the linkages among action situations is still needed.

5. The Reductionist Perspective of Both Strands of Law and Economics

Both neoclassical micro and macro approaches to legal institutions follow a reductionist methodological perspective over their analysis and design. We distinguish between theoretical and empirical analysis in both strands of neoclassical law and economics. This section shall establish that both theoretical and empirical analyses follow a strong reductionist methodology.

¹¹⁹ See section 4.2 on the development economics based critique of the neoclassical normative theory of economic regulations in chapter 9 and the references cited therein.

5.1. The Reductionist Perspective of Theoretical Analysis in Both Strands of Law and Economics

The reductionist perspective of both strands of neoclassical law and economics appears strongly in how they identify their *subject matter/unit of institutional analysis*; both strands *decompose aggressively the institutional network* of the capitalist economy. As already argued, the institutional network of the capitalist economy is a clustered network of numerous institutional domains that are interdependent. Further, this institutional network is embedded in the institutional network of the society, and thus the institutional domains of the capitalist economy are interdependent with the institutional domains of other spheres of the society (e.g., family law, the governance structure of science and education, and the institutional network of the political sphere). Both traditional legal scholarship and the strands of neoclassical law and economics pays little, if any attention, to the analysis of the *institutional interdependencies* of the institutional domains of the capitalist economy and those of the other spheres of the society. It seems that both traditional legal scholarship and the strands of neoclassical law and economics assume the *decomposability* of the institutional networks of capitalist and other spheres of the society. This is incorrect as the institutional network of capitalism is not decomposable from those of other spheres in society; indeed, it seems that the institutional network of the economic sphere can only achieve its intended objectives if the institutional networks of other spheres of the society have been designed in a compatible way with the needs of the capitalist economy. The analyses of the interaction of the political sphere and institutional domains of capitalism in law and economics scholarship (e.g., analysis of political capture of regulation¹²⁰ and regulatory competition among political systems¹²¹) are important instances of studying the interaction of the economic spheres with other spheres

¹²⁰ See, e.g., David A Moss and Marry Oey, 'The Paranoid Style in the Study of American Politics' in Edward J Balleisen and David A Moss (eds), *Government and Markets: Towards a New Theory of Regulation* (Cambridge University Press 2010). The authors present three case studies where public interest oriented regulations in U.S (the Voting Rights Act of 1965, Medicare, 1965 and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) have been enacted despite intense lobbyists' pressures.

¹²¹ See, e.g.,: Roberta Romano, 'The State Competition Debate in Corporate Law' (1987) 8 *Cordozo Law Review*.

of the society. However, law and economics scholarship is still far from taking into account the complex and numerous strong interdependencies among the institutional networks of both capitalism and other social spheres of the society.

More importantly, both traditional legal scholarship and the strands of neoclassical law and economics rarely engage with the analysis of the interdependencies among the institutional domains of the institutional network of capitalism. Indeed, most of the studies that seem to analyze these interdependencies seriously flow from the comparative capitalism literature, with few studies undertaken by mainstream neoclassical economists.¹²² By contrast, both traditional legal scholars and law and economics scholarship, as undertaken by legal scholars and most economists, have neglected the analysis of the interdependencies of the institutional domains. The decomposition of the areas of legal scholarship into distinct domains of competition law, corporate governance, financial regulation, taxation, etc. reflects a deep-rooted (implicit or subconscious) belief in the *decomposability* of these institutional domains.

The fact that neoclassical law and economics decompose the institutional network of capitalism by assuming away its external structure (its interdependencies with the institutional domains of the other spheres of the society) and by assuming away its internal structure (the interdependencies among the institutional domains) is fairly obvious and uncontroversial. Indeed, most law and economics scholars specializing in a specific institutional domain have little knowledge of other institutional domains of the institutional network of capitalism.

Given the deconstruction of the institutional network into its institutional domains, we would expect that neoclassical law and economics research takes the *institutional sub-network* representative of the institutional domain as *its unit of analysis*. We would expect that corporate governance system, competition law, or financial regulation is the *typical unit of analysis* in law and economics scholarship. This is not the case, however. Positive and normative law and microeconomics takes *specific legal institution (or a set of few institutions)*

¹²² See, e.g., Ph. Aghion, M. Dewatripont and P. Reyd, 'Corporate Governance, Competition Policy and Industrial Policy.' (1997) 41(3-5) European Economic Review. Philippe Aghion and others, 'Industrial Policy and Competition' (May, 2012). NBER Working Paper no. 18048 <<http://www.nber.org/papers/w18048.pdf>>. See also the references cited in section 2.4 of chapter 11 on the embedded effects of post-war Japanese corporate governance, competition law, and industrial policy.

of a specific institutional domain (board structure in the institutional domain of corporate governance, abuse of dominant position in the institutional domain of competition law, etc.) as its *unit of analysis* while *assuming away* other legal institutions in the institutional domain.

Law and economics analysis of a specific legal institution or a set of few institutions is seldom explicit about *its assumptions* regarding *other institutions* in the same institutional domain and *their relations* to the institution(s) subject to analysis. This is consistent with the standard practice of formal law and economics analysis, according to which most of the assumptions of the model are made implicitly; only few assumptions are set out explicitly. It is difficult to distill the assumptions that law and economics scholars make regarding other institutions in the institutional domain. However, we can conjecture that as long as these institutions are not part of the analysis, the institutions subject to analysis have been *decomposed* from the institutional domain. This implies that the *assumption of institutional decomposability* is predominant in neoclassical law and economics. According to this hypothesis, the economic effects of specific legal institutions can be analyzed adequately in isolation of other institutions in the institutional domain and the economic effects of the institutional domain is the sum of the effects of its constituent institutions. We can call the institutional decomposability assumption, institutional vacuum assumption because the institutional analysis of specific legal institutions is conducted as if these institutions exist in an institutional vacuum where other interdependent legal institutions constituting the institutional domain are treated as if they do not exist.

In short, in their analysis of the effects of a specific legal institution or a set of few institutions, both strands of law and economics isolate this institution from the network. This implies that both strands of law and economics endorse implicitly the mistaken assumption of the decomposability of the institutional network, according to which the effects of the legal institution are constant, regardless of the institutional network in which this institution is embedded.

We have already argued that neoclassical law and economics generally ignores the analysis of the institutional domains *as systems*. Their unit of analysis is restricted to a specific institution or a set of few institutions, but in the rare occasions where the strands of neoclassical law and economics try to analyze the institutional domain, do they embrace the decomposability of the institutional sub-network when trying to analyze the institutional sub-

network of the institutional domains? In other words, when these strands of law and economics address *broad questions* that relate to *the institutional domain as a whole* such as should developing countries adopt a stakeholder or shareholder model of corporate governance, should they adopt a Schumpeterian or a post-Chicago model of competition law, is the German model of corporate governance efficient, or how does the post-war Japanese model of corporate governance function, how does law and economics address these questions? This is a very tough question. First, these research problems are *systemic* by their very nature because they require the assessment or design of the whole system of corporate governance or competition law. Therefore, as already mentioned, mainstream neoclassical-new institutional economists tend to avoid this type of questions; particularly, with the rise of formalism in economic analysis, they cannot develop a formal model for addressing any of these questions. Except for the comparative capitalism studies, I have not found any neoclassical-new institutional study that attempts to address any of these questions via mathematical modelling. Hence, only *informal* law and economics analysis, as undertaken by few economists and most legal scholars, addresses these broad/systemic research problems. As already argued in chapter 4, informal law and economics scholarship is difficult to characterize because the researcher is not confined to the straightjacket of formal mathematical modelling. Whatever the claim that one could make about this literature, there may be always counter-examples. Accordingly, in order to avoid inaccurate generalizations, I can make an uncontroversial claim in this regard. First, except for the studies that invoke the analytical concept of institutional complementarities or endorse some insights from systemic thinking,¹²³ law and economics scholarship adopts *a reductive* approach to addressing this systemic research problems; this reductive approach assumes *the decomposability* of the institutional network. As shall be discussed in chapter 8 and 11, the neoclassical approach to the systemic research problems regarding the choice of corporate governance and competition law models share the same starting point that is the first fundamental theorem of welfare, according to which perfectly competitive markets in general equilibrium are Pareto efficient.¹²⁴ Then, the standard

¹²³ For an overview of systemic thinking in economics and legal scholarship, see section 3 in the next chapter.

¹²⁴ See section 2 of chapter 8 on the neoclassical approach to the choice of corporate governance model and the references cited therein. See also section 2.2.2 of chapter 11 on post-Chicago and Schumpeterian models of competition law and the references cited therein.

assumption of the economic efficiency of other institutional domains save for the one subject to analysis is made, which justifies, wrongly, the decomposition of the institutional domain from the institutional network. More importantly, this justifies the argument that this institutional domains needs to be designed in a way that ensures solely the correction of relevant market and organizational failure.

By focusing on market failures correction as a sole objective, *a further reduction* is possible. The *numerous market and organizational failures* in the institutional domain are identified, and then *relevant institutions* in this institutional domain are assessed and designed with reference to their capacity to correct the market or organizational failure relevant to each of these institutions. For example, the typical organizational failures in the firm that corporate governance institutions should tackle are equity agency problem, debt agency problem, and majority-minority conflicts.¹²⁵ Then, corporate governance institutions are divided into institutions that are intended to address each of these organizational problems, and each institution is assessed and reformed according to its capacity to address its relevant problem.¹²⁶ Similarly, in competition law, sources of imperfect competition are identified (e.g., abuse of dominance position, collusion, mergers that increase the likelihood of abuse of dominance positions or collusion), then, the institutions of competition law are divided into three sets of institutions, each of which is intended to address each of these sources of imperfect competition. Each of them is then assessed and reformed according to their effects on their relevant source of imperfect competition.

This is a clear decomposition of these institutional domains; it assumes that the economic effects of the institutional network (on market failures or any other objective) is equal to the sum of the effects of the institutions of this network. As already argued in the previous section, there is *no theoretical basis* for such decomposition of the institutional network. We can observe the lack of the theoretical basis in this decomposition in how law and economics scholars who decompose the institutional domain into separate institutions grapple with what they call '*externalities*' problems. A famous example comes from creditors' protection

¹²⁵ Reinier Kraakman and others, *The Anatomy of Corporate Law: A Comparative and Functional Approach* (2nd edn, Oxford University Press 2009) 2.

¹²⁶ This is exactly how the analysis proceeds in some of the famous law and economics accounts of corporate governance in legal scholarship, see, e.g.: *ibid.* Frank H Easterbrook and Daniel R Fischel, *The Economic Structure of Corporate Law* (Harvard University Press 1991).

institutions; resolving the equity agency problem gives the management strong incentives to shift the risk of investment to the creditors to the benefit of the shareholders, particularly when the firm is near financial distress.¹²⁷ The role of creditors' protection institutions is to resolve this externalization of risk.¹²⁸ However, this externalities problem would not have arisen if we have not resolved the equity agency problem in the first place; in other words, if the firm endorses (specific forms) of a stakeholder model of corporate governance, the very problem of risk shifting would have been mitigated. In other words, due to decomposing the institutional domain of corporate governance into a set of organizational failures and institutions assigned to resolve each of these failures, we end up with inconsistent institutions (institutions resolving equity agency problem and those resolving debt agent problem); some of these institutions (institutions relevant to equity agency problem) impose externalities in the action situation relevant to the other institutions (debt agency situation). The above example in relation to the externalities imposed by the shareholder value model on the environmental action situation is a further example on the same point, but it relates to externalities imposed by an institutional domain on the action situation regulated by another institutional domain. Similarly, strengthening the protection of minority shareholders (i.e., enhancing the resolution of the equity agency problem) imposes externalities on the stakeholders of the firm governed by a stakeholder model because it may deprive them from the private benefits of control, and thus destabilize the institutions of the stakeholder model,¹²⁹ although the latter model may outperform the shareholder value model, if both assessed from a systemic perspective.

The *reductive* neoclassical law and economics analysis of both specific institutions and institutional domains does not stop at this point, however. A systemic analysis of the institutional domains requires the analysis of the internal and external structure of the two-level network and the interaction among the heterogeneous multi-attributes agents in the relevant action situation. As will be argued in the next chapter, systems' have dual (or even

¹²⁷ *ibid* 50.

¹²⁸ For a discussion of different legal mechanisms for creditors' protection against risk shifting, *ibid* 52–62.

¹²⁹ Reinhard H Schmidt, 'Corporate Governance in Germany: An Economic Perspective' in Jan P Krahn and Reinhard H Schmidt (eds), *The German Financial System* (Oxford University Press 2004) 414–416.

triple) structures of information (and knowledge) and incentives.¹³⁰ Neoclassical law and economics analysis focuses on the incentives structure of legal systems at the cost of their informational and knowledge structures; corporate governance institutions focus on getting the incentive-structure of firm's stakeholders right, but not on getting the information or knowledge structures right.¹³¹ As already argued in the section on the functions of institutions, institutions do not only affect the incentive structure of economic agents; they have significant effects on the information structure and agents' mental maps and thus the way they process information. As will be argued in the next section, the analytical methods of both strands of neoclassical law embrace the reductive outlook of methodological individualism where crucial elements of the two-level network are assumed away (see below). As shall be argued in chapter 9, individuals are multi-dimensional and multi-attributes; they cannot be represented by utility functions; this is an extreme reductive representation of humans.

Moreover, the least non-decomposable action situations would have typically a moderate number of heterogeneous agents who interact strategically. Neoclassical law and economics has no method for the analysis of interaction between the actors of systems with medium size population.¹³² Game theory could capture the strategic interaction between few actors whereas statistical analysis in some cases could capture the behavior of large number population (while assuming away interaction)¹³³ which leaves medium size populations' interactions with no proper method for analysis in the typical analytical toolkit of neoclassical law and

¹³⁰ See the outline of systemic thinking and the references cited therein in section 2 of the next chapter.

¹³¹ See sections 2, 4.1, and 4.2 on the neoclassical approach to the choice of corporate governance model, the insufficiency of transaction cost and property rights theories of the firm as bases for design of corporate governance institutions in chapter 8 and see the references cited therein.

¹³² John Miller and Scott Page, *Complex Adaptive Systems: An Introduction to Computational Models of Social Science* (Princeton University Press 2007) 221. J. B Ruhl, 'Law's Complexity: A Primer' (2008) 24(4) Georgia State University Law Review 889.

¹³³ The statistical approach (and theoretical representative agent models in economics) analyze the system in terms of the average properties (and behavior) of the elements of the system. Clearly, this (reductionist) analysis ignores the interaction among the elements of the system and the structure of the system. Weinberg argues that this reductionist analysis can still provide accurate analysis of the analyzed system if and only if this system meets two (main) conditions. First, the number of the elements of the system are *large* (the so-called law of large numbers), and second, the properties and behavior of the elements of the system are sufficiently *random*. Gerald M Weinberg, *An Introduction to General Systems Thinking* (Silver Anniversary ed. Dorset House Publishing 2001, first published in 1975) 12–19.

economics.¹³⁴ This form of reductionism becomes even stronger in relation to law and macroeconomics because of the dominant reliance on representative agent modeling in neoclassical macroeconomics.

Further, the structure of the institutional and actors' networks, institutional sub-network of the institutional network (i.e., the sub-network of social norms), the multi-attributes of the agents, and the distribution of the various types of the heterogeneous agents differ across capitalist systems, the non-linear relations among the elements of the system vary across capitalist systems. They cannot be easily captured by *deterministic functional* relations. In other words, each capitalist system constitutes a *peculiar complex system that exhibits dynamical and evolutionary processes distinct from other capitalist systems*. Accordingly, understanding these situated embedded capitalist systems can be done only by exploring the structure of the two-level networks, and agents' interactions and institutional interdependencies of *each* system. By decomposing the institutional network and focusing on a specific institution or a set of few institutions independently from the rest of the institutions of the institutional network, while assuming away the informal institutional sub-network and the peculiar attributes and distribution of heterogeneous actors in the real capitalist economies, neoclassical law and economics claims a form of *universal* analysis. However, it provides us with an extremely *reductive* analysis of real world capitalist economies.¹³⁵

So far we have established the *strong reductionism* of the micro and macro neoclassical *theoretical positive* analysis of the institutional network of capitalism, the institutional sub-network representing the institutional domains of the institutional network of capitalism (e.g., competition law, or corporate governance), any specified institutional sub-network of the

¹³⁴ Miller and Page (n 132) 221. Ruhl (n 132), 889.

¹³⁵ A strong analogy to the *universal* characteristic of the reductionist neoclassical analysis of legal institutions of capitalism is the universal feature of the reductive evidence-based approach to medicine subscription, which is almost entirely based on a biological reductionist approach to disease diagnosis. Howard J Federoff and Lawrence O Gostin, 'Evolving From Reductionism to Holism: Is There a Future for Systems Medicine?' (2009) 302(9) JAMA (The Journal of American Medical Association) 994. In contrast, a systemic approach to medicine would be *personalized*; it would treat the ill-person as a system with specific medical history, inherited genes, and social environment and subscribe a medicine that is *personalized* to the peculiarities of this individual as *a distinct complex system*. *ibid* 994–996. In this analogy, the ill-functioning capitalist system is the idiosyncratic ill-person that needs personalized medical intervention, i.e., contextual legal institutions. However, the reductionism of neoclassical law and economics assumes away these idiosyncrasies, hence gives the way for a mistaken universalistic legal reforms. Neoliberal legal institutions are a paramount example of one-size-fits-all misguided reforms.

institutional domains (e.g., legal institutions regulating board structure), or a single legal institution. Similar to positive analysis, neoclassical theoretical normative design of legal institutions shares the same reductionist aspects of neoclassical positive analysis. Moreover, the neoclassical normative theory of economic regulations outlined in chapter 9 is excessively reductionist, for which reason, chapter 10 develops *a systemic* normative framework for assessment and design of legal institutions.¹³⁶

In short, the theoretical positive and normative analysis of legal institutions of capitalism in neoclassical law and economics is *aggressively reductionist*. We have not examined, however, whether the empirical analysis of micro- and macro-economic effects of legal institutions in neoclassical law and economics transcends this reductionism. In other words, does the econometrical analysis of legal institutions takes into account their interdependencies (complementarities, substitution, and contradiction relations), the strong stable links, non-linear interactions, and multi-levels of the least non-decomposable action situation of the agents' network? If the answer is no, then, a systemic econometrical analysis of legal institutions is needed in order to provide accurate informational basis for systemic theoretical analysis. If the answer is yes, then, this is a very good news because theoretical *systemic* analysis and design of legal institutions can be well-informed by these systemic empirical studies, particularly proper theoretical systemic analysis needs extensive informational basis.¹³⁷

Due to time limits, we cannot discuss all the variants of econometrical analysis of legal institutions; rather, we examine the most important variant that is *indices-based* econometrical analysis of legal institutions.

5.2. The Reductionist Perspective of Indices-Based Econometrical Analysis of the Effects of Legal Institutions

Similar to the theoretical analysis of legal institutions in both strands of neoclassical law and economics, the indices-based empirical analysis of the micro and macro effects of legal

¹³⁶ See chapters 9 and 10 for detailed discussion of the neoclassical normative theory of economic regulations and the proposed systemic normative theory.

¹³⁷ Farmer and others (n 50), 299–301. Schweitzer and others (n 61), 424.

institutions embraces a strong form of reductionism. Indices-based econometrical analysis of legal institutions are ubiquitous.¹³⁸ To demonstrate the reductionist nature of indices-based econometrical studies, we take two famous indices-based econometrical studies, ‘Law and Finance’¹³⁹ and ‘Legal Determinants of External Finance’¹⁴⁰, as our reference point. The below analysis applies equally to other indices based econometrical studies.

The major hypothesis of the “Law and Finance” paper is that the legal rules of civil law system provides low protection of investors and creditors whereas common law system provides high protection of investors and creditors whereas German and Scandinavian legal systems provide intermediate protection. The authors start by dividing a sample of 49 countries into common law legal system and civil law legal system that includes three legal families: French, Germanic, and Scandinavian legal families.¹⁴¹ Then, they consider certain provisions under company law as being the major variables that would decide whether the legal protection of investors and creditors are high, moderate, or low.¹⁴² For instance, they take one-share-one vote as an important pro-shareholders provision and thus countries that mandatorily provide for this provision would get a score of (1) and a score of zero, otherwise.¹⁴³ By adding up the scores for each country, an investor protection index is created. A similar procedure is used for creating a creditors protection index. On basis of these indices, common law countries provide the higher protection of minority shareholders and creditors, civil law countries provide the lowest protection, and Germanic countries are in the between.¹⁴⁴ In another study, based on these indices of the effects of legal institutions on the protection of shareholders and creditors, they argue that the firms in the countries with the lowest protection of investors (e.g., the French legal system) have more concentrated

¹³⁸ See, e.g., Rafael La Porta and others, ‘Law and Finance’ (1998) 106(6) *Journal of Political Economy*; Rafael La Porta and others, ‘Legal Determinants of External Finance’ (1997) 52(3) *Journal of Finance*; and Juan C Botero and others, ‘The Regulation of Labor’ (2004) 119(4) *The Quarterly Journal of Economics*.

¹³⁹ La Porta and others, ‘Law and Finance’ (n 138).

¹⁴⁰ La Porta and others, ‘Legal Determinants of External Finance’ (n 138).

¹⁴¹ La Porta and others, ‘Law and Finance’ (n 138) 1117–1119.

¹⁴² *ibid* 1120–1140.

¹⁴³ *ibid* 1126–1127.

¹⁴⁴ *ibid* 1129–1134. *ibid* 1151.

ownership structures, and they face a higher cost of equity that results in less developed equity markets.¹⁴⁵

The indices-based econometrical analysis of the effects of legal institutions suffer from three problems that relate to delineating and measuring the analyzed legal institutions, aggregating these institutions into one indicator, the goal of the econometrical analysis (i.e., the effects of the institutions to be assessed). Each of these problems originates from ignoring the insights of systemic perspective in structuring the indices-based econometrical analysis. We go through each of these problems in turn.

First, there is no reason why the institutions that the authors have chosen correspond to the most important variables affecting investors' protection and creditors' protection. The authors provide no theoretical basis for inclusion or exclusion of specific legal institutions from the index. From a systemic perspective, this is the 'system's boundary' problem; what is the least non-decomposable institutional network that governs investors' protection? However, as we have already discussed, the least non-decomposable institutional network tends to be very large. Further, from a systemic perspective, we can still simplify the institutional network subject to analysis;¹⁴⁶ still, without a clear systemic theoretical basis, the choice of institutions that are included in the index will be arbitrary.

Further, we cannot identify the *most crucial institutions* in an institutional network, without understanding the structure of this network, i.e., without understanding the interdependencies among these institutions. For example, an institution may be critical to an institutional network that includes no substitutes for this institution, but turn out to be redundant in another institutional network that includes *functionally equivalent* institution.¹⁴⁷ Functional equivalence here has a systemic meaning different from the traditional reductive meaning in neoclassical economics; from a systemic perspective, institutions are functionally equivalent if they undertake the same functions in the two-level institutional and agents' network, assuming that the compared institutional networks have been designed to achieve the same functions/objectives.

¹⁴⁵ La Porta and others, 'Legal Determinants of External Finance' (n 138) 1137–1139. *ibid* 1141–1142.

¹⁴⁶ See below and the relevant discussion of system boundary in chapter 8 and the references cited therein.

¹⁴⁷ Bhagat, Bolton and Romano (n 32), 1834–1835.

The problem of *identifying the legal institutions* that constitute the index becomes more acute when scholars rely on formal legal rules rather than legal rules as interpreted and applied by the Judiciary and supervisory agencies, i.e., when they use the *law on books* instead of *law in action*.¹⁴⁸ Taking into account that indices based studies attempt to have a large sample of countries, it is almost impossible to construct these samples correctly on basis of legal practice, case-law, and legal enforcement. In short, the indices-based econometrical analysis identify arbitrarily the wrong set of institutions to enter the index of the analyzed institutional domain because these studies are not informed by a systemic perspective over legal institutions.

Second, due to the interdependencies of legal institutions, the *aggregation* of the institutions constituting the index of the analyzed institutional domain is acutely problematic. First, non-weighted aggregation of the institutions such as the aggregation method used in the law and finance paper, assumes that each legal rule has *the same effect* on investor protection for which reason all variables are given a score of 1 or zero. Obviously, this is unrealistic assumption. Even if we assume away institutional interdependencies, institutions tend to have differential effects on the same assessment variables;¹⁴⁹ there is no theoretical basis for assuming that each of the legal institutions that protect public shareholders confers upon them the same degree of protection. Second, the non-weighted aggregation method assumes that the effects of these institutions can be summed up; in other words, they assume the linearity of the effects of the institutions. This is true only and only if the interdependencies of these institutions take the form of a simple addition. However, as already argued, the interdependencies of legal institutions may take four forms; simple addition, complementarity, substitution and contradiction. The assumption of simple addition decomposes the

¹⁴⁸ Kenneth W Dam, *The Law-Growth Nexus: The Rule of Law and Economic Development* (Brookings Institution Press 2006) 170–175. Legal enforcement should be taken into account when measuring institutions. Stefan Voigt, ‘How (Not) to Measure Institutions’ (2013) 9(1) *Journal of Institutional Economics* 9–11. For which reason, Voigt suggests that the measurement of institutions should focus on the measurement of the distance between the expected behavior resulting from *hypothetical perfect* enforcement of the written law (i.e., the law on books) and the observed behavior resulting from its *actual* enforcement (i.e., law in action). *ibid* 20.

¹⁴⁹ Indeed, given these differential effects and the ‘the absence of a theoretical model relating attributes [i.e., institutions] to performance, equally weighting attributes identified by third-party governance experts plausibly immunizes their work from charges of “stacking the deck.”’ Bhagat, Bolton and Romano (n 32), 1826 [emphasis in the original].

institutional network of the institutions subject to analysis (investors' protection institutions in our case) by assuming away complementarities, contradictions, and substitution relations among these institutions.

In short, indices-based econometrical analysis of legal institutions gets the independent variable that is the legal institution or the set of legal institutions subject to analysis *wrong* because of the *reductive* nature of the measurement method of these institutions.

Third, the reductive method of measurement of the institutions is not the only problem of reductionism in these indices-based studies. The other problem relates to the goal of these studies. Their standard goal is to identify the economic effects of the institution or set of institutions subject to analysis on a specific dependent variable (e.g., access to equity finance, or economic growth). From a systemic perspective, the boundary of the system, the multi-levels and the multi-layers of the agents' network depends on *our point of view*. The goal of analysis determines this point of view. We can give two concrete examples to illustrate this point. From a systemic perspective, if the goal of the empirical analysis is to assess the effects of a set of legal institutions that are protective of public investors on access to equity finance, we need to determine first the institutional network that affects access to equity finance. For example, the institutions that affect capital inflow and outflow (capital controls), capital taxation institutions, institutions regulating credit financing, stock market regulation, and corporate governance institutions are among the major institutions that affect access and cost of equity financing. For simplicity, let us assume that the institutional network that includes these institutions is the least non-decomposable institutional network so that there are no other legal or informal institutions that need to be included in this network or its environment.

Given the interdependencies among these institutions, the standard goal of the assessment of the effects of the institutions protective of minority shareholders (which is a small sub-network of this institutional network) on access to equity finance becomes *undefined and vague*. Due to interdependencies, this sub-network of institutions has *embedded effects* on access to equity finance, which may be very different from their *non-embedded effects*. Since standard indices based empirical studies control for other variables that may affect access to equity, we can confidently assume that these studies are interested in identifying the non-embedded effects of the institutional sub-network subject to analysis, but these *non-embedded effects* are exactly the effects that we are not interested in for comparison purposes. We need

to know whether the least non-decomposable institutional network that affects access to equity in Germany outperforms the comparable network in US, but we are not really interested in knowing that the non-embedded effects of a sub-network of this institutional network in US outperforms a comparable (arbitrarily identified) institutional sub-network in their non-embedded effects. The reason for this is very simple; if the least non-decomposable network in Germany outperforms the comparable network in US, but the indices-based empirical analysis demonstrate that the non-embedded effects of a sub-network of the American network outperforms the non-embedded effects of a sub-network of the German network, then, we may be lead to believe that Germany needs to reform this sub-network to increase the performance of its network. If Germany were to do so, it might indeed undermine the capacity of its firms to access equity financing.

Once we identify a broader dependent variable such as economic growth, the least non-decomposable institutional network in which the institutions we seek to assess are embedded becomes very large. The indices-based econometrical analysis of non-embedded effects of the analyzed institutional sub-network on economic growth becomes even more misleading. In short, for comparing the relative economic effects of a sub-network of institutions, the analysis should focus on identifying their embedded effects rather than their non-embedded effects. More importantly, the analysis should focus on the aggregate effects of the least non-decomposable institutional networks; these are the most interesting and informative unit for empirical institutional analysis,¹⁵⁰ but this is basically the institutional unit that is not subjected to analysis because indices-based econometrical analysis is not informed by systemic perspective.

¹⁵⁰ By focusing on the interaction of formal and informal institutions (i.e., legal and social norms), Voigt makes a similar point. He argues that ‘To understand the behavior of actors involved in a specific interaction situation, one should attempt to *identify all potentially relevant institutions*, i.e., both formal and informal rules as well as both internal and external sanctions. To predict likely effects of institutions, it is insufficient to focus on the analysis of single institutions ... Not taking internal institutions explicitly into account would lead to omitted variable bias.’ Voigt (n 148), 11 [emphasis added]. Voigt, however, suggests that in the cases where we need to measure more than a single institution, we should first measure each of them separately, then, aggregate them in order to determine the main institutions that derive the aggregate observed behavior. *ibid* 16. I concur that measuring institutions separately would give us a rich informational basis for measuring the institutional networks. However, this measurement should be treated as tentative and for the strict purposes of providing rich informational basis for conducting a systemically informed empirical measurement of the institutional networks that consist of these institutions latter on.

Nevertheless, the indices-based econometrical analysis of *the non-embedded effects* of legal institutions is inaccurate for two reasons. The first reason is the reductive measurement of these institutions outlined above, which means that we got our independent variable wrong. The second reason is that the indices based econometrical studies does not control for significant structural elements in the two-layer structure of the analyzed institutional sub-network. Suppose that the institutions that protect minority shareholders in US and Germany are the same. These identical institutions will have *different effects* because the distribution of the multi-attributes of the agents' in the relevant action situation in Germany and US are different, the action situation has different levels; and since the stable links among these agents at each level may be different, the layers of each level may be different. These structural differences results in another major structural difference that is the institutional interdependencies among these identical institutions may be different; they may become complementary in US, while contradictory or substitutes in Germany.

More problematically, these structural aspects evolve over time, which implies that the same institutions will have different effects at different points of time. For example, the structural relations between institutions evolve as well; two institutions may become complementary rather than contradictory in the medium or long run due to the adaptability of agents to the effects of these institutions. The evolution of the institutions and their interdependencies may take different forms. For instance, the meaning of legal institutions evolves over time; the legal rule could be reinterpreted differently by the Judiciary in the medium and long term. The judicial interpretation of the legal institutions (the judicial meaning) may be different from the meaning of legal institutions as conceived by supervisory agencies or the addressees of the legal rules. The same legal institution may thus have a variety of evolving meanings. Consultancy lawyers are meaning predictors who attempt to predict the meaning that the supervisory agency or the Judiciary will ascertain to legal institution. Assuming that legal institutions retain their meaning across time and that this meaning is not necessarily uniform across all the actors of the economic system. Even if we assume that the meaning of the institutions is stable over time and uniform across agents, the agents can still *adapt differently* to the institutions that have stable and common meaning in the course of time. For instance, the employers and employees in Germany have recently adapted differently to the co-determination principle to bring the co-determination principle in

compatibility with the rise of shareholder-value governance of large German corporations,¹⁵¹ and thus the same institution such as co-determination principle has *different evolving effects across time* due to the different ways in which agents adapt to this legal institution.

In conclusion, the indices-based econometrical analysis of legal institutions is not informed by the systemic perspective; it is reductive. Due to these limitations of indices-based econometrical analysis of legal institutions, it fails, for example, to assess accurately the *non-embedded micro and macro effects* of a specific institutional domain such as the German corporate governance system. In addition, it fails to evaluate *the embedded* micro and macroeconomic effects of the German corporate governance regime as embedded in the institutional network of the German capitalist system. Further, indices-based analysis fails to illustrate the micro and macroeconomic effects of the whole institutional network of a specific capitalist system such as that of the German capitalist system. To overcome these limitations, we need to develop systemically informed methods for empirical analysis of micro and macro effects of legal institutions.¹⁵²

¹⁵¹ This is one of the interpretations of the interaction between the German co-determination principle and the rise of shareholder-value oriented governance in Germany, for a brief discussion of these interpretations, see: Robert Boyer, 'Complementarity in Regulation Theory' (2005) 3(2) Socio-Economic Review 368–370 in: Colin Crouch and others, 'Dialogue on 'Institutional Complementarity and Political Economy'' (2005) 3(2) Socio-Economic Review.

¹⁵² Despite these critiques of the indices-based studies, these studies have gained substantial influence among economists and policy-making institutions such as the World Bank. I would suspect that one of the underlying motivations driving the World Bank to support these studies is their *standardization capacity*. Traditional legal scholarship such as comparative law, particularly cultural comparative legal analysis, seeks to reform national legal systems through adopting legal changes that would fit existing legal culture rather than transplanting legal solutions of other legal systems that may be more economically efficient from a law and economics perspective. See: Daniel Berkowitz, Katharina Pistor and Jean-Francois Richard, 'The Transplant Effect' (2003) 51(1) The American Journal of Comparative Law 179–181. *ibid* 188. Hence, this comparative law method would not enable the World Bank to prescribe standardized regulatory reforms. Rather, comparative law method mandates that each developing country have to develop their economic regulations through striking a balance between endogenous variables such as legal culture and societal values and exogenous variables such as economic efficiency of the legal solutions adopted in other legal systems. Since non-standardization and thus non-convergence of legal systems around the world would impede the creation of globalized markets, the World Bank tends to promote indices-based research agenda because it provides intellectual support for the convergence of legal systems across the globe. Convergence of legal systems would result in symmetric institutionalization of globalized markets, which would enable multi-national corporations to operate under low transaction costs and legal risks. When complemented with the market-biased normative framework of neoclassical welfare economics (see chapter 9 for a discussion of the neoclassical normative theory of economic regulations), these symmetric regulations would be more biased towards the interests of capital providers. In sum, the indices-based econometrical analysis of economic regulations would result in standardized

Given the methodological reductionism of theoretical and empirical analysis of legal institutions in neoclassical law and economics, are these enormous theoretical and empirical studies of legal institutions in neoclassical economics *useless*? The answer is absolutely no; the conclusions of these studies are *highly tentative*, but they are *not useless*.¹⁵³ Both theoretical and empirical systemic analysis (e.g., network analysis) requires very broad informational basis;¹⁵⁴ for which reason, what is called ‘black box’ technique is usually used to simplify the systemic theoretical analysis; according to this technique, we attribute the statistically observable pattern of behavior to some components of the system instead of deriving the dynamics and evolution of these components (i.e., sub-systems) from the dynamics and evolution of their sub-components.¹⁵⁵ Therefore, the reductionist analysis of these sub-systems enable us to *whiten* the black box representation of these sub-systems and provide a better informational basis for a more accurate systemic analysis. Further, although the informational basis that reductionist analysis provides for systemic analysis is inaccurate and tentative; sometimes, inaccurate information when filtered critically from a systemic perspective and from the perspective of multiple cognitive perspectives (the integrated approach) is better than no information at all. Further, understanding the (incentive, informational, cognitive, etc.) mechanisms through which a specific institution affects the behavior of economic agents may help us uncovering and understanding the interlinkages among different institutions because these mechanisms are important source for such interlinkages. For example, different institutions may affect individuals’ behavior through affecting the structure or flow of information in the system; by uncovering this fact, we can conjecture that these institutions are interdependent through an informational channel.

recommendations regarding economic regulations; the latter would serve the policy agenda of an institution such as World Bank, which provides a plausible explanation of the its support and dissemination of these studies. This analysis does not imply that the researchers producing these studies are engaged in a scientific conspiracy for pushing the agenda of globalization. Rather, the above analysis assumes that the scholars are struggling to provide high quality econometrical analysis of legal institutions, but their research receives substantial funding and their findings are disseminated and implemented because this mode of research serves the interests of funding and disseminating institutions.

¹⁵³ Østreng (n 94) 12.

¹⁵⁴ Schweitzer and others (n 61), 424.

¹⁵⁵ Bossel (n 57) 19.

Moreover, as will be argued in chapter 8, another way to simplify the systemic analysis of a complex, large, and non-decomposable system is to take a sub-system of this system as a unit of analysis, while treating the other non-decomposable sub-systems as the environment of this sub-system. Then, we use an informed guess about the most crucial variables in this environment that affect the dynamics and the evolution of the large system that we have, partially, decomposed.¹⁵⁶ The reductionist analysis of many sub-systems and the interlinkages among some of them will enable us to make a better informed guess about the most crucial variables in the environment of the system, which should be included in the systemic analysis.

Some concrete examples from the applied part of the thesis can illuminate the usefulness of reductionist analysis. For example, both the new institutional and knowledge-based theories of the firm are reductive; the former reduces the firm into an incentive structure, while the latter reduces the firm into a system of knowledge.¹⁵⁷ Despite their reductionist outlook, these theories provide us with invaluable informational basis for developing a systemic understanding of the firm as a system of dual structures of incentives and knowledge. Similarly, the empirical evidence concerning the effects of competition on economic growth is inconclusive; still, by comparing the different empirical studies in light of the different reductive theories about the relation between competition and growth,¹⁵⁸ we can reach a hypothesis that represents a good informational basis for systemic analysis of the embedded effects of competition law on economic growth.

In conclusion, given the quasi-decomposability of the agents' network, the complexity (non-linearity) of the least non-decomposable agents' sub-network (action situation), the non-decomposability of the institutional network of capitalist economy, systemic approach is the most appropriate for analysis and design of specific institution(s), institutional domains, and the institutional network of capitalism. Reductionism is inappropriate methodology for institutional analysis. The theoretical and indices-based econometrical variants of both micro and macro strands of neoclassical law and economics embrace a strong form of reductionist institutional analysis. The conclusions of this neoclassical analysis and design of legal

¹⁵⁶ See the discussion of the system boundary in chapter 8 and the references cited therein.

¹⁵⁷ See sections 4.1, 4.2, and 4.3 on transaction cost, property rights, and knowledge-based theories of the firm in chapter 8 and the references cited therein.

¹⁵⁸ For a discussion of the effects of competition on economic growth, see section 2.2.3 of chapter 11 and see the references cited therein.

institutions are therefore highly provisional; still, they are not useless. They can be critically refined by using the insights of systemic thinking (systemic critique) and the insights of the reductive approaches of other schools of thought and theories in economics and social sciences. Accordingly, we need to move beyond the micro and macro perspectives of neoclassical law and economics to endorse a systemic perspective that would give rise to what I call ‘*theoretical and empirical systemic law and economics*’, or for brevity, ‘systemic law and economics’.

Both the theoretical and empirical variants of systemic law and economics complement each other. Empirical (systemic) analysis can be only conducted in light of an underlying theoretical systemic model for structuring the empirical analysis; empirical analysis of legal institutions should be informed by the systemic perspective. In turn, the empirical (systemic) knowledge provides the informational basis for developing empirically grounded systemic theoretical analysis of legal institutions. For the rest of the thesis, we will be concerned solely with theoretical systemic analysis. We will seek to develop operationalized analytical framework or steps for the theoretical systemic analysis and design of legal institutions and to apply theoretical systemic analysis to a specific regulatory problem in the applied part of the thesis. Future research is urgently needed for developing a systemic empirical analysis of legal institutions.

Theoretical systemic law and economics needs an appropriate *analytical framework* that can analyze adequately the smallest non-decomposable action situation and its non-decomposable institutional network systemically. In social sciences, many methodologies for analysis of social phenomena have been proposed such as methodological individualism, institutional individualism, structural individualism, and structuralism/holism. We need to examine which methodology among these methodologies avoid reductionism and can develop a systemic institutional analysis. This is the task of the next section.

6. Analyzing and Designing Legal Institutions: Methodological Individualism, Institutional Individualism, Structural Individualism, or Structuralism/Holism

For analyzing a specific legal institution or an institutional network, we need to identify the *relevant action situation* and the *relevant institutional network* in which this legal

institution or institutional network is embedded. This is the problem of identifying the boundary of the system, which we have discussed partially above in relation to the near-decomposability hypothesis and shall be discussed further in chapter 8. Assuming that we have identified our two-level system that we need to analyze in order to analyze and/or design the legal institution or the institutional network subject to analysis or design, how can we then analyze this system? In social sciences, the debate over the methodologies that are appropriate for analysis of social phenomenon/social systems has been quiet tense. In the context of analysis and design of legal institutions, our relevant social phenomenon is the *observed behavioral patterns of socio-economic agents*. Four major methodologies can be distinguished: methodological individualism, institutional individualism, structural individualism/agency-structure framework, and structuralism/holism. Methodological individualism means that the explanation of economic phenomena should be in terms of *properties, actions, and interactions* of individuals.¹⁵⁹

The type of methodological individualism that explains economic phenomena in terms of actions of economic agents without considering their *direct (strategic)* interaction can be called *non-interactive methodological individualism* in order to distinguish it from that I call *interactive methodological individualism*. The latter is the form of methodological individualism that takes into account agents' *direct (strategic) interactions* in explaining social phenomena.

Methodological individualism has a strong and weak forms.¹⁶⁰ According to its strong form, social phenomena should be explained *solely* in terms of individuals' actions and interactions; nothing other than individuals' beliefs and preferences (utility functions) should

¹⁵⁹ Mark Blaug, *The Methodology of Economics or How Economists Explain* (2nd, Cambridge University Press 1992) 44. Geoffrey M Hodgson, 'Behind Methodological Individualism' (1986) 10(3) Cambridge Journal of Economics 216. Methodological individualism is distinct from rational choice theory; rational choice theory and behavioral economics debate the properties (attributes) of individuals, but they share the commitment to methodological individualism according to which explanation should be made in terms of individuals' properties, actions, and interactions. Joseph Heath, 'Methodological Individualism' in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2009) s. 4, para. 9 <<http://plato.stanford.edu/archives/sum2009/entries/methodological-individualism/>>

¹⁶⁰ Lars Udehn, 'The Changing Face of Methodological Individualism' (2002) 28 Annual review of sociology 500.

be the explanatory variables of social phenomenon.¹⁶¹ This form of methodological individualism is called psychology,¹⁶² or atomism.¹⁶³ According to the weak form of methodological individualism, any social phenomenon should be explained in terms of individuals' actions and interactions, but other explanatory variables (e.g., legal institutions and social norms) can enter into the analysis.¹⁶⁴

Institutionalist schools of thought have endorsed the weak form of methodological individualism where explanation of the socio-economic phenomena (i.e., agents' behavioral patterns over the institutional network) is explained in terms of a framework of agents-structure interaction.¹⁶⁵ Two important variants of this weak methodological individualism exist: institutional individualism¹⁶⁶ and structural individualism.¹⁶⁷ In institutional individualism, both individuals and institutions function as explanatory variables of social phenomena (e.g., the effects of legal institutions).¹⁶⁸ In addition to individuals and institutions, structural individualism asserts that social structures (mainly, stable relations among the agents and institutionalized social roles¹⁶⁹) and their interactions with the agents should also be included as explanatory variables for social phenomena.¹⁷⁰ In this perspective, legal institutions are just one type of social structures.^{171, 172}

¹⁶¹ George Ritzer, 'Sociology: A Multiple Paradigm Science' (1975) 10(3) *The American Sociologist* 163. Udehn (n 160), 500.

¹⁶² *ibid* 487–488.

¹⁶³ *ibid* 500.

¹⁶⁴ *ibid*.

¹⁶⁵ Hodgson, 'Institutions and Individuals: Interaction and Evolution' (n 59) 99.

¹⁶⁶ Fernando Taboso, 'Institutional Individualism and Institutional Change: The Search for a *Middle Way* Mode of Explanation' (2001) 25 *Cambridge Journal of Economics* 770–772. Udehn (n 160), 489–490 and see also the references cited therein.

¹⁶⁷ *ibid* 493–495.

¹⁶⁸ Taboso (n 166), 771–772. Udehn (n 160), 489–490.

¹⁶⁹ Hodgson, 'Institutions and Individuals: Interaction and Evolution' (n 59) 99. Bunge explains social roles as follows, 'once a social system is in place, individuals become *replaceable* to some extent: *their roles* can be enacted by different persons.' Mario Bunge, 'Systemism: The Alternative to Individualism and Holism' (2000) 29 *Journal of Socio-Economic* 149–150 [emphasis added], and see also the reference cited therein.

¹⁷⁰ Hodgson, 'Institutions and Individuals: Interaction and Evolution' (n 59) 99.

¹⁷¹ *ibid* 96.

¹⁷² One can broaden the definition of institutions to include the following structural elements of the two-level institutional and agents' network: stable relations among the agents, social positions, and the multi-level and multi-layer structure of the agents' network. In this case, institutional individualism will be equivalent to the form of structural individualism that limits explanatory social structures to these structural elements of the two-level institutional and agents' network. Since a primitive form of

In contrast, structuralism or holism relies on explaining social phenomenon solely in terms of collective entities or structures (e.g., legal institutions, social norms, national spirit, communications, classes, race, culture, state, society, groups, and organizations).¹⁷³ In contrast to structure-agency analytical framework of structural individualism that tends to restrict social structures to include institutions, stable institutionalized relations among the agents, institutionalized social roles,¹⁷⁴ holism/structuralism tends to broaden social structures to include other collective entities such as knowledge, organizations, national spirit, communications, and classes. According to structuralism, structure determines the behavior of individuals; they have no *agency* to challenge the force of structures and institutions.¹⁷⁵ Despite the limitations of structuralism (see below), it succeeds in highlighting that collective ontologies (e.g., institutions, knowledge, social structure such as institutionalized relations and institutionalized roles) can contribute to the explanation of significant socio-economic phenomenon. Particularly, the aggregate behavior of the same agents if embedded in different structures (e.g., different stable relations) would be significantly different.¹⁷⁶ Moreover, complex systems such as organizations cannot be understood solely in terms of individuals and their interactions. The intertemporal transformation phenomenon refers to the fact that firms as organizations have their *own life and internal logic*¹⁷⁷ that is independent from their

institutional individualism that endorses the narrow definition of institutions, which excludes these structural elements, is prevalent in law and economics scholarship, I have preferred to use the narrow conceptualization of institutional individualism that excludes these structural elements to distinguish it from structural individualism because this provides needed conceptual clarity to the discussion of the methodological position adopted by law and economics. Similarly, Udehn suggests, though for overlapping but not identical reasons, a distinction between institutional and structural individualism, see: Udehn (n 160), 495.

¹⁷³ Valerie A Haines, 'Social Network Analysis, Structuration Theory, and the Holism-Individualism Debate' (1988) 10 *Social Networks* 159–160.

¹⁷⁴ Hodgson, for example, defines social structures to include 'all sets of social relations, including the episodic and those without rules, as well as social institutions.' Hodgson, 'Institutions and Individuals: Interaction and Evolution' (n 59) 96.

¹⁷⁵ Ritzer (n 161), 158–159. Hodgson, 'Institutions and Individuals: Interaction and Evolution' (n 59) 99–101.

¹⁷⁶ Ahdieh (n 58), 83. Bunge explains this point very well, 'to know a human family it does not suffice to know its members: some knowledge of the relations among them and with other people is necessary as well. In general, social facts can only be understood by embedding individual behavior in its social matrix and by studying interactions among individuals.' M. Bunge, 'Ten Modes of Individualism-None of Which Works-And Their Alternatives' (2000) 30(3) *Philosophy of the Social Sciences* 394.

¹⁷⁷ Oliver E Williamson, 'Transaction Cost Economics: the Precursors' (2008) 28(3) *Economic Affairs* 10–11.

individual actors. This suggests that organizations exercise a form of *upward causal effects* on the behavior of their members, and thus should be included directly into the explanatory variables of the dynamics and evolution of these organizations, which implies a sophisticated closed feedback loop form of explanation that includes social categories such as the internal logic of the organization itself. Similarly, the prices, the unemployment rate, and the inflation rate are social categories that emerge out of the interaction of individuals,¹⁷⁸ but once they emerge, individuals take them as givens and reacts to them.¹⁷⁹ This is another instance of a closed feedback relation that includes both individuals and social categories into the explanation of the social phenomenon.¹⁸⁰

Clearly, strong and weak forms of non-interactive methodological individualism fails to provide an adequate analysis of the impact of legal institutions because they ignore how these institutions affects the structure of the agents' networks and the interactions among these agents. Similarly, the strong form of interactive methodological individualism accepts only the analyzed institution as an exogenous variable, while ignoring the institutional network in which this institution is embedded. Further, it ignores the structure of the agents' network; the explanation is undertaken only in terms of individuals' actions and interactions subject to the exogenous constraint of the analyzed institution; the stable and institutionalized relations among the agents' that give rise to agents' network have no explanatory value. Holism/structuralism is equivalently off the mark because it takes into account the institutional

¹⁷⁸ Friedrich A Hayek, *The Counter-Revolution of Science: Studies on the Abuse of Reason* (The Free Press 1952), cited in: Heath (n 159) s. 2, para. 5.

¹⁷⁹ Arthur (n 98) 2. See contra: Hayek (n 178), cited in: Heath (n 159) s. 2, para. 5.

¹⁸⁰ Capturing these closed feedback relations among the individuals on one hand and structural elements of the two-layered network and emergent properties of the system, on the other hand, (or in the terminology of sociology, the feedback loops among the micro and macro levels of the socio-economic reality) is the essence of systemic thinking. Bunge (n 176), 394–395. As we shall discuss in the next chapter, one form of institutional complementarities (namely, quantitative complementarities) are in essence a structural feature of the causal effects of the institutional network that takes the form of a *reinforcing closed feedback loop*. If the researcher focuses only on the so-called downward causality (explaining the social phenomenon in terms of its parts, i.e., individuals' properties and actions as required by methodological individualism), then, he commits the sin of *micro-reductionism*, but if he explains the phenomena solely in terms of social categories (as required by structuralism), then, he commits another form of reductionism that is *macro-reductionism*. Agazzi (n 95), 353. Systemic perspective transcends both forms of reductionism by placing individuals and social categories into their rightful place of analysis as the above-examples of closed feedback structures demonstrate.

network and the structure of the agents' network. Still, by assuming agents' choice away, it overlooks the interaction of agents with the institutional network and the structure of the agents' network as well as the interactions among the agents.

Institutional individualism seeks explanation in terms of institutions-agents interaction, and thus takes the institutional network and agents' interaction into account, but pays little attention to the structure of agents' network. The agent-structure framework of structural individualism fills in this lacunae by taking into account social structures that encompass the structure of agents' network.

7. Improper Reductive Institutional Individualism of Both Strands of Law and Economics

Both strands of neoclassical law and economics are dominated by non-interactive and interactive *inadequate reductive form of institutional individualism*.¹⁸¹ Representative agent modeling that dominates neoclassical *macroeconomics* assumes away the structure of agents' network and agents' direct interaction. Similarly, general equilibrium and partial equilibrium analysis in law and microeconomics overlook the analysis of agents' direct interactions and the structure of their network. Game theoretical analyses of legal institutions in neoclassical microeconomics integrates the analysis of agents' direct (strategic) interactions,¹⁸² but fails to take into account the structure of agents' network or the institutional network in which the analyzed institution(s) is embedded. Moreover, in the next chapter, we will demonstrate the *reductionist* aspects of comparative organizational analysis of transaction cost economics, which underlies the new institutional theories of the firm and corporate governance. Accordingly, comparative organizational analysis also fails to provide an adequate structure-agency interaction framework for analysis and design of legal institutions.¹⁸³

In the context of both micro and macro-analysis of legal institutions, only the institutions subject to analysis are included as independent variables, while excluding the institutional network in which these institutions are embedded. When some institutions, in addition to the

¹⁸¹ Ahdieh (n 58), 54–56. Udehn (n 160), 482–484.

¹⁸² *ibid* 483.

¹⁸³ See the relevant discussion of comparative organizational analysis in section 4 of the next chapter.

institution subject to analysis/design, are introduced into the analysis, they are introduced indirectly through their effects on the preferences of the individuals; they are not introduced as direct explanatory variables that function similar to physical constraints such as budget or resources constraints.¹⁸⁴ Further, the interdependencies among the agents, an important structural element of the two-level network of capitalism are assumed away.¹⁸⁵

Further, although the neoclassical analysis of legal institutions *presumes* the existence of institutions and social structures (e.g., property rights, the enforcement institutions of contracts, the rules of the game in game theoretical analysis,¹⁸⁶ the social categories of price, unemployment rate, the specific stock and distribution of information and knowledge¹⁸⁷),¹⁸⁸ an explicit analysis of these implicitly assumed institutions and social structures/categories, their interdependencies, and the institutional network in which they are embedded is not conducted.

Consequently, neoclassical law and economics analysis is therefore far from adequate institutional individualism as it does not analyze the institutions as embedded in the institutional network relevant to analysis; due to the implicitly assumed background rules and the inclusion of the institution(s) subject to analysis as an explanatory variable, we may characterize the methodological position of the neoclassical analysis to be an *inadequate reductive* form of proper institutional individualism.

Despite the predominance of the improper reductive form of individual institutionalism in neoclassical law and economics analysis of legal institutions, two exceptions come to mind. First, some of the sophisticated game theoretical analyses of legal institutions in law and economic scholarship may broaden the rules of the game to include some of the institutions

¹⁸⁴ Ahdieh (n 58), 54–56. Hodgson, ‘Behind Methodological Individualism’ (n 159) 217–218. By abstracting from the effects of the institutions and social structures on the formation of individuals’ attributes (e.g., preferences, beliefs, reasons for action, plans, and purposes), neoclassical law and economics can provide a (mistaken) universal context-free explanations of economic phenomena and analyses of legal institutions. Further, even when legal norms are introduced in the analysis as external constraints, the feedback effects of individuals’ actions on these legal norms are seldom analyzed. Zamagni (n 58), 201.

¹⁸⁵ Ahdieh (n 58), 55–56.

¹⁸⁶ Kenneth J Arrow, ‘Methodological Individualism and Social Knowledge’ (1994) 84(2) *The American Economic Review* 5.

¹⁸⁷ *ibid* 6–8.

¹⁸⁸ *ibid* 5–8. Geoffrey M Hodgson, ‘Meanings of Methodological Individualism’ (2007) 14(2) *Journal of Economic Methodology* 217–219.

neighboring to the institutions subject to analysis. These analyses are therefore close to, but still do not conform to proper institutional individualism because the least non-decomposable institutional network and action situation are not included in the analysis. Institutional interdependencies are still inadequately analyzed. Further, these analyses are far from structural individualism. For example, the structure of the agents' network is not appropriately analyzed.¹⁸⁹

¹⁸⁹ If taken into account, the structure of agents' network may transform the economic analysis of legal institutions. For example, traditional neoclassical-new institutional analysis predicts that in the case of a polluter and large number of injured individuals, the polluter cannot reach an agreement with the injured parties because of the credible threat of hold-up by each individual. Some case studies provide counter evidence, however. For example, a sale agreement has been reached between the inhabitants of a small town called Cheshire and the polluter. See: Gideon Parchomoksky and Peter Siegelman, 'Selling Mayberry: Communities and Individuals in Law and Economics' (2004) 92(1) California Law Journal 89–91. One of the main reasons for the lack of hold-up is that the decision not to sell *depends* on the decisions of the majority of the inhabitants not to sell; if they sell, then, the asset of living in a community of strong friendship links will be lost anyway. Many of them had to sell because of holding-out would mean to suffer the pollution for the time-period of litigation. Hence, the collective sense of the *community* created *strong interdependencies* among the decisions of the inhabitants so that they no longer can credibly commit to hold-out. *ibid* 119–124. These interdependencies are stable/structural; they simultaneously arise out of and consist a stable social structure that is *the community*. One of the major implications of this analysis is that the inhabitants may sell their properties at a price lower than the value they attach to living in the community; this calls for a legal protection. For a discussion of the legal implications for this analysis in tort law and takings law, see: *ibid* 124–142. Another example that illustrates the significant legal implications of considering *the interdependencies* among the agents, i.e., the structure of the agents' network, comes from the intellectual property rights law. The economic theory of property rights considers an intellectual work (e.g., a book) to be non-rival *products* that enters the profits maximization function of *the producer* (the writer) and the utility function of its consumer (i.e., the reader in our example). Given the non-rival nature of the intellectual work, intellectual property rights should be designed to ensure the maximization of the sum of the producer and consumer surplus. Michael Rushton, 'Methodological Individualism and Cultural Economics' (1999) 23 Journal of Cultural Economics 143. If we introduce the *interdependencies* of the producers (writers) into the analysis, the analysis would change fundamentally. Any intellectual work is another node in a complex network of intellectual networks; it cannot make its intellectual contributions without the contributions made by other works, and its intellectual value depends on the following intellectual works and the way they engage with this work. Important intellectual works die out if following works have chosen to ignore them and engage with other works. *Intellectual works constitutes other intellectual works and are constituted by them*. Given these *constitutive relations* among intellectual works, assigning property over a single work and the extent of the protection of this property should deepen and further *the interdependencies* among these intellectual works; to do so, it should ensure the maximum dissemination of intellectual works and the minimum protection required for giving the producers the incentives to produce. *ibid* 144–145. By transcending methodological individualism and considering the interdependencies among the agents (the producers of intellectual works), one can argue for different conceptualization, justification, and roles for intellectual property rights. *ibid* 145. For other examples of the legal implications of considering the interdependencies among the agents, see: Ahdieh (n 58), 79–81.

Second, post-financial crisis, economic analysis of banking regulation, particularly the analysis of macro-prudential banking regulation, has witnessed a surge of *network analysis*. The structure of agents' network (the interdependencies of agents who are mainly banks and financial institutions in the context of financial regulation) has become central to analysis and design of banking regulation.¹⁹⁰ Still, in the area of banking regulation, only the analyzed institution(s) is treated as explanatory variable in isolation of the institutional network in which this institution is embedded. Hence, this analysis does not conform to proper individual institutionalism. Moreover, other structural elements of the two-level network (e.g., the social patterns created by the collective behavior of the agents to which the individual agents respond, the multi-level and multi-layer structures of the agents' network) are still assumed away. Hence, this analysis, though taking into account an important structural element of the two-level network, which is the interdependencies of the agents, is still far from proper individual structuralism. For example, systemic risk, an emergent property of the financial system, is *reduced* into a negative externality in the banking regulatory studies.¹⁹¹ This conceptual reductionism leads astray the analysis and design of banking regulation. Instead of focusing on how the structure and dynamics of the financial system results in building-up of systemic risk; the focus is on pricing the contribution of *each single* financial institution to systemic risk to tax each institution in proportion to its contribution and internalize the negative externality of systemic risk. From a systemic perspective, systemic risk cannot be divided and attributed to single financial institutions because it is a product of their interactions and the structure of the two-layered institutional and agents network of the financial system.

In sum, neoclassical analysis of micro and macro effects of legal institutions is dominated by an *inadequate reductive form of institutional individualism*. Some law and economics game theoretical analyses and the network analysis of the financial networks in financial regulatory studies are important improvements over standard neoclassical law and economics analysis; some of them broaden the institutional network subject to analysis and others analyze agents'

¹⁹⁰ See, e.g., Andrew G Haldane and Robert M May, 'Systemic Risk in Banking Ecosystems' (2011) 469 Nature.

¹⁹¹ Matthias Thiemann, Mohamed Aldegwy and Edin Ibrocevic, 'Understanding the Shift from Micro to Macro-Prudential Thinking: A Discursive Network Analysis' (9 May 2016). SAFE Working Paper no. 136, 28 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2777484>

interdependencies; still, they do not conform to proper institutional individualism or proper structural individualism.

In contrast to this methodological failure of neoclassical law and economics, systemic thinking necessitates the endorsement of a structure-agent framework of analysis of legal institutions because the core of systemic perspective is that systems' behavior and evolution can be explained only in terms of interdependencies (structure) and interactions (dynamics) among the components of the system.¹⁹² Only an agent-structure framework seeks to adequately analyze the behavioral patterns in terms of the institutions, the interdependencies and interactions among agents (i.e., the structure of agents' network and their interaction over this network) as well as their interaction with the institutional network. In essence, the agent-structure interaction analytical framework is *a systemic* approach because it places *interaction* among *the crucial elements* of the system, agency and structure, at the core of the analysis of socio-economic systems.¹⁹³

8. Conclusion

In this chapter, we have made an intuitive argument that is for determining how to know something such as legal institutions (epistemology/methodology), we need to know

¹⁹² For brief examples of using the structure-agency framework in sociological analysis, see: Bunge (n 169), 150–151.

¹⁹³ Bunge seems to equate the analytical framework of structure-agency interaction with systemic perspective. *ibid* 154–155. Although all systems, whether natural or social, consists of information processing entities (agents) and structure, conceptual clarity requires a distinction between systemic perspective and structure-agency framework/structural individualism because some variants of structure-agency interaction analysis such as that of institutional individualism may be *reductive* as they do not take into account crucial elements of the system or its environment (e.g., the structure and the multi-layers of the agents' network in the case of institutional individualism). Similarly, some variants of structure-agency interaction analysis may include types of social structures in the system, which may undermine the agency; this structure-agency analysis would be *macro-reductive* because it reduces the system into some of its structural elements, while undermining the role of agency and thus contingencies. Hence, conceptual distinction between systemic thinking and structural individualism is necessary for distinguishing *reductive* from *systemic* structural individualist analysis. Hence, systemic perspective guides the design of proper structure-agency interaction framework that does fall into the reduction of the system to its agents' actions or to its structure. Further, systemic perspective gives the epistemological justification for analyzing structures, agents, and their interactions because the main proposition of the systemic perspective is that the dynamics and evolution of the system depend on the *interaction* of the crucial elements of the system and *its internal and external structure*.

ontological structure and features of this thing (legal institutions). Institutional theories in economics allow us to understand the ontology of institutions and their interdependencies; institutions do not exist in isolation, they exist in *networks*. Similarly, they do not influence isolated agents; they exert their effects on *networks of agents*. Accordingly, from a structural perspective, the capitalist system is a two-level institutional and agents network. Given that the agents' network can have multiple levels; capitalism is indeed a multi-level institutional and agents' network. Further, given that the institutional network and each level of the agents' network may have different types of links among the same nodes; institutional and agents' networks are multi-layered. Capitalism has a structure of a multi-level multi-layer institutional and agents' network. This is a very complex structure, which *evolves* over time. Given this ontology of institutions and of capitalism as the subject-matter of regulatory intervention, how should law and economics scholars analyze and design legal institutions? Which methodology is adequate for this ontology?

This chapter answered this question by arguing that a systemic theoretical and empirical perspective is *necessary* for analyzing and designing legal institutions. Unlike the reductive indices based econometrical analysis of the effects of legal institutions, we need to develop an empirical analysis of legal institutions informed by systemic thinking. Similarly, unlike the strong reductionist perspective of micro and macro strands of neoclassical law and economics, we need to endorse a theoretical systemic perspective over analysis and design of legal institutions. In short, we need to critically complement the micro and macro perspectives of neoclassical law and economics with what I call 'systemic law and economics'.

Still, we need to operationalize theoretical systemic law and economics in order to be able to apply this perspective to analysis and design of legal institutions. In this chapter, we argued that the structure-agent analytical framework of structural individualism is the most adequate systemic methodology. By contrast, methodological individualism endorsed by both strands of law and economics is strongly reductive. Nevertheless, structural individualism just tells us that for analyzing and designing legal institutions we need to take into account the two-level network as well as agency. We still do not know how to do so; in other words, we are still lacking an operationalized framework for systemic institutional analysis and design. In sociology, numerous analytical frameworks of agent-structure interaction have been

developed.¹⁹⁴ Similarly, the agent-based modeling of complex systems theory, the game theoretical analysis on networks,¹⁹⁵ the attempts for integrating network analysis with multi-level analysis in sociology¹⁹⁶ are other important endeavors for operationalizing structure-agency interaction analysis and providing a more adequate systemic analysis of social systems. One of the major tasks for future research in *systemic law and economics* is to investigate these strands of research in sociology and complex systems theory to develop an operationalized structure-agency interaction framework that is adequate for the analysis and design of the two-level institutional and agents' network, i.e., for analysis and design of legal institutions of capitalism. As a modest starting step in the long way towards the operationalization of *systemic* analysis and design of legal institutions, the next chapter develops *some systemic analytical and design concepts* that we can use for systemic institutional analysis and design. In other words, the following chapter advances a *systemic toolkit for institutional analysis and design*.

¹⁹⁴ Among the most famous structure-agency frameworks in sociology are those developed by Anthony Giddens and James Coleman. The standard accounts of these frameworks are found in: Anthony Giddens, *The Constitution of Society: Outlines of the Theory of Structuration* (University of California Press 1984). James S Coleman, *Foundations of Social Theory* (Harvard University Press 1990).

¹⁹⁵ For an overview, see: Matthew O Jackson and Yves Zenou, 'Games on Networks' in H. P Young and Shmuel Zamir (eds), *Handbook of Game Theory with Economic Applications: Volume 4* (North Holland 2015) 95–163.

¹⁹⁶ For an overview, see the scholarly works in the edited volume: Emmanuel Lazega and Snijders, Tom A. B. (eds), *Multilevel Network Analysis for the Social Sciences: Theory, Methods, and Applications* (Springer 2016).

Chapter

6

Operationalizing Systemic Law and Economics:

Institutional Networks as Units of Legal Analysis and Design, a Four-Step Process of Consistency Analysis, and the Process and Principles of Systemic Design of Consistent Institutional Networks

1. Introduction

The previous chapter has established the interdependence of legal institutions so that they are better conceptualized as *institutional networks (legal systems)*, then, it has shown that the micro and macro strands of law and economics fail to analyze institutional interdependence due to their methodological positions, namely, reductionism and methodological individualism. To overcome this limitation of neoclassical law and economics, the previous chapter has established that systemic thinking and the systemic structure-agency framework are adequate for analysis and design of embedded legal institutions and institutional (sub-) networks. Hence, law and economics scholars should use a *systemic* approach for analysis and design of legal institutions of capitalism. This gives rise to what has been called “*systemic law and economics*”, or for indicating the generic nature of the approach as it can be applied to economic and non-economic legal institutions, “the systemic approach”.

Many questions regarding the systemic approach to legal institutions are still unanswered. The most important among these questions is obviously the following. How can we *operationalize* this systemic approach into well-defined analytical frameworks and a process of well-defined steps? The natural starting point for tackling this question is to *review the relevant literature* on systemic thinking, systemic approaches, and methods in social and natural sciences. Further, we must also examine whether any school of thought in economics or legal scholarship, other than neoclassical law and economics, endorses a systemic approach

to analysis and design of legal institutions. This literature review may provide us with some insights that help us in operationalizing a systemic approach to analysis and design of legal institutions. Unfortunately, a comprehensive literature review of systemic approaches and methods in economic schools of thought, legal scholarship, and social and natural sciences cannot be accommodated in one chapter. Hence, this chapter reviews briefly the crucial insights of systemic thinking and approaches, which can be used later in operationalizing a systemic approach to legal institutions. Future research is needed for an in-depth examination of the systemic approaches and adapting them to institutional analysis and design.

Given the outline of systemic thinking, the rest of this chapter *operationalizes* the systemic approach to legal institutions. The starting point for operationalizing the systemic approach to analysis and design of legal institutions is to use the systemic perspective for identifying our (systemic) unit of analysis. From a systemic perspective, we establish that *embedded institutional (sub-)networks* should be *the unit of impact institutional analysis and design*. More precisely, the unit of legal analysis and design should be the embedded least non-decomposable two-level institutional and agents' network (for brevity, the two-level network) instead of the units of analysis in neoclassical economics (i.e., the rational agent) and the unit of analysis in new institutional economics (i.e., the transaction). Since the agents' network is not subject to design, it is more accurate to state that the embedded least non-decomposable institutional networks (for brevity, institutional networks) are the unit of legal design. This is the *first building block* in the operationalization of the systemic approach.

As shall be discussed below, *systemic* analysis and design of institutional networks, our unit of legal analysis and design, cannot be undertaken adequately without addressing complex and daunting questions relevant to *the regulation of capitalism as a complex system*; systemic law and economics brings capitalism to the center stage of analysis and design of economic regulations. Hence, the *second building block* in operationalizing the systemic approach dictates that we should determine these complex questions and address them systemically in order to analyze and design legal institutions.

As already argued in the previous chapter, there are numerous forms of institutional interdependencies (e.g., simple addition, substitution, complementarity, and contradiction). Hence, we cannot analyze the impact of the institutional networks on a specific assessment criterion (e.g., innovation) or design an institutional network that achieves a desired objective

(e.g., income distribution) without understanding and analyzing the forms of interdependencies among the institutions constituting this institutional network. Accordingly, the *third building block* for operationalizing the systemic approach is to understand, conceptualize, and classify the forms of institutional interdependencies. Given the large number of the forms of institutional interdependencies, we examine only four forms of institutional interdependencies in this chapter: compatibility, consistency/coherence, hierarchy, and complementarity.

In order to analyze the effects of an institutional network on a specific assessment criterion, we need to identify the forms of interdependencies among the institutions of this network; the most important forms of institutional interdependencies that affect the *performance* of the institutional network are *consistency and complementarity*. Contradictory institutions undermine the effects of each other on the same assessment criterion, for which reason, consistency matters. Further, complementarity of the institutions increases their effects on the assessment criterion beyond their sum. Accordingly, analyzing the consistency and complementarity of the institutions of the institutional network is crucial for ascertaining the effects of the network on its assessment criteria. Due to time constraints, we develop a four-step process for analyzing the consistency of institutional networks, while leaving the analysis of institutional complementarities to future research. The four-step process of consistency analysis is *the fourth building block* in operationalizing the systemic approach.

Accordingly, these four building blocks (particularly the first, the third, and the fourth blocks) enable us to analyze the consistency of institutional networks, an important systemic feature of legal institutions. In other words, we can determine whether the effects of the institutions constituting the German corporate governance system on an assessment criteria (e.g., organizational learning) is coherent, whether the Japanese competition law is coherent, whether the German institutional network that includes German corporate governance competition law is coherent in its effects on an assessment criterion (e.g., innovation). As shall be argued below, this is an invaluable piece of information because consistent institutions can be presumed to be complementary. We can therefore hypothesize theoretically that consistent institutional networks reasonably achieve their objectives, a hypothesis that we can then test empirically. Further, inconsistent institutions are undermining the effects of each other; these

identified inconsistencies can help us recommend *systemic legal reforms* that reduce these contradictions in the institutional network and thus enhance its performance.

Still, identifying contradictions in the institutional network is insufficient for guiding legal reform of this network. Suppose that we find out that the German institutional network that includes a stakeholder model of corporate governance and a post-Chicago model of competition law is inconsistent. In this case, should we reform corporate governance (e.g., by adopting a shareholder value model of corporate governance) or competition law (e.g., by adopting a Schumpeterian model of competition law) to restore the consistency of this network? As we shall see in chapter 8, this is not a hypothetical example, the transformations in German corporate governance systems over the last two decades suggest that this system have become inconsistent; reforming this consistency by restoring the stakeholder model or moving toward a full-fledged shareholder value model is a difficult systemic institutional design/reform problem.¹ Therefore, *in order to design a consistent institutional network*, we need to complement the four-step process of consistency analysis with systemic design concepts and principles. This chapter seeks to develop a set of systemic design concepts and principles for design of consistent institutional networks that can achieve reasonably their objectives. These systemic institutional design concepts developed in detail below include what I call, reasonableness of institutional design, institutional domain hierarchy, model superiority, model dominance, and model hierarchy. These design concepts constitute the fifth building block of operationalizing the systemic approach as *an approach to design of consistent institutional networks*. Finally, this chapter brings together these five building blocks into an eleven-step process that we can follow in order to design consistent institutional networks. The applied part of the thesis follows this eleven-step process closely in designing a consistent institutional network for governing the supply side of the product markets in developing countries. By linking these building blocks together, this process operationalizes the systemic approach as *an approach to design of consistent institutional networks*.

As will be argued below, consistent institutions are presumptively complementary, but they are not necessarily so; therefore, future research is needed for developing systemic design concepts and principles that can guide us in designing complementary, and not only consistent, institutions.

¹ See the introduction of chapter 8 and the references cited therein.

The structure of this chapter is as follows. Section 2 briefly outlines some of the most important common characteristics of systemic thinking across the various systems theories and approaches in social sciences. Section 3 then investigates succinctly systemic perspective over *legal institutions* in some legal and economic schools of thought. Section 4 argues that embedded institutional networks are the proper systemic unit of legal analysis and design (the first building block in operationalizing the systemic approach). Section 5 demonstrates that systemic analysis and design of institutional networks requires answering difficult questions relevant to regulation of capitalism (the second building block in operationalizing the systemic approach). Section 6 conceptualizes some important forms of institutional interdependencies, namely, compatibility, consistency, hierarchy, and complementarity; the determination of these interdependencies is the third building block in operationalizing the systemic approach. Section 7 develops a four-step process for conducting consistency analysis of institutional networks (the fourth building block in operationalizing the systemic perspective). Section 8 develops a systemic toolkit of design concepts and principles for design of consistent institutional networks (the fifth building block). Then, by linking these fifth building blocks, this section develops a systemic process for design of consistent institutional networks; this process therefore operationalizes the systemic approach as an approach to design of consistent institutional networks. Section 9 concludes.

Prior to delving into this chapter, it is noteworthy that due to the abstract exposition of this chapter, particularly sections 3 to 7, some of the ideas of this chapter might be vague. Although I have attempted to reduce this vagueness by introducing examples, the abstract nature of the ideas of this chapter impedes any meaningful attempt to eliminate every instance of ambiguity. The applied part, which is extensively cross-referenced in this chapter, shall clarify the ambiguous ideas of this chapter. The applied part also demonstrates that this chapter is one of the most important contributions of the thesis.

2. A Concise Outline of Systemic Thinking

As already mentioned in the previous section, systemic thinking arises out of non-satisfaction with reductionist thinking. Numerous theories and approaches of systemic thinking have emerged across natural and social sciences. They include, inter alia, complex systems theory (including agent-based modelling and network analysis) in natural and social sciences, social systems theory in sociology, soft systems approach, systems thinking in managerial studies, general systems theory (an attempt for unifying systems theories and approaches cross disciplines), system dynamics in social and environmental studies, and systems engineering in engineering and information management systems.

Despite the significance differences among these systems theories and approaches, they share important characteristics. First, they share an ontological view of the socio-economic reality according to which reality is a super-system organized into interdependent sub-systems, but they differ on how these sub-systems are connected to each other; according to one view, sub-systems are quasi-decomposable from each other (i.e., semi-autonomous), while the other view perceives the sub-systems to be open and interdependent.²

Second, these systemic approaches take *systems* to be their units of analysis; their starting point is to identify the system boundary to differentiate between the system and its environment.³ As already argued in the previous chapter, a good understanding of the system necessitates an analysis of both the interactions among the elements of the system and the interactions among these elements and *the crucial elements of its environment*.

Third, these variants of systemic thinking agree that the *structure* of the system determines system's behavior over time (dynamics) and evolution of its structure (evolution); understanding the systems' structure (structural analysis) is the natural starting point for understanding the system.⁴ Structure of the system includes various *stable relations* among its components, which can be represented by networks and closed feedback-loops (circular causal relations and informational and energy flows), particularly in the form of a stock-flow

² We have already discussed the near-decomposability hypothesis of the economic system in the previous chapter. In addition, see below for a further brief discussion and relevant references.

³ For a discussion of the boundary of the (legal) system, i.e., the institutional network, see chapter 8 and the references cited therein.

⁴ Donella H Meadows, *Thinking in Systems: A Primer* (Earthscan 2009) 89. Piero Mella, *Systems Thinking: Intelligence in Action* (Springer 2012) 21–22.

analysis.⁵ With respect to the economic system, Brian Arthur identified positive feedback structures that determine the dynamics of many economic phenomena such as firms' market share in knowledge-intensive industries,⁶ geographical concentration of industries,⁷ nations' comparative advantage in international trade,⁸ and technological lock-in.⁹

Central to understanding the structure of any system is the structure and organization of information (and knowledge), the process of its accumulation, storage, processing, and flow/communication within the system.¹⁰ Similarly, the control/incentives structure of the systems is an equivalently important structural component of the system.¹¹

Forth, as already mentioned in the previous chapter, systemic perspective emphasizes that the *interactions* among the components of the system determine the dynamics and evolution of the system; the structure of the system determines and structure these *interactions*. Structural analysis is a pre-condition for a dynamical analysis of the interaction of the components of the system. Fifth, unlike neoclassical law and economics, systemic perspective emphasizes the difference between system *analysis* and system *design*. From a neoclassical law and economics perspective, analyzing the economic efficiency of existing legal institutions and proposed legal reforms is sufficient for the design of legal institutions. By contrast, from a systemic perspective, understanding a system is a necessary, but insufficient condition for system's design. As the third proposition of systemic law and economics below demonstrates, design systemic concepts are essential in any systemic approach to *designing* systems.

This succinct outline of the main characteristics of systemic perspective does not do any justice to its richness. For the purposes of this thesis, these five characteristics will prove invaluable for developing a systemic approach to analysis and design of legal institutions. For

⁵ Meadows (n 4) 89. Mella (n 4) 21–22. Due to these circular feedback loop structures within the system, many parts of the system are *self-dependent*; their effects/functions depend on the effects/functions of other parts of the system, which in turn depend on them. Evandro Agazzi, 'Systems Theory and the Problem of Reductionism' (1978) 12 *Erkenntnis* 343–344.

⁶ Brian Arthur, 'Positive Feedbacks in the Economy' [1994] *Mckinsey Quarterly*, 84.

⁷ *ibid* 87–88.

⁸ *ibid* 88–89.

⁹ *ibid* 92–93.

¹⁰ Meadows (n 4) 14. Melanie Mitchell, *Complexity: A Guided Tour* (Oxford University Press 2009) 40–41.

¹¹ Meadows (n 4) 158–159.

example, the ontological structure of the sub-systems of the socio-economic reality and their relations, systems as units of analysis, and the identification of system boundary are central to identifying the embedded institutional networks as units of legal analysis (see below) and for identifying the boundary of the institutional network subject to analysis (see chapter 8). Similarly, the closed-feedback loop structure of systems will enable us to conceptualize institutional complementarities as reinforcing closed-feedback loops where the assessment criteria (variables) affected by the complementary institutions can be conceptualized as the stocks in the structure of the institutional network. Moreover, the dual incentives and information structure of the systems will help us in developing a *systemic* understanding of the firm that combines the information and knowledge insights with incentives-compatibility insights of both the knowledge-based and new institutional theories of the firm (see chapter 8 for detailed discussion). Finally, the distinction between *analysis and design* in systemic thinking will allow us to develop systemic design concepts for the design of institutional networks (see below).

3. An Outline of Systemic Perspective over legal institutions in Legal and Economic Research

Systemic thinking in economics is an old idea. Influenced largely by Marx, Schumpeter, the thought of whom has been a major inspiration for the modern neo-Schumpeterian and evolutionary schools of economics, argued that capitalism, to be correctly understood, should be analyzed as an evolutionary system instead of the analytical reductionist methods of partial equilibrium analysis:

Both economists and popular writers have once more run away with some fragments of reality they happened to grasp. These fragments themselves were mostly seen *correctly*. Their formal properties were mostly developed *correctly*. But no conclusions about capitalist reality as *a whole* follow from such *fragmentary analyses*. If we draw them nevertheless, we can be right only by accident. That has been done. And the lucky accident did not happen. The essential point to grasp is that in dealing with capitalism we are dealing with an *evolutionary process*. It may seem strange that anyone can fail to see so obvious a fact which

moreover was long ago emphasized by Karl Marx. Yet that *fragmentary analysis* which yields the bulk of our propositions about the functioning of modern capitalism persistently neglects it.¹²

Although perceiving capitalism as a system that needs to be analyzed systemically was an old idea in some strands of economic thought, these strands did not emphasize, however, the systemic nature of the *legal institutions* of capitalism, which would justify analyzing them systemically. German Ordo-liberalism was a notable exception in this regard. Indeed, we can trace the systemic perspective of legal institutions of capitalism to Walter Eucken's methodology called "Denken in Ordnungen" or thinking in orders/systems.¹³ David Gerber explains well the Ordo-liberal systemic perspective over legal institutions:

[Eucken's] "orders" were constructs through which he sought to demonstrate that certain characteristics of economic systems were related to each other systemically - i.e., they fit together such that the density of those characteristics in an actual economic system necessarily increased the capacity of that system to achieve its goals. For example, [the legal institutions ensuing the protection of] *private property, the protection of economic freedom and low barriers to entry into markets* were individual characteristics of a transaction economy that tended to *reinforce each other* and thereby increase *the effectiveness of the system as a whole*. A corollary to this analysis was that the intermingling of components from ... two fundamentally incompatible "orders" in an actual economic system *necessarily* impaired the functioning of that system.¹⁴

Unfortunately, with the demise of Ordo-liberalism and rise of neoclassicism, thinking in orders methodology and its important implications for design of legal institutions were relegated to the studies on the history of economic thought. The systemic approach to legal

¹² Joseph A Schumpeter, *Capitalism, Socialism and Democracy* (5th edn, first published 1976, Routledge 2003) 82 [emphasis added].

¹³ David J Gerber, 'Constitutionalizing the Economy: German Neo-liberalism, Competition Law and the "New" Europe' (1994) 42 *The American Journal of Comparative Law* 41. For a very good elaboration on the systemic perspective of Ordoliberalism, see: Jean-Daniel Weisz, 'A Systemic Perception of Eucken's Foundations of Economics' in Agnès Labrousse and Jean-Daniel Weisz (eds), *Institutional Economics in France and Germany: German Odoliberalism versus the French Regulation School* (Springer 2001).

¹⁴ Gerber (n 13), 42–43 [emphasis added].

institutions of capitalism has been regained in the heterodox literature of the institutional school of comparative capitalism, although the latter does not refer to Ordo-liberal ideas, it seems to be the natural extension of their systemic perspective over legal institutions. Since institutional complementarity, the core systemic analytical concept in comparative capitalism, has been already discussed in the previous chapter and shall be discussed further below, I will not examine comparative capitalism literature in this section. In addition to comparative capitalism, complexity economics, an emerging school of economic thought, uses explicit systemic perspective.¹⁵ Still, complex systems analysis focuses on the interaction of heterogeneous socio-economic actors without paying attention to the interdependence of legal institutions. There is still a potential for adapting the systemic perspectives of complex systems theory for informing the analysis and design of institutional networks. This is an important research agenda for future research.

Similarly, in legal scholarship, systemic thinking, although it is not the mainstream perspective, it is not a new idea. One can distinguish three variants of systemic thinking in legal scholarship: social systems theory of law advanced by Luhmann and developed further by Teubner,¹⁶ complexity theory and the law,¹⁷ and what can be called ‘systemic insights variant’. The latter encompasses few studies that use eclectically some insights from different

¹⁵ See, e.g., W. B Arthur, ‘Complexity Economics: A Different Framework for Economic Thought’ (2013) <<http://www.santafe.edu/research/working-papers/abstract/36df2f7d8ecd8941d8fab92ded2c4547/>>.

¹⁶ For an in-depth overview of social systems theory of the law, see: Gunther Teubner and Zenon Bankowski, *Law as an Autopoietic System* (Blackwell 1993). For an application of the insights of the social systems theory to financial regulation, see, e.g., Gunther Teubner, ‘A Constitutional Moment: the Logics of ‘Hitting the Bottom’ in Poul F Kjaer, Gunther Teubner and Alberto Febbrajo (eds), *The Financial Crisis in Constitutional Perspective: The Dark Side of Functional Differentiation* (Hart Pub. 2011). Social systems theory emphasizes structure over agency as it considers *communications*, and not information processing agents (e.g., the individuals), as the basic unit of analysis of the social system. That is why Bunge considers the theory to be an instance of holism instead of systemic thinking. Mario Bunge, ‘Systemism: The Alternative to Individualism and Holism’ (2000) 29 *Journal of Socio-Economic* 149. Since I am not going to rely on the insights of social systems theory in this chapter or in the applied part, I do not need to examine whether it belongs to systemic thinking or holism.

¹⁷ For an overview of complexity theory and the law, see, e.g.: J. B Ruhl, ‘Law’s Complexity: A Primer’ (2008) 24(4) *Georgia State University Law Review*. Gregory T Jones, ‘Dynamical Jurisprudence: Law as a Complex System’ (2008) 24(4) *Georgia State University Law Review*. For an application of the complexity theory in relation to administrative law, see, e.g.: J. B Ruhl, ‘Complexity Theory as a Paradigm for the Dynamical Law-and-Society System: A Wake Up Call for Legal Reductionism and the Modern Administrative State’ (1996) 45(5) *Duke Law Journal*.

systems approaches (e.g., institutional complementarities, complex systems theory, and general systems theory) in order to generate new insights about specific legal problems.¹⁸ This variant of legal scholarship is of exploratory nature; it explores the insights of systems thinking and checks whether any of these insights can illuminate the legal problem in hand. This variant of legal scholarship demonstrates that systems thinking can generate interesting insights about legal problems, but it lacks any coherent analytical framework for applying systemic analysis to legal institutions.¹⁹ Without well-defined steps or operationalization of the systemic approach, which is *adapted to the analysis of legal institutions*, we cannot move beyond this exploratory phase of systemic perspective over legal institutions into developing a systemic law and economics approach that replaces the reductive neoclassical approach.

Despite the apparent heterogeneity among these variants of systemic thinking in economics and legal scholarship, they share most of the five important characteristics of systemic approach outlined in the previous section. Despite these commonalities, there are some important differences. For example, in social systems theory, social systems such as law, economics, and politics are conceptualized as closed self-referential (i.e., autopoietic semi-autonomous) systems.²⁰ Social systems theory perspective comes close from the near decomposability hypothesis because the latter implies that sub-systems are semi-autonomous. By contrast, the sub-systems of the socio-economic reality are conceived to be open under

¹⁸ Representative scholarly works of this variant of systemic thinking in legal scholarship include, inter alia, the following: Lynn M LoPucki and George G Triantis, 'A Systems Approach to Comparison of U.S. and Canadian Reorganization of Financially Distressed Companies' (1994) 35(2) Harvard International Law Journal. Lynn M LoPucki and Elizabeth Warren, *Secured Credit: A Systems Approach* (7th edn, Aspen Publishing 2011). Troy A Paredes, 'Systems Approach to Corporate Governance Reform: Why Importing US Corporate Law Isn't the Answer' (2004) 45 William and Mary Law Review. Angus Corbett, 'A Systems Approach to Regulatory Excellence' (June, 2015). Paper Prepared for the Penn Program on Regulation's Best-in-Class Regulation Initiative <<https://www.law.upenn.edu/live/files/4713-corbett-ppr-bicregulatordiscussionpaper-062015pdf>>.

¹⁹ For an early attempt for developing a systemic analytical framework for analysis of legal institutions, see: Lynn M LoPucki, 'The Systems Approach to Law' (1997) 82 Cornell Law Review. The systems approach suggested by LoPucki is a reproduction of the famous primary insights of systemic thinking; some of these insights have been already outlined in the previous section. Still, the proposed systems approach is far from being an operationalized systemic analytical framework for analysis and design of legal institutions.

²⁰ Gunther Teubner, 'Autopoiesis in Law and Society: A Rejoinder to Blankenburg' (1984) 18(2) Law and Society Review 296–300.

complexity theory,²¹ although the agent-based models impose a form of closure of the system from its own environment, but these are modelling choices for simplification rather than an ontological position of complexity economics. These differences regarding the ontology of the socio-economic system have significant implications for identifying the unit of analysis of legal analysis and design; we will turn to discussing them below.

Most importantly, these systemic perspectives, with the exception of comparative capitalism, fail to focus on the analysis of the institutional network, its structure, types of interdependencies, and evolution. Network analysis in complexity economics focuses on the structure of the network of socio-economic agents and not of the institutions. The rising macro-prudential regulation of systemic risk research emphasizes the structure of the networks of financial institutions, with no attention whatsoever to the institutional network of financial regulations over which these financial institutions are interacting.²² Similarly, social system theory, although it does not use network analysis, emphasizes *communication* interlinkages, these interlinkages connect actors of various systems together. Further, social systems theory does not endorse methodological individualism; the actors may be collective such as courts and political parties.

In contrast, comparative capitalism by emphasizing institutional complementarities opens the door for understanding and analyzing institutions as a network. Still, such understanding and analysis is highly underdeveloped in comparative capitalism.

In sum, some variants of systemic approaches are gaining more acceptance in modern economic and legal research, however, they are definitely still the *minority* at the margin of both legal and economic research. These variants fail to provide a sufficient understanding or analysis of the institutional network, as the analytical concept of institutional network itself seems to be absent from these systemic research programs. These variants of systemic thinking, exhibit important commonalities drawing on which we can conceptualize and operationalize a systemic law and economics approach to legal institutions of capitalism.

²¹ John Foster, 'From Simplistic to Complex Systems in Economics' (2005) 29(6) Cambridge Journal of Economics 874–875. See also: Ervin Laszlo, *The Systems View of the World: A Holistic Vision for Our Time* (2nd edn, Hampton Press 1996) 30–32.

²² See, e.g., Andrew G Haldane and Robert M May, 'Systemic Risk in Banking Ecosystems' (2011) 469 Nature.

Similarly, systemic thinking has gained some foot in political economic studies. Comparative capitalism is the most salient example. In addition, political economists outside the comparative capitalism literature have relied on systemic thinking. In her analysis of global economy, Saskia Sassen argues that the observed brutalities manifested in the increase in the rates of crime, incarceration, suicide, displacement, out-migration, unemployment, youth unemployment, long term component of unemployment, absolute and relative poverty, income and wealth inequality, destruction of farming land and pollution of water, and erosion of both quality and coverage of public services of education and health care²³ are not unrelated phenomena. They are the outcomes of the underlying complex *systemic logic* of modern (neoliberal finance-led) capitalism.²⁴ This is a logic of socio-economic exclusion from the socio-economic space instead of the systemic logic of inclusion of the pre-neoliberal Keynesian/Fordist model of capitalism.²⁵ This *systemic logic* cannot be captured by reference to some powerful actors in the system such as some developed countries or multinational corporations as none of them controls the system. The systemic conditions that produced these brutalities are rather the product of complex interactions among the individuals, finance, knowledge (such as the knowledge required for financial engineering and its legal institutionalization), technologies, organizations, and legal institutions.²⁶ For example, the interplay of the surge of financial engineering, large legal and accounting firms, self-interested and powerful financial sector, and legal institutions has transformed the logic of the mortgage segment of the financial system from expanding credit sensibly to enable individuals to finance the ownership of their homes into the logic of creating/originating as much as possible mortgage *contracts* that can function as assets backing the securitization business.²⁷

Despite the fact that a systemic perspective informs Sassen's analysis, her analysis lacks any analytical systemic framework that can consistently bring together the components of the socio-economic system, which she alluded to such as knowledge, technology, land, water, natural resources, formal and informal institutions, individuals, organizations, states, power,

²³ For a discussion of most of these brutal outcomes, see: Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy* (The Belknap Press of Harvard University Press 2014) 16–75.

²⁴ *ibid* 77–78.

²⁵ *ibid* 211–214.

²⁶ *ibid* 77–78.

²⁷ *ibid* 126.

communications, and meaning. Given the very different nature of these components of the socio-economic system, this failure is largely shared across the legal, economic, and sociological studies that have used systemic thinking. Below, I will not attempt to overcome this hurdle. Instead, I develop an analytical framework for analysis and design of *legal institutions*, and thus *reduce* the capitalist system into institutions and individuals/actors; the latter stands for individuals, organizations, and states. The framework needs to be refined and expanded so that the other components of the system can find their place as subject to systemic analysis. However, prior to increasing the complexity of the systemic analysis by including these heterogeneous elements of the system, much research has to be extended for analyzing capitalism as a two-level network of individuals and institutions.

4. The Embedded Two-level Institutional and Agents Network as a Systemic Unit of Legal Analysis and Design: Comparison with Units of Analysis in Neoclassical and New Institutional Economics

Given that institutional interdependence is a well-established idea in institutionalist schools of thought in economics and sociology, the previous chapter argued for perceiving the institutional network and not specific institutions as the *unit of regulatory analysis and design*. The proposition that the two-level individuals' and institutional networks should be the unit of regulatory analysis and design is the most important building block in the operationalization of the systemic approach. Due to its utmost importance, this section delves deeper into this building block by comparing it with the units of analysis in neoclassical and new institutional economics, on one hand, and linking it to the rise of networks as units of analysis in some streams of thought in legal and economic scholarship, on the other hand.

Given its improper reductionist institutional individualism, neoclassical law and economics takes *the rational individual* as their unit of analysis/observation. Building deductively from this individual, neoclassical law and economics analyzes the effects of a specific institution or a few number of institutions on the choices of that rational individual, holding other institutions constant. These are typically a comparative statics models; in the baseline model, the individuals' behavior are modelled assuming the institution subject to analysis does not exist. Then, this institution is introduced in the model typically as a

constraint or incentive to which the individual responds rationally given her preferences. This is the reductionist and simplistic individual-institution interaction framework of modern neoclassical economics. Game theory enabled neoclassical scholars to include strategic interaction among a few number of representative rational agents into the modeling; it has also enabled them to include more than one institution for analysis.²⁸ Still, in this framework, the *rational individual* is the main *unit of analysis/observation*, while institutions are rules of the game that function as external constraints.

Old institutional economics of John Commons and new institutional economics developed mainly by Coase and Williamson take the *transaction* as their *unit of analysis*.²⁹ In his seminal paper on the nature of the firm, Coase argued that firms emerge because they govern some *transactions* more *efficiently* in comparison to the market contractual governance of these transactions.³⁰ Efficiency is defined in terms of reducing *transaction costs*; these are the costs of negotiating, consummation, monitoring implementation and enforcement of the transaction.³¹ Williamson pushed this Coasian insight further by arguing, convincingly, that transaction costs associated with governance structures of any transaction, i.e., their efficiency, depend on the *attributes* of this transaction.³² He classified possible governance structures into hierarchies, contracts, hybrids, bureaucracy, and regulation; then, he conceptualized the attributes of the transaction to include its time-dimension (long vs. short term), the degree of uncertainty and complexity of the transaction, the degree of asset specificity and frequency of the transaction.³³ Given a boundedly rational individual, we can compare the efficiency of governance structures according to the characteristics of the

²⁸ For a defense and an example of game theoretical analysis of legal institutions, see: Martin van Hees, *Legal Reductionism and Freedom* (Kluwer Academic Publishers 2000) 45–83.

²⁹ John R Commons, ‘Law and Economics’ (1924-1925) 34 *Yale Law Journal* 374–375. Oliver E Williamson, ‘The New Institutional Economics: Taking Stock, Looking Ahead’ (2000) 38(3) *Journal of Economic Literature* 599.

³⁰ R. H Coase, ‘The Nature of the Firm’ (1937) 4(16) *Econometrica* 390–393.

³¹ *ibid* 390–391.

³² Oliver E Williamson, ‘The Theory of the Firm as Governance Structure: From Choice to Contract’ (2002) 16(3) *The Journal of Economic Perspectives* 175–176. Oliver E Williamson, ‘Comparative Economic Organization: The Analysis of Discrete Structural Alternatives’ (1991) 36(2) *Administrative Science Quarterly* 270–282.

³³ Williamson, ‘The Theory of the Firm as Governance Structure: From Choice to Contract’ (n 32) 175–176. Williamson, ‘Comparative Economic Organization: The Analysis of Discrete Structural Alternatives’ (n 32) 270–282.

transaction; this is the crux of the method of comparative organizational analysis of new institutional economics.³⁴

If we invoke the actors' network and the institutional network constituting the two levels of capitalism, we can now locate the *transaction as unit of analysis* in this two-level network. Transactions are *links* connecting the individuals who are the parties to these transactions in a sub-network of the individuals' network. Governance structures (contracts (market exchanges), hierarchy (the firm), hybrids, or bureaucracy) constitute *the sub-institutional network* that governs this agents' sub-network. Consider the famous 'make or buy' problem that each firm confronts; the firm should choose to make the product or to buy it on the market.³⁵ The "make transaction" is a transaction among the stakeholders of the firm: its managers, employees, shareholders, creditors and suppliers. The "buy transaction" is a transaction among the firm and the producer of the product. The make transaction can thus be represented by links connecting the stakeholders of the firm and the buy transaction can be represented by the link between the firm and the producer of the product. The firm is the governance structure of the make transaction; it can be represented by a sub-network of the institutional network that represents the legal and non-legal institutions constitutive of the firm as a governance structure. The nodes of this institutional network would include, inter alia, the limited liability institution, the firm's legal personality institution, the power of hierarchy (i.e., the authority to give orders),³⁶ and the power to allocate resources internally.³⁷ Similarly, the contract is the governance structure of the buy transaction. The terms of the specific contract governing the buy transaction and the legal institutions of contract law applicable to that specific transaction represent the institutional network governing the buy transaction and structuring the relations among its parties in the individuals' network. In a sense, comparative organizational analysis is nothing but *a comparison of the efficiency of the sub-institutional network constitutive of the firm governing the make transaction to that representing the contract governing the buy transaction*. However, this is a sophisticated comparison to

³⁴ For an overview comparative organizational analysis, see, *ibid*.

³⁵ Coase (n 30), 393–394. Williamson, 'The Theory of the Firm as Governance Structure: From Choice to Contract' (n 32) 178–179.

³⁶ Coase (n 30), 387–389. *ibid* 391.

³⁷ *ibid* 387–389.

undertake as we are comparing *the two-level networks of the buy transaction with the two-level network of the make transaction*.

The analytical framework of comparative organizational analysis developed by Williamson succeeds in comparing the efficiency of market exchanges as a governance structure of the buy transaction and the firm as a governance structure of the make transaction. However, the analytical framework of comparative organizational analysis has done so brilliantly, but at *significant costs of simplification/reductionism*. The framework of the two-level networks can reveal this *reductionism*. First, in comparative organizational analysis, the institutional networks that represent each governance structure are idealized and homogeneous; the terms of purchase contracts that represent the institutional network of the buy transaction are assumed to be the same across all purchase contracts. Similarly, the institutional network that represents the institutions of the firm is assumed to be the same across all firm; for example, a firm in India is no different from a firm in Germany. The differences in organizational culture and legal norms of corporate law are assumed away although they are important institutions in the institutional network that represents the firm. Accordingly, all firms are assumed to have the same degree of each of these attributes (e.g., intensity of incentives, administrative control, and the legal regime of the governance structure).³⁸ In short, comparative organizational analysis assumes away the heterogeneity of the institutional networks that represent each governance structures across time and space and thus provides a universalistic instead of a contextual analysis of governance structures. Further, as shall be discussed in detail in chapter 8, comparative organizational analysis of governance structures reduces these structures into incentive structures. The firm as a two-level institutional and stakeholders network is reduced into a system of incentives; the information and knowledge structures of the firm, important structural facets of any complex system as already highlighted in the section on the outline of systems thinking above, are overlooked.³⁹ Similarly, the incentive-compatibility effects of contracts and hybrids as governance structures are analyzed, while their effects on the knowledge structure of agents' networks are ignored. Moreover, in comparative organizational analysis, the task is to assign

³⁸ Williamson, 'The Theory of the Firm as Governance Structure: From Choice to Contract' (n 32) 180.

³⁹ See sections 4.1, 4.2, and 4.3 on the transaction cost theory of the firm and knowledge-based theories of the firm in chapter 8 and see the references cited therein.

the transaction (e.g., buy or make transaction in our example) to the governance structure that would facilitate this transaction; the alignment is made in light of the attributes of both the transaction and the governance structure. The attributes of the governance structure (i.e., the intensity of incentives, administrative control, and the legal regime of the governance structure) combines mistakenly two different aspects of the two-level institutional and agents network into one category. The attribute “legal regime of the governance structure” is part of the institutions of the institutional network of the governance structure, while the other two attributes, the intensity of incentives and administrative control, reflect the systemic (aggregate) effects of this institutional network on the agents’ incentives and interaction. More importantly, these effects are assumed to be systemic/aggregate effects of the governance structure, but the interdependencies (such as the complementarities) among the institutions of the institutional network of each of these governance structures that give rise to these systemic effects are not analyzed. In other words, interdependencies in the institutional network are *reduced* away. They are introduced indirectly by assuming that these institutional networks give rise to (systemic) attributes/effects of the governance structure.

Moreover, the efficiency of these governance structures would depend on the institutional network in which these sub-institutional networks are embedded. Consider the degree of trust in the economy. If the degree of impersonal generalized trust is high, the costs associated with market transactions would decline. Similarly, the degree of uncertainty of the transaction is a function of the larger institutional network of the economy. Comparative organizational analysis avoids this complexity by implicitly assuming an idealized large institutional network so that such comparisons can be made without investigating this network.

This reductionist approach to the institutional network that represents compared governance structures extends to the agents’ network. Comparative organizational analysis also assumes away heterogeneity among the agents in the agents’ network. All agents are assumed to be boundedly rational and opportunistic; as shall be argued in chapter 8, this reductionist assumption has a negative implications for design of legal institutions of corporate governance. Further, the relations among the stakeholders of the firm are also idealized; the employer is assumed to have a discretionary power over the employee in the firm,⁴⁰ for example. Although this is correct, this is a significant reduction of the rich and

⁴⁰ Coase (n 30), 387–389.

contextual relations among the stakeholders of the firm. Firms are not homogeneous entities; the relations among the stakeholders of the firm and the relations among each group of stakeholders (e.g., the employees) are structured differently from one firm to another across national economies, and within the same national economy. In other words, in comparative organizational analysis, the structure of the agents' network is idealized and much of the heterogeneity and complexity of these relations among the agents are assumed away.

Without these strong and implicit forms of reductionism, comparative organizational analysis would require the sophisticated *contextualized* comparison of *the two-level networks of the buy transaction with the two-level network of the make transaction*. This shows that comparative organizational analysis of new institutional economics that takes the transaction as its unit of analysis has enabled us to make a *reductionist*, but significant, comparison between these two-level networks. Systemic law and economics requires complementing the transaction as *unit of analysis* with the *two-level networks* to be able to overcome the *reductionist limitations* of comparative organizational analysis.

Overcoming the reductionism of comparative organizational analysis by taking the two-level network of governance structures as our units of analysis and comparison has significant legal implications. As shall be discussed in length in chapter 8, if we take into account the heterogeneity of agents instead of the reductionist universal assumption of opportunism and take into account the knowledge structure of the governance structures such as the firm in addition to its incentive structures, then, we will recommend a different design of corporate governance institutions.⁴¹

⁴¹ See sections 4.1 and 4.3 on the transaction cost theory of the firm and knowledge-based theories of the firm in chapter 8 and see the references cited therein. Interestingly, as will be clear in chapter 8, by using the integrated approach, these reductionist aspects of the transaction cost theory of the firm has been overcome. This shows that the integrated approach allows us to overcome many reductionist aspects of the neoclassical analysis of legal institutions because it integrates some valid insights of non-neoclassical perspectives that shed light on crucial aspects of the two-level network of the economic system, which have been *reduced away* in the neoclassical perspective. For example, the knowledge-based theories of the firm brings to the fore learning and knowledge structure of the firm, an important structural aspect of any system, and thus eliminates the neoclassical-new institutional reductionism of the structure of knowledge of the agents' network. This demonstrates the complementarity of the integrated and systemic perspectives. The next chapter will demonstrate further this complementarity between the integrated and systemic dimensions of the integrated and systemic approach.

In short, both the rational individual in neoclassical economics and the transaction in new institutional economics are *reductive* units of analysis; they do not take into account the richness of institutional economic reality. The two-level network is a general/systemic unit of legal analysis and design that locates the individual and transaction in their respective places in the two-level network and provides a systemic unit of institutional analysis that can then be analyzed using systemic approaches.

Some legal scholars and economists have been tinkering with networks as units of analysis. For example, economists, particularly in complexity economics and financial economics, advocate *agents' networks as units of analysis*.⁴² Similarly, following a sociological perspective, Gunther Teubner argued for considering some tripartite contractual relations to be networks and argued that in addition to the legal concepts of firms and contracts, a third category for contractual networks should be created.⁴³ He argues that some interrelated contracts (i.e., web of contracts) that he considers to be *networks* needs a regulatory framework distinct from the legal framework of both contracts and firms.⁴⁴ One of the major arguments against his proposal has been that these networks of contracts are nothing but *hybrids*; they include elements of market contractual relations and elements of hierarchy as they include a central coordinator.⁴⁵ Hybrids as governance structures of transactions have been an efficient market response to the characteristics of these transactions; hence, there is no convincing reason suggesting that the regulation of these hybrids would be welfare enhancing.⁴⁶

We can locate Teubner's analysis in the two-level network as our unit of analysis. As already mentioned, he considers that some interlinked relations between more than two individuals as constitutive of an *economic unit* with a collective purpose, which he

⁴² J. D Farmer and others, 'A Complex Systems Approach to Constructing Better Models for Managing Financial Markets and the Economy' (2012) 214 *The European Physical Journal Special Topics* 297–298. *ibid* 310–311. Foster (n 21), 884–886.

⁴³ Gunther Teubner, "'And if I by Beelzebub cast out Devils, ...': An Essay on Diabolics of Network Failure' (2014) 10(4) *German Law Journal* 119–120.

⁴⁴ *ibid* 123.

⁴⁵ David Campbell, 'Luhmann without Tears: Complex Economic Regulation and the Erosion of Market Sphere' (2013) 33(1) *Legal Studies* 169–174.

⁴⁶ *ibid*.

characterizes as a network.⁴⁷ Obviously, what he perceives as a network is just a sub-network of the individuals' network. He then argues that the current contractual governance structure of this network is inadequate,⁴⁸ and argued for regulation of these networks that now have become a new legal concept that needs a new legal treatment.⁴⁹ Similarly, his proposal is nothing but a proposal for replacing the sub-institutional network of contract law with that of regulation. Most importantly, he perceives that sub-network of the individuals' network to represent *an economic unity*. This implies, in the proposed analytical framework of the two-level network, that he saw the structure of this network and the relations/links among the individuals consisting the nodes of this network as different from how they have been already perceived by traditional legal scholarship. It is no coincidence that his critics challenged his conceptualization of the sub-individuals' network and his proposal to change its governance structure (underlying sub-institutional network) from contract law to a legal regulation that specifically constructed for networked relations.⁵⁰

More generally, any regulatory problem, whether economic or non-economic, can be located and formulated in terms of the two-level network; legal scholar needs to locate the institutional network in which the institutions subject to analysis are embedded and the agents' network that is governed by this institutional network. Once she does so; she can use the analytical framework of systemic law and economics developed in the third proposition of the systemic approach below for tackling the regulatory problem. Williamson has argued that transaction cost economics (i.e., comparative organizational analysis) can be applied to any problem that can be formulated as a contractual problem.⁵¹ The scope of systemic law and economics is much broader; it can be applied to any regulatory problem whether it can be formulated as a contractual problem or not. Doubtless, if the problem can be formulated in contractual terms, the analytical framework of comparative organizational analysis would be very helpful despite its above shortcomings that can be overcome by invoking the analytical framework of the systemic perspective. In other words, systemic law and economics can

⁴⁷ Teubner, "‘And if I by Beelzebub cast out Devils, ...’: An Essay on Diabolics of Network Failure' (n 43) 119–120.

⁴⁸ *ibid* 117–119.

⁴⁹ For a very succinct outline of the law of networks that Teubner proposes, see: *ibid* 134–135.

⁵⁰ Campbell (n 45), 169–174. *ibid* 183–186.

⁵¹ Williamson, 'The New Institutional Economics: Taking Stock, Looking Ahead' (n 29) 608.

uncover the broader picture and thus guide our use of available analytical frameworks while being aware of their limitations.

Isabel Feichtner's research on transnational law of natural resources exploitation is a good example of a legal problem outside the traditional scope of economic regulations, which can be conceptualized in terms of the two-level network as unit of analysis. Feichtner endorses a *conflict* approach for analysis of natural resources exploitation; in this approach, resource distribution *conflicts* among the stakeholders of natural resources exploitation are the unit of analysis.⁵² In game theoretical perspective, conflicts can be modeled as *non-cooperative games*. However, the two-level network reveals a deeper understanding of conflicts among countries over natural resources; they represent *stable relations* among the agents, who happen to be countries in the context of natural resources exploitation, in the agents' network. In other words, conflictual relations represent a *structural property* of the system of natural resources exploitation. Given this agents' network, Feichtner's research can be characterized as the construction of the institutional sub-network that would govern this network of agents (countries). Interestingly, one of the motivation of her research program is to overcome the fragmentation of the legal norms that govern natural resources.⁵³ In terms of the two-level network, she seeks to transform the fragmented norms into a *coherent* institutional network. An interesting aspect of this scholarly research is that some of the legal institutions she proposes for resolving some of these conflicts are procedural; they do not regulate the conflict substantively, but they establish participatory procedural framework that the relevant actors should follow in order to resolve their conflicts.⁵⁴ This shows that the institutions in the institutional network can be of a procedural or a substantive nature.

⁵² In tracing the transnational legal regimes of natural resource exploitation, Feichtner conceptualizes the problem addressed and resolved by these regimes as a problem of "*resource distribution conflicts*" between the states and between the relevant stakeholders within the resource states. Isabel Feichtner, 'International (Investment) Law and Distribution Conflicts over Natural Resources' in Stephan W Schill, Christian J Tams and Rainer Hofmann (eds), *International Investment Law and Development: Bridging the Gap* (Edward Elgar Publishing 2015) 258–270. See also: Isabel Feichtner, 'Transnational Law of Natural Resource Exploitation: The Role of Law in Constituting, Transforming and Resolving Distribution Conflicts Over Extractive Resources' Unpublished Manuscript.

⁵³ *ibid.*

⁵⁴ Feichtner, 'International (Investment) Law and Distribution Conflicts over Natural Resources' (n 52) 282–284. See also: Feichtner, 'Transnational Law of Natural Resource Exploitation: The Role of Law in Constituting, Transforming and Resolving Distribution Conflicts Over Extractive Resources' (n 52).

In sum, rational utility maximizing individual and transaction are the units of analysis/observation of neoclassical and new institutional economics, respectively. Recently, legal scholars and economists have been introducing *networks* as unit of analysis/observation in their scholarship. Systemic law and economics welcomes this broadening of *the units of analysis*. Particularly, the units of observation of neoclassical and new institutional economics, though important, are insufficient for capturing the institutional interdependencies among the institutions of the institutional network. *Therefore, systemic law and economics takes the two-level sub-individuals network and its underlying/governing sub-institutional network as its unit of analysis.*

More importantly, the two-level network is not only a unit of analysis; it is also a unit of *design*. This is the most important dimension of this first proposition of systemic law and economics. Once we think of agents' and institutional networks as our unit of analysis, we would inquire how to *structure the institutional network* to attain the desired objectives of regulatory governance. Once we take institutional networks as our unit of analysis, we can no longer think of legal reform as piecemeal changes of specific institutions; it is a process of comparing plausible institutional networks and choosing the one that *reasonably* achieves our desired objectives; it is a process of *institutional network design*. The third proposition of systemic law and economics has thus to demonstrate how to *analyze* the two-level network and how to *design* the institutional network to attain that the two-level network that can reasonably achieve the desired objectives. Design requires its own systemic methods that are distinct from analysis. As will be discussed in the third proposition of the systemic approach, this is different from the neoclassical comparative statics perspective in which design is the outcome of analysis.

5. Bringing Capitalism Back in Legal Scholarship: Capitalism as Subject of Regulatory Governance

Mainstream law and economics scholars traditionally take markets or firms as their *subject of regulation*. The capitalist economic system is not treated, at least explicitly, as the system subject to regulatory design. Prior to the financial crisis, capitalism has become almost a non-existent term in neoclassical law and economics literature. The study of capitalism has been

fragmented across independent research areas such as contract law, corporate governance, banking regulation, capital markets regulation, competition law, and taxation.⁵⁵

How was regulatory governance of capitalism as a system, a significant and complex research question, ignored in neoclassical law and economics scholarship? Three interdependent and complementary reasons may justify the observed absence of the capitalist system as a subject to regulatory governance from law and economics scholarship. First, restriction of the objectives of economic regulations to achieving economic efficiency enables law and economics scholars to ignore the objectives and values that the capitalist economic system should seek to achieve and respect. This sole focus on efficiency gave rise to the analytical framework of market and organizational failures that dominate both analysis and design of legal institutions of capitalism.⁵⁶ Second, when the sole normative criterion of efficiency is coupled with the decomposability hypothesis of the institutional and agents' networks, law and economics scholars can focus on the analysis and design of a specific set of legal institutions and the affected agents by this set of institutions *in isolation* of the two-level institutional and agents' network in which these institutions and agents are embedded. The net result of a sole normative criterion and decomposability hypothesis is a *misguided universalistic* analysis and design of legal institutions, which is grounded in market and organizational failures correction that finds its basis in the general equilibrium ideal of perfectly competitive markets.

However, none of these justifications for fragmenting the tough and complex question of regulating capitalism into regulating corporate governance, product markets (through, for example, competition law), regulating labor markets, and regulating financial markets and institutions is valid. First, as shall be established in chapter 10, citizens desire that the capitalist

⁵⁵ In contrast to the law and economics literature, the research programs of regulatory studies and comparative capitalism have been emphasizing institutional aspects of *capitalism* as a subject of their analysis. As already mentioned in chapter 1 of this thesis, regulatory studies scholarship explores some aspects of the rise of regulatory governance of capitalism such as questions of regulatory instruments and legitimacy (see chapter 1 of this thesis and the references cited therein for a brief outline of regulatory studies scholarship). The comparative capitalism literature classifies and compares the different models of capitalism and the sources of their diversity (e.g., political and legal institutions, and culture). Still, these research agendas do not seek to design a normatively desirable institutional network (i.e., regulatory governance) of capitalism.

⁵⁶ For a detailed discussion of the neoclassical normative theory of economic regulations, see section 2 in chapter 9 and the references cited therein.

economic system achieves a multiplicity of objectives and respects numerous moral constraints. Given this numerous objectives and the interdependencies of the institutions of the institutional network of capitalism, designing allocatively efficient legal institutions using systemic perspective would be insufficient for satisfying the normative requirements of the desirable normative framework of capitalism; the challenge is to design an institutional network that achieves this multiplicity of objectives. To do so, we need to design institutions that complement each other regarding these objectives; a corporate governance system that maximizes shareholder value may not contribute to the desirable objectives of the institutional network of the German capitalist economy, for example. To design a German corporate governance system, we need to determine the desirable objectives of German capitalism, how the institutional network contributes to the attainment of these objectives, and the functions that corporate governance should assume in this institutional network.⁵⁷ As shall be discussed in length in chapter 10, this systemic perspective to the design of the institutions corporate governance would require a sophisticated process of allocation/assignment of objectives to institutional domains. In other words, we cannot design legal institutions without developing a normative framework for the capitalist economy, based on which we develop complementary normative framework for analysis and design of each institutional domain.⁵⁸

Not only the sole objective of economic efficiency for legal institutions of capitalism is untenable, but also the decomposability hypothesis of the institutional and agents networks. As mentioned in the previous section, according to systemic law and economics, the embedded two-level institutional and agents (sub-)network is the unit of institutional analysis and design. More precisely, as already discussed in the previous chapter, the unit of analysis includes the least non-decomposable agents' network and the associated least non-decomposable institutional network that normally turns out to be quiet broad. As already mentioned in the previous chapter, each capitalist economy has an idiosyncratic institutional and agents networks. The minimum non-decomposable agents' network in a capitalist

⁵⁷ From a systemic perspective, this is an instance of what Ackoff calls 'the environmentalization problem'. This problem refers to the degree of the effectiveness of the system (e.g., corporate governance) in achieving the objectives of the larger system in which this system is embedded, which is capitalism in our case. Russell L Ackoff, 'The Systems Revolution' (1974) 7(6) Long Range Planning 14–15.

⁵⁸ Chapter 10 develops an integrated and systemic normative framework for economic regulations, where these questions are discussed in detail.

economy may be decomposable in another system. For example, horizontal and vertical inter-firm relations and the main bank system in post-war Japanese economy are essential for understanding the resources, competences, and capabilities of the Japanese firm.⁵⁹ In contrast, the inter-firm relations (and to a lesser extent firm-banking relations) were not essential to post-war capabilities formation and growth of (the vertically integrated) American firms.⁶⁰ Consequently, the number and identity of agents who strategically interact with each other are larger than their number in the American agents' network. Similarly, the interdependencies among the institutions of these capitalist economies are starkly different. Moreover, the desirable normative objectives of governance of each capitalist economy, which respond to the needs and preferences of their people, are also different.

Accordingly, given the multiplicity of objectives of economic regulations and the non-decomposability of the institutional network, the universalistic neoclassical analysis and design of legal institutions cannot justify the decomposition of the analysis and design of legal institutions. Institutional networks designed according to this reductionist approach would underperform alternative institutional networks designed according to the systemic approach. As already argued in the previous chapter, this would still be the case even if we assume allocative efficiency to be the sole desirable normative objective for legal institutions of capitalism.

Given the flawed reasons that might have justified ignoring regulating capitalism as system in law and economics scholarship, systemic law and economics emphasizes that for regulating firms and product, labor and financial markets, we need to start with the tough question of regulating capitalism. The regulation of these sub-systems of capitalism hinges upon *important regulatory questions* that relate to regulating capitalism. They include, for example, the following. What should be the normative framework/objectives for a capitalist economy? What functions/objectives should the institutional network of capitalism play to contribute to the attainment of these objectives? What can the institutional network achieve,

⁵⁹ For a discussion of the resources, competences and capabilities of the firm in the knowledge-based theories of the firm, see section 4.3 on knowledge-based theories of the firm in chapter 8 and see the references cited therein. For a discussion of the Japanese inter-firm relations, see section 2.2.1 on horizontal inter-firm relations in post-war Japan in chapter 11 and see the references cited therein.

⁶⁰ David J Teece, 'Competition, Cooperation, and Innovation: Organizational Arrangements for Regimes of Rapid Technological Progress' (1992) 18 *Journal of Economic Behavior and Organization* 7.

i.e., what are the limits of the legal system of the capitalist economy?⁶¹ What are the alternative possible designs of the institutional network of capitalism? Which design of these designs can reasonably achieve the assigned objectives to the institutional network of capitalism? In short, the normative theory of capitalism as a system and the institutional network (i.e., the legal system) of capitalism becomes central areas of investigation in systemic law and economics. The systemic approach brings capitalism back in to law and economics scholarship on economic regulations.

So far, we have established two propositions/building blocks for operationalizing systemic law and economics. The first is that the two-level institutional and agents network is the central unit of analysis and design; the rational individual and the transaction as units of analysis are special cases of the general unit of analysis that is the two-level network. The second is that to analyze and design two-level sub-networks of the two-level network of capitalism, we need to address difficult questions regarding the regulation of capitalist economy as a system. For example, we need to determine the normative framework of capitalism to derive the normative theory of economic regulations; this task shall be undertaken in chapter 10 by using the integrated and systemic approach.

Still, these building blocks are necessary, but insufficient for designing reasonable and consistent institutional networks; we still need to develop a toolkit of systemic institutional design concepts and principles. In order to develop this toolkit, we need to understand the forms of interdependencies among legal institutions (the third building block in operationalizing the systemic approach) and develop a well-defined process for consistency analysis of institutional networks (the fourth building block). The following two section undertake this task.

6. Some Important Forms of Interdependencies among Legal Institutions Forming the Institutional Network: Compatibility, Consistency, Hierarchy, and Complementarity

⁶¹ We refer to the answer of this question by ‘institutional capacities’ of the institutional network. The concept of “institutional capacities” will be developed and conceptualized in chapter 10.

Boyer suggests that interdependence of institutions could take many forms that include, inter alia, compatibility, consistency/coherence, complementarity, super-modularity, hierarchy, and isomorphism.⁶² We can add also simple addition and contradiction into this list. In the previous chapter, we have already discussed four forms of these interdependencies, namely, simple addition, complementarity, substitution, and contradiction. Here, we will focus on some of the remaining forms of institutional interdependencies, namely, *compatibility and consistency/coherence, and hierarchy*.

According to Boyer, compatibility of the institutions refers to their co-existence; if we observe that some institutions coexist in an institutional network, then, they are compatible.⁶³ This conceptualization of compatibility, however, is of little analytical value for legal scholars. I suggest a modified conceptualization of institutional compatibility, according to which incompatible institutions are those that if they coexist, the socio-economic sub-system governed by these institutions would *run into crisis and break down in the short, medium or the long run* because of the perverse incentives structure created by these incompatible institutions. This conceptualization of institutional compatibility is derived from the conceptualization of the parts of systems in the systemic perspective, according to which parts are crucial elements of the system, without which the system breaks down.⁶⁴ For instance, the public property rights and planning institutions of the communist regime of the former Soviet Union are incompatible institutions; they have coexisted for decades, but they have created an incentives structure for individuals that pushed the economic system into crisis. Similarly, the institutions of the institutional network for a free banking system that has no deposit insurance and no capital regulation would be incompatible because this institutional network would not

⁶² Robert Boyer, 'Coherence, Diversity, and the Evolution of Capitalisms—The Institutional Complementarity Hypothesis' (2005) 2(1) *Evolutionary and Institutional Economics Review* 47–52.

⁶³ *ibid* 49. Amable provides a political economic conceptualization of institutional compatibility, according to which two institutions x and y are compatible 'if their coexistence does not set in motion a process of institutional change, in the sense that some political forces would like to keep x and keep y . Therefore, institutions x and y are not compatible if there is no stable ... equilibrium including both x and y i.e., no stable socio-political compromise.' Bruno Amable, 'Complementarity, Hierarchy, Compatibility, Coherence' (2005) 3(2) *Socio-Economic Review* 372, in: Colin Crouch and others, 'Dialogue on 'Institutional Complementarity and Political Economy'' (2005) 3(2) *Socio-Economic Review*.

⁶⁴ This conceptualization of the parts of the system is crucial for the determination of system's boundary, see the discussion of the boundary of institutional networks (i.e., legal systems) in chapter 8 and the references cited therein.

remedy the inherent instability of the financial system, or if we assume its inherent stability, this network would create the incentives structure that would destabilize the system. According to the proposed conceptualization of incompatibility, compatible institutions are not necessarily efficient in achieving their desired objective. Compatible institutions may create perverse and inconsistent incentives structures and be highly inefficient such as the institutions of the capitalist system in most developing countries. Still, as long as the system does not run into *crisis*, these institutions are *compatible*. The *crisis criterion* is the proposed test for analysis of compatibility of the institutions forming the institutional network. Once we are confronted with a crisis such as the financial crisis, sovereign debt crisis in Europe, or an ecological crisis, we can then suspect that the institutional network underlying these sub-systems are incompatible; they cannot either correct the inherent instability of the sub-systems they govern or they create incentives structures that generate such instability.

In addition to compatibility, consistency is another important form of institutional interdependence. Consistency as a form of institutional interdependence is distinct from the consistency of legal institutions discussed in legal theory. The term “legal system” conveys the understanding that legal norms composing this system are necessarily coherent.⁶⁵ Indeed, legal scholars have been concerned with both consistency and coherence of the legal system; however, they adopt *an internal* understanding of consistency and coherence. Legal norms are consistent with reference to *each other*. This is a self-referential internal understanding of consistency, according to which court decisions should interpret legal norms in a way that

⁶⁵ Neil MacCormick, *Legal Reasoning and Legal Theory* (Oxford University Press 1994) 106.

ensure their *consistency*,⁶⁶ and *coherence*.⁶⁷ To be consistent, legal norms constitutive of the legal system should not contradict each other. The legal system is inherently consistent if the prescriptions of the legal norms of this system regarding the *same* legal problem do not collide. If a specific action is legal under a specific legal norm and illegal under another, the legal system encompassing these norms is *internally inconsistent*. For example, transnational organizations are producing legal norms that collide with both the norms of international law and that of national legal orders.⁶⁸ Global law that encompasses the legal norms belonging to the national, international, and transnational legal orders is thus internally fragmented and inconsistent.⁶⁹ In the words of Gunther Teubner and Peter Korth,

what is characteristic for post-modern interlegality is not only the collision of grown local customary laws with legal acts of parliamentary provenance, but also a new confusedness in the legal in-between-worlds of global society that has to live with contradictory individual case decisions, with colliding settings of rules governing the same social field and with masses of laws that do not give rise to a single ‘ultimate rule of recognition’. Instead of a generalisation of expectations by means of an authoritative final decision, unity of legal texts and homogeneity of methods of cognition, the post-national constellation is characterized by the juxtaposition of a number of structurally closed legal systems, all of which principally claim to be applied pre-eminently within their respective

⁶⁶ MacCormick explains this point articulately,

‘The idea of a ‘consistent’ body of norms I use in a strict sense: however desirable on consequentialist grounds a given ruling might be, it may not be adopted if it is contradictory of some valid and binding rule of the system. Of course, an ostensibly contradictory precedent may be ‘explained’ and ‘distinguished’ to avoid such a contradiction, or an ostensibly conflicting statute interpreted in a way which avoids such contradiction. But if such devices for reconciliation fail, the requirement of consistency would require rejection of an otherwise attractive ruling on the ground of its irresolvable conflict with (contradiction of) established valid rules.’
ibid.

⁶⁷ *ibid* 120–127.

⁶⁸ Gunther Teubner and Peter Korth, ‘Two Kinds of Legal Pluralism: Collision of Transnational Regimes in the Double Fragmentation of World Society’ in Margaret Young (ed), *Regime Interaction in International Law: Facing Fragmentation* (Oxford University Press 2009) 25–26.

⁶⁹ *ibid* 26–30.

realms. Neither a hierarchical construction of the law nor a *Grundnorm* nor a common point of final reference can hold these heterarchical systems together.⁷⁰

Here, the collision (i.e., the inconsistency) of legal norms takes the form of collision of legal solutions that each of these norms provides to the same legal problem. To resolve this collision, legal scholars identify a sensible conflict of law rule that determines the applicable legal norm.⁷¹

Internally consistent legal systems (i.e., institutional networks) may not be internally coherent. For the legal system to be internally coherent, it should be possible to subsume the legal norms of this system under *general legal principles*⁷² that ‘express justifying and explanatory values of the [legal] system’.⁷³ These values are mainly derived from *inside* the legal system itself.⁷⁴

Legal scholars, however, have not engaged seriously with *external consistency/coherence* of the legal system, which have been the focus of institutional economists of comparative capitalism literature. External consistency refers to the extent to which the legal norms that are internally consistent and coherent have *coherent effects on the desired outcome*. External consistency assumes that there is a *normative point of reference* for assessing the coherence of the legal system that lies *outside* this system. This point of reference could be justice, economic efficiency, or any other normative criterion. Internal consistency and internal coherence are necessary but insufficient conditions for external consistency/external coherence;⁷⁵ internally inconsistent or incoherent norms are necessarily externally inconsistent, but internally consistent and coherent institutions can still be externally inconsistent. This explains why national legal systems that may be considered, in principle, to

⁷⁰ *ibid* 29.

⁷¹ *ibid* 35.

⁷² McCormick (n 65) 152–153.

⁷³ *ibid* 153.

⁷⁴ *ibid*. On this internal view of the law, see also: Kristoffel Grechenig and Martin Gelter, ‘The Transatlantic Divergence in Legal Thought: American Law and Economics vs. German Doctrinalism’ (2007) 30(1) *Hastings International and Comparative Law Review* 354–355, and see the references cited therein.

⁷⁵ Unlike *internal consistency* and *internal coherence*, which are conceptually distinct in legal theory, I use the terminology “external consistency” and “external coherence” as synonyms. However, I will stick as much as possible to the term “external consistency” throughout the thesis in order not to cause any confusion to the reader.

be internally consistent may be populated with numerous instances of external inconsistencies, some of which are identified and discussed in chapter 11 of this thesis.

Consistency of the institutional network and homogeneity of the individuals in the individuals' network are distinct concepts: ensuring the consistency of the institutional network does not imply or require ensuring the *homogeneity* of the individuals in the agents' network. Indeed, the heterogeneity of the behavioral patterns of the individuals, their values, and their aspirations, although it may result in temporal inconsistencies in the institutional network, is required for the *resilience and adaptability* of the institutional network. Diversity and not homogeneity of the individuals in the legal system is required for resilience, adaptability and evolution of that system.

The systemic approach mandates the external consistency of institutional networks, but not the creation of *homogeneous* systems. Homogeneous systems suppress diversity to ensure that the behavior of every actor in the system contributes to the attainment of the democratically determined objectives of the system. To ensure this complementary and harmonious behaviors, actors need to be homogeneous, they should share the objectives of the system or at least they should be assigned some objectives, the achievement of which contributes to the attainment of the systemic objectives. One of the most insightful ideas of complex systemic thinking is that diversity enhances the adaptive capability and robustness of the systems to changes in their environment.⁷⁶ To ensure stability and adaptability of the system to changes in its environment, and to ensure that the system is not only adaptive but it has the ability to follow a desirable evolutionary path of its own, the system should be *intentionally infused with diversity*.⁷⁷ This diversity of perspectives would result in behaviors that would introduce some inconsistencies and paradoxes in the institutional network. These inconsistencies would bring in dialectical processes that would result in revising the objectives of the system or the means by which these objectives could be attained, leading to a *new*

⁷⁶ Scott E Page, *Diversity and Complexity* (Princeton University Press 2010) 148–166. *ibid* 202–214.

⁷⁷ I wish to thank a lot Dr. Mohamed Saafan for drawing my attention to the idea that systemic thinking does not aim to design *optimally* consistent systems in which all the individuals in the system are enlisted for contributing to the objectives of the system. Rather, it seeks to develop *sufficiently* consistent systems, while moderately infusing these systems with diversity that would bring in some inconsistencies and paradoxes and thus generate *dialectical processes* that ensure the *adaptability and desirable evolution* of the system.

equilibrium of a newly consistent institutional network. Diversity would result in *temporal institutional inconsistencies* that should not be only tolerated, but also welcomed by the systemic perspective because it enables the system to be contested and thus to benefit from the strengths of diversity as the latter would prevent the system from degeneration on one hand and ensure its adaptability and evolutionary capacities on the other hand. This could enable legal scholars to take evolutionary perspectives more seriously in analysis and design of legal institutions.

This is an abstract idea that appears to be counterintuitive. We can put this idea into application by investigating the role of judges in the legal system (i.e., institutional network) of capitalism. In chapter 1, I have taken the position that judges should not be *making* laws; they should confine themselves as much as possible to *enforcing* existing laws. When they face the problem of multiple plausible interpretations of existing legal rules, they should not invoke either the neoclassical or integrated and systemic approaches to determine which interpretation is more desirable. MacCormick has proposed that judges should be guided in their choice of the legal interpretations by the internal consistency and internal coherence of the legal system,⁷⁸ and the consequences of these alternative interpretations.⁷⁹ Some of these criteria are clearly internal to the legal system itself (such as consistency and coherence) and some are external (such as consequences). consequential grounds for choice of judicial interpretations somehow instrumentalize the judicial law partially as it implies that legal rules should be interpreted as to achieve specific objectives external to the legal system itself (e.g., fairness, convenience, or expediency).⁸⁰ The internal consistency and coherence requirements constrain this instrumentalization; judges are constrained in remaking the law by the internal consistency and internal coherence requirements.⁸¹ This framework for adjudication advanced by MacCormick largely reflects how courts in civil law and common law countries decide cases. Civil law judicial systems tend, however, to place more weight on internal consistency and coherence, whereas common law judges tend to place more weight on these external objectives, but still, both of them tend to balance these concerns.

⁷⁸ MacCormick (n 65) 120–127.

⁷⁹ *ibid* 104–106. *ibid* 129.

⁸⁰ For some illustrative English court decisions that make use of consequentialist arguments, see: *ibid* 140–150.

⁸¹ *ibid* 106–107.

In MacCormick's above framework for adjudication, consequences of alternative judicial rulings can include any sensible consequence such as justice, and economic concerns such as economic growth, or efficiency. However, from a *systemic* approach to the legal system, judges as actors of the legal system that governs capitalism are well suited for introducing some of the paradoxes and inconsistencies necessary for *adaptability and evolution* of this legal system.⁸² To do so, they should play the role of *moral agents of justice* in the legal system. When faced with a myriad of possible interpretations of legal norms, judges should not use economic consequences as criteria for choice among alternative interpretations of litigated legal rules. Rather, judges should be concerned mainly with delivering *justice* under the constraint of respecting the *internal consistency and coherence of the legal system and not causing grave practical inadequacies*. The latter constraints ensure that judges do not encroach over the law-making power of the parliament under the veil of delivering justice. The constraint of avoiding the interpretations that may cause grave inadequacies ensures that judges

⁸² The focus here is on actors of the system that can introduce irritations into the legal system after the stage of regulatory design of this system. Prior to design, some stakeholders and public-interest spirited third parties such as NGOs ensure that the normative objectives of regulations are largely reflective of the societal demands; they also ensure that designed legal institutions could be contested and thus put to further political deliberation. In this sense, they can act as institutional entrepreneurs for regulatory changes. However, much of their concerns should have been already incorporated in the legal institutions at the stage of their design. They have weak incentives for advocating institutional change, except for the changes they advocated that have not yet been incorporated in the legal system. Even for these changes, they may not be inclined to reopen a political debate over them if these legal institutions were designed through a socio-political compromise. In this sense, the legal system needs further actors that could initiate dialectics into the system. To do so, these actors should have a different cognitive perspective from other players in the system. By entrusting judges with balancing internal consistency and justice concerns under the constraint that the resulting interpretations are not excessively impractical, we ensure that judges would raise fairness-focused interpretations from time to another. Judges are well suited for this role given that they have been traditionally playing this role in civil law countries. This is how judges identify themselves; they apply law and deliver justice. Further, they gain valuable knowledge similar to that generated by the method of participant observation in anthropology; judges acquire knowledge of the regulated sphere that regulators, legal scholars and economists do not have. One important aspect of this knowledge is that the various contexts of the cases they adjudicate give them an understanding of aspects of injustices that armchair scholars may not be able to perceive. Judges can also perceive some common patterns of injustices repeated across different cases and thus gain a (subjective and inaccurate) sense of their frequency. Exaggeration of the extent of these capacities of judges should be avoided, however. The argument is not that judges have a perfect or sufficient capacity to engage with relevant fairness concerns of the cases they adjudicate. Rather, judges may be more sensitive to *some* fairness concerns than other actors may not perceive in the legal system. Despite being imperfect agents of justice, this sensitivity to fairness can enable judges to raise some valid fairness concerns from time to another. This is what exactly needed for irritating the system and generating dialectical processes.

do not deliver judgments that the common sense perceives to be *excessively* costly and impractical for the society to implement.

By focusing on procedural and substantive fairness concerns, judges may bring about judicial interpretations that are inconsistent with what a regulator, following either neoclassical or integrated and systemic perspective, would have preferred. Hence, these judicial interpretations would give rise to inconsistencies in the institutional network designed by the regulator on basis of the neoclassical or the integrated and systemic approach. Since these judicial interpretations would point to *fairness concerns* that legislative bodies need to consider, they would initiate public debates, dialectical processes, and deliberations over existing laws. These fairness concerns highlighted by the judiciary would then indicate that regulators, when used integrated and systemic law and economics, might have failed to put sufficient weight on these fairness considerations. Due to its normative flexibility as exemplified in chapter 9 of the thesis, the systemic approach can guide the reforms of legal institutions to consider these fairness concerns, while ensuring the consistency of the reformed institutional network.

In contrast to this systemic approach to adjudication, according to the neoclassical law and economics perspective, judges should attempt to maximize economic efficiency through their decision-making power.⁸³ From a systemic law and economics perspective, this is another example of the *reductionist simplistic* perspective of neoclassical law and economics. By taking economic efficiency as a normative standard, it attempts to enlist all the *institutions and individuals* of the two-level legal system, such as regulators and judges, to maximize such objective. As a result, they expect that the pieces of the legal system, i.e., regulatory laws and their judicial interpretations, to add up into an *efficient* legal system that maximizes economic efficiency.

In sum, only by ensuring that judges act as moral agents of justice, they can generate inconsistencies into the institutional network by raising procedural and substantive fairness concerns. Once they do so, they create a dialectical process within the society that would end up with regulatory changes that are more sensitive to the raised concerns. Entrusting judges

⁸³ For a defense of Kaldor-Hicks economic efficiency as a normative basis for adjudication, see: Richard A Posner, 'The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication' (1980) 8 Hofstra Law Review 492–497.

with the role of moral agents of justice introduces some of the necessary inconsistencies in the legal system of capitalism as required by the systemic perspective. This enables the legal system to generate endogenously societal deliberation and dialectical processes that initiate the desirable evolution of the legal system and assist in preventing the legal system of capitalism and capitalism itself from degeneration.

In short, from a systemic perspective, consistency of the institutional network does not mandate homogeneity of the agents in the agents' network. Agents should not be enlisted for the service of the objectives of the legal system; instead, legal institutions should infuse these agents with diversity to create a diversity locus of the legal system that generates dialectical and deliberation process that would prevent the system from degeneration and sustain its adaptive capacities. Doubtless, judges may not be sufficient for undertaking this diversity/contestation locus role of the legal system of capitalism so that we need to investigate how to infuse the system with a *sufficient* degree of diversity that ensures its adaptive capacity in the long term along with tolerating temporal institutional inconsistencies in this adaptive process. In parallel, this diversity should be balanced with the need for institutional consistency and the ability of the system to achieve its objectives in the short and medium term. .

So far, we have discussed the compatibility and consistency of institutional networks along with the relation between diversity of the individuals in the agents' network and the external consistency of the institutional network. Now, we need to examine other two important forms of institutional interdependencies: *hierarchy and complementarity*.

We relegate the discussion of institutional hierarchy to section 8 below where we develop the systemic institutional design concept called *institutional domain hierarchy*. With respect to institutional complementarities, we have already discussed institutional complementarity in the previous chapter in the relevant section on the interdependencies of institutions. Given this discussion and the importance of closed feedback structures for understanding the structure, dynamics, and evolution of systems, which is highlighted in section 2 on the outline of systemic thinking in this chapter, allow us to conceptualize institutional complementarity as *a circular causality or closed positive/reinforcing feedback loop relationship*.⁸⁴ The

⁸⁴ (Balancing and reinforcing) feedback loops connecting the variables of the system represent the structure of the system that determines its behavior over time (i.e., its dynamics) and its structural

equilibrium of the game played in each institutional domain reinforce and stabilizes the equilibrium of the game played in the neighboring institutional domain because the players when playing each game, they take the equilibrium of the other game as given, and by doing so, they reinforce the effects of this equilibrium on the game they are playing. For example, the Japanese stakeholder model of corporate governance system gives strong incentives to the management of the Japanese firms to cooperate instead of competing with each other, particularly in times of recessions, in order to stabilize profits.⁸⁵ The Japanese competition law facilitates and reinforces the incentives for cooperation.⁸⁶ By cooperating in the product market, the Japanese firms succeed in stabilizing their profits and reduce the risk of bankruptcy. New generations of Japanese management would then take the cooperative equilibrium in the product market *as given*; by doing so, each of them would find that non-cooperative behavior would be even more costly, while the institutionalized cooperation becomes more profitable. This would reinforce their choice of the cooperative strategy. However, as each firm becomes more inclined for more cooperation, institutionalized cooperation becomes more well-established and competition law in action becomes weaker, which gives even stronger incentives for cooperative strategy. Here, complementarity between stakeholder model of corporate governance and weak competition law is not *a static* relation. Instead, it is a dynamical reinforcing closed feedback loop; the cooperative strategy, which initially was a desirable corporate strategy due to the stakeholder governance of the firms, became reinforced and transformed to become the *sole* feasible strategy available for the management of the firm. In this process, the weak competition law becomes even weaker, while cooperation in the product market becomes more institutionalized.

So far, we have conceptualized and illustrated the differences among compatibility, consistency, hierarchy, and complementarity as some of the major types of interdependencies

evolution. Meadows (n 4) 89. Mella (n 4) 21–22. These feedback loops are among the major sources of the non-linearities of system's behavior; these nonlinearities in turn may change the structure of the system by shifting the dominance of a feedback loop in the system's structure over another. Meadows (n 4) 92–94. Therefore, understanding the structure, dynamics, and evolution of the system requires uncovering these feedback structures (e.g., institutional complementarities in relation to institutional networks).

⁸⁵ Ulrike Schaeede, *Cooperative Capitalism: Self-Regulation, Trade Associations, and the Antimonopoly Law in Japan* (Oxford University Press 2000) 266.

⁸⁶ See the relevant discussion of post-war Japanese competition law in chapters 8 and 11 and the references cited therein.

among the institutions, but we have not yet investigated the methods and analytical frameworks that can allow us to analyze these forms of institutional interdependencies.. Due to the conceptual differences among compatibility, consistency, and complementarity of the institutions of the institutional network, they may require distinct analytical frameworks for their analysis.⁸⁷ Due to time constraints, I will focus on developing an analytical framework for consistency analysis of the institutions of the institutional network, while leaving the development of analytical frameworks for compatibility and complementarity analysis of legal institutions for future research.

7. Operationalizing Consistency Analysis: A Four-Step Approach for Analysis of External Consistency of Institutional Networks/Legal Systems

In order to conduct consistency analysis of an institutional network, we ask a straightforward question: Whether the institutional domains (such as corporate governance and competition law) constituent of the institutional network governing the sub-system under analysis have *incoherent embedded* effects on a desired objective of the objectives of this institutional network (i.e., on *its assessment criteria*)? For example, suppose that the criterion of innovation capabilities of domestic firms is one of the assessment criteria of the institutional network subject to consistency analysis. If institutional domain increases the innovation capabilities of the firms, while the other reduces these capabilities, then, these institutional domains are *inconsistent*.

The researcher can conduct this consistency analysis by first *identifying the institutional domains* forming the institutional network that govern the sub-system subject to analysis. Then, the researcher assesses the effects of the institutional domain (say, corporate governance) as if it is isolated from other institutional domains. In other words, the researcher analyzes theoretically and empirically the *non-embedded* effects of each of the institutional domains of the institutional network on the assessment criterion.

Then, the researcher examines whether the non-embedded economic effects of the institutional domain (corporate governance in our example) will change when it is combined with the other institutional domains in the institutional network (e.g., competition law,

⁸⁷ Boyer (n 62), 66.

industrial policy, and banking regulation).⁸⁸ The researcher does not attempt to assess the effects of the institutional domain as if it is isolated from other institutional domains; rather, she seeks to analyze the effects of each institutional domain, while taking these neighboring institutional domains *as exogenous*.⁸⁹ For example, when analyzing the effects of the Japanese competition law on technology adoption by Japanese firms, the researcher investigates how the Japanese competition law affects technology adoption *given* the effects of the Japanese corporate governance, labor regulation, and other neighboring institutional domains on the incentives structure of the Japanese firms regarding technology adoption.

One example can demonstrate how the embedded effects of an institutional domain (e.g., stakeholder corporate governance) can change when embedded into different institutional networks; the first institutional network includes a relaxed regime of competition law that gives a space for inter-firm cooperation in the product market sphere, while the second network has a strict system of competition law. Suppose that the stakeholder model of corporate governance may provide the management with high incentives to cooperate with other firms in the market because the stakeholder governed firms puts high weight to long term stability and survival over profit maximization; due to the relaxed regime of competition law, this cooperation could be institutionalized easily through, *inter alia*, trade associations.⁹⁰ Suppose further that unlike the shareholder value model, the stakeholder model of corporate governance does not provide strong incentives for the management for technological upgrading. In this example, some of the leading firms in the market may have the incentives to ensure that trade associations require their members to meet high product standards to impede new entry into the market.⁹¹ These quality standards would incentivize the incumbent

⁸⁸ One of the major insights of the systemic perspective is the distinction between the *embedded and non-embedded* effects of the parts of the system. Ackoff explains this lucidly, ‘The properties and behavior of each part and the way they affect the whole [i.e., the system] depend on the properties and behavior of at least one other part in the set. Therefore, no part has an independent effect on the whole. For example, the effect that the heart [or corporate governance] has on the body [or the economic system] depends on the behavior of the lungs [or on the effects of competition law].’ Russell L Ackoff, ‘Science in the Systems Age: Beyond TE, OR, and MS’ (1973) 21(3) *Operations Research* 663.

⁸⁹ Aoki has also suggested this approach for analyzing *institutional complementarities*. Aoki argues that ‘an institution prevailing in one domain constitutes an *institutional environment* for agents in other domains, as far as those agents perceive it as exogenously given and beyond their control.’ Masahiko Aoki, *Toward a Comparative Institutional Analysis* (The MIT Press 2001) 225.

⁹⁰ Schaede has highlighted the important role of trade associations in institutionalizing cooperative relations among Japanese firms, Schaede (n 85) 43–56.

⁹¹ *ibid* 55–56.

firms to upgrade their technologies. In this example, the institutional domain of corporate governance results in two initial equilibriums: slack in adoption of technology and inter-firm cooperation in product markets. Due to the relaxed regime of competition, inter-firm cooperation in product market has been institutionalized via trade associations; this cooperation resulted in a feedback effect on the managerial incentives that required them to adopt latest technology and thus *reduce* their initial slack in adoption of technology. If this stakeholder model of corporate governance is combined with a strict regime of competition law, then, inter-firm cooperation could be hardly institutionalized and if institutionalized, trade association would find it legally risky to set high product standards to impede entry because this action falls under the prohibitions of a strict regime of competition law. Assume that this strict regime of competition law is strictly enforced and assume further that it does not impede inter-firm technological cooperation. In this case, to survive competition, these firms might focus on cooperating in upgrading their technologies and developing new technologies. A strict regime of competition law therefore seems to transform the initial slack in technological upgrading resulting from the stakeholder model of corporate governance into cooperative technological upgrading and innovation. In both institutional networks, the non-embedded effects of the stakeholder model on the assessment criterion of technology adoption (slack in technological upgrading) differ from their embedded effects on technology adoption. In the first institutional network, this slack is reduced, at least moderately, while in the second network, this slack is transformed into an efficient and active cooperation in technological transfer and development.

Consistency of the institutional network may not be normatively desirable. If the institutional domains have embedded positive effects on a desired assessment criterion (e.g., innovation), or at least one of them has a positive effect and the other has no or marginally negative effect, then, these institutional domains are *consistent*. This is a *normatively desirable* consistency. If these institutional domains, however, have consistent *negative* effects on the desired assessment criterion, then, the institutional network, though consistent, systemically *undermines* this assessment criterion. In this case, consistency is *normatively undesirable*. Normatively undesirable consistency systemically undermines the desired objective. Hence, normatively undesirable consistent networks may be worse than inconsistent institutional networks that include institutional domains that have positive effects

on the desired assessment criterion and institutional domains that have negative effects on this criterion.

In order to develop *formal* mathematical models for analysis of institutional consistency, the non-situated/non-embedded analysis of the effects of a specific institutional domain (say, corporate governance) on a specific assessment criterion (such as technology adoption) would be the *baseline model*. The economic literature on corporate governance, competition law, etc. is indeed replete with these baseline models.⁹² For analyzing the embedded effect of corporate governance on technology adoption, we then extend the baseline model by introducing the neighboring institutional domains as *exogenous* into the model. Some economic and legal studies investigate some of the embedded effects of economic regulations. For example, Aghion and his co-authors show that competition law has a positive effect on the firms' incentives for innovation if the firms suffer from high agency costs, and has a negative effect if the firms are maximizing long-term profits.⁹³ This implies that *the embedded effects of competition law on firm's innovation incentives* would depend on the effects of neighboring institutional domain (corporate governance in our example) on agency costs. Similarly, Amable and his co-authors show that the effects of product market regulation on joblessness rate depend on the institutional domain of labor; given a regulated labor market, product market deregulation has strong effect on reducing joblessness rates, and given a deregulated labor market, it has a weak effect.⁹⁴

In both informal and formal consistency analysis of institutional networks, the scholar relies on relevant empirical studies and *valid* insights of relevant theories and models in diverse economic schools of thought to ascertain the non-embedded and embedded effects of each of the institutional domains in the institutional network on the assessment criteria. In other words, *integrated* law and economics provides us with the informational basis for conducting consistency analysis, as it gives us rich information about the non-embedded and

⁹² For example, Aoki develops insightful game theoretical models for analysis of the effects of institutional domains in his important scholarly work: Aoki (n 89). See also the excellent survey of empirical studies and theoretical models on the effects of corporate governance on innovation: Filippo Belloc, 'Corporate Governance and Innovation: A Survey' (2012) 26(5) *Journal of Economic Surveys*.

⁹³ Ph. Aghion, M. Dewatripont and P. Rey, 'Corporate Governance, Competition Policy and Industrial Policy' (1997) 41(3-5) *European Economic Review* 803–804.

⁹⁴ Bruno Amable, Lilas Demmou and Donatella Gatti, 'The Effect of Employment Protection and Product Market Regulation on Labour Market Performance: Substitution or Complementarity' (2011) 43(4) *Applied Economics* 455.

embedded effects of the institutional domains consisting the institutional network subject to consistency analysis.

By using the insights of numerous theories and models and empirical studies on the non-embedded and embedded effects of the institutional domains, consistency analysis *connects* this large number of dispersed theories and models that provide us with these valid insights. By creating a link among these models and theories, consistency analysis overcomes one of the major methodological problems that modern economics confronts: the trade-off between rigor and relevance.⁹⁵ Given that realistic systemic models are excessively difficult to build, modern economics relies on simplified reductive models. These models function as *stories* that provide scholars with relevant insights about the phenomenon subject to investigation,⁹⁶ but they do not and cannot mirror reality.⁹⁷ By using the valid insights of these numerous models and theories, consistency analysis enables us to understand some *systemic features* about the institutional networks (i.e., their consistency) without creating a complex systemic realistic model of the institutional network.⁹⁸

In sum, we have developed a four-step process for consistency analysis of the institutional domains forming a specific institutional network. First, we identify the assessment criteria of the institutional network because consistency analysis of the institutional domains is conducted with reference to the embedded effects of these domains on each of these assessment criteria. Second, given the assessment criteria of the institutional network, the researcher, using *integrated* law and economics complemented by empirical evidence,

⁹⁵ Mark Blaug, 'The Trade-Off between Rigor and Relevance: Sraffian Economics as a Case in Point' (2009) 41(2) *History of Political Economy* 219–224.

⁹⁶ Ariel Rubinstein, 'Dilemma of an Economic Theorist' (2006) 64(4) *Econometrica* 881–882.

⁹⁷ Paul Pfleiderer, 'Chameleons: The Misuse of Theoretical Models in Finance and Economics' (March 2014). Stanford Business School Working Paper no. 3020, 14 <<https://www.gsb.stanford.edu/faculty-research/working-papers/chameleons-misuse-theoretical-models-finance-economics>>

⁹⁸ This idea of linking the valid insights of the reductive unrealistic models to gain a systemic understanding of real systems comes from a useful modeling technique of real systems, which is based on linking unrealistic (sub-)models of the sub-systems of the real system together to create a systemic model of this system. The process of linking the sub-models would involve modification of these sub-models because this process connects variables from each model with variables of the other model. In other words, we can systemically modify and link the unrealistic sub-models of the sub-systems of the system together to gain a systemic understanding of this system. Hartmut Bossel, *Systems and Models: Complexity, Dynamics, Evolution, Sustainability* (Books on Demand 2007) 10–11. For an example of connecting (modified) sub-models to create a systemic model, see: *ibid* 101–104.

assesses the non-embedded effects of each institutional domain on these assessment criteria as if neighboring institutional domains do not exist. Then, the researcher, using the *integrated* approach complemented by empirical evidence, assesses whether these non-embedded effects of the institutional domain would change, and if so how, if the effects of the neighboring institutional domains are taken *as exogenous*. Finally, given these embedded effects of each institutional domain on the assessment criteria, the researcher can assess whether these domains are consistent, i.e., whether they have similar (e.g., positive) effects on the assessment criterion. If they turn out to be consistent, the researcher assesses whether this consistency is normatively desirable. Given the assessment criteria of the institutional network of product markets developed in chapter 10, the consistency analysis of the post-war Japanese institutional network in chapter 11 follows closely these steps.

Consistent institutions are not necessarily *complementary*. Unlike complementarities analysis, consistency analysis does not investigate the aggregate effects of the institutional domains; rather, it examines whether the embedded effects of each of these institutional domain on an assessment criterion is coherent with each other. Hence, unlike complementarity, consistency of the institutional domains does not imply that the aggregate effects of these institutional domains on an assessment criterion are more than the sum of their non-embedded effects. Furthermore, for undertaking consistency analysis, we analyze the embedded effects of each institutional domain, while assuming that the effects of the neighboring institutional domains are exogenous. This analysis does not take into account that the effects of these neighboring institutional domains are indeed *endogenous* because we overlook the *feedback loop effects* of the analyzed institutional domain on the effects of these neighboring domains. As already mentioned, one of the main mechanisms through which complementarity works is circular causality (closed positive/reinforcing feedback loops). Closed reinforcing feedback loops are not the only mechanism for complementarities; scholars observe empirically many complementary institutions,⁹⁹ but they do not know the sources of their complementarity. In these cases, scholars do not know the underlying mechanisms through which these institutions complement each other in bringing about the

⁹⁹ For example, see the short overview of the empirical literature on complementarities in organizations in: Erik Brynjolfsson and Paul Milgrom, 'Complementarity in Organizations' in Robert Gibbons and John Roberts (eds), *Handbook of Organizational Economics* (Princeton University Press 2013) 24–30.

observed equilibrium. In consistency analysis, we do not attempt to identify the mechanisms underlying institutional complementarities such as closed reinforcing feedback loops; instead, we try to identify the contextualized/embedded effects of each institutional domain while taking other institutional domains as exogenous.

Although consistent institutions are not necessarily complementary, they are *prima facie* complementary. Consistency of the institutions points to their complementarity, particularly if two conditions are met. First, the institutional domains are consistent with reference to each of the assessment criteria. Second, the consistent institutional network achieves the desired assessment criteria. If these conditions are met, then, we can presume that these institutions are not only consistent but most probably complementary as well.¹⁰⁰ For example, as chapter 11 will demonstrate, during the three decades following the World-War II, the Japanese institutional domains seem to be *highly consistent* with reference to their effects on the factors driving economic growth. In this period, Japan was growing rapidly.¹⁰¹ Hence, we can *presume* that the post-war Japanese institutional domains were complementary regarding growth, unless there are strong counter-arguments for this presumption of institutional complementarities. From a pragmatic perspective, if we could not analyze complementarities among these institutional domains or fully understand the sources of these complementarities, consistency analysis that establishes the presumption of complementarity would be a practical, though *tentative*, guide for institutional design. Given the complexity of integrated and systemic analysis and design of legal institutions, lawmakers should use the tentative, but invaluable, results of the integrated and systemic approach for experimenting with legal reforms.¹⁰²

¹⁰⁰ Boyer argues that institutional coherence/consistency if coupled with clustering of these coherent institutions that is the observation of the co-existence of these institutions for a reasonable period of time, then, we can presume that these institutions are complementary, see: Boyer (n 62), 51. It is noteworthy that Boyer's definition of coherence is somehow different from the definition of institutional consistency developed in this chapter. Boyer defines coherence as follows: 'Two institutions are declared coherent if they can *easily coexist* ... This is more than compatibility since it means that the fitness of each institution is improved by the existence of the other but it is less than complementarity since this does not imply that the mix between ... [these institutions] gives the best result among any possible association of alternative institutions.' See: *ibid* 50.

¹⁰¹ See chapter 11 and the references cited therein.

¹⁰² Indeed, one can observe a general pattern of pragmatism and experimentalism in policy making in the successful development experiences such as that of Japan and China. For example, around 30% of all the economic regulations enacted in China in the period from 1979 until 1999 were *experimental regulations* that become permanent only if their socio-economic effects in the experimental period

In conclusion, in this section, we have developed a four-step process for analyzing the consistency of the institutional networks (i.e., the consistency of economic regulations/legal systems). Further, we have argued that although consistency of the effects of the institutions on a specific assessment criterion does not necessarily imply the complementarity of these institutions regarding this criterion of assessment, institutional consistency establishes a reasonable presumption of complementarity if we observe empirically that consistent institutions achieve the desired assessment criteria of the institutional network for a reasonable period. Given this presumption of complementarity, we can use the results of consistency analysis for guiding the design of institutional networks.

8. Systemic Institutional Design Concepts for Design of Consistent Institutional Networks: Reasonableness, Model Superiority, Model Dominance, Model Hierarchy, Institutional Hierarchy, and Consistency Analysis

In the comparative capitalism literature, political scientists, sociologists, and economists use the concept of institutional complementarities for analysis of the economic effects of institutions and their change, i.e., *institutional impact and institutional change analysis*. They have largely overlooked a serious discussion of consistency and hierarchy of institutions despite being important forms of institutional interdependencies, which can be used as analytical concepts for institutional impact analysis and explaining institutional change. More importantly, they have not attempted to develop *design concepts and principles for the design* of institutional networks that reasonably achieve their objectives/assessment criteria. One reason for this significant lacuna is that legal scholars, one of the core interest of whom is institutional design, have not engaged seriously with the comparative capitalism literature. Throughout the process of using systemic perspective for design of reasonable institutional network to govern the product markets for developing countries in the applied part, I have developed five *systemic institutional design concepts*¹⁰³ (*systemic design concepts, systems*

turned out to be positive. Sebastian Heilmann, 'Policy Experimentation in China's Economic Rise' (2008) 43(1) *Studies in Comparative International Development* 6.

¹⁰³ As the below exposition of these concepts shall reveal, some of these design concepts can be used also as *an analytical concepts* for understanding *the impact and change of existing institutional*

design concepts, or institutional design concepts, for brevity). These design concepts are the following: institutional reasonable design (design reasonableness or reasonableness, for brevity), model embeddedness superiority, model hierarchy, model dominance, and institutional domain hierarchy (or institutional hierarchy, for brevity).

Since most of the below discussion draws on extended discussions in the applied part, I will extensively cross-reference the relevant parts and the references therein of the applied part as it is neither possible nor convenient to reproduce these discussions here. Meanwhile, I will try to keep the below exposition as clear as possible. Further, although I take the institutional domain of corporate governance as the basis for the exposition of the systemic design concepts, nothing of our conclusions would change if we take any other institutional domain (e.g. competition law, industrial policy, banking regulation, or labor regulation) as our point of reference. Finally, I have attempted to develop some mathematical representations for these design concepts; the purpose of these representations is to enhance the accuracy of the conceptualization of these concepts and illustrate their differences from other analytical concepts such as institutional complementarities.

Institutional networks design concepts/principles are a set of concepts or principles that can guide the scholar in designing a *consistent* institutional network that can reasonably achieve the desired objectives. Here, the goal is not to design a legal institution in isolation of other institutions, but to design a consistent *institutional network* (i.e., a legal system or a legal sub-system). We can categorize the systemic design concepts into three broad categories. The first category attempts to address systemic design questions such as which objectives should we assign to each institutional domain, or can we organize the design process of the institutional network by ranking the institutional domains according to their importance for the attainment of the objectives of the institutional network in which these domains are embedded? To address these questions, this category of design concepts compares and relates *the institutional domains* with each other (i.e., it relates, for example, corporate governance with competition law). Two important systemic design concepts come under this category: *institutional hierarchy and assignment rules*. The former is discussed below and the latter is discussed in chapter 9.

networks, but I will not focus on the analytical potentials of these design concepts below, as it is better left to future research projects.

The second category of the design concepts addresses the following vexing systemic institutional design question: which model of the institutional domain should we include in the institutional network given the interdependencies of the chosen model and other institutional domains? For example, given the interdependencies of corporate governance and other institutional domains (e.g., competition law, banking regulation, and labor regulation), what model of corporate governance (e.g., a shareholder value model or a stakeholder model) should we adopt? To address this question, unlike the design concepts of the first category that compares and ranks the institutional domains with each other (i.e., corporate governance vs. competition law), the second category of the institutional design concepts *compares and ranks the models of the same institutional domain* (e.g., it compares the stakeholder model of corporate governance with the shareholder value model). Three important systemic design concepts developed below fall under this second category, namely, *model embeddedness superiority*, *model dominance*, and *model hierarchy*. The third category is a general catchall category that includes any systemic design concept that does not fall under the above two categories. This category includes *institutional reasonable design* (design reasonableness) discussed below and *multi-assessment qualitative criteria* as a basis for the normative framework for analysis and design of the institutional networks, which will be developed in chapter 9, and *qualitative indicators* as a design concept, which is also discussed in chapter 9.

Given the definition and categorization of the institutional design concepts, we can now discuss each of them. The following sections discuss each of the categories of the systemic design concepts. We start with the catchall category, then, the first category, then, the second category.

Prior to delving into the below discussion of the systemic design principles of legal institutions, One important remark is in order. To the best of my knowledge, this is the first attempt in legal scholarship and in economics to develop *design concepts and principles* for design of legal institutions. Doubtless, this is the first attempt to develop *systemic* design concepts and principles for design of *institutional networks* (i.e., *legal systems and legal sub-systems*). Given that both legal scholars and economists are concerned with legal reform, it may seem very strange that they have not attempted to develop a theory for design of legal institutions, which would include methods, concepts, and principles for guiding the design of legal institutions. The reason for this massive lacuna in legal and economic scholarship on

legal institutions is straightforward. Traditional legal scholars use legal theories and legal principles that they have developed as organizing principles for existing legal systems, which ensure its coherence as basis for recommending *legal reforms* that would make the system *more internally coherent*. However, as long as we are concerned with external coherence/consistency and institutional complementarities, traditional legal scholars had so little to offer; for which reason, neoclassical law and economics found it very easy to colonize analysis and design of economic regulations.¹⁰⁴

On the other hand, given the dominance of reductionist thinking in economics, unlike engineers, economists almost never discuss something such as *systems engineering*. The way to think about *designing* legal institutions is to *incorporate the recommended institutions into a model to assess their effects*. In other words, economists normally start with a baseline model that does not include the institution to be introduced, then, they extend the model by including this institution as an exogenous variable and assess its social welfare consequences. Only if the institution is efficient or produces net benefits, it should be introduced.

This way of approaching the issue of “designing” legal institutions seems straightforward and intuitive for economists, but for engineers, this is a very peculiar way of approaching problems of design, particularly problems of designing complex systems such as institutional networks (i.e., legal systems). In other words, even if we would accept the economists’ approach to designing specific legal institutions, their approach becomes inappropriate once we take institutional networks as the appropriate unit of design, as already argued in the first proposition of systemic law and economics, because here the unit of design is a complex structural element of a *complex system*. For designing systems, engineers use systemic approaches; a famous systemic perspective is called *systems engineering*. We can list briefly the main steps in designing systems in engineering to demonstrate the stark difference

¹⁰⁴ Howarth suggests that legislative law-making is a process akin to engineering. David Howarth, *Law as Engineering: Thinking about What Lawyers Do* (Edward Elgar 2013) 67–73 For an exploration of some of the implications of the “law as engineering” metaphor in legal practice, teaching and research, see: *ibid* 97–188. Although connecting law-making to engineering metaphorically is an important progress, it is insufficient; law-making is a real, and not metaphoric, process of engineering because both processes, law-making and engineering, address *conceptually identical* problems that are problems of *design*. These processes differ only in their *subject* of design; in engineering the subject of design is normally physical systems (e.g., machines, and software programs), where in law-making, the subject of design is normally our evolutionary, indeterminate, and hardly controllable socio-economic-political systems (e.g., firms, financial markets, capitalist economies, and political systems).

between the engineering approach to systems design grounded in *systemic thinking* and the economists' approach to design grounded in *reductionist* perspective. These are six steps that include the following: requirements design (i.e., identification of the goals of the system), functional analysis (i.e., allocation/assignment of functions to sub-systems for achieving the system goals), Requirements Loop (i.e., revising the goals of the system, given the information generated in the step of functional analysis), Design synthesis (i.e., design of the parts/sub-systems of the system that can meet their respective assigned functions), Design loop (i.e., revising the design synthesis step), and Verification (i.e., analysis whether the designed system satisfies its goals).¹⁰⁵ As we shall see, in chapter 10 of the thesis, I follow closely the first three steps of this process of systems engineering for developing a normative framework for analysis and design of economic regulations.

In short, this is the first attempt to investigate this uncharted territory of developing design concepts and principles of legal institutions; this endeavor becomes even more challenging when we seek to develop *systemic* design concepts and principles for designing *consistent and complementary institutional networks*. Given the nature of this scholarly endeavor, I had to develop new terminologies to denote the design concepts and principles developed in these sections. I hope that this would be a kick-off for more in-depth scholarly research on systemic design concepts and principles for the design of consistent institutional networks (i.e., design of legal systems/regulatory design). Section 3 of chapter 12 titled 'Which Institutional Network of the Supply Side of Product Markets Should Developing Countries Adopt?' has followed closely the design concepts and principles developed in the following sections for designing a consistent institutional network (i.e., a legal system) for the supply side of product markets in developing countries.

8.1. Catchall Category of Systemic Design Concepts/Principles: The Principle of Reasonable (not Optimal) Design of Institutional Network

¹⁰⁵ Systems Management College, Department of Defense, 'Systems Engineering Fundamentals' (Fort Belvoir, Virginia January 2001) 32 <http://ocw.mit.edu/courses/aeronautics-and-astronautics/16-885j-aircraft-systems-engineering-fall-2005/readings/sefguide_01_01.pdf>.

The first design concept that I call *reasonable institutional design* or *design reasonableness*, for brevity addresses the issue of the goal of the design of the institutional network. Aldegwy and Thiemann argue that neoclassical law and economics scholars insist on designing *optimal* regulations that maximize regulatory objectives, while minimizing the relevant costs of their enforcement.¹⁰⁶ Because of the radical uncertainty and evolutionary nature of the socio-economic systems to be governed by regulations, the insistence of optimization results in regulatory frameworks that fail to adapt to the rapid changes of their governed systems. In other words, the insistence on the pursuit of optimal regulation is self-defeating; it results in *pseudo-optimal* regulations.¹⁰⁷ Instead, they argued for what they call *reliable regulations*; reliable regulations achieve *reasonably* their objectives without insistence on accurate quantification of these objectives or the effects of these regulations, while being *adaptive* to rapid changes in the socio-economic system.¹⁰⁸

The argument for reliable/reasonable regulation based on the uncertain and evolutionary nature of the economic system gains more credibility once we take into account the complexity of the regulation itself as a complex institutional network. The institutional design problem involves a choice of an institutional network structure among *thousands of plausible institutional networks*, while having little knowledge about the complementarities of institutional domains in most of these plausible networks. Particularly, each network involves different institutional complementarities and different *contextual* mechanisms underlying these complementarities. Accordingly, identifying the *optimal* set of institutional networks is a very difficult, if not a futile exercise.¹⁰⁹

¹⁰⁶ Mohamed Aldegwy and Matthias Thiemann, 'How Economics Got it Wrong: Formalism, Equilibrium Modelling and Pseudo-Optimization in Banking Regulatory Studies' (2015). EAEPE Papers in Evolutionary Political Economy no. 2015-1, 26
<http://eaepe.econ.tuwien.ac.at/pepe/papers/PEPE_2015_1.pdf>

¹⁰⁷ *ibid* 29.

¹⁰⁸ *ibid* 27–29.

¹⁰⁹ In the context of multiple criteria analysis, the Pareto optimal set of decision variables (in the case of regulatory design, the institutional networks are the decision variables) are defined to be "feasible solutions [i.e., institutional networks in our case] such as no other feasible solution [i.e., no other institutional network] can perform equally or better for all the criteria under consideration and be strictly better for at least one criterion." Francisco J Andre, M. A Cardenete and Carlos Romero, *Designing Public Policies: An Approach Based on Multi-Criteria Analysis and Computable General Equilibrium Modelling* (Springer-Verlag 2010) 37. For example, a Pareto optimal institutional network of the supply side of the product markets would be an institutional network such that no other institutional network can achieve the same objectives that this network achieves (e.g., allocative

In fact, the number of possible institutional networks is *an exponential function* of the number of the *institutional domains* and the number of the *possible models* of each institutional domain. Assuming that each of these institutional domains (e.g., corporate governance and labor regulation) have the same number of alternative models (for example, there are only two plausible models of corporate governance, and of labor regulation), we can express this exponential function as follows:

$$f(x, y) = x^y$$

where $f(x, y)$ is the number of feasible institutional networks, x is the number of alternative models for each institutional domain assuming that they share the same number of models, and y is the number of the institutional domains.

Consider the case of designing an institutional network consisting of three institutional domains, corporate governance, competition law, and industrial policy, and each domain has only two plausible models (stakeholder and shareholder value models of corporate governance, Schumpeterian and post-Chicago competition law models, and sectoral and horizontal industrial policy models). The number of possible models of competition law, corporate governance and industrial policy in this example is two ($x = 2$) and the number of the institutional domains is three ($y = 3$). Thus, the number of possible institutional networks is $f(x, y) = x^y = 2^3 = 8$.¹¹⁰ Assume further that there are only two plausible models/regimes of labor regulation. If we also include the institutional domain of labor law, then, the number of possible institutional networks will be: $f(x, y) = x^y = 2^4 = 16$. In case there are three possible regimes of each of these four institutional domains, then, the number of possible institutional networks will be: $f(x, y) = x^y = 3^4 = 81$. Due to the exponential nature of the function of the possible networks, the high number of the institutional domains (in addition to these four domains, institutional domains include, inter alia, banking regulation, capital markets regulation, intellectual property law, bankruptcy law,

efficiency, innovation, and learning) while achieving a better value of at least one desirable objective (e.g., protection of the weak). Unlike the concept of Pareto optimality in neoclassical economics, this concept of Pareto optimality is not necessarily *welfarist* (i.e., based on subjective preferences satisfaction). See chapter 9 for a discussion of the neoclassical welfarist concept of Pareto efficiency.

¹¹⁰ Bruno Amable, *The Diversity of Modern Capitalism* (Oxford University Press 2003) 56.

property rights law, contract law, tax law, monetary policy, and environmental regulation) would result in a significant number of feasible institutional networks. Further, each of these institutional domains is itself an institutional network that consists of a large number of legal institutions (think of the hundreds of legal norms constitutive of corporate law, for example), and each of these norms has a large number of alternative designs. Consequently, the number of the feasible models (networks or systems) of corporate governance, which is an exponential function of the number of these norms and the number of the possible designs each of these norms may take, would be of a large magnitude. Once we plug in the large number of the institutional domains and the large number of feasible models of these institutional domains in the exponential function of the feasible institutional networks, we would have *thousands* of plausible institutional networks.

Given this significant complexity of the institutional network design, I suggest that we clearly determine our institutional design objective to be the choice of *an institutional network* that *reasonably* achieves the normative objectives, while not requiring significant changes in the existing institutional network of the country where the chosen institutional network shall be introduced.¹¹¹ The large number of institutional domains suggests that a subset of these institutional networks can fulfill *reasonably* our desired objectives. We can call this subset of institutional networks, the *set of reasonable institutional networks*. The goal is not to identify this set of institutional networks, but only to identify *one institutional network* in this set. This institutional network should meet two conditions. First, as it is already in the set of reasonable institutional networks, this institutional network would reasonably achieve our normative objectives. This network need not however be the optimal network in the set of reasonable networks. We do not need to show that the identified network would maximize the desired objectives at the lowest possible cost. Second, to ensure its successful transplant in the

¹¹¹ As will be clear from the discussion in the following chapters, since the embedded effects of the models of corporate governance (and also the models of competition law and industrial policy) differ across these reasonable networks, there is no a priori reason to think that only one model of corporate governance is suitable for the needs of developing countries. Some of these reasonable institutional networks may have a shareholder value model, while others may include stakeholder model. From a systemic perspective, we cannot thus say that one model of corporate governance is necessarily superior to the other, unless, we show that none of the set of the reasonable institutional networks has the inferior model of corporate governance. This is obviously a very difficult proposition to establish.

developing country, the chosen institutional network should not require substantial legal reforms in the institutional network of the country in which it shall be introduced.

In short, given the high number of feasible institutional networks, identifying the optimal network is a very difficult, if not a futile exercise. In fact, due to the evolutionary nature of the institutional network and the socio-economic system governed by this network, identifying the evolutionary and dynamically optimal institutional network (regulations) is not only a very difficult exercise, but may also result in a choice of an institutional network that is not reasonable. Instead, the design concept of the reasonableness of institutional network design states that the goal of legal design is to identify an institutional network that achieves reasonably the desired objectives assigned to this network, i.e., achieves at least the minimum threshold required for each objective.¹¹² For example, in the applied part, we inquire how to design the institutional network that governs the supply side of product markets in developing countries; this network includes the institutional domains of competition law, corporate governance, and industrial policy. Given the design reasonableness principle, the objective is not to choose the *optimal* combination of the models of each institutional domains (e.g., a shareholder value model of corporate governance, Schumpeterian competition law, and horizontal industrial policy, assuming that this is the optimal combination of models of these institutional domains), which *maximizes* the objective of this institutional network at the least possible costs. Rather, the objective is to identify any combination of models of the institutional domains that can reasonably achieve this objective, i.e., it can achieve *a socially desirable and acceptable level* of this objective with a *reasonable probability*.

The design principle, ‘reasonableness of the institutional network design’, legitimizes *informal* analysis and design of institutional networks. It also justifies the development of sophisticated multi-dimensional normative frameworks for analysis and design of institutional networks, which may also include non-quantified objectives such as justice, because the concept of design reasonableness does not impose the requirement of optimizing or quantifying the regulatory objectives. In other words, this design concept legitimizes and justifies the analysis undertaken in the applied part of this thesis, particularly chapter 10 where we develop a sophisticated normative theory of economic regulations.

¹¹² The idea of establishing a minimum threshold of each objective of the institutional network, which should be achieved, shall be developed and defended in chapter 10 of the thesis.

8.2. Weighted Assessment Criteria of the Institutional Network and The Distinction Between Common and Distinctive Effects of the Models of Institutional Domains on These Assessment Criteria

Once we determine the objective of institutional design to be the choice of a reasonable institutional network from the set of feasible reasonable networks, we need to develop further institutional design concepts and principles for guiding the design of a reasonable network. The starting point for designing a reasonable and consistent institutional network is to determine the *objectives* this network should reasonably achieve. In other words, given the large of number of plausible institutional networks, we need to identify assessment criteria (e.g., static efficiency, economic growth, innovation, and learning) to form the normative basis for comparison of the effects of these institutional networks. As shall be discussed in length in chapter 9, in neoclassical law and economics, economic efficiency is the most important, if not the sole, assessment criterion for economic regulations.¹¹³ Due to the significant critiques advanced against this assessment criterion in chapter 9, we develop an integrated and systemic assessment criteria/normative framework for economic regulations in chapter 10. Suffice it to say, in this *integrated and systemic normative framework* of economic regulations, economic regulations (i.e., institutional networks) are assessed with reference to multiplicity of assessment criteria. These criteria include inter alia, protection of the weak, income distribution, economic growth, innovation, organizational learning capabilities of the firms, allocative static efficiency, and international competitiveness. As shall be argued in chapter 10, some of these assessment criteria have necessary minimum thresholds that should be achieved. Further, depending on their significance for attaining the ultimate objectives of the system of objectives of the institutional network, these criteria are given different weights.¹¹⁴ For example, in chapter 10, we argue that firms' learning capabilities should be given high weight, while other assessment criteria (e.g., static efficiency) may be given low or moderate

¹¹³ See section 2 on the neoclassical normative theory of economic regulations in chapter 9 and see the references cited therein.

¹¹⁴ See section 5.3.2 on giving weights to the objectives of the institutional network in chapter 10.

weight. A reasonable institutional network is a network that can achieve the *required minimum thresholds and desired weights* of each of the assessment criteria of this network.

In order to develop systemic design concepts for designing this reasonable institutional network, we must distinguish between the *common and distinctive/idiosyncratic effects* of the *different models* of the institutional domains on the assessment criteria. Common effects refer to the effects that the compared models of the institutional domain (the corporate governance systems of stakeholder and shareholder value maximization in our example) share. Suppose that both of the compared regimes of corporate governance have *strong positive* effects on the innovation capability of the firm, or on the aggregate costs of the transactions consummated among the stakeholders of the firm (i.e., the aggregate cost of equity and debt agency costs and majority-minority shareholders conflicts under both regimes of governance is roughly the same). This means that both models share the direction of effect (positive and not negative) *and* share roughly *the degree* of the effect (e.g., they both have strong rather than moderate or weak effect). If both models do not share both *the direction and the degree of their effect* on the assessment criterion, then, this effect is not common between them; it is *distinctive/idiosyncratic*. For example, both systems of corporate governance seem to have either divergent effects or effects of the same direction, but of different degrees on distribution of income, distribution of power, and the value of participatory governance (assuming it is an intrinsic value). As we shall discuss in detail in chapter 8, the stakeholder model seems also to outperform the shareholder value model in terms of its effects on the learning capabilities of the firm, while according to the neoclassical perspective, the shareholder value model seems to outperform the stakeholder model in terms of its effects on access and cost of equity financing.¹¹⁵ Hence, the effects of both models of corporate governance on income and power distribution, the value of participatory governance, and learning capabilities of the firm are *distinctive/idiosyncratic*.

Moreover, the effects of the models of the institutional domain can be divided into *non-embedded effects and embedded effects*. The former refers to the common effects of the institutional domain model (corporate governance model in our example) assuming away the existence of interdependence with other institutional domains, while the latter refers to the

¹¹⁵ See sections 2 and 4.3 on the neoclassical approach to the issue of corporate governance choice and the knowledge-based theories of the firm in chapter 8 and see the references cited therein.

effects of the institutional domain model given the institutional network in which this model is embedded. Hence, the models of the institutional domain have common and distinctive embedded and non-embedded effects depending on whether we assume way or consider interdependencies with other institutional domains in the institutional network. For example, the distinctive effects of the institutional domain model (say stakeholder model of corporate governance) may differ according to the institutional network in which it is embedded. For example, if labor market institutions provide no protection to workers, the significant positive effects of stakeholder model of corporate governance may be marginal; workers, though having voice, may not be able to exercise this voice due to the lack of any legal protection against dismissal in labor law. Here, the non-embedded distinctive effects of the model of the institutional domain are a first step for assessing the embedded distinctive effects. As shall be clear from the below discussion, the systemic institutional design concepts developed below rely, primarily, on *the distinctive embedded effects* of the models of the institutional domains for designing a reasonable and coherent institutional network.

Both the common and distinctive effects of the institutional domains can be either *aggregate or systemic*. An aggregate effect on an assessment criterion is the result of *the sum* of the effects of the institutions of the institutional domain on this assessment criterion, while a systemic effect on an assessment criterion is *different* from the sum of the effects of the institutions of the institutional domain on this criterion. In other words, if the institutions in the institutional domain that affect the assessment criterion have a non-linear form of interdependency (e.g., complementarity, substitution, or contradiction), their aggregate effect shall be different from the sum of their single effects. On the contrary, if their institutional interdependency is of the form of simple addition, then, their aggregate effects will be equivalent to the summation of their single effects in isolation of each other.

Criterion of classification of the effects of the models of the same institutional domain	The commonality of the direction and degree/strength of the effect	Assuming away or considering interdependencies with other institutional domains	The form of interdependencies among the institutions that affect the
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			assessment criterion
	Common Effects	Embedded Effects	Aggregate Effects
	Distinctive/Idiosyncratic Effects	Non-Embedded Effects	Systemic Effects

Table 6.1: Classification of the Effects of the Models of the Same Institutional Domain

This classification of the effects of the compared models of the institutional domains is crucial for developing a systemic design concepts and principles for institutional networks in the following sections. It is also crucial for developing an important systemic design concept that is “objectives assignment rule” in chapter 10. Given this classification of the effects of the models of the same institutional domain on the assessment criteria, we can now turn to develop systemic institutional design concepts and principles for the design of reasonable and consistent institutional networks in the following sections.

**8.3. First Category of Systemic Design Concepts (Institutional Domain Hierarchy):
Comparing and Ranking the Institutional Domains in the Institutional Network
Subject to Design**

Given the above, we can now turn to the explanation of the remaining four systemic design concepts. We start with institutional domain hierarchy/Ranking, one of the main institutional design concept in the first category of our design concepts. This concept is inspired largely by the concept of institutional hierarchy, an important form of interdependence among legal institutions. Boyer explains institutional hierarchy as follows:

Institutional hierarchy by design means that during the conception of some institutional form [e.g., an institutional domain], the constraints of another central, and hence superior, institutional form [e.g., institutional domain], are explicitly or implicitly taken into account. For instance, if nominal wage becomes the equivalent of a labor standard, the objective and the tools of monetary policy have to be redesigned ... and this means that collective bargaining on wages has a primacy over the (Keynesian) monetary regime, and thus that there is a

hierarchy from labor market institutions to the monetary regime.¹¹⁶ Similarly, an efficient monetary policy absolutely requires totally flexible employment and wage adjustments,¹¹⁷ and the absence of any structural public deficit by governments.¹¹⁸ [In this case, monetary policy is hierarchical over both labor market institutions and fiscal policy].

Based on this insightful conceptualization of institutional hierarchy, we can develop the design concept that we call “institutional domain hierarchy”. In contrast to the second category of systemic design concepts (see below) that compares the different models of the same institutional domain to determine the model that we include in the institutional network subject to design, institutional domain hierarchy as a design concept *compares and ranks the institutional domains themselves and not their models*. For example, it compares both competition law and corporate governance and not stakeholder and shareholder value models of corporate governance. This comparison and ranking of institutional domains is based on *the hierarchy of the objectives/assessment criteria of the institutional network and the embedded effects of the plausible models of each institutional domain of these objectives/assessment criteria*.

Institutional domain hierarchy as a design concept refers to the choice of the institutional domain that should be placed at the top of the hierarchy of other institutional domains. To be at the top of the hierarchy of the institutional domains, the institutional domain must meet two conditions. First, given the objectives of the institutional network ordered in a hierarchical order according to their importance, the hierarchical institutional domain can achieve some of the critical objectives that come at the top of the hierarchy of the objectives through its embedded effects on these objectives.¹¹⁹ Second, there is no other institutional domain that can compensate for these critical functions undertaken by the institutional domain at the top of the hierarchy of institutional domains, i.e., there is *a systemic need* for these functions of this institutional domain. We can call this second condition *the (systemic) compensation test or the systemic need test*. If one of the models of the institutional domain meets these

¹¹⁶ Boyer (n 62), 67–68 [emphasis in the original].

¹¹⁷ *ibid* 50.

¹¹⁸ *ibid* 68.

¹¹⁹ The comparison of the institutional domains is based on *embedded, and not non-embedded*, effects because embedded effects are what really matters; non-embedded effects do not take place in reality because institutional domains are always embedded in larger institutional networks. .

conditions, we take this model of the institutional domain *as given* and then proceed to the design of other institutional domains in the institutional network.

For instance, as shall be argued in the applied part, due to globalization and rise of transnational corporations, one of the most important intermediate objectives of the supply side of product markets is *international competitiveness*. A minimum threshold of international competitiveness should be satisfied for the firms in domestic markets to survive international competition.¹²⁰ To increase the competitiveness of the national industry, developing countries need to support the formation and growth of the financial, technological, and organizational capabilities of domestic firms. Although corporate governance, financial regulation, labor regulation and competition law may contribute to the formation and growth of these capabilities, the main institutional/policy domain that is critical for the embryonic formation stage of these capabilities is *sectoral industrial policy*, without which national firms cannot form these capabilities. Given that developing countries cannot adopt horizontal industrial policies due to their high costs, they have to adopt sectoral industrial policies.¹²¹ This means that the first condition for ranking an institutional domain at the top of the hierarchy of institutional domains, according to which this the effects of this institutional domain (industrial policy in our example) ensures the attainment of a crucial objective of the institutional network (international competitiveness in our example), is met. The second condition that is compensation test or systemic need test is also satisfied because other institutional domains, regardless of their models, cannot *compensate for* this function of sectoral industrial policies. Accordingly, sectoral industrial policies have a hierarchy over other institutional domains; it should come at the top of the hierarchy of the institutional domains that govern the supply side of the product markets. Given this institutional domain (sectoral industrial policy), developing countries can then choose the systems of corporate governance and competition law that are consistent and complementary with sectoral industrial policy. In other words, developing countries should take sectoral industrial policy *as given* when choosing the models for corporate governance and competition law. Chapter

¹²⁰ In chapter 10, we will discuss establishing minimum thresholds and weights for the (ultimate and instrumental) objectives of the institutional network.

¹²¹ See sections 2.1 and 5 on industrial policy in chapters 11 and 12 respectively and see the references cited therein.

12 employs this insight in recommending an institutional network design for governing product markets in developing countries.

Institutional domain hierarchy provides *a partial and not a complete ranking* of the institutional domains. The ranking is made with reference to a specific critical function (formation and growth of infant industries) that only one institutional domain (say, sectoral industrial policy) can reasonably achieve. However, suppose that only one institutional domain (e.g., Schumpeterian competition law) can reasonably achieve another critical function that is at a high ranking in the hierarchy of objectives of the institutional network subject to design (e.g., specific minimum threshold of innovation capabilities). In this case, we can argue that both sectoral industrial policy and Schumpeterian competition law have a hierarchy over corporate governance in the designed institutional network, but we cannot determine whether Schumpeterian competition has a hierarchy over sectoral industrial policy. The ranking of institutional domains is therefore incomplete. In contrast, if corporate governance can achieve alone or along with another model of competition law, other than Schumpeterian competition law, the necessary level of innovation capabilities, then, Schumpeterian competition law has no hierarchy in this institutional network.

Despite this partial ranking of institutional domains, it functions as a good guide to the process of institutional network design. First, if specific thresholds of some objectives are crucial to the systems of objectives of the institutional network and two institutional domains are indispensable for attainment of these objectives (e.g., sectoral industrial policy and Schumpeterian competition law in the above example), we can take these institutional domains as given. Then, we examine the model of corporate governance that *fits* with these models and enable the designed institutional network to achieve reasonably its objectives.

Suppose that the models of Schumpeterian competition law and sectoral industrial policies are incompatible or inconsistent so that they defeat the overall objectives of the institutional network that consists of competition law, industrial policy, and corporate governance. Alternatively, suppose that there is no model of corporate governance that seems to fit Schumpeterian competition law and sectoral industrial policies and ensures the attainment of the objectives of the institutional network. In both cases, the partial ranking of the institutional domains is still helpful as it gives us a starting point (i.e., the choice of a specific institutional domain that we can take as *a given*) for designing the network. We can even improve our

starting point by choosing the institutional domain that contributes to more critical functions (i.e., desired minimum threshold of more objectives) than the other institutional domain, as this justifies further its position at the top of the hierarchy of the institutional domains for the purposes of institutional design. Hence, in the above example, we can take sectoral industrial policies as given, then, investigate the best combination of models of competition law and corporate governance that fit sectoral industrial policies. In this case, we are searching for *institutional complementarities* among sectoral industrial policies, specific model of corporate governance, and non-Schumpeterian model of competition law, which may compensate for the critical functions undertaken by Schumpeterian competition law. Alternatively, we can take Schumpeterian competition law as given; then, we examine the best combination of the models of industrial policies and corporate governance that fit Schumpeterian competition law. In this case, we are searching for *institutional complementarities* among non-sectoral industrial policies, a specific model of corporate governance, and a Schumpeterian model of competition law, which may compensate for the critical functions undertaken by sectoral industrial policies.

Indeed, the *concept of hierarchy of institutional domains* is discussed implicitly by mainstream economics in coordinating fiscal and monetary policies, which are *policy domains* similar conceptually to the *institutional domains* in our institutional networks. The effects of each of these policies influence the effects of the other on aggregate demand and inflation rate, but separate institutions are entrusted with each of these policies (the ministry of finance for administering fiscal policy and central banks for conducting monetary policy). Neoclassical economists had to address the problem of coordinating fiscal and monetary policies to ensure their complementarities; otherwise, each policy might defeat the effects of the other. Ensuring the independence of central banks has been the main solution to the coordination problem. The logic of this solution works as follows. The independence of central bank signals to the fiscal authorities that the central bank shall respond to credibly to inflationary fiscal policies by increasing interest rate to ensure the targeted inflation rate; this would discipline the fiscal authorities.¹²² Assume that the independence of the central bank

¹²² Goodhart, C. A. E, *The Central Bank and The Financial System* (Macmillan 1995) 69–70.

succeeds in disciplining fiscal authorities.¹²³ In this case, since the mix of tax and interest rates preferred by the fiscal authority is different from the mix preferred by the central bank,¹²⁴ ensuring the independence of the central bank implies granting a *hierarchy* to monetary policy over fiscal policy. In other words, central banks' independence is grounded in a vision that gives institutional hierarchy to the monetary policy over fiscal policy. According to this vision, the mix of tax and interest rate desired by the central bank is social welfare enhancing for the society, regardless of the economic conditions. In contrast, if central banks lack independence, fiscal authorities will have larger freedom in setting fiscal policies, which would imply a de facto hierarchy of fiscal policy over monetary policy.

In addition to institutional domain hierarchy/ranking, the second systemic design principle that belongs to the first category of systemic design concept is what I call 'objectives assignment principle'. Chapter 10 develops this principle so that we can skip the discussion of this principle here.

8.4. The Second Category of Systemic Legal Design Concepts (Model Superiority, Model Dominance, and Model Hierarchy): Comparing and Ranking the Models of the Same Institutional Domain

When we aim to design an institutional network that consists, for example, from competition law, corporate governance, and industrial policies, we need to choose a model of each institutional domain that *fits* each other in a way that ensures the attainment of the objectives of this institutional network. As we already discussed, given the numerous models of each institutional domain, the choice of the optimal combination of models that maximize the objectives of the network at the least costs is a futile exercise; rather, the objective is to identify a combination of models of these institutional domains that achieve the minimum threshold of these objectives with reasonable probability. This is the major insight of the

¹²³ Central bank's independence might fail to achieve this disciplining effect because the central bank is pre-committed; it is usually a first rather than a second mover in the fiscal-monetary policy coordination game played by the central bank and fiscal authorities. Neil Rankin, 'Is Delegating Half of Demand Management Sensible?' (1998) 12(3) *International Review of Applied Economics* 420.

¹²⁴ Christopher Doyle and Martin Weale, 'Do We Really Want an Independent Central Bank?' (1994) 10(3) *Oxford Review of Economic Policy* 71.

institutional reasonableness design principle. To simplify the design of this institutional network further, the design concept of institutional domain hierarchy enables us to identify the institutional domain that may have hierarchy over other institutional domains (say, sectoral industrial policies) so that we can take this domain *as given* in our institutional network.

Consequently, the problem of designing this institutional network becomes a simpler problem: the choice of a corporate governance and competition law models that fit sectoral industrial policy and ensure reasonable attainment of the objectives of the institutional network. To determine which model to adopt from the plausible models of corporate governance (e.g., shareholder value model, stakeholder model, or other variants of these two models), we need to compare these models with each other according to their *distinctive embedded* effects.

Two reasons justify the use of the *distinctive embedded* effects on the *assessment criteria* of the institutional network as a basis for comparison of the models of the same institutional domain. First, the objective of systemic design concepts is to allow us to choose combination of models of corporate governance and competition law, which *fit* each other and fit sectoral industrial policies. From a systemic perspective, *embedded* effects are what really matter because non-embedded effects assume away the interdependencies among the institutional domains and thus non-embedded effects are mistaken basis for designing *consistent institutional network*. As already mentioned, consistency of the institutional network is determined according to the *embedded effects* of the institutional domains that compose this network. For sake of simplifying the design process, we can presume that the non-embedded effects of the model of the institutional domain approximate its embedded effects and thus use these non-embedded effects as basis for comparison. By using non-embedded effects of the models of the same institutional domain as a basis for their comparison, we can choose the models of the institutional domains that will consistent our institutional network. Then, by conducting consistency analysis of this institutional network, we can check whether the selected models of the institutional domains fit each other; if they do fit each other, then, the assumption that the non-embedded effects of these models approximate their embedded effects was not way off the mark. Still, an institutional network designed based on the comparison of the embedded effects of the models of the same institutional domain would outperform a network designed based on the comparison of non-embedded effects.

Second, distinctive rather common effects are used as a basis for comparing the models of the same institutional domain because common effects are already shared among these models. They cannot be a basis for comparing them. For instance, if both stakeholder and shareholder value models of corporate governance share their effects on the assessment criterion of the cost and access to equity capital, then, this assessment criterion cannot be a basis for their comparison. Instead, their distinctive effects on other assessment criteria such as learning capabilities, income and power distribution, and participatory governance should be the basis for comparison.

In short, in contrast to the legal design concept of institutional domain hierarchy, the remaining three systemic design concepts (i.e., model superiority, model dominance, and model hierarchy) belong to the second category of systemic design concepts. This category of systemic design concepts compares the models (i.e., the institutional networks) of the *same* institutional domain rather than the institutional domains themselves based on the *distinctive embedded effects of the compared models*. We discuss these systemic design concepts in order.

As for model superiority, it is a design concept based on the comparison of the *distinctive effects* of a *specific model* of an institutional domain with other models of the same institutional domain (e.g. comparison of the stakeholder and shareholder models of corporate governance) on *one assessment criterion* of the assessment criteria of the institutional network. Model superiority has two variants: embedded and non-embedded model superiority. The former compares the embedded effects of the models of the same institutional domains, while the latter compares the non-embedded effects of these models on one criterion of the assessment criteria. Embedded model superiority of a specific model of an institutional domain over another (e.g. the embedded superiority of stakeholder model over shareholder value model) can be defined as follows. Given *a specific institutional network* in which these models are embedded, the *embedded distinctive effects* of the embeddedly superior model outperforms the embedded distinctive effects of the other model(s) on one assessment criterion of the assessment criteria of this institutional network.

As such, the concept of model superiority does not compare the institutional domains with each other (e.g. competition law with corporate governance), but rather it focuses on the

comparison of the *various systems* of the *same institutional domain* based on their *distinctive (embedded or non-embedded) effects*.

To explain the concept of model superiority, we can give an example. Suppose that the institutional network that we seek to design has three institutional domains (industrial policy, corporate governance, and competition). By using the design concept of institutional domain hierarchy in the previous section, we have established the institutional hierarchy of sectoral industrial policies so that it should be included in the designed institutional network. Our regulatory problem is to choose one model of corporate governance (shareholder value or stakeholder model) and one model of competition law (post-Chicago model or Schumpeterian competition law) to include in the institutional network. To do so, we need to compare these models of corporate governance with each other, and the models of competition law with each other. Suppose that the assessment criteria that the institutional network should seek to satisfy include high weight of firms' learning capabilities and moderate weight of access and cost of equity capital. According to the design concept of non-embedded model superiority, we compare the effects of the alternative models of corporate governance on each of these assessment criteria. Suppose that the stakeholder model has larger positive effects on firms' learning capabilities than those of the shareholder value model. In this case, the stakeholder model is superior to the shareholder value model in relation to their non-embedded effects on learning capabilities. Suppose that the shareholder value has larger positive effects on access to equity finance, then, it is non-embeddedly superior to the stakeholder model in relation to access and cost of equity finance. This means that a model of the institutional domain may be superior/outperforming other model in relation to its (non-embedded) effects on one assessment criterion, but underperform this model in relation its (non-embedded) effects on another assessment criterion.

In order to assess the embedded model superiority of each of these models of corporate governance, we need to identify the institutional network in which they shall be embedded. However, this network is the one that we seek to design; it is not designed yet. Accordingly, we have two alternatives. First, we can assess and compare the embedded effects of these models of corporate governance in some of the plausible institutional networks. In our example, if there are only two models of each of the three institutional domains, there are eight plausible institutional networks, hence, we can choose some of them networks (e.g.,

Schumpeterian competition law and sectoral industrial policies), and then compare the embedded effects of each model of corporate governance when they are included in this network. Alternatively, we can take only sectoral industrial policies as given, and then compare the embedded effects of each model of corporate governance when combined with sectoral industrial policies on each of the assessment criteria of the institutional network. This is a reasonable simplification of the problem of institutional network design, particularly we will check whether the embedded effects of each of the institutional domains of the designed network are consistent with each other at the final stage of the design of the institutional network. At this stage, we will make sure that the chosen corporate governance model fits the chosen competition law model.

Consequently, according to the embedded model superiority, given a sectoral industrial policy model, suppose that the embedded effects of stakeholder model of corporate governance turn out to be lesser than those of the shareholder value model on firms' learning capabilities, then, the shareholder value model is *embeddedly* superior, although it is non-embeddedly inferior regarding its effects on learning capabilities. We can express mathematically both the concepts of non-embedded and embedded model superiority.

Let $f(x)$ be the non-embedded positive effects of corporate governance x on (organizational) learning (i.e., learning capabilities of the firms in the economy). x can take two discrete values; it can be either equal to a stakeholder model $x = s$ or a shareholder value model $x = h$. Let A be the institutional network that includes both a stakeholder model s and a sectoral industrial policy. B refers to the institutional network that includes both a shareholder model and sectorial industrial policy. c is a constant. Non-embedded superiority of stakeholder model to shareholder value model regarding their effects on organizational learning can be expressed as follows.

$$f(s) \geq f(h) + c \quad (1)$$

The embedded superiority of the stakeholder model to shareholder value model regarding their effects on organizational learning in an institutional network that includes corporate governance and sectoral industrial policies can be expressed as follows:

$$f(s) \geq f(h) + c \quad \text{where } \begin{array}{l} s \in A \\ h \in B \end{array} \quad (2)$$

The constant (c) reflects that to be embeddedly superior, the positive effects of the stakeholder model on organizational learning has to be larger than the positive effects of the shareholder value model with an amount equivalent to or more than (c); otherwise, we would consider the stakeholder model to be embeddedly superior even if it marginally outperforms the shareholder value model. The value of the constant (c) depends on how much weight we assign to the normative objective of organizational learning in the objectives of the institutional network. The higher the weight we give to learning, the lower the value we give to (c).

The concept of model superiority informs us that a specific model of the institutional domain (e.g., stakeholder model) outperforms the effects of the other model (e.g., shareholder value model) on some assessment criteria (e.g., organizational learning and protection of the weak), while it underperforms this model regarding its effects on other assessment criteria (e.g., access and cost of equity finance). Though informative, the concept of model superiority is insufficient for guiding us to choose one of these compared models. We need to develop further systemic institutional design concepts. We can introduce a second design concept, which I call *institutional model dominance* (or *model dominance*, for brevity).

According to the concept of model dominance, a model of the institutional domain dominates another model of this domain if and only if it *outperforms* the latter model regarding its *embedded* effects on *all* of the assessment criteria of the institutional network. This is a strong/strict form of model dominance, which rarely exists. We can therefore introduce the concept of *weak dominance*. A model weakly dominates another model of the institutional domain if two conditions are met. First, its embedded effects outperform the embedded effects of the other model on *some* of the assessment criteria. Second, the weakly dominated model outperforms the weakly dominant model regarding its effects on the remaining assessment criteria; still, the weakly dominant model achieves the required minimum thresholds and desirable weights of the remaining assessment criteria. For example, suppose that the stakeholder model of corporate governance has stronger positive embedded effects on some

assessment criteria (e.g., firms' learning capabilities and innovation) than the shareholder value model. In this case, the first condition of weak dominance of the stakeholder model is satisfied. Suppose further that the shareholder value model has stronger positive embedded effect on access and cost of equity capital than the stakeholder model, but the latter still satisfies the desirable weight of the assessment criterion of access to finance. In this case, the second condition of weak dominance is also satisfied. This means that the stakeholder model of corporate governance *weakly dominates* the shareholder value model. Interestingly, if the shareholder value model satisfies the desired weight given to learning capabilities and innovation, then, the shareholder value model also weakly dominates the stakeholder model. In this case, each of them weakly dominates each other.¹²⁵

In addition to weak and strong/strict dominance, we can also distinguish between embedded model dominance and non-embedded model dominance. A model of an institutional domain is non-embeddedly dominant over another model of this domain if it outperforms this model regarding their *non-embedded* effects on the assessment criteria of the institutional network. In contrast, embedded model dominance can be established only if the comparison of the models of the institutional domain is made with reference to their *embedded effects* on the assessment criteria.

Embedded model dominance is *a relative and not absolute* design concept; a model dominates another model of the same institutional domain with reference to *specific* institutional networks. We are not seeking to check whether a model dominates the other models of the institutional domain in all plausible institutional network designs. Further, we are not checking whether a model of the institutional domain dominates all the other plausible models of this domain; for the sake of simplifying the analysis, we are only comparing a small

¹²⁵ I have borrowed the concepts of *weak and strict dominance* from game theory. However, I adapted these concepts to describe the model of the institutional domains, which outperforms other models, while these concepts, weak and strict dominance, are used in game theory to describe the player's strategy that outperforms his other strategies. In game theory, a dominant strategy is 'better in some eventualities, and not worse in any. In general, a player has a dominant strategy when he has one course of action that outperforms all others no matter what the other players do. If a player has such a strategy, his decision becomes very simple; he can choose the dominant strategy without worrying about the rival's moves.' Avinash K Dixit and Barry J Nalebuff, *Thinking Strategically: The Competitive Edge in business, Politics, and Everyday Life* (W. W. Norton & Co. 1991) 59. Further, strict model dominance is *conceptually similar* to the concept of "Pareto optimality" in the context of multi-criteria analysis. For a discussion of this concept of Pareto optimality, Andre, Cardenete and Romero (n 109) 37. See also supra fn. 109.

number of the models of the same institutional domain. Dominance is only relative to the compared models only.

Accordingly, we need to identify the set of institutional networks and models of the institutional domains with reference to which our analysis of model dominance shall be conducted. With respect to our above example, by using the design concept of institutional domain hierarchy, we already know that the institutional network that we seek to design should include sectoral industrial policies. Hence, we compare the embedded effects of the compared models of corporate governance, given the existence of sectoral industrial policies. Similarly, we compare the embedded effects of the compared regulatory models of inter-firm relations, given the existence of sectoral industrial policies. Let us assume that when we compare the effects of post-Chicago and Schumpeterian models of competition on our assessment criteria, while taking sectoral industrial policies as given, we find out that Schumpeterian competition law weakly dominates post-Chicago model of competition. For example, Schumpeterian competition law may have stronger embedded effects on the assessment criteria of organizational learning and innovation, while having weaker effects on static efficiency, but still it satisfies the minimum threshold and desired weight of the objective of static efficiency.¹²⁶ In this case, we include Schumpeterian competition law in the institutional network.

Weak model dominance is a very helpful systemic institutional design concept. Suppose we find out that given sectoral industrial policy and Schumpeterian competition law, we find out that the stakeholder model of corporate governance weakly dominates shareholder value model regarding their embedded effects on all assessment criteria. In this case, we include the stakeholder model in the institutional network. The resulting institutional network would therefore include sectoral industrial policy, Schumpeterian competition law, and stakeholder model of corporate governance. Suppose, however, that none of the compared models of corporate governance weakly dominates each other regarding their embedded effects on the assessment criteria. Suppose that sectoral industrial policies would cause slack in the corporate governance; hence, the embedded effects of the stakeholder model on cost and access to finance becomes weaker than its non-embedded effects to the extent that the

¹²⁶ For a discussion of these models of competition law, see sections 2.2.2 and 2.2.3 on post-Chicago and Schumpeterian competition law models in chapter 11 and the references cited therein.

stakeholder model no longer meets the desired weight of the assessment criterion of access and cost of finance. Similarly, suppose that the shareholder value model does not achieve the desired weight of the assessment criterion of organizational learning. In this case, we need a further design concept to allow us to select a model for corporate governance. I suggest a third systemic legal design concept that can be termed ‘model hierarchy’.

Similar to model superiority and model dominance, *model hierarchy* compares different models of the same institutional domain, and not different institutional domains, but it does so based on the capacity of other institutional domains *to compensate for* the embedded underperformance of the embeddedly inferior models. To determine whether a specific model of the institutional domain (stakeholder model in our example) is hierarchical, there must be *a systemic need* for the *distinctive embedded effects* of this model on at least one assessment criterion. The main test for model superiority is the *comparison of the distinctive embedded effects of the model on specific assessment criteria*, but here the *compensation test or the systemic need test functions as the pragmatic test for model hierarchy*. The compensation test or systemic need test requires two conditions to be met. First, specific models of other institutional domains in the institutional network or its environment can *substitute (compensate)* for the *inferior* distinctive embedded effects of the model of the institutional domain on some assessment criteria. Second, these *compensating* models, particularly when taking into account their complementarities that we may be aware of, still can achieve the desired thresholds and weights of the relevant assessment criteria. If these two conditions are met, then, there is no *systemic need* for the superior distinctive embedded effects of this model of the institutional domain.

For example, let us assume that the stakeholder model is embeddedly superior to shareholder value model regarding its effects on firm specific knowledge accumulation. To determine whether the stakeholder model is *hierarchical to* the shareholder value model, we need to apply the *compensation/the systemic need test*. We ask whether other institutional domains can compensate for the knowledge accumulation underperformance of the shareholder value model. First, one needs to show, for example, that protective labor regulation when combined with a shareholder value model can have embedded distinctive effects on knowledge accumulation that can ensure that the minimum threshold required for knowledge accumulation in our normative framework is achieved. Second, one needs to show

that the tightened labor regulation, along with the shareholder value model, weakly dominates the labor regulation prior to being tightened. In other words, the tightened labor regulation along with shareholder value model produces embedded effects on the assessment criteria that may not outperform the effects of non-tightened labor regulation, but still can satisfy the desired weighted relevant assessment criteria.

Doubtless, one may show that a stakeholder model when combined with this tightened model of labor regulation would be embeddedly superior to the shareholder model in relation to knowledge accumulation, but this does not establish the hierarchy of the stakeholder model; it just establishes its embedded superiority with reference to the new institutional network that includes a tightened labor regulation. Model hierarchy as defined here implies that no institutional domain (e.g., labor regulation) can compensate for the embedded underperformance of the embeddedly inferior model (the shareholder value model in our example), while still weakly dominates its pre-amended model (i.e., non-tightened labor regulation in our example).

If another institutional domain can compensate for the underperformance of the embeddedly inferior model, but still cannot achieve its assigned distinctive functions, one can still inquire whether other institutional domains can compensate for its failures in achieving these distinctive functions. If this process reaches a point where these failures can be compensated by models of other institutional domains that can still satisfying their desired weighted assignment criteria, one can argue that the embeddedly superior model (the stakeholder model in our example) is not hierarchical. However, as we are mainly seeking the design of a reasonable network, we do not have to go through this demanding long process. If no other institutional domain can compensate for the underperformance of the embeddedly inferior effects of one model, while satisfying their desired weighted assignment criteria, we can *presume* the hierarchy of the embeddedly superior model.

We can express mathematically the *model hierarchy of the stakeholder model of corporate governance* as follows:

$$f(s) \geq f(h) + f(l) + c \text{ where } \begin{array}{l} s \in X \\ h \in Y \\ l \in F \\ x(l) \geq \bar{x} \end{array} \quad (3)$$

Where $f(s)$ is the embedded positive effects of the stakeholder model on learning when combined with sectoral industrial policies and Schumpeterian competition law, i.e., where $s \in X$. X is an institutional network consists of sectoral industrial policies, Schumpeterian competition, and stakeholder model. Y an institutional network consists of sectoral industrial policies, Schumpeterian competition, and shareholder value model. $f(h)$ is the embedded positive effect of shareholder model on learning when combined with sectoral industrial policies and Schumpeterian competition law, i.e., where $h \in Y$. l is any institutional domain in the institutional network of the environment of the institutional network. $f(l)$ is the distinctive embedded learning effects of l when l is combined with Y that is the institutional network that includes the shareholder value model h , Schumpeterian competition, and sectoral industrial policies. F is the resulting institutional network after adding l to Y . c is a constant reflecting the fact that in order to be hierarchical over the shareholder value model regarding its learning effects, the stakeholder should have a sufficiently higher positive effects on learning after taking into account the compensating learning effects of l . $x(l)$ refers to the other distinctive effects of the institutional domain (e.g., protection of the weak) and \bar{x} refers to the minimum threshold that these distinctive effects should always meet. If l affects more than one assessment criterion (e.g., income distribution in addition to protection of the weak), then, we can include the required thresholds of these assessment criteria to capture each of its relevant distinctive effects. For example, we can capture that the compensating institutional domain still satisfies the required threshold of these further assessment criteria (e.g., income distribution) as follows: $y(l) = \bar{y}$.

Inequality (3) above implicitly assumes that the embedded effects of the stakeholder model will not change if we also combine the institutional domain l to the institutional network X . To ensure more accuracy, we can require that the stakeholder model belongs to this resulting institutional network to which we can refer as D . If we do so, the above inequality would remain the same, but we would only change $s \in A$ to $s \in D$. We can also change $h \in Y$ to $h \in F$. The inequality reads then as follows:

$$f(s) \geq f(h) + f(l) + c \quad \text{where} \quad \begin{array}{l} s \in D \\ h \in F \\ l \in F \\ x(l) \geq \bar{x} \end{array} \quad (4)$$

The above mathematical representation of the model hierarchy reveals three important information about this institutional design concept. First, similar to model dominance, it is *a partial and relative ranking concept and not a complete and absolute ranking concept*. In the above equation, the stakeholder model is hierarchical over the shareholder value model with reference to specific institutional network that includes sectoral industrial policies, Schumpeterian competition law, and the institutional domain l (e.g., labor regulation in our above example). Ranking/hierarchy here is not absolute across all plausible institutional networks. Further, it is hierarchical over the shareholder value model with reference to specific assessment criterion that is learning.

In this example, if we could not find that the stakeholder model is hierarchical to the shareholder value model, then, we would have two plausible institutional networks. To choose one of these networks, we can then use *consistency analysis*. As already defined, we assess whether the embedded effects of sectoral industrial policy, Schumpeterian competition, and shareholder value are consistent regarding each of the assessment criteria of the institutional network. We conduct the same consistency analysis for the alternative institutional network that includes the stakeholder model instead of the shareholder value model. The institutional domains that are consistent, and their consistency is normatively desirable are then presumed to complementary, and presumed to achieve reasonably our weighted assessment criteria. Indeed, both institutional networks may turn out to be consistent and reasonably achieve our desirable objectives.

By using the design concept of model hierarchy, we may find out that the stakeholder model has a hierarchy over the shareholder value model regarding one of the inferior effects of the shareholder value model. In this case, we include the stakeholder model in the institutional network. The systemic institutional design concepts (i.e., institutional domain hierarchy, model superiority, model dominance, and model hierarchy) allow us to choose the combination of the models of the institutional domains that consist our institutional network. In our example, this combination includes sectoral industrial policies, Schumpeterian

competition law, and stakeholder model of corporate governance. Still, the embedded effects of these institutional domains may not be consistent; hence, we need to conduct consistency analysis of this institutional network. If they turn out to be consistent and their consistency is normatively desirable, we presume them to be complementary. Hence, we adopt the institutional network that includes this combination of models of the institutional domains.

In sum, through the combination of consistency analysis, institutional domain hierarchy, model superiority, model dominance, and model hierarchy, we can design an institutional network that would be largely consistent and achieve reasonably our assessment criteria. If we use some of these concepts or we use them with relevant to specific networks out of the large number of the plausible networks, they can guide us also through the process of designing a reasonable network. However, if we combine them and use them across a large number of plausible networks, while reducing the informational basis due to this combination, then, we can improve the institutional network design. Table 6.2 summarizes the five systemic institutional design concepts developed in this chapter.

The Systemic Design Concepts	Institutional Design Objective	Explanation and Rationale of the Design Concept and Some Relevant Comments	Relevant (Pragmatic) Test/Operationalization of the Design Concept
Reasonableness	Design of institutional networks that fulfil the normative objectives <i>reasonably and not optimally</i> , i.e., achieves the minimum acceptable	Optimization of the institutional network design is a very difficult, if not a futile exercise, given the thousands of plausible institutional networks and the evolutionary nature of the socio-economic system.	Whether the designed network can achieve the minimum threshold for each normative objective with reasonable probability.

	<p>threshold of the objectives with reasonable probability.</p>		
<p>Institutional Domain Hierarchy</p>	<p><i>Partial</i> Ranking of the institutional domains according to hierarchy/priority (i.e., weights) given to the assessment criteria of the institutional network.</p>	<ul style="list-style-type: none"> - Given the difficulty of choosing institutional domains simultaneously, the concept of institutional domain hierarchy simplifies the process of institutional networks design by selecting an institutional domain to include in the institutional network so that we can take this institutional domain <i>as a given</i> for the purpose of choosing other institutional domains. - In order to selection the hierarchical institutional domain, the concept of institutional domain hierarchy compares the institutional domains according to a two-fold test. - Sometimes, the concept of institutional domain hierarchy gives us important information (e.g., hierarchy of sectoral industrial policies), but it may provide us with intuitive, if not superficial, information. For example, according to the concept of institutional domain hierarchy, corporate governance, regardless of its model, is a hierarchical domain, i.e., it cannot be eliminated from the institutional 	<p>Two-fold Test</p> <ul style="list-style-type: none"> - Does the institutional domain achieve some of the critical assessment criteria of the institutional networks, i.e., does this institutional domain undertakes some of the critical functions/objectives to be achieved by the institutional network? To answer this question, we need to know the common and distinctive effects of each domain, and the set of the critical assessment criteria based on ordering the overall normative objectives/assessment criteria of the institutional network. - <i>Compensation or Systemic Need Test: Is</i>

		<p>network because the distinctive effects of any model of corporate governance cannot be compensated for by other institutional domains.</p>	<p>there other institutional domain that can compensate for these critical functions if these critical functions are not undertaken by the hierarchical institutional domain (i.e., is there a systemic need for this function of the institutional domain?), while the institutional network can still achieve the required minimum thresholds of the weighted assessment criteria.</p>
<p>Model Superiority</p>	<p>relative ranking of the models of the same institutional domain with reference to a specific assessment criterion of the assessment criteria of the</p>	<ul style="list-style-type: none"> - Given the difficulty of choosing one of the models of the same institutional domain, we need to develop design concepts to guide this choice. - With reference to specific network, and specific assessment criterion, embedded model superiority establishes that one model of the institutional domain outperforms other models with respect to their distinctive embedded effects on this assessment criterion. The other variant of model superiority, non-embedded model superiority, compares the models of the institutional domain based on their non-embedded effects on this assessment criterion. 	<p>Comparison of <i>the embedded distinctive effects</i> of each <i>model</i> on a specific assessment criterion, given a specific institutional network. The non-embedded variant of model superiority compares non-embedded distinctive effects rather than embedded distinctive effects on the assessment criterion.</p>

	institutional network		
Model Dominance	Relative Ranking of the models of the same institutional domain	<ul style="list-style-type: none"> - Model superiority is insufficient for selecting a model among the plausible models of the institutional domain because the model may be superior to other models with reference to an assessment criterion, but inferior to them regarding its effects on another assessment criterion. We need to complement it with other systemic institutional design concepts. Model dominance is an important complementary design concept. - If a model of the institutional domain outperforms the other models with reference to its distinctive embedded effects on all the assessment criteria of the institutional domain, then, this model <i>strictly dominates</i> the other models. - Strict model dominance is rare, for which reason, we introduce the concept of weak model dominance. - Based on whether the comparison of the models of the institutional domain is made with reference to their embedded or non-embedded effects, model dominance is of two types: embedded model dominance and non-embedded dominance. 	<ul style="list-style-type: none"> - A model weakly dominates another model of the institutional domain if two conditions are met. First, its embedded effects outperform the embedded effects of the other model on <i>some</i> of the assessment criteria. Second, the weakly dominated model outperforms the weakly dominant model regarding its effects on the remaining assessment criteria; still, the weakly dominant model achieves the required minimum thresholds and desirable weights of the remaining assessment criteria.
Model Hierarchy	Relative ranking of the models of the same	<ul style="list-style-type: none"> - If neither of the models of the institutional domain weakly dominates each other, then, we need a further systemic design concept for guiding the choice of a model of the domain. 	<p>Compensation or Systemic Need Test:</p> <ul style="list-style-type: none"> - Are there specific models of other institutional

	<p>institutional domain</p>	<p>This further systemic legal design concept is called, model hierarchy.</p> <ul style="list-style-type: none"> - - In principle, if a model weakly dominates another model, there is no need for checking whether it is hierarchical. Generally, there is no reason for adopting the weakly dominated model, while compensating for its inferior effects through compensating institutional domains. Model hierarchy is most helpful when the model is embeddedly superior with reference to an assessment criterion, but inferior with reference to its effects on another criterion. - There is a strong similarity between institutional domain hierarchy and model hierarchy because each of these design concepts relies on the compensation test (systemic need test). However, the main difference between these design concepts is that for institutional domain hierarchy, we ask whether the critical functions achieved by a specific institutional domain can be largely compensated by other institutional domains. In a sense, we ask whether we can eliminate this institutional domain from our institutional network and this network can still achieves the desired assessment criteria. The performance of this institutional network would be largely undermined after the elimination of the institutional domain, but it can still reasonably 	<p>domains in the institutional network or its environment that can, after some legal modifications, <i>substitute (compensate)</i> for the underperformance of the inferior effects of the model?</p> <ul style="list-style-type: none"> - <i>If yes, can these compensating institutional domains, particularly when taking into account their complementarities that we may be aware of, still achieve the required minimum threshold of the assessment criteria that they used to achieve prior to their modifications.</i>
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		<p>achieve the critical functions of the eliminated institutional domain, while not undermining the critical functions of the compensating institutional domains.</p> <p>In contrast, model hierarchy compares the models of the same institutional domain. It thus determines the <i>critical functions (the superior effects of the model, which are necessary for achieving the required minimum threshold of some of the weighted assessment criteria)</i> that each of these models achieve.</p> <p>Then, it inquires whether if we included one of these model in an institutional network, then, can this network still compensate for the underperformance of this model? Here, we do not eliminate the institutional domain altogether and then apply the compensation test, but we apply the compensation test while including the embeddedly inferior model of the institutional domain in the institutional network.</p>	
<p>Multi-Assessment Criteria, Assignment Rule, Qualitative Indicators, and Built-in Adaptive Mechanisms</p>	<p>These four important systemic design concepts and principles shall be developed in chapter 10. The built-in adaptive mechanisms shall be discussed briefly in chapter 11. Here, it suffices to say that ensuring the heterogeneity among the relevant stakeholders of the socio-economic system is an important example of a built-in adaptive mechanism of the institutional networks, which has been already discussed above in relation to the role of judiciary in a capitalist economy.</p>		

Table 6.2: Systemic Design Concepts and Principles for Institutional Networks Design (Systemic Institutional Design Concepts and Principles)

Figure 6.1 below describes the process of designing reasonable institutional networks by combining consistency analysis with the proposed legal design concepts. In other words, figure 6.1 describes the *operationalization* of the *systemic* approach to (the design of) legal institutions of capitalism. The process starts with the goal of the institutional design that is the design of a consistent and *reasonable*, and not optimal, institutional networks (legal systems). We determine the normative objectives/assessment criteria that the institutional network should reasonably achieve, along with operationalizing some of these objectives/assessment criteria by creating some qualitative and quantitative indicators for them. Then, the scholar selects some real world institutional networks that include the same institutional domains of the institutional network that she intends to design and conducts an in-depth consistency analysis of these institutional networks. These real world networks should include also the institutional network of the (developing) country for which we aspire to design a new reasonable institutional network; clearly, these real world networks should also include networks of countries that succeeded in their socio-economic (human) development. The assessed networks can also include institutional networks that no country has yet adopted, but the analysis of such networks would be highly theoretical and tentative because we lack any context specific empirical knowledge about these hypothetical institutional networks. Hence, at this stage of our limited knowledge, it is preferable to focus on consistency analysis of real world institutional networks. The three steps of consistency analysis, assessment of the non-embedded effects of each institutional domain, assessment of their embedded effects, and consistency analysis, ensure a good *informational basis* for the application of our systemic design concepts.

Systemic law and economics scholars should use the systemic design concepts wisely and efficiently. For example, when using institutional domain hierarchy, they should not check whether each of the institutional domains have institutional hierarchy. Similarly, they should not check whether the model of each institutional domain weakly dominates the other models of these institutional domains. Instead, if they suspect that an institutional domain is hierarchical, then, they should start by checking its hierarchy, while skipping examining the

hierarchy of the other institutional domains, if they suspect they are not hierarchical. Similarly, if they suspect that a model of corporate governance weakly dominates the alternative model of corporate governance, then, they should check its weak dominance. However, they should not be concerned with investigating the weak dominance of one model of competition law over another, if they suspect that this model is not weakly dominant. Similarly, they should examine model hierarchy only for the models for which they suspect they are hierarchical.

The application of these design concepts may then result in adopting an institutional network that is largely or marginally different from the real world institutional networks that the scholar has already assessed their consistency. If these differences are significant, then, we need to conduct a further in-depth consistency analysis; otherwise, a brief consistency analysis will be generally sufficient. Given this reasonable institutional network, the scholar can then inquire into the design of each of the institutional domains, for which she has already selected its model. For example, if the designed institutional network includes a stakeholder model of corporate governance, the scholar can then investigate what would be the best network of legal institutions that implement a stakeholder model, i.e., what is the best model of the feasible stakeholder models; chapter 12 will address this question, for example.

In its attempt to design a reasonable institutional network for the supply side of product markets in developing countries, the applied part has followed closely these steps of systemic design of legal institutions. In chapter 10, we develop the assessment criteria of the institutional network of the supply side of product markets, which includes the domains of corporate governance, competition law, and industrial policy (steps 2 and 3 of the systemic design process in figure 6.1 below). In chapter 11, we conduct consistency analysis of real world institutional networks, namely, the institutional networks of post-war Japan, post-War Germany, and the US. In section 3 of chapter 12, we use the systemic design concepts in steps 5 to 9 in figure 6.1 below to suggest an institutional network for developing countries. Then, in sections 4, 5, and 6 in chapter 12, we provide an outline of a (modified) legal framework for the selected models of competition law, corporate governance, and industrial policies that compose the suggested institutional network.

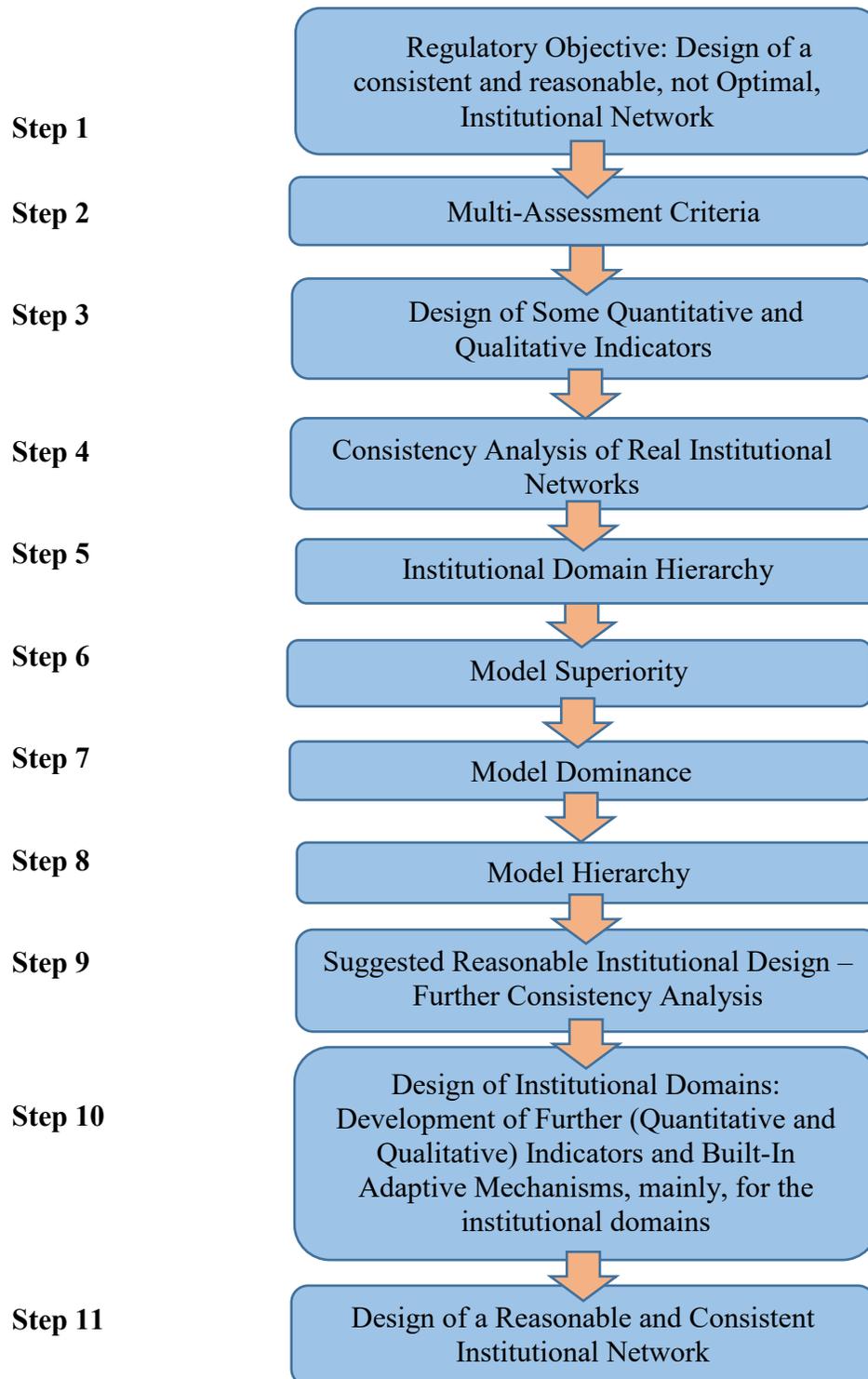


Figure 6.1: The Process of Systemic Design of Reasonable and Consistent Institutional Networks (i.e., Legal Systems).

9. Conclusion

In the previous chapter, we have established the case for a systemic approach to analysis and design of legal institutions to overcome the reductionist and improper institutional individualism of neoclassical law and economics as an approach to analysis and design of economic regulations. Given the strong case for systemic law and economics, we have attempted to operationalize this approach in this chapter. The starting point for the operationalization of the systemic approach is to identify the systemic unit(s) of institutional analysis, which is the embedded institutional network(s) (i.e., legal systems). Taking institutional networks as our unit of institutional analysis would imply bringing capitalism back into legal analysis, where regulatory interventions at the micro-level has to be justified with reference to its global impact on the capitalist system channeled and amplified over the institutional network. We cannot conduct systemic analysis and design of legal institutions without addressing big systemic questions regarding capitalism as a complex system such as the objectives of the regulatory governance of capitalism, for example. Then, we have developed important analytical and design systemic concepts and principles for analysis and design of institutional networks, namely, the four-step process of consistency analysis, legal design reasonableness, institutional domain hierarchy, model superiority, model dominance, and model hierarchy. Then, we have demonstrated how these systemic concepts and principles can be used collectively for design of reasonable and consistent institutional networks.

Still, systemic law and economics faces serious challenges. First, it seems to be too complex to be undertaken. Further, its results would not be as rigorous as those of neoclassical law and economics. As to the first challenge, the institutional studies that employed some forms of systemic thinking such as comparative capitalism and the applied part of this thesis demonstrate the possibility of such systemic analysis despite its complexity. As to the challenge of rigor, neoclassical law and economics is far from developing rigorous and accurate analysis or optimal design of legal institutions because of its reductive and improper institutional individualism. By simplifying or assuming away institutional interdependencies, the complex structure of the multi-level-multi-layered capitalist economy, and the heterogeneity of agents' interacting simultaneously with each other and with these complex

structures, the neoclassical analysis and design of legal institutions is conducted in *a nirvana*. This analysis is necessarily inaccurate, incomplete, or mistaken, but it appears to be rigorous and accurate. Similarly, the so-called optimal legal institutions from a neoclassical perspective are indeed pseudo-optimal. In contrast, systemic law and economics acknowledges the complexities of institutional analysis and design, and the tentative nature of its conclusions.

Recognizing the true complex nature of the problem is not a trivial contribution; it is the starting point for reliable solution to the problem. Hence, the systemic approach allows us to uncover the *scientific façade* of neoclassical law and economics, which contributes to its powerful rhetoric in policy-making arenas. Since this scientific façade legitimizes the intellectual power of economics as a discipline in policy-making and the enormous funds channeled to economic research, many economists would be the most vehement opponents of systemic law and economics. In contrast, the prestige and power of legal scholarship are not tied to these scientific facades; legal scholars have no strong self-interested reason to dismiss systemic thinking. Indeed, systemic thinking gives them a distinct perspective for analyzing and designing legal institutions. Rather than producing low quality applied microeconomics, systemic thinking gives legal scholars a voice and a space for innovative intellectual contributions.

So far, we have established the case for both integrated law and economics and systemic law and economics separately. Indeed, both of them are standalone approaches that can be used in isolation of each other. In the following chapter, we operationalize the integrated law and economics approach, investigate its relation to the systemic approach, and then *combine and operationalize* both approaches to constitute what I call *integrated and systemic law and economics*, or for indicating its generic nature, we can call it, the *integrated and systemic approach*.

Chapter

7

Bringing Together and Operationalizing the Integrated Approach and the Systemic Perspective: An Operationalized Integrated and Systemic Approach to Economic Regulations

1. Introduction

The previous chapters have established the methodological case for both the integrated approach and the systemic approach to analysis and design of economic regulations. This chapter argues that both the integrated and systemic approaches are complementary; therefore, when we can easily combine them together to constitute what I call, the “integrated and systemic law and economics”, or for brevity, the “integrated and systemic approach”. In addition, the previous chapter has already operationalized the systemic approach, but we have not operationalized yet the integrated approach or the integrated and systemic approach. This chapter fills in this lacuna and develops a process for the application of both the integrated approach and the integrated and systemic approach.

The structure of this chapter is as follows. By drawing on systems thinking and interdisciplinary studies literature, section 2 shows the complementary relation between the integrated approach and the systemic perspective; this complementarity justifies methodologically the synthesis of both approaches to give rise to an integrated and systemic approach. Then, section 3 uses the insights of interdisciplinary studies literature to operationalize the integrated and systemic approach by developing concrete steps for the application of this approach. This section shows also how the integrated approach can be applied independently from the systemic approach. Section 4 concludes.

2. Toward an Integrated and Systemic Approach: the Complementary Relation between the Integrated and Systemic Approaches

The integrated approach and the systemic approach are separate approaches to the analysis and design of legal institutions. Each of them is justified by distinct epistemological foundations; the integrated approach finds its epistemological justifications in the *pragmatism and the perspectival realism* in philosophy of science, while the systemic perspective finds its justification in systems theory (e.g., complex systems theory), and the interdependencies of (legal) institutions that are well-established in the institutional schools of thought such as comparative capitalism. Further, the application of each of these approaches follows distinct methodical steps.

Because of the distinct theoretical and philosophical basis for the integrated and the systemic approaches, the readers who are dismissive of both approaches, they have to counter-argue the distinct line of arguments developed in support of each approach. Dismissing one approach does not imply dismissing the other. Further, the readers, who are convinced of the arguments underlying one approach such as the integrated approach, but unpersuaded by the arguments underlying the other approach such as the systemic approach, can use the integrated approach for analysis and design of economic regulations. These readers do not need to endorse the systemic approach to justify their adopted of the integrated approach.

With respect to the researchers who are convinced of both the integrated and systemic approaches like myself, the challenging issue is whether these approaches can be theoretically combined to constitute one approach that I call “integrated and systemic law and economics”, or for brevity, the “integrated and systemic approach”.

Indeed, both the systemic and integrated approaches are theoretically consistent and complementary to each other. The systemic approach is in essence a way of thinking; it informs legal scholars that a proper systemic analysis and design of legal institution requires the analysis institutional interdependencies, heterogeneous agents’ interactions, and the structures of the institutional and agents’ networks. The systemic approach may also provide the researcher with operationalized systemic approaches and methods for undertaking this

systemic analysis such as the four-step process of consistency analysis, the systemic process for institutional networks design, the systemic institutional design concepts and principles, and a systemically informed econometrical analysis of legal institutions. However, as the previous chapter has argued, the use of any of these operationalized systemic approaches requires *broad and rich informational basis*. For example, consistency analysis of the institutional domains of an institutional network such as corporate governance, competition law, and industrial policy requires the analysis of the non-embedded and embedded effects of each of these institutional domains of our assessment criteria (e.g., organizational learning, innovation).

The researcher who adopts the systemic approach can use a single cognitive perspective such as neoclassical-new institutional economics to informational basis of the systemic analysis. For example, the researcher can use neoclassical economics to assess the non-embedded and embedded effects of the above institutional domains to assess their consistency. However, this informational basis would be biased because it overlooks the insights of non-neoclassical cognitive perspectives. Accordingly, if the researcher uses the integrated approach for assessing these non-embedded and embedded effects, then, the resulting informational basis for systemic analysis would be less biased; moreover, this informational basis would be richer and more complete informational basis. For example, the neoclassical-new institutional perspective provides some insights on the effects of corporate governance on organizational learning, but the account of learning of this cognitive perspective is largely poor. Accordingly, the integration of the relevant insights of the knowledge-based theories of the firm would enhance the quality of the informational basis of the systemic analysis substantially.

In short, the systemic approach gives the legal scholar an operationalized systemic way of thinking about legal problems, while the integrated approach gives this scholar a rich, high quality, and less biased informational basis that is required for conducting proper systemic analysis. Once the integrated approach provides us with numerous valid insights that constitute this informational basis, the systems thinking is one way to integrate consistently these valid insights relevant to the regulatory problems to develop a systemic solution to this regulatory problem.

Further, the integrated approach forces the legal scholar to identify the cognitive perspective of the schools of thought and theories relevant to the regulatory problem; each of these cognitive perspectives sheds light on an aspect of the problem overlooked by the other perspective. A consistent integration of the valid insights of these cognitive perspectives would give the scholar a *better systemic* understanding of the regulatory problem. This somehow systemic understanding can be deepened by using operationalized systemic approaches that would call for a second round of the use of the integrated approach to secure the informational basis required for proper systemic analysis. This positive feedback loop that connects systemic thinking and the integrated approach would result in a systemic integrated understanding and resolution of the regulatory problem.¹ For example, the integration of the insights of the new institutional theories of the firm and knowledge-based theories of the firm in chapter 8 results in a better systemic understanding of the firm as a dual system of *incentives* and of *knowledge* rather than the reductive new institutional understanding of the firm as a system of incentives.²

In short, the integrated and systemic approaches are complementary; they give rise to an inherently consistent approach that I call the “integrated and systemic approach”. This approach *complements* and *critically refines* the mainstream neoclassical law and economics approach. Table 7.1 below includes a comparison between the integrated and systemic approach and neoclassical law and economics. Neoclassical law and economics applies automatically and blindly the theories and methods of neoclassical economics to regulatory problems. In contrast, the integrated dimension of the integrated and systemic critically refines the insights of neoclassical economics and complements these refined insights with the valid

¹ Similarly, Newell suggests that integration is a non-linear (feedback) process in which the researcher seeks to develop a systemic understanding a complex system by integrating the disciplinary insights relevant to different sub-systems of this complex system. Since the researcher observes the overall pattern of the complex system, this overall pattern should inform the integration process, while the integration process should inform back his understanding of the complex system that produces this overall pattern. William H Newell, ‘A Theory of Interdisciplinary Studies’ (2001) 19 *Issues in Integrative Studies* 20.

² There are other aspects of the complementary relation between systems thinking and integration. For example, Repko suggests that systems thinking can help interdisciplinary scholars identify the disciplines (i.e., schools of thought and theories in our case) relevant to the interdisciplinary problem because it can help them map the sub-systems of the complex interdisciplinary problem and the relations among these sub-systems. This mapping of the complex problem can help the researchers identify the disciplines relevant to each of these sub-systems and their relations. Allen F Repko, *Interdisciplinary Research: Process and Theory* (2nd edn, SAGE 2012) 152–156 .

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insights of non-neoclassical cognitive perspectives. Further, unlike the reductionist perspective of the micro and macro strands of neoclassical law and economics. The systemic dimension of the integrated and systemic approach proposed approach overcomes this reductionism by developing *systemic frameworks and approaches* for analysis of institutional interdependencies, agents' interactions, and the structure of the two-level network of capitalism. In this systemic approach to legal institutions, the unit of legal analysis and design is systemic, namely, institutional networks rather than isolated legal institutions. Further, the system subject to regulatory intervention is also systemic, namely, capitalism rather than firms or markets. Finally, numerous systemic approaches need to be developed and operationalized for analysis of the different forms of institutional interdependencies and for design of consistent and complementary institutional domains. The previous chapter has developed some of these operationalized approaches, but future research is needed for developing further operationalized systemic approaches.

Neoclassical Law and Economics	Integrated and Systemic Law and Economics
Automatic application of the cognitive perspective (theories, methods, analytical concepts and normative criteria) of neoclassical-new institutional economic school of thought to economic regulatory problems	Integrated Law and Economics critically complements the neoclassical perspective: <ul style="list-style-type: none"> • The integrated approach refines the neoclassical insights relevant to the regulatory problem and select only the valid insights • The integrated approach integrates the valid insights of non-neoclassical schools of thought and theories into the analysis of the regulatory problem
<ul style="list-style-type: none"> • The neoclassical law and economics, particularly as undertaken by legal scholars, applies the (reductive) 	Systemic Law and Economics overcomes the reductionism of the micro and macro strands of neoclassical law and economics of

<p>micro-economic perspective to the analysis and design of legal institutions (i.e., the analysis and design of institutional networks)</p> <ul style="list-style-type: none"> • Legal scholars rarely apply neoclassical macroeconomics to analysis and design of legal institutions. In contrast, the macro-analysis, particularly indices-based macro-econometrical analysis of legal institutions have been on rise in economics. Still, the neoclassical macroeconomic perspective commits also to reductionism; it fails to develop a systemic analysis and design of legal institutions conceptualized as <i>institutional networks</i>. 	<p>economic regulations. The systemic approach develops a systemic analysis and design of legal institutions that takes into account the interdependencies among the legal institutions, the interactions of the heterogeneous agents', the structure of both the institutional and the agents' network. The analytical framework of the systemic approach is as follows:</p> <ol style="list-style-type: none"> a) A systemic rather than a reductionist <i>unit of legal analysis and design</i>: institutional networks rather than isolated legal institutions are the unit of legal analysis and design. b) A systemic rather than a reductionist <i>subject of economic regulation</i>: the capitalist system rather than markets or firms is the main systemic subject-matter of regulatory intervention c) Operationalized systemic approaches for analysis of the different forms of institutional interdependencies (e.g., compatibility, consistency, hierarchy, and complementarities). Chapter 6 has developed only a four-step process for consistency analysis. Consistent institutions are presumably complementary. Still, other forms of institutional interdependencies are still awaiting
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	<p>operationalized systemic approaches for their analysis.</p> <p>d) Operationalized systemic approaches for design of institutional networks: chapter 6 has developed a systemic process for design of consistent and reasonable institutional networks. Operationalized systemic design approaches are needed for design of complementary institutions.</p>
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Table 7.1: Neoclassical vs. Integrated and Systemic Law and Economics

3. The Operationalization of the Integrated and Systemic Approach: The Steps of the Application Process of the Integrated and Systemic Approach to Concrete Regulatory Problems

Up until this point, we have already operationalized the systemic approach in the previous chapter, but we have not yet operationalized the integrated approach. Further, we have not yet operationalized *the integrated and systemic* approach. This section seeks to operationalize the integrated and systemic approach by developing well-defined and replicable *process* for its application. The steps that operationalize *the integration dimension* of the integrated and systemic approach are close adaptation of *the process of interdisciplinary research*. Instead of developing a *method* for interdisciplinary research, some interdisciplinary scholars have developed a *process* that interdisciplinary scholars could follow.³ The process consists of chronological steps that the scholar would repeat circularly; once the scholar reaches the last step, she goes through these steps from the start to enhance the quality of the interdisciplinary inquiry.⁴ In each step, the researcher may choose freely the method or the combination of

³ Newell (n 1), 14–15. Repko, *Interdisciplinary Research: Process and Theory* (n 2) 73–74.

⁴ *ibid* 73–76.

methods (quantitative, qualitative, experimental, computational, mixed methods, historical, triangulation, informal, etc.) that enable her to undertake the scholarly tasks of each step.

For example, Repko suggests the following process for interdisciplinary research, which goes roughly as follows.⁵ First, the scholar defines the research problem in a way that avoids disciplinary bias and jargon.⁶ Second, the scholar justifies why this research problem calls for an interdisciplinary approach.⁷ Third, the scholar identifies the most relevant disciplines to the research problem.⁸ Forth, the scholar conducts a literature review of the research problem in each of these relevant disciplines in order to identify the disciplinary insights relevant to this problem.⁹ Fifth, the scholar evaluates and refines these insights through a process of critical reflection,¹⁰ and then determines whether the insights are inconsistent and identifies the sources of their inconsistencies.¹¹ Sixth, she integrates these insights by using integration techniques and systemic thinking.¹² This integration would result in a more comprehensive and interdisciplinary answer to the interdisciplinary research question.¹³ The process I suggest for integrated and systemic law and economics follows closely these steps. However, given the current state of legal and economic scholarship on economic regulations, I have made some modifications to this process to ensure its suitability for analysis and design of economic regulations.

In the first step, the researcher reviews how neoclassical law and economics approaches the regulatory question at hand. This review should include how the neoclassical approach conceptualizes the regulatory problem, the neoclassical answer to the regulatory question (i.e., the neoclassical regulatory position) and the underlying arguments made in support of that position. Most importantly, the neoclassical literature review should also include the *diverse*

⁵ The original process suggested by Repko consists of 10 steps, but this exposition of his proposed process consists only of 7 steps because I combined some steps into fewer steps.

⁶ *ibid* 76. For an overview of this step, see: *ibid* 76–84.

⁷ *ibid* 84. For an overview of this step, see: *ibid* 84–89.

⁸ *ibid* 143–144. For an overview of this step, see: *ibid* 143–164.

⁹ *ibid* 167–170. For an overview of this step, see: *ibid* 167–190.

¹⁰ For an overview of this point, see: *ibid* 225–255.

¹¹ *ibid* 293–294.

¹² *ibid* 321–322. Newell (n 1), 20–21. One of the most important integration technique is the creation of common ground among the conflicting insights, see: Allen F Repko, ‘Integrating Interdisciplinarity: How the Theories of Common Ground and Cognitive Interdisciplinarity are Informing the Debate on Interdisciplinary Integration’ [2007] *Issues in Integrative Studies*, 14–21.

¹³ Repko, *Interdisciplinary Research: Process and Theory* (n 2) 382–384.

neoclassical positions on the regulatory issue, and their underlying lines of arguments. This stage can be called the “*neoclassical literature review*.”

In the second step that I call the “critique step”, the researcher advances *internal, external and systemic* critiques of the neoclassical regulatory position(s) and their underlying lines of argument. *Internal critiques* refer to the set of critiques that the researcher can develop by using the cognitive perspective of the neoclassical-new institutional school of thought itself. As the applied part will show, the neoclassical perspective can be used for advancing a critique of some neoclassical positions or arguments. For example, section 3 of chapter 8 uses the neoclassical-new institutional perspective to develop a critique of the neoclassical-new institutional arguments made in support of the shareholder value model of corporate governance. Similarly, section 3 of chapter 9 uses the neoclassical perspective to develop critiques of the dominant neoclassical normative theory of economic regulations.

In addition to internal critiques, the researcher applies both the integrated and the systemic dimensions of the proposed approach as *critical perspectives* to the diverse neoclassical positions and their underlying arguments. First, the researcher uses the integration dimension critically; in this case, the researcher takes an “*external critique*” position; she uses the non-neoclassical cognitive perspectives to develop a critique of the neoclassical regulatory position and/or its underlying arguments. The researcher examines whether the cognitive perspective of any of the non-neoclassical economic schools of thoughts (e.g., Keynesian economics, Sraffian (Neo-Ricardian) economics, complexity economics, old institutional economics, socio-economics, and comparative capitalism) can develop a *critique* to the neoclassical conclusions regarding the regulatory problem at hand. Similar to non-neoclassical schools of thought, non-neoclassical *theories*, and non-neoclassical *concepts* can develop *external critiques* to the neoclassical regulatory positions and their underlying arguments. For example, the capabilities approach of Amartya Sen is not a standalone school of thought, but it is a non-neoclassical normative theory distinct from neoclassical welfare economics, which can be used to develop external critiques of the neoclassical normative theory of economic regulations. This is the “external critiques” sub-step of the critiques step. For example, section 4 of chapter 8 uses the insights of knowledge-based theories of the firm and the French regulation school of economics to develop external critiques of the neoclassical-new institutional theories of corporate governance. Similarly, section 4 of chapter

9 use insights from moral philosophy, (non-neoclassical) development economics, constitutional economics, and law and political economy to criticize the neoclassical normative theory of economic regulations.

Subsequently, the researcher uses the systemic perspective critically to develop systemic critiques of the neoclassical position(s) and its underlying arguments. Most importantly, the researcher asks four questions. First, the researcher investigates whether there are important interdependent institutions that the neoclassical analysis has overlooked. The focus here is clearly on the institutional network and its structure; particularly, the researcher investigates whether the neoclassical position takes the structure of the institutional network into account or ignores this structural aspect of the regulatory problem. Second, the researcher inquires whether there are interactions at the agents' level that the neoclassical analysis has ignored, and whether the regulatory conclusions may differ if these interactions are taken into account. Third, the researcher examines whether there are sub-areas of economic or non-economic research that can inform the regulatory question, but the neoclassical perspective has ignored these sub-areas. Regulatory problems such as financial regulatory problems, as the previous chapter has argued, cuts across numerous sub-areas of economics such as banking economics, organizational economics, contract theory, risk management, and corporate governance of financial institutions. Assume that a neoclassical perspective exists in each of these sub-areas. Assume further that the neoclassical position on the regulatory issue at hand is based on the insights of the neoclassical perspective of only one of these sub-areas, while excluding the neoclassical relevant insights of the other sub-areas. In this case, this neoclassical regulatory position is *not systemic* because it misses important aspects of the problem. Forth, in light of the important methods and insights of systemic thinking (e.g., consistency analysis, institutional complementarities, multi-criteria analysis, sensitivity to initial condition, and path dependency of the system) the researcher can advance further critiques to the neoclassical regulatory position or its underlying arguments. I will call these four set of critiques "*the systemic*" critiques. They refer to the set of critiques that can be advanced to the neoclassical regulatory position or its line of argument by using the systemic approach as a *critical perspective*. Section 5 of chapter 8 employs the systemic perspective, particularly the institutional interdependence of institutions, to develop a systemic critique of the neoclassical choice of corporate governance model for developing countries. Similarly, section 5 of chapter

9 uses the systemic perspective to uncover systemic inconsistencies (the so-called horizontal and vertical normative inconsistencies) in the neoclassical normative framework of economic regulations.

In the economic methodology literature, economists advance *internal and external critiques* to the *dimensions* of the neoclassical paradigm (e.g., the ontological position, neoclassical positivist methodology, neoclassical theories, and assumptions such as rational choice theory).¹⁴ In contrast, according to the “critique step”, the internal, external, and systemic critiques should target the neoclassical position *on the regulatory issue* at hand; these critiques should not target, for example, the rationality assumption of neoclassical economics. Rather, it should establish why, *given the regulatory question at hand*, the rationality assumption might be untenable. This flows from the *pragmatic* epistemological justification of the integrated approach; from a pragmatic perspective, contextualized rather than theoretical generalized critiques of the neoclassical school of thought would be of a significant *practical* value in the real-world context of the regulatory problem. Further, according to the scientific realist position that justifies also the integrated approach epistemologically, the heterogeneity of the sub-systems that constitute the economic reality implies that a neoclassical assumption (e.g., rational choice) might be justified in the context of analyzing a specific regulatory problem, but it might be unwarranted in the context of analyzing another problem.

In sum, the second step that I call the “*critique step*” involves *using the integrated and systemic law and economics (as well as neoclassical and new institutional economics) as a critical perspective for advancing the internal, external, and systemic critiques to the neoclassical regulatory position on the regulatory problem at hand and its underlying line(s) of argument.*

The critique stage is one of the most important steps of the application process of the integrated and systemic approach. It focuses on the critiques of the neoclassical position(s) and its (their) underlying arguments regarding a *specific regulatory question*. Therefore, the critique step enables the researcher to identify the most relevant schools of thought that could help her overcome the internal and external critiques. Further, this step allows the researcher to identify the systemic critiques that she needs to address by using the systemic perspective.

¹⁴ Sheila C Dow, ‘Structured Pluralism’ (2004) 11(3) Journal of Economic Methodology 279.

Given the systemic critiques (and the internal and external critiques), the researcher in the third stage relies informally on the insights of the systemic thinking to *reformulate systemically* the regulatory question (hereinafter referred to as the “primary regulatory question”). Indeed, regulatory questions, as chapter 8 illustrates, could be reformulated systemically in numerous ways; each of these systemic reformulations would have its own strengths and weaknesses. The answer to the systemically formulated regulatory question provides simultaneously a systemic answer to the primary regulatory question. For example, chapter 8 formulates systemically the regulatory question of the choice of corporate governance model for developing countries to a systemically formulated question that is the choice of an institutional network of product markets in developing countries, which consists of a corporate governance system, competition law, and industrial policy. Therefore, once we make a systemically reasoned choice of this institutional network, we simultaneously choose a corporate governance model for developing countries and address systemically the primary regulatory question. Similarly, chapter 10 formulates the regulatory problem of developing a normative framework of economic regulations to a systemic problem of designing a system of objectives; once this system of objectives is chosen, the primary regulatory problem that is the development of a normative framework of economic regulations is simultaneously systemically addressed. I refer to *this third stage* of the application process of the integrated and systemic approach as the “*systemic reformulation*” step.

The essence of a good systemic reformulation of regulatory question is that it overcomes *some* of the systemic critiques, while *acknowledging its limitations in tackling the others*. Systemic perspective cannot overcome all the systemic critiques; the socio-economic system is too complex, dynamic, evolving, and interdependent to the extent that some systemic critiques can be always developed regardless of how hard we try to overcome them. By making explicit these limitations of our knowledge, systemic law and economics, though complex and ambitious, is essentially grounded in the acknowledgment of the humbleness of humans’ cognitive capacities and knowledge because the systemic approach recognizes its limitations and acknowledges the tentative nature of its regulatory conclusions.

The systemic reformulation of the primary regulatory question gives rise to a newly reformulated regulatory question that can be called “the systemically reformulated question”. To address this systemically reformulated question, we may need to identify and then address

the sub-questions necessary for tackling this reformulated question. This is the “sub-questions step” of the process of the application of the integrated and systemic approach; this is *the forth step* in this process. Accordingly, the outcome of the “systemic formulation” stage and the “sub-question” stage is a systemically reformulated regulatory question and the sub-questions that the scholar should address in order to tackle the systemically reformulated question.

Sometimes, the systemic reformulated question can be addressed directly; it does not give rise to sub-questions. In this case, the “sub-questions” step will be skipped. Normally, these systemically reformulated questions can be addressed directly by using the systemic approach as operationalized in the previous chapter, or any other operationalized systemic approaches or methods.

In most cases, however, due to its complexity, answering the systemically reformulated question would necessitate tackling numerous sub-questions. The researcher may opt for simplifying the analysis by using the answers provided by the neoclassical paradigm for addressing some of these sub-questions. In this case, the researcher assumes *unrealistically* the *sufficiency* of the neoclassical approach for addressing these sub-questions because the neoclassical answers to these sub-questions might not survive the critique step if they were subjected to cross-criticism. Still, this unrealistic simplifying assumption can be used for simplifying the complexity of the integrated and systemic analysis provided that the researcher makes this assumption explicit; otherwise, the integrated and systemic approach would be a camouflage for implicit neoclassical biases.

Problematically, each of the sub-questions that the researcher should address in order to tackle the systemically reformulated question would give rise to further sub-sub-questions (“second-order questions”); particularly, if we use the integrated and systemic approach to address these sub-questions. This seems to be an infinite regress problem; indeed, it is definitely an infinite regress problem! The systemic reformulation of the primary regulatory question reveals the inherent complexity of the primary regulatory question because it uncovers the embeddedness of this regulatory question in *a larger system of problems*. Once the researcher seeks to address these larger problems, which constitute the sub-questions required for addressing the systemically formulated question, the scholar discovers that these sub-questions are similarly embedded in even *larger systemic problems* that constitute the sub-sub-questions (i.e., the second order questions) required for tackling these sub-questions.

What does this infinite regress problem tell us? It tells us simply to be very humble as far as the *systemic* understanding of the socio-economic system and the systemic design of its regulatory governance is concerned. This is indeed one of the fundamental contributions of the integrated and systemic approach. This approach emphasizes *what we do not know*, and unlike the neoclassical perspective, it does not therefore exaggerate our ability to design optimal regulatory controls.

In *the fifth stage* of the application process of the integrated and systemic approach, the scholar uses the integrated and systemic approach to address each of the sub-research questions. Here, we could classify the sub-questions into *two categories*. The first category includes the sub-questions that can be addressed directly by drawing on the previous steps, by using the operationalized systemic approach, and/or by using other supplemental literature; the researcher does not need to go through the long steps of the application process of the integrated and systemic approach to address this category of sub-questions. For example, one of the sub-questions that we address in chapter 8 is the classification of the models of corporate governance, competition law, and industrial policy;¹⁵ this question could be answered easily by drawing on existing legal and (neoclassical and non-neoclassical) economic literature without going through the cumbersome application process of the integrated and systemic approach.

The second category of sub-questions includes the sub-questions whose (integrated and systemic) answers require following the steps of the application process of the integrated and systemic approach starting from the very first step of this process. These sub-questions, though necessary for addressing the primary regulatory question, tend to be somehow distinct from this regulatory question. They can be seen therefore as *standalone* questions. This implies that for addressing these sub-questions, the scholar starts from the first step of the application process, namely, the “neoclassical literature review”, followed by the “critique step” in which the scholar advances systemic, internal and external critiques to the neoclassical position on each of these sub-questions. Then, in the third step, instead of moving to the above-mentioned third stage of the application of the integrated and systemic approach that is the “systemic reformulation” of the sub-question, the researcher applies and distinguishes between *systemic and reductive sub-questions*. Since the primary regulatory question has been

¹⁵ See section 8 of chapter 8.

already systemically reformulated, *some* of the sub-questions required for addressing this systemically reformulated question are by definition *systemic*; in other words, some sub-questions address systemic aspects of the two-tier institutional and agents' network of the capitalist system such as institutional interdependencies. For example, chapter 8 identifies an important sub-question (which is required for tackling the systemically formulated regulatory question) that is the assessment of the consistency of the American, post-war German, post-war Japanese institutional networks of product markets. This is clearly a systemic sub-question because it is concerned with the systemic analysis of the consistency of the legal system of product markets. These systemic sub-questions call for an *operationalized* systemic approach for developing a systemic answer to them. Chapter 11 therefore addresses this sub-question by using the systemic approach, namely, the four-step process of consistency analysis developed in chapter 6. Similarly, chapter 8 argues that the design of a normative framework for assessment of the consistency of these institutional networks is another important sub-question that should be addressed in order to develop an answer to the systemically formulated regulatory question. The development of a normative framework for economic regulations is a complex systemic question that necessitates the use of an operationalized systemic approach or some of the relevant informal insights of systems thinking. Chapter 10 therefore uses the concept of "system of objectives", or "system of indicators" and the insights of multi-criteria analysis to develop a systemic answer to this systemic sub-question.

In contrast, some sub-questions are not systemic; the answers of these questions provide important information necessary for developing a systemic answer to the systemically formulated question. In other words, they contribute to the broad information basis required for advancing a systemic answer to the systemically formulated question because such answer necessitates, as already argued, a broad informational basis. Accordingly, we need not use the operationalized systemic approach to address these sub-questions; still, the insights of systems thinking might inform the answer of these sub-questions. When I went through the sub-questions that I needed to tackle in the applied part of the thesis, I found out that almost all of these sub-questions are systemic; even sub-questions that seem to be non-systemic have been tackled by using many important insights from systemic thinking. For example, one of the sub-questions that we address in chapter 10 is how the ultimate and instrumental (regulatory) objectives of the economic system should be chosen. Although the insights of Ordoliberalism

and regulation theory have been crucial for addressing this sub-question, many of the insights of systems thinking (e.g., the process of the determination of the requirements of the designed systems) have also informed the answer to this sub-question.

In short, in the third stage of tackling these sub-questions, we distinguish between systemic and non-systemic sub-questions. Due to the systemic formulation of the regulatory question, most of the sub-questions required for addressing this regulatory question would be *systemic*. We then choose the operationalized systemic approach (and methods, if any) and systems thinking insights appropriate for addressing the systemic sub-questions. With respect to the non-systemic sub-questions, we move directly to step four that informs how we can address them.

In short, in the fifth stage of the application process, we distinguish between two categories of the sub-questions. The first category includes the questions that can be addressed directly without going through the steps of the integrated and systemic approach, and the second category includes the standalone sub-questions whose integrated and systemic answer requires following the application process of the integrated and systemic approach for each of these sub-questions from the very first step. To address each of these sub-questions, we review the relevant neoclassical literature on each of them, we develop internal, external, and systemic critiques of the neoclassical answers to these sub-questions, and then we distinguish between systemic and non-systemic sub-questions and identify the adequate systemic approaches, methods, and/or insights for addressing the systemic sub-questions. This concludes the fifth stage of the application process, and we move now to the sixth step.

In *the sixth step* of the application process of the integrated and systemic, we continue to address the (standalone) sub-questions by using the integrated and systemic approach. In this step, we use the *integrated* law and economics for addressing both systemic and non-systemic sub-questions. The researcher identifies the economic and non-economic schools of thought and theories that could provide valid insights relevant to these sub-research questions. Since relevant paradigms and theories may be numerous, the researcher is recommended to choose the most relevant paradigms and theories, which would normally be those schools and theories that advanced the most fundamental external critiques. Other researchers could extend the analysis further by including further weakly relevant paradigms. The researcher should explicitly state which schools of thought or theories that she thinks to be relevant, but excluded

them. She should also justify this exclusion. In this regard, simplifying the analysis is a sufficient justification provided that the researcher acknowledges the tentativeness of her conclusions as these conclusions may change in case the excluded cognitive perspectives are taken into account.

After identifying the neoclassical and non-neoclassical insights relevant to the sub-research questions, the researcher goes through a process of *cross-criticism and refinement of these insights*. The output of this stage would be a set of *refined insights* over each of the sub-research questions required for addressing the systemically formulated regulatory question. The researcher must justify why she considers a particular insight to be valid or invalid. It is important to note that neoclassical law and economics would appear in this stage of integrated and systemic law and economics because it may provide important valid insights over each of the sub-research questions. At the end of step six of the application process, the scholar ends up with *refined insights for each sub-question provided by relevant neoclassical and non-neoclassical schools of thought and theories*.

After ending up with refined insights regarding each sub-question, the researcher needs to integrate the insights that relate to the regulatory sub-question to provide an integrated answer to this regulatory question. Here, we distinguish between systemic sub-questions and non-systemic sub-questions. As to systemic sub-questions, integration would be straightforward because the systemic approach, method, or insight chosen for addressing these sub-questions in stage five of the application process ensures the automatic systemic integration of these refined insights. Particularly, these refined insights will be complementary if the researcher follows the above steps accurately, particularly the *cross-criticism and refinement* step. In other words, the operationalized systemic approach is in essence an integrative framework that ensures consistent and systemic integration of the relevant insights. For example, the four-step consistency analysis of the consistency of the institutional network of product markets in Us, post-war Japan, and Germany gives us a road-map of four steps for conducting such consistency analysis. In steps 2 and 3 of the consistency analysis process, we can either use the neoclassical approach or use the integrated approach (as outlined in step six of the application process) to identify the non-embedded and embedded effects of each institutional domains. Once we have identified these embedded effects, we can therefore assess their consistency as per the forth step of consistency analysis. Accordingly, we address the systemic

issue of the assessment of the consistency of legal systems by using the operationalized four-step consistency analysis (the chosen systemic approach as per step 5 of the application process); this four-step process gives us a road map, but to move from a step to another in this road map, we use the integrated approach. The integrated assessment of the embedded effects of each institutional domain can then provide the informational basis required for assessment of consistency. The four-step consistency analysis therefore provides a systemic framework for integrating the refined insights of the cognitive perspectives relevant to the assessment of the embedded effects of each institutional domain. Another example from the applied part relates to the development of a normative framework for economic regulations in developing countries. The systemic perspective provides us with a systemic normative framework; the core of this normative framework is a system of interrelated regulatory objectives.¹⁶ The main sub-question that we therefore need to address is how to determine the second-order instrumental (regulatory) objectives (e.g., innovation, organizational learning, and firms' international competitiveness) required for attainment of the first-order instrumental objectives (e.g., economic growth) that are in turn required for the attainment of the ultimate regulatory questions (e.g., capabilities expansion) in this system of objectives.¹⁷ To determine the second-order instrumental objectives that ensure the maximization of economic growth, we use the *integrated* approach to identify the drivers of economic growth in both neoclassical and non-neoclassical theories of economic growth.¹⁸ Once we identify these drivers of economic growth, we can then include them into the system of objectives. In other words, the systemic framework (e.g., consistency analysis or the system of objectives insight) integrates consistently and easily the refined insights of relevant cognitive perspectives.

With respect to non-systemic sub-questions, the integration of the valid insights of the cognitive perspectives relevant to these sub-questions is somehow trickier because of the lack of a systemic framework that ensures consistent systemic integration of the relevant insights. Still, as long as the researcher has refined and cross-criticized meticulously the relevant insights, the refined valid insights would tend to be *complementary*. In this case, the

¹⁶ See section 2 of chapter 10.

¹⁷ See section 2 of chapter 10.

¹⁸ For the discussion of the critical insights of development economics, see section 4.1 of chapter 9 and for the list of the drivers of economic growth that the institutional network of product markets should seek to achieve, see section 5.3.1 of chapter 10.

integration of these insights may be straightforward. Still, the integration may require a bit of imagination. For example, chapter 8 develops and refines the insights of new institutional and knowledge-based theories of the firm relevant to the choice of corporate governance model. To integrate these refined insights, chapter 8 first developed a diagram that explains the role of the institutions of corporate governance in enhancing organizational learning; in this diagram, the insights of both theories of the firm have been integrated.¹⁹ Then, chapter 8 has developed an integrated framework of three steps that can be used to assess whether the institutions of corporate governance ensures a viable organizational learning process and is simultaneously cost effective.²⁰ Both the diagram and this integrated framework have integrated the relevant valid insights of these theories, but the development of each of them has not been straightforward; it took a while until I figured out how to put the pieces (i.e., the valid insights of these theories) together. Further, if direct integration has not been possible and the researcher has not been lucky to find an imaginative way to integrate these valid insights, then, systemic models and approaches, integrated models and techniques of integration²¹ can act as good integrative method.

In case some of the valid insights are inconsistent, the researcher would usually be unable to integrate these insights. In this case, the researcher should first revise the refinement and cross-criticism step. If the insights persist to be inconsistent (which should be very rare), then, she could use some of the numerous integration techniques developed in interdisciplinary studies for overcoming this inconsistency.²² For example, the apparent inconsistencies among insights may cease to exist if the researcher uses one of the integration techniques. For example, these inconsistencies among the valid insights may cease to exist if the researcher identifies clearly the scope of the application of these insights as they may turn out to have different scope of application. Similarly, they may cease to exist if the researcher redefines the analytical concepts used by each of the relevant cognitive perspective²³ or modify the relevant theories.²⁴ In the applied part, I did not run to the problem of persistent inconsistent

¹⁹ See figure 8.1 in chapter 8.

²⁰ See section 4.3.3 of chapter 8.

²¹ For a short overview of these techniques, see: Repko, 'Integrating Interdisciplinarity' (n 12) 14–21.

²² These integration techniques revolve around the creation of common ground among the conflicting insights, for a discussion of the different ways to create such common ground, see: *ibid.*

²³ *ibid* 18–19.

²⁴ *ibid* 16–18.

valid insights; indeed, the *valid* insights of each cognitive perspective have been always completing an aspect of the regulatory problem missed by the other cognitive perspective.

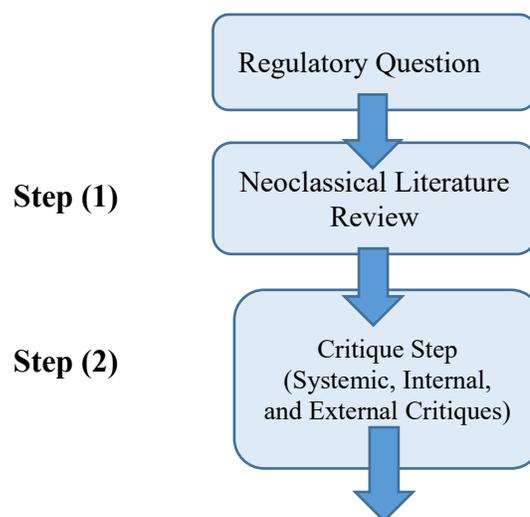
This concludes sixth step of the integrated and systemic approach that can be called the “integration step”. By the end of this step, the researcher has an *integrated and systemic answer* to each of the systemic sub-questions required for addressing the systemically reformulated question. Moreover, the research has an *integrated* answered to the non-systemic sub-questions.

In the *seventh stage* of the application process of the integrated and systemic approach, the researcher employs, informally or formally, the systemic approach that is most suitable for integrating the answers to sub-research questions into *a consistent systemic answer* to our systemically reformulated regulatory question. For example, the systemically formulated question to be addressed in the applied part is the following, “what is the institutional network of product markets that developing countries should adopt?” Chapter 8 illustrates that four sub-questions are required for tackling this question. The fourth sub-question reiterates the systemically formulates question; it reads as follows: given the integrated and systemic answers to the first three sub-questions, what institutional network of product markets should developing countries adopt? To address this sub-question, chapter 12 uses the operationalized systemic approach, particularly the systemic institutional design concepts developed in the previous chapter. In other words, the integrated and systemic answers of the first three sub-questions provide the (systemic and integrated) informational basis required for addressing the fourth sub-question systemically; by answering this sub-question systemically, we simultaneously develop a systemic answer to the systemically formulated question. We can call this seventh step, the “systemic thinking step”.

Sometimes, the answers to the sub-questions can be integrated directly and automatically to provide a systemic answer to the systemically formulated question. The reason is that many of the sub-questions are already systemic and captures the systemic aspects of the systemically formulated question; hence, integrating the systemic answers to the sub-questions results in a systemic answer to the systemically formulated question. For example, the other systemically formulated question to be addressed in the applied part is the following, “what is the system of (regulatory) objectives that the institutional network of product markets in developing countries should pursue?” By developing an integrated and systemic answer to the sub-

questions required for addressing this question (e.g., what are the types of these objectives?, How should these objectives be chosen?, and What weight should we give to each of the instrumental objectives?), we automatically develop an integrated and systemic answer to the systemically formulated question. This integrated and systemic answer provides simultaneously a systemic and integrated answer to our primary regulatory question. For example, the choice of an institutional network for product markets in developing countries answers our primary regulatory question that is the choice of a corporate governance model for developing countries because corporate governance is one of the institutional domains of the chosen institutional network. Similarly, the design of a system of regulatory objectives for the institutional network of product markets in developing countries provides simultaneously a systemic and integrated answer to our primary regulatory question that is the choice of a normative framework for assessment of the consistency of the institutional networks of the product markets of US, post-war Japan, and post-war Germany.

In the eighth step of the application process of the proposed approach, we repeat the steps to enhance the quality of the conclusions. At this step, we have gained a richer and sophisticated understanding of the regulatory problem. We start the process from the first step because this rich understanding can then inform each of the steps of the application process when we go through them again. Figure 7.1 provides a visual representation of these steps and table 7.2 encapsulates these steps along with a summary of each step.



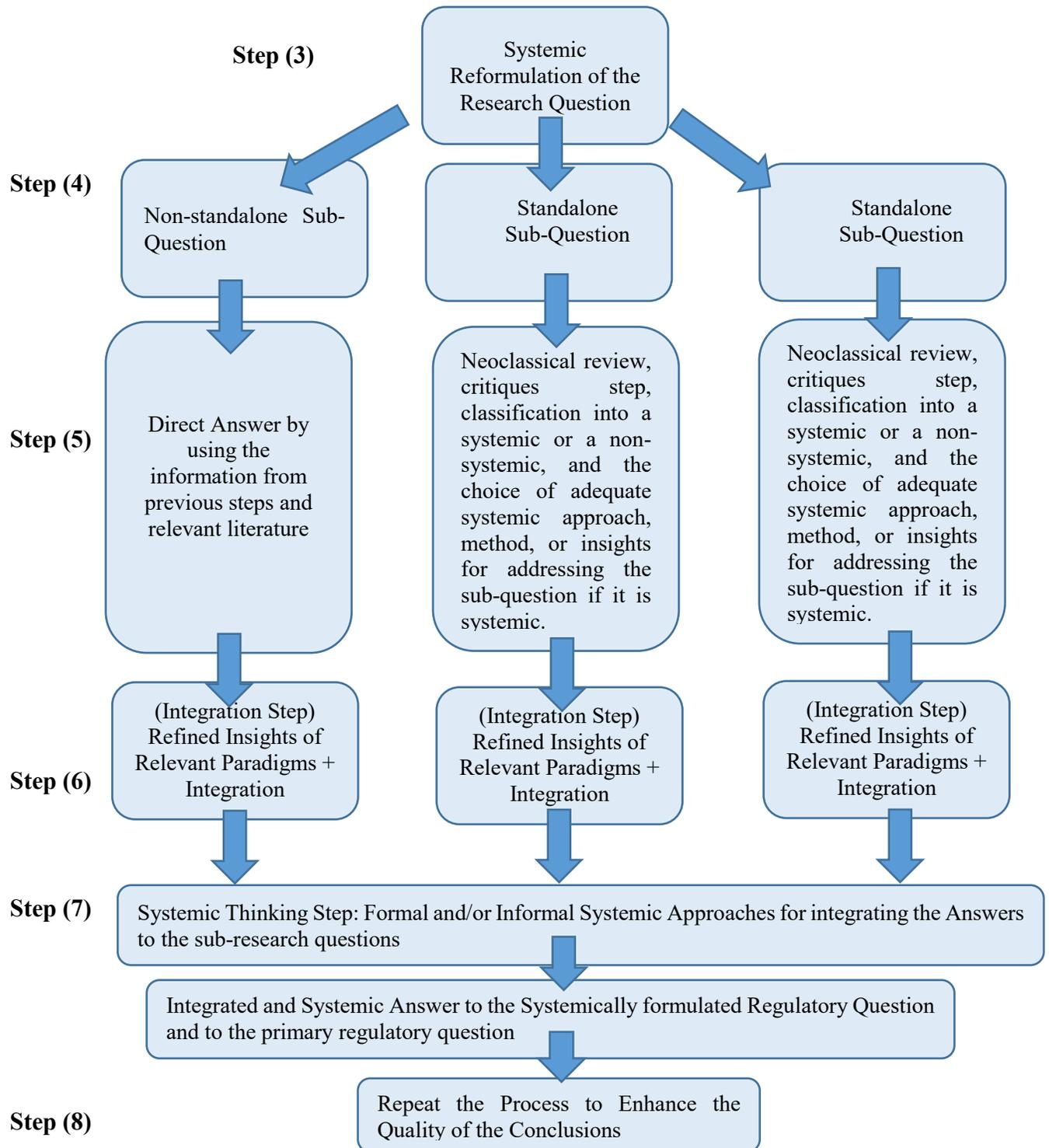


Figure 7.1: Visual Representation of the Application Process of the Integrated and Systemic Approach

No. of the Step	The Methodical Steps	Short Description of Every Step
1	Neoclassical Literature Review	Review how the neoclassical perspective conceptualizes the regulatory problem, the existing diverse answers to the regulatory question provided by neoclassical economics, and the underlying arguments of each answer.
2	The Critique Step (Internal, External, and Systemic Critiques)	<ul style="list-style-type: none"> a. Use the neoclassical- new institutional perspective to advance internal critiques to the neoclassical regulatory position and its underlying arguments (Internal Critiques) b. Use the cognitive perspective of non-neoclassical paradigms and theories to advance critiques to the neoclassical regulatory position(s) and its (their) underlying arguments (External Critiques) c. Use the systemic perspective to develop critiques to the neoclassical regulatory positions and arguments (Systemic Critiques)
3	Systemic Reformulation Step	Given the above insights of relevant paradigms, including those of the neoclassical school of thought, reformulate the regulatory question systemically by using the approaches, methods and insights of systemic thinking such as the operationalized systemic approaches developed in chapter 6 and the insights of systemic thinking outlined in sections 2 and 3 of chapter 6.
4	Sub-Research Questions	Systemic reformulation of the regulatory question will reveal the inherent complexity of the primary regulatory question because it demonstrates that it is embedded in a larger system of problems. Here, we identify the main sub-research questions that we need to address in order to be able to provide an answer to the systemically formulated question. Sometimes, systemically reformulated

		<p>question may not give rise to sub-research questions. In the case of our primary regulatory questions concerning corporate governance and normative theory of economic regulations, the systemic reformulation of these questions will give rise to other research sub-questions. Still, the scholar may opt for simplifying the analysis by using the answers provided by the neoclassical paradigm for addressing these sub-questions. This implies that the focus will be on applying the proposed approach to the main regulatory question, while assuming the sufficiency of the neoclassical approach for addressing the sub-questions. This is clearly an unrealistic assumption unless proven through subjecting the neoclassical insights to the critiques step. In the case of using this simplifying assumption, step 5 will be replaced by the neoclassical answer to the sub-question.</p> <p>Some sub-questions do not require going through the application process of the proposed approach from its very first start; they can be answered by using the information generated in the previous step or by using relevant literature. Normally, they are not completely distinct from the primary regulatory question. In contrast, other some sub-questions are standalone questions; an integrated and systemic answer to these sub-questions requires going through the steps of the integrated and systemic approach from the very start.</p>
<p>5</p>	<p>Follow the following steps for the standalone sub-questions: Neoclassical Literature Review Step, Critique Steps, Distinction between Systemic and Non-systemic Sub-Questions and Choice of Appropriate</p>	<ul style="list-style-type: none"> - Review the existing answers to the sub-research question provided by neoclassical economics and the underlying arguments of this answer, and advance internal, external and systemic critiques to these answers. - Distinguish between systemic and non-systemic sub-questions (note that most questions will be of a systemic nature)

	Systemic Approaches and Insights for Addressing the Systemic Sub-questions	<ul style="list-style-type: none"> - Choose the (operationalized) systemic approach, methods, and insights adequate for addressing the <i>systemic</i> sub-questions
6	Integration Step (i.e., the Integration Step the valid insights relevant to each of the standalone sub-questions”	<ul style="list-style-type: none"> ➤ Identify relevant non-neoclassical schools of thought and theories that may provide insights on the regulatory sub-question; ➤ Identify the insights of each of these cognitive perspectives relevant to each of the sub-questions; ➤ Compare these insights to the answers of the neoclassical approach, and to each other, and then identify the insights that seem to be the most valid and those that seem to be most probably mistaken. Justify why specific insight is invalid or valid. ➤ Integrate the insights relevant to the sub-question subject to analysis. To integrate these insights, we distinguish between systemic sub-questions and non-systemic sub-questions. As regards the systemic sub-questions, follow the following steps for integrating the valid insights relevant to these sub-questions: <ul style="list-style-type: none"> ➤ the chosen systemic approach for addressing the sub-question would ensure straightforward integration of the relevant valid insights, if these insights are not inconsistent; ➤ If these insights are inconsistent, the researcher should go through the process of refinement and cross-criticism again because she may find out that some of these inconsistent insights are invalid. ➤ If the insights persist to be inconsistent after conducting this second round of cross-criticism, then, integrative techniques may be helpful in overcoming this inconsistency.

		<p>As regards the non- systemic sub-questions, follow the following steps for integrating the valid insights relevant to these sub-questions:</p> <ul style="list-style-type: none"> ➤ If the researcher follows the above steps accurately, particularly the cross-criticism and refinement step, then, the refined insights should be complementary (i.e., consistent) and can be integrated automatically. Sometimes, these complementary insights may still need an imaginative thinking to integrate them consistently. In this case, systemic models, approaches, and insights, and integrated models can act as good integrative methods. ➤ If these insights are inconsistent, the researcher should go through the process of refinement and cross-criticism again because she may find out that some of these inconsistent insights are invalid. ➤ If the insights persist to be inconsistent after conducting this second round of cross-criticism, then, integrative techniques may be helpful in overcoming this inconsistency.
7	Systemic Thinking	Use systemic thinking to integrate the answers of the sub-questions to provide an integrated and systemic answer to the systemically reformulated regulatory question. This answer would provide simultaneously an integrated and systemic answer to the primary regulatory question
8	Repeat the Process	Go through each step again once or twice more. Given the pieces of knowledge that the final steps generate, when we go through earlier steps again, we may change the conclusions reached in these steps. This circular movement reflects the interdependent feedback relations among these steps.

Table 7.2: The Application Process of the Integrated and Systemic Approach to Economic Regulations

I have attempted to design the above process for applying the integrated and systemic approach in a way that reflects my *thought patterns* when I have applied the approach to the choice of corporate governance model and the design of a normative framework of the economic regulations of product markets in the applied part. This has been a difficult process because it is not clear how our thought patterns are generated or organized; our thoughts do not evolve in well-organized prescribed steps. They evolve somehow randomly. This apparent randomness, however, conceals a *logical pattern* as long as our resulting thoughts conform to a logical and coherent structure. For which reason, after I used the integrated and systemic approach to answer the concrete regulatory questions of the applied part, I began to revise the steps for application of the approach. I found out that my thought pattern has not followed the prescribed steps. I began to revise the steps further to reflect my thought pattern until I reached a process for applying the integrated and systemic approach. Then, I revised my answers to the regulatory questions of the applied part in light of the revised process; this has resulted in a second round of reflection on the revised process resulting a third revision of the application process. This circular process that starts from the application process to concrete applications and back to the application process was not easy as I had to detect the underlying pattern of my thought.

Other scholars may develop thought patterns in applying the proposed approach distinct from the one developed here. If they are successful in uncovering their thought patterns and representing them in well-defined steps, then, they can design *other processes* for the application of the integrated and systemic approach. These processes can be accepted if and only if they can produce a *valid logical line of argument* when applied to regulatory questions. In other words, there could be various valid processes for applying the proposed approach. The validity of the process is determined by its ability to generate *an integrative and systemic line of argument that is logically valid*. The best test of the application process of the integrated and systemic approach lies therefore in *its application*. Since the process I have developed here has succeeded in developing a valid logical line of argument, as the applied part will show, it is a valid process.

Nonetheless, the valid process is not necessarily the most cognitively efficient process as it may be too sophisticated to implement. The most efficient process is a process that

minimizes cognitive resources, while generating a logical line of argument. Given the complexity of socio-economic systems, any process for applying the integrated and systemic approach will be *necessarily sophisticated*. Efficient processes are thus the least sophisticated ones because there is no such thing as a *simple process* for applying the integrated and systemic approach.

Neoclassical law and economics scholarship stops at stage two of the above process: the critiques step. In this step, the critique is limited normally to internal critiques. Building on these internal critiques, law and economics scholars advance a more refined neoclassical analysis that either extends, confirms or refutes the previous neoclassical positions and/or arguments. The above process reveals how integrated and systemic law and economics goes far beyond the neoclassical approach. However, neoclassical law and economics is a necessary input to the integrated and systemic approach; the neoclassical insights get then refined through the steps of the integrated and systemic approach. The better the quality of the neoclassical input, the richer the analysis the proposed approach will advance. This applies equivalently to heterodox law and economics. The quality of the integrated analysis of socio-economic regulations hinges upon the quality of heterodox law and economics analysis of these regulations.

The integrated and systemic perspectives of the proposed approach can be applied separately. Since some readers may be interested in applying either the integrated or the systemic approach to their regulatory problems, it is convenient to demonstrate how each approach can be applied as a standalone approach. The four-step consistency analysis developed in the previous chapter operationalizes one form of systemic analysis that is institutional consistency analysis. If the scholar were to use the systemic approach without using the integrated approach, it can use a single cognitive perspective (e.g., neoclassical-new institutional paradigm) to determine the non-embedded and embedded effects of the institutional domains; based on these embedded effects, the researcher can then assess the consistency of the institutional network. However, if the scholar chooses a non-neoclassical school of thought, she would find it difficult to analyze the non-embedded and embedded effects of the institutions or complementarities without using the neoclassical insights, particularly because of the under-development of most of the non-neoclassical schools of

thought. Accordingly, in case of choice of non-neoclassical paradigm, integration seems to be necessary for systemic analysis.

Similarly, figure 6.2 of the previous chapter has already developed a systemic process for the design of consistent and reasonable institutional networks (i.e., reasonable and consistent legal systems and economic regulations), but each step of this process calls for a rich informational basis. The researcher can follow this process without using the integrated approach; she can simply use a single cognitive perspective (e.g., the cognitive perspective of neoclassical-new institutional school of thought) to provide the required informational basis for undertaking each of these steps.

With respect to the integrated approach, it can also be applied independently from the systemic approach. Table 7.3 below briefly disentangles the application process of the integrated approach from that of the systemic approach. This disentanglement of the application process would enable the readers to understand better the above long and sophisticated application process of the integrated and systemic approach, especially I have divided some of the somehow condensed steps in the above process into more discrete steps in the application process of the integrated approach captured in table 7.3 below.

No. of the Step	The Methodical Steps	Short Description of Every Step
1	Neoclassical Literature Review	Review how the neoclassical perspective conceptualizes the regulatory problem, the existing diverse answers to the regulatory question provided by neoclassical economics, and the underlying arguments of each answer.
2	The Critiques Step (Internal and External and Critiques)	<ul style="list-style-type: none"> a. Use the neoclassical- new institutional perspective to advance internal critiques (Internal Critiques) b. Use the cognitive perspective of non-neoclassical paradigms and theories to advance critiques to the neoclassical regulatory position(s) and its (their) underlying arguments (External Critiques)
3	The Relevant Cognitive	<ul style="list-style-type: none"> a. Identify relevant non-neoclassical schools of thought and theories that may provide insights on the regulatory question;

	Perspectives and Insights Step	<ul style="list-style-type: none"> b. Identify the relevant insights of each of these cognitive perspectives; c. State explicitly which relevant cognitive perspectives you have excluded d. Justify the exclusion, and acknowledge the tentativeness of your conclusions if the exclusion is for simplification reasons
4	The Cross-Criticism and Refinement Step	Compare these insights to the answers of the neoclassical approach, and to each other, and then identify the insights that seem to be the most valid and those that seem to be most probably mistaken. Justify why a specific insight is invalid or valid in the context of this specific regulatory question.
5	The Integration Step	Integrate the insights. If the researcher follows the above steps accurately, particularly the cross-criticism and refinement step, then, the refined insights should be complementary. If inconsistency of insights persist, integrative techniques may be helpful in overcoming this inconsistency. Complementary insights may be easily integrated directly, and if direct integration is not possible, integrated models can act as good integrative method.
6	Repeat the Process	Go through each step again once or twice more. Given the pieces of knowledge that the final steps generate, when we go through earlier steps again, we may change the conclusions reached in these steps. This circular movement reflects the interdependent feedback relations among these steps.

Table 7.3: The Steps of the Application Process of the Integrated Approach

Tables 7.3 shows that the integrated approach can be applied without adopting the systemic perspective. As to the integrated approach, as long as the scholar does not attempt to integrate the relevant insights of the schools of thought that adopt a systemic perspective such as comparative capitalism or complexity economics, her *integrated* analysis or design of economic regulations would be largely analytical and non-systemic.

Chapter 7: Bringing Together and Operationalizing the Integrated Approach and the Systemic Perspective

Finally, the following part uses the integrated and systemic approach to address two concrete regulatory problems: what model of corporate governance should developing countries adopt? In addition, what normative framework should be used for assessment and design of economic regulations of product markets in developing countries? Tables 7.4 and 7.5 below show how the steps of the integrated and systemic approach have been followed in developing an integrated and systemic answer to each of these regulatory problems. Although these tables cannot be understood properly without reading the applied part, I have preferred to include them here because they give the reader a taste of the way the integrated and systemic approach is applied to concrete regulatory problems. Revisiting these tables again after reading the applied part might be, therefore, a good idea because these tables construct a bridge between the theoretical framework developed in parts I and II and the applications of this theoretical framework advanced in part III.

No. of the step	Steps	The Application of the Step to the Regulatory Problem of the Choice of Corporate Governance Model for Developing Economies
1	Neoclassical Literature Review	Majority Opinion: Shareholder Value + supporting arguments Minority Opinion: Stakeholder Value + supporting arguments
2	Internal, External, and Systemic Critiques	Internal Critiques: General theory of the second best, critique of law and finance, need for protection of workers' specialized investments, and implementation critique External Critiques: a) Knowledge Theories of the Firm: does not integrate the effects of corporate governance institutions on organizational learning; b) the French Regulation School of Economics: Macroeconomic fragility c) Varieties of Capitalism: the choice of corporate governance model is endogenous to the real institutional network of the

		<p>developing country – Incentives Compatibility Requirement (Fit Requirement)</p> <p>Systemic Critiques: All the institutional domains of the institutional network, and not only corporate governance, are variable. The relevant systemic problem is to choose the right institutional network, and not to choose the corporate governance model that fits the existing institutional network.</p>
3	Systemic Reformulation of the Regulatory Problem	<ul style="list-style-type: none"> - What is the institutional network of the supply side of product markets that developing countries should adopt? In other words, what are the models of corporate governance, competition law, and industrial policy that consist this institutional network that developing countries should adopt? - The systemic and integrated answer to this question answers simultaneously the primary regulatory question, namely, the choice of a corporate governance model for developing countries.
4	Sub-Questions	<ul style="list-style-type: none"> a) Classification Sub-Question: classification of the models of corporate governance, competition law, and industrial policy adopted by the US, post-war Japan, and post-war Germany – This sub-question can be addressed directly by using the relevant existing legal and economic literature. b) The Normative Framework Sub-Question: what is (are) the criterion (criteria) that should be used for the assessment of the consistency of the institutional networks of product markets in the US, post-war Japan, and post-war Germany? c) Consistency Assessment Sub-Question: Are the institutional domains of each of the compared

		<p>institutional networks consist with reference to their embedded effects on each of the assessment criteria?</p> <p>d) The choice or design of an institutional network sub-question: In light of the consistency analysis conducted according to (c), what is the consistent and reasonable institutional network of product markets that developing countries should adopt?</p>
5	<p>Follow the following steps for the standalone sub-questions: Neoclassical Literature Review, Critiques Step, and Choice of the Adequate Systemic Approach, Method, or Insights for the Systemic Sub-Questions</p>	<p>a) The Normative Framework Sub-Question: This is a standalone systemic sub-question. We apply the integrated and systemic approach to this sub-question starting from the very first step in chapters 9 and 10 (see table 7.4 below for the process of this application).</p> <p>b) Consistency Assessment Sub-Question: This is clearly a systemic sub-question. We use the four-step process of consistency analysis to address this sub-question.</p> <p>c) The design of an institutional network of product markets for developing countries: this is indeed our systemically formulated question. We use the systemic process of design of institutional networks to address this question, particularly the systemic institutional design principles and concepts</p>

6	Integration Step for each of the sub-questions	<p>a) The application of the integrated and systemic approach to the normative framework sub-question results in integrated and systemic assessment criteria for evaluating the consistency of the compared institutional networks</p> <p>b) Consistency Assessment Sub-Question: we use the insights of relevant cognitive perspectives to assess the non-embedded and embedded effects of each of the institutional domains in each of the compared institutional network on each of the assessment criteria derived in step (a);</p>
7	Systemic Thinking	<p>Given the consistency analysis, we use the <i>systemic process</i> of consistent and reasonable institutional network design to design a consistent and reasonable institutional network of product markets in developing economies. This institutional network shall consist of a stakeholder model of corporate governance, sectoral industrial policies, and competition law that consists of Schumpeterian competition law and inter-firm cooperation law. This provides therefore an integrated and systemic answer to our primary regulatory problem</p>

		concerning the choice of a corporate governance model for developing countries.
8	Repeat the Process	Knowledge generated in later steps could improve outcomes of the earlier steps.

Table 7.4: The Process of the Application of Integrated and Systemic Approach to the Problem of the Choice of Corporate Governance Model in Developing Economies (Shareholder Value Model vs. Stakeholder Model of Corporate Governance)

No. of the Step	Steps	The Application of the Step to the Problem of Choice of Criterion (Criteria) for the Assessment of the Consistency of the Compared Institutional Networks
1	Neoclassical Literature Review	Welfare criteria: <ul style="list-style-type: none"> • Pareto allocative efficiency – justification of economic regulations: correction of market and organizational failures function of economic regulations • These economic regulations maximize social welfare: <ul style="list-style-type: none"> ➤ comparative organizational analysis lack of more cost-effective alternative organizational structure (e.g., the firm or private ordering) ➤ Kaldor-Hicks efficiency implemented by applied cost-benefit analysis reveal that the net efficiency benefits exceed the net costs of these regulations
2	Internal, External, and	Internal Critiques: Scitovsky Paradox, the General Theory of the Second Best (correction of market failures may not necessarily enhance allocative efficiency),

	<p>Systemic Critiques</p>	<p>Multiple Meanings of Economic Efficiency, and Inter-personal Comparisons of Utility</p> <p>External Critiques:</p> <ul style="list-style-type: none"> a) Moral Philosophy: neoclassical normative theory of economic regulations finds its moral basis in the subjective preference satisfaction account of well-being, but the welfare criteria do not ensure that the economic regulations that satisfy these criteria will maximize subjective welfare. Further, other accounts of well-being are morally compelling such as Sen’s capabilities approach. Finally, economic regulations should conform to the morally compelling concerns of other moral theories such as Kantian ethics, protection of the weak, and fair distribution of a minimum threshold of basic capabilities. b) Neoclassical and Non-Neoclassical Development Economics: the correction of some market failures has neutral, minimal positive effects, or adverse effects on economic growth. In other words, the economic regulations that correct market failures are different from the regulations that would maximize economic growth. c) Constitutional Economics: assuming that we subscribe to actual preference satisfaction view of well-being, the preferences of the humans in their social role as citizens in the political rather than their preferences as economic agents in the market should be the normative basis for assessment and design of economic regulations.
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		<p>d) Law and Political Economy: One of the main functions of legal institutions is to distribute power and authority (e.g., law-making power) among the relevant stakeholders fairly. In other words, one of the main functions of law is to create spaces for deliberation and contestation. This function is ignored by the neoclassical focus on correction of market and organizational failures.</p> <p>Systemic Critiques: horizontal and vertical normative inconsistencies and cost-benefit analysis obscures the ultimate objectives that economic regulations are intended to maximize.</p>
3	<p>Systemic Reformulation of the Regulatory Problem</p>	<p>Instead of a mono-neoclassical evaluative criterion (e.g., social welfare functions and/or cost-benefit analysis that is focused primarily on allocative efficiency costs and benefits), <i>what is the system of (regulatory) objectives that the economic regulations of the supply side of product markets should pursue?</i></p>
4	<p>Sub-Questions</p>	<p>a) What are <i>the types of these objectives</i> and what are their differences? In other words, how can we conceptualize ultimate and instrumental objectives?</p> <p>b) How are these ultimate and instrumental objectives determined? In other words, what is the <i>process</i> for the determination of these objectives?</p> <p>c) Given the trade-offs among these objectives, how to quantify or formalize these objectives to resolve the trade-offs?</p> <p>d) Ultimate Objectives Assignment Problem: what are the intrinsically valuable (ultimate) objectives (e.g., capabilities expansion or subjective social welfare) that should be assigned to the regulation of products markets in developing countries? In</p>

		<p>other words, what are the ultimate (regulatory) objectives that these economic regulations should seek to achieve?</p> <p>e) What are the first-order instrumental objectives (e.g., economic growth, or income distribution) that ensure the attainment of these ultimate regulatory objectives?</p> <p>f) First-tier Instrumental Objectives Assignment Problem: what are the first-tier instrumental objectives (e.g., economic growth, macroeconomic stability, or reduction of unemployment rate) that should be assigned to the regulation of products markets in developing countries? In other words, what are the first-tier instrumental objectives that these economic regulations should seek to achieve?</p> <p>g) What are the second-tier instrumental objectives (e.g., innovation, organizational learning, and international competitiveness) that are required for the attainment of the first tier instrumental objectives (e.g., economic growth), and that can be affected by economic regulation of the product markets?</p> <p>h) What is the minimum required thresholds and weights that should be given to each of these second-order instrumental (regulatory) objectives?</p>
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5	<p>Neoclassical Literature Review, Critiques Step, Distinction between Systemic and Non-systemic Sub-questions, and Choice of the Adequate Systemic Approach, Method, or Insights for the Systemic Sub-Questions</p>	<p>a) The conceptualization of ultimate and instrumental objectives is made in light of the insights of systemic thinking and moral philosophy</p> <p>d) The political process for the determination of the choice of the system of objectives is proposed in light of the economic constitution insight of Ordoliberal and systems thinking insights</p> <p>e) The problem of quantification and/or formalization of the regulatory objectives in the system of objectives is addressed in light of the insights of multi-criteria analysis, which is one of the important systemic evaluative methods</p> <p>f) The (ultimate and first-tier instrumental) objectives assignment problem is a complex systemic problem because it attempts to assign the objectives of the system (i.e., the institutional network of the whole society) to its sub-systems (i.e., the institutional network of the product markets). We use the insights of systemic thinking and some neoclassical-new institutional insights relevant to the objectives assignment problem to develop systemic assignment rules and principles.</p> <p>g) The determination of the first-tier instrumental objectives required for attainment of the ultimate objectives, and the determination of the second-tier instrumental objectives required for the attainment of the first-tier instrumental objectives is made in light of the insights of relevant cognitive perspectives. For example, the second-tier instrumental objectives (e.g., innovation)</p>
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		<p>required for attainment of the first-tier instrumental objective of economic growth are determined in light of the insights of neoclassical and non-neoclassical theories of economic growth.</p> <p>h) The minimum thresholds and weights to be given to each of the second-tier instrumental objectives is a complex systemic question because it requires us to assign minimum required thresholds and weights to the second-tier instrumental objectives in the system of regulatory objectives in a way that ensures that the minimum thresholds and desirable weights of the ultimate objectives are achieved. We can use the network analysis of the structure of this system of objectives and the insights of multi-criteria analysis to tackle this systemic sub-question</p>
6	Integration Step for each of the sub-questions	As mentioned in the previous step, for many of the above sub-questions, we use the insights of relevant cognitive perspectives (e.g., Ordoliberalism, theories of moral philosophy, neoclassical and non-neoclassical theories of development)
7	Systemic Thinking	The integrated and systemic answers to the above sub-questions result in a system of (regulatory) objectives that the institutional network of product markets in developing countries should seek to achieve reasonably. This system of objectives consist of ultimate systemic objectives (e.g., capabilities expansion) and local ultimate objectives (e.g., protection of the weak), first-tier instrumental objectives (e.g., economic growth and income distribution), and second-tier instrumental objectives (e.g., innovation and

		technological upgrading). This system also includes the minimum thresholds and the weights given to the ultimate and instrumental objectives. The ultimate local objectives and the second-tier instrumental objectives consist the integrated and systemic <i>assessment criteria</i> of the consistency of the compared institutional networks. This provides an <i>integrated and systemic</i> answer to the problem of the choice of a normative framework for assessment of the consistency of the compared institutional networks.
8	Repeat the Process	Knowledge generated in later steps could improve outcomes of the earlier steps.

Table 7.5: The Application Process of the Integrated and Systemic Approach to the Problem of the Choice of a Normative Framework for Assessment of the Consistency of the Institutional Networks of the US, post-war Japan, and post-war Germany

4. Conclusion

This chapter argues that both integrated and systemic approaches are independent approaches to analysis and design of legal institutions. Each of them has distinct theoretical and epistemological foundation and distinct process and operationalized approaches for their application. Therefore, legal scholars can apply either the systemic approach or the integrated approach to any concrete regulatory problem.

More importantly, these independent approaches are *complementary*; the systemic perspective gives legal scholars an operationalized way of thinking about regulatory problems, while the integrated approach provides high quality, rich, and less biased informational basis required for conducting adequate systemic analysis.

The operationalization of the integrated and systemic reflects this complementary relation between the systemic approach and the integrated approach. In the suggested process of the application of the integrated and systemic approach, the systemic approach always provides

the systemic road map and the operationalized approach, while the integrated approach provides the informational basis for each step in this road map. For example, step (2) of the application process of the integrated and systemic approach, the critiques step, provides rich informational basis about the regulatory problem. Based on this informational basis, the systemic approach reformulates the regulatory problem systemically in step (3) of the application process. This systemic formulation of the regulatory problem gives rise to the sub-questions that represent the systemic road map for tackling the systemically formulated question. Similarly, the choice of a systemic approach adequate for addressing the systemic sub-question in step 5 precedes the integration of the refined valid insights relevant to these sub-questions in step 6. The choice of the systemic approach establishes the road map for the use of the integrated approach that provides in turn the informational basis for conducting a proper systemic analysis of these systemic sub-problems.

In addition, the previous chapter has operationalized the systemic approach, but the integrated approach and the integrated and systemic approach have not been operationalized yet. This chapter has developed a process for the application of the integrated and systemic approach to concrete regulatory problems. It has shown as well that this process can be divided into separate processes for the application of the integrated approach and the systemic approach independently from each other. The readers who are convinced of both the integrated and systemic dimensions of the integrated and systemic approach can follow the application process of this approach to tackle their regulatory problems. The scholars who convinced of only one dimension of the integrated and systemic approach can follow the application process that operationalizes this dimension.

Although this application process of the integrated and systemic approach is intended to be used for analysis and design of economic regulations, it is indeed of a generic nature. This process can be used for integrated and systemic analysis of any legal institution (e.g., the legal institutions of family law); still, the cognitive perspective relevant to these legal institutions may be not be economic; they may be sociological or political schools of thought or theories. However, accommodating this issue would require minor adaptations of the above application process of the integrated and systemic approach.

By bringing the integrated and systemic approaches together to constitute the “integrated and systemic approach” and operationalizing this approach, this chapter concludes the

Chapter 7: Bringing Together and Operationalizing the Integrated Approach and the Systemic Perspective

theoretical part of this thesis. The following part shall follow closely the steps of the application process of the integrated and systemic approach to address two concrete, but interrelated, regulatory problems: the choice of a corporate governance model for developing economies, and the choice of a normative framework for assessment of the consistency of the institutional network of product markets in developing economies.

Part III

Integrated and Systemic Law and Economics in Action

Chapter

8

A Shareholder Value vs. a Stakeholder Model of Corporate Governance for Developing Countries

1. Primary Regulatory Question: a Stakeholder vs. a Shareholder Value Model of Corporate Governance for Developing Countries

One of the traditional debates of corporate governance relates to whether regulators should adopt the shareholder value or stakeholder model of corporate governance. Given the regulator's choice of shareholder or stakeholder model, a parallel and related debate relates to whether regulators should implement the adopted model through an inside or outside control system of corporate governance. Design of corporate governance institutions depends on the adopted model of corporate governance. For example, in case the regulators choose to endorse the shareholder value regime, they would regulate the structure of managers' compensation in a way that ensures the alignment of their incentives with the objectives of the shareholders and not the stakeholders. The same applies to other legal institutions of corporate governance such as takeover regulation, board structure, and the independence of board directors.

Given the significant implications of the choice of corporate governance model on the design of the legal institutions of corporate governance and the quality of corporate governance, regulators in both developed and developing countries need to address the difficult regulatory choice of corporate governance model. In Germany, for example, the banks' representation on the supervisory board of German firms has been one of the major economic institutions in the institutional network supporting the German stakeholder model of governance.¹ However, the

¹ Ulrich Jürgens, Katrin Naumann and Joachim Rupp, 'Shareholder Value in an Adverse Environment: the German Case' (2000) 29(1) *Economy and Society* 59–62. For a characterization of the major economic and legal institutions constitutive of the German corporate governance system prior to the fundamental changes that this system started to undergo in the 1990s, see: Wolf-Georg Ringe, 'Changing Law and

divestiture of banks shareholdings in German corporations, their withdrawal from active involvement in the management of the corporations, and their shift to manage their shareholdings as assets whose value should be maximized have weakened the dominant role of banks in corporate governance of German firms.² This change resulted in *inconsistencies* in both the institutional network of the German financial system³ and corporate governance.⁴ Confronted with these inconsistencies with their high social losses, the German regulators have to choose between restoring the consistency by going back to the traditional model of financial system and corporate governance or to replace existing institutions with a set of consistent institutions that would give rise to a capital market based and shareholder value model.⁵

Similarly, developing countries confront the difficult regulatory issue of the choice of corporate governance model. As already argued in chapter 5, both theory and empirical evidence on the effects of corporate governance institutions on economic growth are inconclusive. Many developing countries lack the social norms that support the stakeholder models of corporate governance in Germany and Japan.⁶ Further, the numerous critiques of the shareholder value model of corporate governance (see below) and the need for foreign capital by many developing economies demonstrate the difficulty of choosing an adequate corporate governance model for developing economies.

Ownership Patterns in Germany Corporate Governance and the Erosion of Deutschland AG' (2015) 63 The American Journal of Comparative Law 295–508. This characterization starts from the economic institutions of German corporate governance, the most important of which are concentrated ownership and the dominant role of banks, and then, suggests that these economic institutions gave rise to majority-minority shareholders conflicts that required the protection of minority shareholders through numerous legal institutions. This characterization, however, ignores that the legal institutions of German system of corporate governance might have contributed to the rise of the economic institutions of this system of corporate governance, which then reinforced further the economic justification of these legal institutions.

² Andreas Hackethal, Reinhard H Schmidt and Marcel Tyrell, 'The Transformation of the German Financial System' (2006) 116(4) *Revue d'économie politique* 449–450. Jürgens, Naumann and Rupp (n 1), 70–71. Ringe (n 1), 522–524.

³ Hackethal, Schmidt and Tyrell (n 2), 452–453.

⁴ Andreas Hackethal, Reinhard Schmidt and Marcel Tyrell, 'Corporate Governance in Germany: Transition to a Modern Capital-Market-Based System?' (2003) 159(4) *Journal of Institutional and Theoretical Economics* 672–673. Reinhard H Schmidt, 'Corporate Governance in Germany: An Economic Perspective' in Jan P Krahen and Reinhard H Schmidt (eds), *The German Financial System* (Oxford University Press 2004) 416–419.

⁵ Schmidt suggests that given the unfeasibility of restoring the old German system of corporate governance, a complete shift to a shareholder-value model seems to be the only feasible path for Germany to take. *ibid* 419.

⁶ For a discussion of this issue, see section 4 of chapter 12 and see the references cited therein.

This applied part of the thesis aims to demonstrate how the integrated and systemic approach can be applied to the regulatory question of corporate governance model choice in developing countries (the “primary regulatory question”). By following the methodical steps for the application of the integrated and systemic approach outlined in chapter 7, this part will tentatively tackle our primary regulatory question. Each of the sections of this and the following chapters will correspond to one of the steps of the application of the integrated and systemic approach.

Prior to delving into the application, an important remark is in order. The integrated and systemic approach can be used for examining any socio-economic regulatory question; it is not limited to corporate governance, and it is certainly not limited to the question of choice of corporate governance model. We can apply the approach to investigate any other socio-economic regulation such as taxation, competition law, or labor regulation, and any other regulatory aspect of corporate governance such as takeovers laws, independence of board members, corporate board structures, or executive compensation. Regardless of the regulatory issue at hand, the same steps of application process of the approach shall be followed, and in most cases,⁷ the regulatory positions and/or arguments developed on basis of the proposed approach will differ from that of the neoclassical perspective. The reason for the choice of the corporate governance models debate to be the focal point of the applied part is that from an integrated and systemic perspective, the examination of any of the legal aspects of corporate governance hinges upon the choice of the corporate governance model.⁸

⁷ Only in two special cases, the conclusions of the integrated and systemic approach will be similar to that of the neoclassical approach. The first case takes place if two conditions are satisfied. First, non-neoclassical schools of thought and theories do not provide any valid insights distinct from the existing insights of the neoclassical perspective in relation to the regulatory issue subject to investigation. Second, the reductionist microeconomic perspective is sufficient, as the interdependencies at the institutional or agent’s networks that justify a broader systemic perspective are either weak or non-existent. Both conditions are rarely met; I do not imagine that there is any regulatory issue where these conditions are simultaneously satisfied. The second special case takes place when both approaches would share similar conclusions, but they have *different reasoning* for supporting their conclusions. However, the convergence in this case conceals their disagreement over the arguments underlying their positions. This is therefore an apparent, but not a true convergence.

⁸ This is a reasonable justification for choosing this regulatory issue, but it is not too reasonable given the infinite regress problem that any scholars confronts when choosing their research questions. As we will see, addressing our primary regulatory question requires tackling *other sub-questions* such as the normative framework of the regulatory governance of capitalism, the interdependencies among corporate governance and other institutional domains such as competition law. Hence, it may be more sensible to tackle first these sub-questions prior to addressing the choice of the corporate governance model. However, in order to tackle

This chapter proceeds as follows. Section 2 reviews the neoclassical-new institutional approach to the question of the choice of corporate governance model (neoclassical literature review step). Sections 3, 4, and 5 outlines the internal, external, and systemic critiques advanced to the neoclassical-new institutional answer to this regulatory question (the critiques step). Given

each of these sub-questions, a myriad of other *sub-sub-questions* should be examined. This infinite regress problem cannot be resolved, however. We need to start from some point, and build our knowledge starting from this point. Whether the starting point would have a fundamental implication on the nature and structure of knowledge that we produce is a fascinating, but a tough question to tackle. I used to think that the starting point would not have fundamental implications on the form of knowledge we end up with, as long as researchers follow a systemic perspective because it would ensure the inherent consistency of the pieces of knowledge they produce. In addition to the systemic perspective, the starting point for our investigation would not matter if researchers agree on the normative framework within which the knowledge is produced. This explains why I take seriously the sub-question of the normative basis of regulatory governance in this applied part. Given the systemic perspective and the agreement to the normative basis, I used to think that starting points, most probably, would not affect the structure of knowledge that we would reach. However, this seems to be incorrect. The above would be correct if the aggregate knowledge we accumulate across social sciences about the socio-economic system has two features. First, it should be inherently consistent, i.e., it should have a coherent structure and should not have *contradicting positions about socio-economic reality*. The numerous inconsistent positions about socio-economic reality reflect the disturbing fact that we still lack any inherently consistent knowledge about the socio-economic reality. Due this lack of consistent knowledge, starting points matter. The knowledge we generate by investigating these starting points depends on the local knowledge that prevails in the knowledge space where these starting points are located and these generated knowledge may thus distort our understanding of the socio-economic reality by shifting it toward some positions at the cost of others. Second, for starting points not to matter, our aggregate knowledge should capture most of the *potential knowledge* about the social reality. To illustrate this second point, the famous blind men and the elephant story is a good example on the point (the story is available at: https://en.wikipedia.org/wiki/Blind_men_and_an_elephant). If the elephant is our socio-economic reality, and we know only the leg of the elephant, our understanding of the socio-economic reality will be dependent on this piece of knowledge and thus we would perceive the leg of the elephant to represent the elephant. This implies that if our aggregate knowledge does not capture most or all of the *potential knowledge* that is represented by *the whole elephant in our example*, then our understanding of the socio-economic reality largely depends on the starting point that is the leg of the elephant in our example. The structure of knowledge is thus *path dependent* on the starting point. If our understanding captures all the potential knowledge, i.e., if we have full knowledge of all parts of the elephant, we can then develop an understanding of the elephant that will not depend on whether we came to know the leg of the elephant prior to its head or vice versa. Starting points will be irrelevant in this case. Since we do not possess all the potential knowledge of the socio-economic reality, *starting points matter*. In short, starting points matter because we do not possess all the potential knowledge about socio-economic reality and our partial socio-economic knowledge is replete of contradicting positions about socio-economic reality. Hence, *the infinite regress problem becomes unresolvable*: any regulatory question that we choose as a starting point for our investigation would be always lacking well-grounded justification. To conclude on this point, this analysis should not be read as an endorsement of social constructivism that claims that researchers construct socio-economic reality. Rather, in their search for objective knowledge, researchers end up with *highly contingent, but not a subjectively and fully constructed* knowledge that they cannot verify accurately because verification of any piece of knowledge is always made with *reference* to the inconsistent pieces of knowledge that they already have. This self-referential path dependency of knowledge uncovers the inevitable limitedness of humans' knowledge, which humans cannot transcend.

the systemic critiques outlined in section 5, section 6 reformulates systemically the regulatory question of the choice of corporate governance model (the third step of the application of the integrated and systemic approach). Section 7 covers the fourth step of the application of the integrated and systemic approach by outlining the sub-questions required for tackling the systemically formulated question. Section 8 addresses the first sub-question of these sub-questions. Section 9 concludes.

2. Step One (Neoclassical Literature Review): Neoclassical-New Institutional Approach to the Choice of Corporate Governance Model

Most neoclassical-new institutional law and economics scholars support the shareholder value model of corporate governance.⁹ Shareholder value maximization could refer to either long-term firm value maximization or short-term shareholder value maximization. Michael Jensen, a prominent exponent of the shareholder value emphasizes that the long-term firm value (and not equity value) should be the objective that the corporation should maximize.¹⁰ There are four standard arguments in support of the shareholder value model: general equilibrium argument, equity agency problem and managerial abuse of discretion argument, residual claimant argument, and economic growth argument. The first three arguments are grounded in neoclassical and new institutional microeconomics, particularly the first fundamental theorem of welfare, and the agency theory of the firm. According to the latter, both informational asymmetry and conflict in interests among managers and shareholders give rise to an equity agency problem where the incentive structure of the management is misaligned with that of the shareholders.

In his defense of the shareholder value model, Michael Jensen advanced a general equilibrium argument. He argued that this model results in the maximization of the long-term firm value, and if every firm maximizes its value, assuming no market failures such as monopolies and negative externalities in inputs and products markets, shareholder value maximization would maximize social welfare.¹¹ This argument is a straightforward application of the first fundamental theorem

⁹ See, e.g.: Michael C Jensen, 'Value Maximization, Stakeholder Theory, and the Corporate Objective Function' (2001) 14(3) *Journal of Applied Corporate Finance* 10–21. Anant K Sundaram and Andrew C Inkpen, 'The Corporate Objective Revisited' (2004) 15(3) *Organization Science* 353–356.

¹⁰ Jensen (n 8), 16.

¹¹ *ibid* 11–13.

of welfare that states that under specific (strict) conditions, perfectly competitive (general equilibrium) markets are allocatively Pareto optimal.¹² For the theorem to hold, some conditions including, inter alia, profit-maximizing firms should be satisfied.¹³ Accordingly, if firms do not maximize profits, markets will fail to allocate resources efficiently.

The residual claimant argument is another standard argument in defense of shareholder value. If an asset generates revenue that is to be distributed among its stakeholders, the property right and thus control of the asset should be with the residual claimant of the asset because she has the best incentives structure for maximizing the value of the asset.¹⁴ Since shareholders are the residual claimants, they should have the control over the assets of the corporation. The shareholder value model ensures the shareholders' control over the corporate assets by aligning the incentives of the management with the objectives of the shareholders.¹⁵

Furthermore, according to the stakeholder model, the management's loyalty becomes divided among the firm's stakeholders because the stakeholder model requires the management to make trade-offs among the interests of the stakeholders. The two-masters (divided loyalty) situation is problematic because it broadens *the discretionary power* of the management. With broader discretion and lack of single objective similar to shareholder value maximization that the management can be held accountable for its attainment, the equity agency problem shall exacerbate.¹⁶

These are the standard neoclassical and new institutional microeconomic arguments in support of the shareholder value model. In addition to these micro-arguments, law and finance literature has introduced a macro-economic growth-based argument.¹⁷ The argument runs as follows. The higher the legal protection of the shareholders rights, the lower the cost of equity capital for the firm.¹⁸ When the firms have an access to low cost equity capital, this would enable the firms to

¹² Allan M Feldman, 'Welfare Economics' in Steven N Durlauf and Lawrence E Blume (eds), *The New Palgrave Dictionary of Economics* (2nd. Palgrave Macmillan 2008) 3. R. F Boadway and Bruce Niel, *Welfare Economics* (Wiley-Blackwell 1984) 64.

¹³ Richard W Tresch, *Public Finance: A Normative Theory* (2nd, Academic Press Inc. 2002) 9. Feldman (n 11) 3. Boadway and Niel (n 11) 83.

¹⁴ Sundaram and Inkpen (n 8), 353–354.

¹⁵ *ibid.*

¹⁶ *ibid* 354–355. Jensen (n 8), 14.

¹⁷ This literature, also known as legal origins literature, was kicked off by the famous 'law and finance' paper: Rafael La Porta and others, 'Law and Finance' (1998) 106(6) *Journal of Political Economy*.

¹⁸ Rafael La Porta and others, 'Legal Determinants of External Finance' (1997) 52(3) *Journal of Finance* 1137–1146.

grow on one hand and deepen the capital markets, on the other hand.¹⁹ These two forces will result in higher growth rate for the economy.²⁰ The shareholder value model guarantees a high protection for shareholders, while the stakeholder model poses a risk to shareholder value because it involves the protection of other constituencies at the cost of shareholders.

Nevertheless, some scholars have attempted to advance neoclassical and new institutional economic arguments in defense of the stakeholder theory. Their main argument is that shareholder value model would incentivize the management to extract value from the employees to the benefit of the shareholders. If employees invest in firm specific assets, they will be beholden to the firm: they will be susceptible to opportunistic behavior by the management due to this hold-up problem. The management will be able to, and due to shareholder value model, has the incentives to transfer value from the workers to the shareholders instead of rewarding the asset specific investments of the workers.²¹ Some empirical evidence seems to corroborate this argument; it shows that in contrast to friendly takeovers, hostile takeovers tend to transfer wealth from employees to shareholders.²² This implies that workers, given this risk of expropriation, are also residual claimants.²³ As a result, workers under shareholder value model will cease to invest in firm specific assets. This would cause a reduction of the value of the firms across the economy, resulting in significant social welfare losses. Particularly, these firm's specific investments are crucial for firms in the knowledge economy where most important assets of the firm are intangible knowledge assets.²⁴ Further, these firm specific investments are crucial for firms that pursue the competitive strategy of product specialization that targets a small segment of long-term customers with

¹⁹ *ibid.* Rafael La Porta and others, 'Investor Protection and Corporate Governance' (2000) 58(1-2) *Journal of Financial Economics* 15–16.

²⁰ Ross Levine, 'Financial Development and Economic Growth: Views and Agenda' (1997) 35(2) *Journal of Economic Literature* 703–710. La Porta and others, 'Investor Protection and Corporate Governance' (n 18) 16–17.

²¹ Margaret M Blair and Lynn A Stout, 'A Team Production Theory of Corporate Law' (1999) 85(2) *Virginia Law Review* 272–274. Lynn A Stout, 'Bad and Not-So-Bad Arguments for Shareholder Primacy' (2002) 75 *Southern California Law Review* 1197–1198.

²² Cheryl C Asher, James M Mahoney and Joseph T Mahoney, 'Towards a Property Rights Foundation for a Stakeholder Theory of the Firm' (2005) 9(1) *Journal of Management and Governance* 18, and see the empirical studies cited therein. See also: Harold Demsetz, 'The Theory of the Firm Revisited' (1988) 4(1) *Journal of Law, Economics, and Organization* 154.

²³ Blair and Stout (n 20), 314, fn 178, and see the references cited therein. Further, workers, who make no firm specific investments, are also susceptible to significant losses (e.g., job losses) when firms go bankrupt; hence, they are also residual risk bearers. Stout (n 20), 1194–1195.

²⁴ Asher, Mahoney and Mahoney (n 21), 9–10.

specialized products that adapt to their needs; this strategy has proven to be successful for middle-sized firms in Germany (the so-called hidden champions)²⁵ and may be replicated successfully by large-sized firms in developing economies. Moreover, the economic performance of the flexible specialization business model that seems to outperform the old mass production model depends on significant firm specific investments by workers.

The exponents of the shareholder value model (e.g., Williamson and Jensen) respond to this argument by contending that labor regulation and employment contracts can provide the socially optimal legal protections of workers.²⁶ Voting membership on the board of directors is a less efficient instrument for protecting workers because it would involve the above-mentioned two-masters problem (divided loyalty) that exacerbates the equity agency problem. This is a problematic argument, however, because unlike participation in the decision-making process, labor regulation does not provide adequate protection of the workers against ex-post (financial) expropriation, particularly expropriation that takes tacit forms such as inadequate increases in real wages that is disproportionate to the increase in labor productivity. Indeed, Williamson, though arguing for non-voting representation of labor on the board of directors, acknowledges that “the discussion assumes throughout that, once struck, all node C Bargains (e.g., labor contractual safeguards) will thereafter be respected. This ignores the possibility that circumstances will change and that departure from the spirit, if not the letter, of the contract will sometimes follow.”²⁷ The contractual safeguards of labor specific investments are an excellent case on this point. For example, when technology changes so that labor investments specific to old technology becomes obsolete, the firm’s management has an incentive to hire new workers who have a better knowledge of the new technology instead of investing in training existing workers as long as the costs of infringing labor safeguards are lower than training the workers. Further, in a shareholder-value model, if the shareholders have short term investment horizons, the management will have strong incentives to expropriate the labor in the short run as long as the short term gains exceeds

²⁵ Bernd Venohr and Klaus E Meyer, ‘The German Miracle Keeps Running: How Germany’s Hidden Champions Stay Ahead in the Global Economy’ (Berlin 2007). Working Papers of the Institute of Management at the Berlin School of Economics, Paper no. 30, 12 <http://www.hwr-berlin.de/fileadmin/downloads_internet/Forschung/Veroeffentlichungen/Working_paper/working_paper_30.pdf>

²⁶ Oliver E Williamson, ‘Corporate Governance’ (1984) 93 Yale Law Journal 1208. Sundaram and Inkpen (n 8), 355.

²⁷ Williamson, ‘Corporate Governance’ (n 25) 1229.

the short term costs of infringing the contractual safeguards despite the long term costs incurred by the firm due to expropriating the labor. Moreover, investment in firm's specific assets is an implicit and incomplete contract, and thus any contractual safeguards are necessarily sub-optimal; given changes in circumstances, the management should have the discretion to require different types and levels of firm's specific investments from labor. Contractual safeguards are thus inadequate for coordinated adaptation, particularly in times of adverse economic conditions when adaptation requires credible mechanisms for information sharing.²⁸ Indeed, Williamson also acknowledges this limitation to his argument as he argues that when the safeguards are lower than the transaction specific investments for a corporate constituency, its board's representation may be warranted.²⁹ Finally, re-employment and transition costs incurred by almost all the employees of the firm in case of their dismissal make them susceptible to ex-post exploitation. Williamson acknowledges that his argument for non-representation of labor on the board of directors assumes away these non-negligible costs.³⁰ Given the costs of loss of firm's specific investments and the inefficient coordinated adaptation resulting from using labor law and labor contracts instead of corporate governance mechanism, it is not clear that the net benefits of these governance mechanisms along with non-representation of labor on the board of directors exceeds the net benefits of such representation. Indeed, the insights of the knowledge-based theories of the firm discussed below will uncover further relevant costs and benefits of labor's representation on the board of directors, which would complicate further the comparative organizational assessment of labor's representation on one hand and the combination of labor law and contracts, on the other hand.

3. Step Two (The Critiques Step): Internal Critiques of the Neoclassical Approach to the Primary Regulatory Question (The Choice of The Corporate Governance Model)

The general equilibrium argument for shareholder value theory is valid only if all the other underlying conditions of the first fundamental theorem of welfare (such as perfect information, no scale economies, stable preferences, and fixed technology) hold. If one of these conditions does

²⁸ *ibid* 1208–1209.

²⁹ *ibid* 1229.

³⁰ *ibid* 1207-1208, fn. 31.

not hold, profit-maximizing firms do not necessarily lead to Pareto efficient allocation of resources. For instance, if markets are not perfectly competitive, profit-maximizing firms will use its market power for pricing above marginal cost, resulting in an inefficient allocation of resources. This is the basic critique advanced by the General Theory of the Second Best.³¹

The general theory of the second best establishes the following intuitive, but a significant proposition. If some of the underlying conditions for the first fundamental theorem of welfare do not hold in reality and that policy makers are constrained in their ability to ensure the realization of these conditions (such as ensuring perfect competition in imperfectly competitive markets),³² these unsatisfied conditions become constraints to the social welfare maximization problem.³³ Given these constraints, fulfilling the other conditions required for first best Pareto optimal allocation (such as profit maximizing firms) does not ensure a (second-best) Pareto efficient allocation of resources.³⁴ To determine whether profit maximization would ensure Pareto efficient allocation, we need to introduce the real-world constraints (i.e., the unfulfilled conditions) as constraints in the optimization problem. However, once we do so, the problem becomes mathematically intractable, and assuming that it would be mathematically tractable, we may not be able to interpret economically the derived optimization conditions.³⁵ More problematically, these optimization conditions may not hold also in reality, and thus they would constitute further constraints that should be taken into account in the optimization problem. To put the theory in the words of Lipsey and Lancaster:

The general theorem for the second best optimum states that if there is introduced into a general equilibrium system a constraint which prevents the attainment of one of the Paretian conditions, the other Paretian conditions, although still attainable, are, in general, no

³¹ For an exposition of the general theory of the second best, see: R. G Lipsey and Kelvin Lancaster, 'The General Theory of Second Best' (1956) 24(1) *The Review of Economic Studies*. Richard G Lipsey, 'Reflections on the Theory of the Second Best at Its Golden Jubilee' (2007) 14 *International Tax and Public Finance*.

³² Peter Bohm, 'Second Best' in Steven N Durlauf and Lawrence E Blume (eds), *The New Palgrave Dictionary of Economics* (2nd. Palgrave Macmillan 2008) 4–5.

³³ Lipsey (n 30), 353–355.

³⁴ *ibid* 356. See also: Richard S Markovits, 'Second-Best Theory and Law & Economics: An Introduction

' (1998) 73 *Chicago-Kent Law Review* 4–5. Charles Blackorby, 'Partial-Equilibrium Welfare Analysis' (1999) 1(3) *Journal of Public Economic Theory* 372–373.

³⁵ Lipsey (n 30), 355–356.

longer desirable. In other words, given that one of the Paretian optimum conditions cannot be fulfilled, then an optimum situation can be achieved only by departing from all the other Paretian conditions. The optimum situation finally attained may be termed a second best optimum because it is achieved subject to a constraint which, by definition, prevents the attainment of a Paretian optimum.³⁶

The underlying idea of the second best is intuitive. The first fundamental theorem of welfare establishes that an *abstract mathematically modelled* economic system in general equilibrium that entertain specific properties that are reflected in the assumptions of the theorem (such as being perfectly competitive, devoid of externalities, informational asymmetries, and scale economies) allocates the resources efficiently. These properties of this abstract hypothetical system are the conditions for ensuring efficient allocation of resources. If in *real* economic system, some of these conditions do not hold, the role of the regulator is to intervene to ensure the attainment of these conditions to ensure that *the real system approximates the abstract system*. The unfulfilled conditions are referred to as *market failures* in neoclassical economics and the role of the regulation is then to intervene to correct them. However, if some of these conditions are *impossible* to be fulfilled in real economic systems, fulfilling the other conditions would not then ensure the first-best (or the second-best) Pareto efficient allocation of resources. To ensure that real economic systems will allocate resources efficiently, we need to consider the *conditions that are impossible to fulfill as constraints*. Given these constraints, we need to derive the conditions that ensure that the *abstract* economic system in general equilibrium will be able to allocate resources efficiently. There is no theoretical (or mathematical) basis for believing that these conditions will be similar to the specific properties of our abstract toy economy subject to the first fundamental theorem of welfare because the maximization problem in both cases are made under different set of assumptions and constraints.³⁷

³⁶ Lipsey and Lancaster (n 30), 11.

³⁷ A further valid interpretation of the General theory of the second is that the correction of a market failure may result in creation or exacerbation of another market failure. Thomas Ulen, 'The General Theory of Second Best in Law and Economics' (1998) 73 Chicago-Kent Law Review 206. This interpretation results in a further critique of Jensen's general equilibrium argument made in defense of the shareholder value model. Despite maximizing firm's profits, the shareholder value model of corporate governance may impose *negative externalities* on other stakeholders of the firm (e.g., workers who make firm specific investments and firm's community by giving strong incentives for infringing environmental law). This

The general theory of the second best thus hinges upon the impossibility of correcting some of the market failures at zero or low cost and thus it is not possible to fulfill the unrealistic conditions of the first fundamental theorem in real market economies. Some market failures may be impossible to correct perfectly due to *technical* reasons.³⁸ For instance, it is not technically feasible to push all the oligopolistic markets to behave as the perfectly competitive markets in the general equilibrium neoclassical model. In addition, it is difficult to acquire knowledge about all the distortions in the economy.³⁹ Further, some market failures are impossible to correct due to *political* constraints. Politicians may be constrained in their ability to introduce the regulatory interventions that may correct specific markets failures.⁴⁰ Furthermore, for the conditions underlying the first fundamental theorem of welfare to hold, no socio-economic regulations should have any objective other than correcting market failures; otherwise, they would misallocate the resources. The enactment of solely market failures correcting socio-economic laws is impossible (and indeed undesirable) to achieve due to political constraints. Given the wide range of persistent market failures in any market economy, there is no reason to believe that correcting only one of these market failures will increase the social welfare.⁴¹ Hence, there is no reason for believing that shareholder value by ensuring profits maximization behavior of the firms would be welfare enhancing, given the wide range of persistent market failures in any market economy. The general theory of the second best deconstructs Jensen's general equilibrium argument outlined above.

As to the comparative efficiency of the protection of labor through labor law and contracts, it has already been critiqued above. As to the protection of the shareholders because they are the residual claimants who are not protected by the contract, it has already been shown that workers who make specific human capital investments in the firm's assets are also residual claimants. More importantly, assuming that public investors are the sole residual claimants, there seems to be no economic rationale for adopting a shareholder value model of corporate governance that would increase short term returns on their equity investments because they already receive equity

point will be discussed further in section 5 on the systemic critiques of the neoclassical normative theory of economic regulation in the next chapter.

³⁸ Bohm (n 31) 4–5.

³⁹ Ricardo Hausmann, Dani Rodrik and Andrés Velasco, 'Growth Diagnostics' in Narcís Serra and Joseph E Stiglitz (eds), *The Washington Consensus Reconsidered: Towards a New Global Governance* (Oxford University Press 2008) 329.

⁴⁰ Bohm (n 31) 4–5.

⁴¹ Hausmann, Rodrik and Velasco (n 38) 327–330. Markovits (n 33), 4–5.

premium that is above the long-term riskiness of equity investments and the compensation for their patience (delay in consumption).⁴² Equity agency problem that involves the expropriation of public shareholders is a theoretical proposition that lacks an empirical support; hence, there is no empirical basis for requiring further protection for public equity investors.

With respect to the economic growth argument of the law and finance literature, the relevant empirical evidence has been contested extensively in both mainstream economics and legal scholarship.⁴³ As to the theoretical argument underlying the empirical analysis, this argument assumes implicitly that capital accumulation drives growth rate of the economy. Capital stock increases in the economy because foreign capital flies in while domestic capital does not fly out because corporate governance of domestic firms ensures high (risk-adjusted) returns to equity. In neoclassical growth theory, only technological progress affects the rate of economic growth; capital accumulation affects the level, but not the rate of economic growth.⁴⁴ The level of economic growth matters in the short and medium run, but it does not matter in the long-run when the economy converges to its steady state growth path. Given the short and medium term benefits, the argument can be accepted on growth theory accounts; particularly, in non-neoclassical models of economic growth when capital is assumed to have constant or increasing marginal productivity, capital accumulation has a positive effect on the rate of economic growth.

However, there are three major problems with this argument. First, it assumes that firms in all developing countries are financing constrained: least developed countries are no different from India, Brazil, or China. This is obviously incorrect. This is not also true in developed countries with stakeholder value model such as Germany or Japan. Firms in many developing countries are not as financing constrained as law and finance literature implies for several reasons. First, firms with good quality stakeholder models are embedded in a long-term relational network with their bank and employees. This embeddedness restricts risk-taking by the firm as both banks and employees tend to be more risk averse than diversified shareholders.⁴⁵ Given this risk averse

⁴² O'Sullivan M. 'The Innovative Enterprise and Corporate Governance' (2000) 24(4) Cambridge Journal of Economics 401–402.

⁴³ See the critique of the indices-based econometrical analysis of legal institutions (such as the empirical analysis of the law and finance literature) in section 5.2 of chapter 5 and the references cited therein.

⁴⁴ Paul Romer, *Advanced Macroeconomics* (4th edn, McGraw Hill 2012) 19–21.

⁴⁵ Michael Carney and Eric Gedajlovic, 'Corporate Governance and Firm Capabilities: A Comparison of Managerial, Alliance, and Personal Capitalism' (2001) 18(3) Asian Pacific Journal of Management 343–344. Sundaram and Inkpen (n 8), 354.

attitude of the firms, they have easier access to credit in comparison to a shareholder value firm with a higher appetite for risk. At least, the cost of credit capital of the latter would be higher. Cheaper cost of credit could attract equity investment as it increases returns on equity. Further, as stakeholder model of governance ensures a convergence of the interests of the governance coalition over long-term firm's survival, these firms will be attractive for *long-term* equity investments, which may mitigate the effects of the outflow of short-term domestic equity investments and the reduction in the inflow of short-term equity foreign investments.

Further, shareholder value model by relying more on raising capital on the market deconstructs long-term relational banking. As a result, banks would have less private information about their shareholder-value maximizing borrowing firms. Knowing that the management of these firms has strong incentives for taking higher risks to maximize returns on equity, the cost of credit capital for these shareholder value-maximizing firms that reflects both the cost of gathering information by the bank and the cost of the high-risk profile of the firm would be higher. By ignoring the cost of credit capital and focusing on the cost of equity capital, law and finance literature assumes mistakenly the existence of financing constraints in countries with a good quality stakeholder model of corporate governance.

Third and most problematically, the argument suffers from an implicit normative bias. To reveal its normative bias, we could state the argument as follows: given the conditions of globalization, capital flies to the jurisdictions with highest risk adjusted returns on equity, and since firms in developing countries are in need for capital, they have to adjust their governance to be aligned with the interests of capital owners. The argument emphasizes the benefits of this alignment of corporate governance with the interests of shareholders, but fails to take note of the associated costs/externalities to the workers, local communities and the environment. Further, the argument takes the conditions of globalization as unproblematic; it does not investigate how developing countries or developed countries with stakeholder model may *resist* the compelling implications of globalization.

Finally, the most serious internal critique to the shareholder value model relates to its implementation. Legal institutions of corporate governance that are considered to implement shareholder value model, as represented by many indices of corporate governance quality

developed by corporate finance scholars,⁴⁶ give the management the incentives to maximize short-term stock prices or equity value, but not the long term total firm value as defined by Jensen. Supporters of stakeholder model argue that the institutions of the latter are better suited for maximizing long-term firm value (and long term *social value* of the firm). Regulatory implementation argument seems to be the most serious issue on both sides of the debate. It seems that adequate institutional set-ups that ensure the maximization of the long-term total firm value are lacking; shareholder value model maximizes short-term equity value, while the stakeholder model seems to be caught in the two-masters/split loyalty problem exacerbating equity agency problem. On balance, however, when the latter is complemented with concentrated ownership, stakeholder model seems to be more adequate to maximizing the long-term firm value. Further, if we endorse a *social value* maximization objective, conceptualized below as the creation of *ethical and learning* organization objective, then, the shareholder value model would be inferior to the stakeholder model.

However, this assessment of the stakeholder model may not apply to developing countries. For example, the post-war German and Japanese stakeholder models have functioned properly due to a set of (complementary) peculiar legal and economic institutions of corporate governance (e.g., the co-determination principle in Germany, the main bank, job rotation, and the Keiretsu structure of the Japanese firms in Japan). Due to differences in economic institutions of corporate governance (e.g., the bank-firm relations in developing countries), social norms, and political economy of developing countries, the transplant of the German or Japanese stakeholder models may be politically unfeasible or if transplanted, these transplanted models may not function properly. In short, although the stakeholder model seems to be more efficient in securing long term total firm's value maximization, the transplant of the German or Japanese forms of the stakeholder model in developing countries may fail to maximize long term value; it may even destroy existing value. Chapter 12 will seek to overcome this problem by suggesting a modified form of a

⁴⁶ One of the famous indices for corporate governance quality that is based on shareholder value model is developed by Bebchuk and his co-authors, see: Lucian A Bebchuk, Alma Cohen and Allen Ferrell, 'What Matters in Corporate Governance?' (2009) 22(2) Review of Financial Studies 788–796. For a brief outline of the most famous indices of corporate governance quality, see: Sanjai Bhagat, Brian Bolton and Roberta Romano, 'The Promise and Peril of Corporate Governance Indices' (2008) 108(8) Columbia Law Review 1819–1826.

stakeholder model that fits the economic institutions of corporate governance, social norms, and legal systems of developing countries.

In sum, the internal critiques uncover two important aspects of the stakeholder-shareholder value models debate. First, most of the arguments advanced by the exponents of the shareholder value model of corporate governance are mistaken. One argument still holds, however; the shareholder value model of corporate governance attracts (foreign and domestic) (short-term) *equity* capital. We should not exaggerate the importance of this argument, however. As the following section will argue, attracting long-term patient capital (and not short term capital) should be the objective of the institutions of the supply side of product market (e.g., corporate governance) because long term patient capital is a necessary requirement for ensuring a viable organizational learning.⁴⁷

Second, most of the scholars on both sides of the debate, who follow a neoclassical-new institutional perspective, seem to share the view that the objective of the corporate governance is to ensure maximizing total long term firm's value. This implies that the debate lies in which model can achieve more efficiently (at the least possible cost) this objective. This is not a normative debate around the objective of corporate governance; this is rather a debate concerning the implementation capacity of the institutions of both models of corporate governance. Concerning this debate, it seems that the stakeholder model, given the above reasons, is more suited for attaining this shared objective. However, the typical German and Japanese institutions that give rise to the stakeholder model shall not function properly, if transplanted in developing countries. This is the main conclusion that we can draw from examining the internal critiques to the neoclassical approach to the choice of corporate governance model.

4. The Critique Step Continued (The External Critiques): Insights from Knowledge-based Theories of the Firm and The French Regulation School of Economics

Two strands of economic thought advance *external* critiques of the neoclassical-new institutional approach to the choice of corporate governance model: the knowledge theories of the firm in the strategic management and evolutionary economics literature and the French regulation school of economics. Other critical perspectives include critical legal studies, social responsibility

⁴⁷ See below the discussion of the knowledge-based theories of the firm and the references cited therein.

of the corporation, social systems theory, and complexity economics. This section will engage with the critical insights of the knowledge-based theories of the firm and the French regulation school of economics, while excluding the relevant insights of the other theories and schools of thought due to space and time limits. Future research is needed for extending the current analysis by including the insights of these strands of thought.

The knowledge-based theories of the firm encompass a wide range of theories (e.g., resource-based view of the firm, the competence theory of the firm, the evolutionary theory of the firm, dynamic capabilities theory in strategic management, the innovative enterprise theory of the firm). These theories share a common theoretical framework that emphasizes *production costs, technology, management and entrepreneurship, knowledge, learning, and innovation* instead of or in addition to *transaction costs*; firm's competences and capabilities and not the transaction is the primary unit of analysis in these theories.⁴⁸ To understand the external critiques advanced by the knowledge-based theories of the firm to the new institutional approach to the theory of the firm and choice of corporate governance model, we need to outline the new institutional theories of the firm. These theories inform the above-mentioned arguments underlying both the shareholder value and the stakeholder model of corporate governance positions in neoclassical-new institutional law and economics literature.

Neoclassical theory of the firm perceived the firm as *a production function*; given the state of technology, the firm as a production function transforms the inputs into maximum outputs;⁴⁹ firm's management maximizes the profits by choosing the profit maximizing quantity to produce.⁵⁰ This neoclassical theory of the firm fails to address any of the major questions that any adequate theory of the firm should address, namely, why firms emerge, the boundary of the firm,⁵¹ the process of value creation by the firm and of internal distribution of this value, firm's growth, and creating and sustaining the firm's competitive advantage. As the below discussion will show, most, if not all, theories of the firm address satisfactorily only some of these questions.

⁴⁸ Nicolai J Foss, 'Theories of the Firm: Contractual and Competence Perspectives' (1993) 3(2) Journal of Evolutionary Economics 131–132.

⁴⁹ Oliver E Williamson, 'The Theory of the Firm as Governance Structure: From Choice to Contract' (2002) 16(3) The Journal of Economic Perspectives 178.

⁵⁰ Oliver Hart, *Firms, Contracts, and Financial Structure* (Oxford University Press 1995) 15–16.

⁵¹ *ibid* 17.

Given this failure of the neoclassical theory of the firm, an alternative set of theories of the firm have been developed in new institutional economics: agency theory (referred to also as the principal-agent theory of the firm)⁵², the firm as a governance structure (referred to also as transaction cost theory of the firm)⁵³, and property rights theory of the firm.⁵⁴ These theories share similar starting point that is the transaction cost explanation of the emergence of the firm developed by Coase in his seminal article on the nature of the firm.⁵⁵ Particularly, they share the understanding of the firm as *a nexus of transactions/contracts*. The agency theory of the firm views the firm as a nexus of complete and explicit contracts,⁵⁶ while both transaction cost and property rights theories conceptualize the firm as a nexus of *explicit, implicit and incomplete* contracts.⁵⁷

Clearly, the agency theory of the firm is an insufficient basis for the choice of the corporate governance model. First, the completeness and explicitness of the contracts embodied in the firm is unrealistic assumption. Further, the main arguments in support of the shareholder value theory, which are derived from the agency theory of the firm, have been already subject to intensive internal critiques outlined in the previous section. In contrast, both the transaction cost and property rights theories of the firm may seem to provide a sufficient basis for the choice of the corporate governance model. Inspired by the insights of the knowledge-based theories of the firm, the following sub-section shall establish that this is not the case; these new institutional theories of the firm (i.e., the transaction cost and property rights theories) fail to provide a sufficient basis for the choice of corporate governance system.

This section shall proceed as follows. Section 4.1 outlines the transaction cost theory of the firm (the firm as a governance structure theory), situates the new institutional arguments underlying both shareholder value and stakeholder models of corporate governance outlined in the previous sections in this theory. It then illustrates the *main critique* of the transaction cost theory

⁵² For an outline of the agency theory of the firm, see: Eugene F Fama, 'Agency Problems and the Theory of the Firm' (1980) 88(2) *Journal of Political Economy*. Michael C Jensen and William H Meckling, 'Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure' (1976) 3(4) *Journal of Financial Economics*.

⁵³ For an outline of the theory of the firm as a governance structure, see: Williamson, 'The Theory of the Firm as Governance Structure: From Choice to Contract' (n 48).

⁵⁴ For an exposition of the property rights theory of the firm, see: Hart, *Firms, Contracts, and Financial Structure* (n 49) 29–72.

⁵⁵ R. H Coase, 'The Nature of the Firm' (1937) 4(16) *Econometrica*.

⁵⁶ Asher, Mahoney and Mahoney (n 21), 12–13.

⁵⁷ *ibid* 15–16.

of the firm that is it fails to determine the transactions to be organized by the firm to ensure its sustainable competitive advantage. Transaction cost theory is not a theory of the learning/innovative/competitively sustainable firm; hence, it is not a sufficient basis for the choice of the system of corporate governance. Similarly, section 4.2 illustrates that for similar reasons, the property rights theory of the firm, another major new institutional theory of the firm, does not provide a sufficient foundation for the choice of corporate governance model. Section 4.3 discusses the main insights of the knowledge-based theories of the firm and demonstrates how they can complement critically the insights of the new institutional theories of the firm.⁵⁸ Finally, section 4.4 outlines briefly the relevant critical insights of the French regulation school of economics.

4.1. The Transaction Cost Theory of the Firm (The Theory of the Firm as a Governance Structure) Is Not a Sufficient Basis for the Choice of Corporate Governance Model

This section will proceed as follows. Section 3.2.1.1 outlines the theory of the firm as a governance structure and situates the new institutional arguments in support of the shareholder value and stakeholder models within this theory. It establishes that the shareholder value and stakeholder models are different types of the firm/hierarchy as a governance structure; each of them facilitates different set of transactions. Section 3.2.1.2 illustrates that the theory of the firm as a governance structure (the transaction cost theory of the firm) is insufficient for determining the desirable transactions to be facilitated by the firm; a theory of the firm as a learning/innovative enterprise is needed for identifying these transactions. Section 3.2.1.3 advances further arguments

⁵⁸ According to the steps of the application of the integrated and systemic approach, one could have discussed the insights of the knowledge-based theories of the firm and integrated them with those of the new institutional approach in the integration step (step 6) of the application process of the proposed approach. More precisely, this discussion could have been relegated to sections 2.3 and 2.4 on the integrated effects of corporate governance in Japan in chapter 11 and section 4 on the proposed model of corporate governance for developing economies in chapter 12. However, the flow of the discussion would have been fragmented if we were to do so. Alternatively, we discuss the insights of knowledge-based theories of the firm in this section, while drawing on this discussion in the relevant sections in chapters 11 and 12. This shows that the proposed steps for the application of the integrated and systemic approach are not written in stone. Rather, they are guidelines to be followed flexibly as long as three conditions are satisfied: the epistemological requirements of each step has been fulfilled, the scholar is aware of the instances of his deviations from the strict adherence to the steps, and he informs the reader of these instances of non-adherence. This flexibility enables the scholars to ensure a smooth flow of their argument, while fulfilling the epistemological requirements of the steps of the integrated approach.

demonstrating the insufficiency of the transaction cost theory of the firm as an epistemological basis for the choice of corporate governance model.

4.1.1. Shareholder Value and Stakeholder Models Are Distinct Hierarchical Governance Structures That Facilitate Different Transactions

As already mentioned, the new institutional theories of the firm have their starting point in Coase's analysis of the nature of the firm. Coase argued that *production* requires the *coordination* of economic activities of entrepreneurs, investors, workers, and suppliers.⁵⁹ Market exchange (i.e., contracts) can coordinate these activities through *price mechanism*⁶⁰ and thus allocate resources efficiently. However, given this hypothetical efficiency of the markets as a coordinating and allocative governance structure of economic activities, why would firms emerge? i.e., why these economic actors organize the production within the firm by replacing the price mechanism with managerial authority?⁶¹ Coase answered this question by arguing that firms emerge because they *economize on transaction costs* associated with the governance structure of market exchange.⁶² In this Coasian perspective, both firms and markets are governance structures of the transaction; the firm is no longer perceived as a production function.⁶³

Williamson has operationalized and broadened this Coasian insight. He argued that the *costs* of the governance structure of any transaction (e.g., markets, firms, hybrids, or regulation) depend on both the attributes of the transaction (e.g., frequency of the transaction, uncertainty, asset

⁵⁹ Coase, 'The Nature of the Firm' (n 54) 388–389.

⁶⁰ *ibid.*

⁶¹ *ibid* 389--390.

⁶² *ibid* 390–393.

⁶³ Williamson, 'The Theory of the Firm as Governance Structure: From Choice to Contract' (n 48) 176.

specificity, and the adaptive needs of the transaction to changes in the circumstances⁶⁴)⁶⁵ and the attributes of the governance structure (e.g., intensity of incentives, administrative control, and the legal regime of the governance structure).⁶⁶ For example, asset specific transactions would require contractual safeguards for the party that makes these investments to protect him from the opportunism of the counter-party; if contracts cannot provide these safeguards, then, the firm as an alternative governance structure may be needed for providing these safeguards.⁶⁷

Although Williamson endorses efficiency in the form of transaction cost minimization as the criterion for comparing governance structures,⁶⁸ his framework of analysis is richer than the criterion of cost-minimization might signal. Williamson points to the choice of the governance structure that mitigates *contractual/transaction hazards*⁶⁹ and thus *facilitates* the consummation of these transactions that *would have been* desired by their parties under conditions of zero/low transaction costs and symmetric information. In this sense, in the transaction cost perspective, the *transaction facilitation* (and not transaction cost minimization) is a more accurate criterion for comparing governance structures.⁷⁰ If different governance structures can facilitate the *same*

⁶⁴ The *coordinated* adaptive needs of the transaction depend on both the degree of uncertainty and asset specificity of the transaction. The need for coordinated adaptation depends on the degree of uncertainty; if future changes can be foreseen probabilistically or with certainty, market contracts can provide for (autonomous) adaptation to these future changes. In addition, the need for coordinated instead of autonomous adaptation depends on the degree of the asset specificity of the transaction because the parties of asset specific transactions cannot adapt autonomously to changes in circumstances by terminating current contractual relation and contracting with third parties in the market without significant loss of the value of their specific investments. Given that adaptive needs of the transaction are function of both uncertainty and asset specificity, one may be tempted not to consider these needs as a standalone attribute of the transaction. Still, the inclusion of the adaptive needs as an attribute of the transaction provides the Williamsonian transaction costs framework with an analytical clarity; particularly, this would help us distinguish adaptive needs as an attribute of the transaction from the adaptation capability as a normative criterion for evaluating compared governance structures of the transactions. In addition to these attributes of the transaction, one may also add the *degree of information asymmetry* as another important attribute of the transaction.

⁶⁵ *ibid* 175–176. Oliver E Williamson, ‘Comparative Economic Organization: The Analysis of Discrete Structural Alternatives’ (1991) 36(2) *Administrative Science Quarterly* 270–282.

⁶⁶ That is why the objective of the transaction cost economics is to choose the appropriate governance structure for the transaction, which ensures the minimization of the costs of this transaction. Oliver E Williamson, ‘Why Law, Economics, and Organization?’ (2005) 1 *Annual Review of Law and Social Science* 378.

⁶⁷ Williamson, ‘The Theory of the Firm as Governance Structure: From Choice to Contract’ (n 48) 176.

⁶⁸ Williamson, ‘Comparative Economic Organization: The Analysis of Discrete Structural Alternatives’ (n 64) 286–287.

⁶⁹ See, e.g.: *ibid* 288–289. Williamson, ‘The Theory of the Firm as Governance Structure: From Choice to Contract’ (n 48) 172.

⁷⁰ Demsetz, ‘The Theory of the Firm Revisited’ (n 21) 150. One may still argue that when transaction costs are too high, they impede the consummation of transactions and thus transaction facilitation depends

transactions, then, cost-effectiveness can function as a further criterion for comparing these governance structures. This proposed representation of Coasian and Williamsonian transaction cost economics reveals that *different governance structures facilitate different transactions*. Transactions and their attributes are not givens that we assign to the cost minimizing governance structure; rather, the type and attributes of the transactions are functions of the governance structure. Transactions *vary* with the governance structure. This important point will be very helpful in understanding the strengths and the weaknesses of the transactions cost approach to the choice of corporate governance model discussed below.

Given this outline of transaction cost economics, the Coasian transaction cost explanation to emergence of the firm can be sharpened. The firm as a governance structure emerges because it facilitates value-creating transactions among its stakeholders that market exchanges would not have facilitated. The transactions among the stakeholders of the firm are replete of contractual hazards such as externalities, asset specific investments, the transactions' need to coordinated adaptation, information asymmetry, and conflict of interests. The latter two contractual hazards give rise to agency problems (e.g., equity agency problem, debt agency problem, and labor's shirking). If left to the market, these transactions may not have been consummated due to high transaction costs or contractual incompleteness⁷¹ or would be consummated but they would have been highly inefficient. Furthermore, these contracts are incomplete; they have gaps and ambiguities that need to be filled and resolved in the future through renegotiation.⁷² Accordingly, the firm as a governance structure by allocating the residual control rights to the principals who are not protected adequately through the contract can reduce the transaction/agency costs on one hand, and fill in the gaps in the incomplete contracts in the future by making decisions regarding

on the capability of the governance structure to minimize transaction costs. This, however, confuses transaction facilitation with transaction costs; a governance structure may fail to facilitate a transaction for contractual hazards other than prohibitive transaction costs. Further, I prefer to distinguish transaction facilitation from transaction cost minimization because when applying the transaction cost theory of the firm to corporate governance, the transaction cost theory of the firm formulated in terms of transaction cost minimization conceals the *fundamental need to determine the transactions that should be facilitated by the corporate governance system*. The below discussion of the knowledge-based theories of the firm will clarify this point.

⁷¹ Relationship specific investments would not take place through market exchange due to incompleteness of contracts. See: Hart, *Firms, Contracts, and Financial Structure* (n 49) 26.

⁷² Oliver Hart, 'Corporate Governance: Some Theory and Implications' (1995) 105(430) *The Economic Journal* 680.

the use of the assets of the firm.⁷³ In sum, governance structure of the firm intends to reduce the transaction costs associated with the nexus of incomplete contracts embodied in the firm (mainly, agency and hold-up costs) and fill-in the gaps in these incomplete contracts.⁷⁴

A contractual approach to corporate governance based on this contractual transactions cost theory of the firm was developed. In this contractarian perspective, the corporation is a nexus of explicit and implicit contracts/transactions.⁷⁵ Corporate governance mechanisms (e.g., managerial authority, board structure, board voting membership, and distribution of residual control rights) are thus mechanisms for governance of these transactions. In absence of these mechanisms, these transactions would not have been consummated, or they would have been consummated, but would have been highly inefficient (i.e., costly) in a sense that part of the value created by these transactions would be wasted.

Given this outline of the transaction cost theory of the firm and corporate governance, the arguments of both the shareholder value and stakeholder theory of corporate governance outlined in the previous section can be situated in this transaction cost theory of the firm. The central problem is to assign ‘transactions to governance structures in such a way as to accomplish an economizing result.’⁷⁶ From a transaction cost theory of the firm, both the shareholder value and the stakeholder model of corporate governance are different variants of the hierarchy/the firm as a governance structure. As already mentioned, according to the shareholder value theory, only the equity investors lack adequate contractual safeguards of their investments and thus should be granted residual control rights. According to the stakeholder theory, workers should be also granted a residual claimant status because of asset specificity of their investments that cannot be adequately protected by labor contracts and labor law. Both arguments hinge upon the same theoretical framework: by allocating residual control rights to the parties who cannot be protected adequately by contractual safeguards, the firm becomes *an efficient governance structure that facilitates* the consummation of these contracts that would not have been consummated in absence of the governance structure of the firm. According to the shareholder value theory, without this legal protection of shareholders, the investors will not provide equity capital to the firm. Financing

⁷³ *ibid.*.

⁷⁴ *ibid* 678–680.

⁷⁵ Frank H Easterbrook and Daniel R Fischel, *The Economic Structure of Corporate Law* (Harvard University Press 1991) 15–16.

⁷⁶ Williamson, ‘Corporate Governance’ (n 25) 1201.

contracts will not be consummated on the market and the firms as a governance structure will fail to compensate for the inefficiency of the market; the firm will be financially constrained. According to the stakeholder theory, workers will not contract on investing in firm's specific assets because of the hold-up problem; if the firms do not endorse a stakeholder model of corporate governance, it will not be more efficient than the market in consummating the asset specific transactions. Here, the transactions facilitated by the firm as a governance structure (whether equity financing or labors' asset specific investments) depend on the type of the firm/hierarchy as a governance structure (whether a shareholder value or a stakeholder governance structure). In addition to equity financing and labor's investment in specialized firm's assets, the shareholder value and stakeholder models as distinct types of hierarchical governance structure affect the consummation of other exchanges among the firm's stakeholders as well. For example, the cooperation of the employees, knowledge sharing among them, and vertical information and knowledge sharing among the employees and the management are examples of other important transactions whose facilitation hinges on the type of hierarchical governance structure. This importance of these exchanges will become clear when we discuss the labor-related organizational conditions for a viable learning process in the knowledge-based theories of the firm.

In short, the transaction cost theory of the firm demonstrates that transactions vary with governance structure. The firm/hierarchy emerges because it facilitates transactions that the market fails to coordinate due to contractual hazards/market failures. Both the shareholder value and stakeholder models of corporate governance are different forms of hierarchical governance structure; hence, they facilitate different types of transactions. Many of the arguments advanced by new institutional law and economics scholars in support of the shareholder value or stakeholder model are deeply situated in the transaction cost theory of the firm; each side of the debate claims that one of these models facilitates specific transactions and thus *should* be adopted. However, for any of these claims to be true, one has still to show why facilitating any specific transaction is *desirable*; only the governance model that facilitates desirable transactions should be adopted. The following section demonstrates that the transaction cost theory of the firm fails to identify the desirable transactions, and thus provides insufficient epistemological basis for the choice of corporate governance model.

4.1.2. Transaction Cost Theory of the Firm is an Insufficient Epistemological Basis for the Choice of Corporate Governance Model: Indeterminacy of the Desirable Transactions, The Positive Nature of the Theory, and Problems with the Assumption of Opportunism

Each governance system facilitates distinct set of transactions among firm's stakeholders. Accordingly, for the transaction cost based arguments in support of stakeholder or shareholder value models of corporate governance to gain credibility, we need to investigate why facilitating any of these transactions (e.g., equity financing, labors' investments specific to the firm's assets, intra-labor exchanges, vertical exchanges between management and labor) is desirable. Transaction cost theory of the firm assumes that the transactions that would have been consummated through market exchanges in absence of contractual hazards/market failures are desirable for two reasons. First, these transactions would ensure *efficient allocation of resources*. Second, these transactions would increase, if not maximize, *economic value*. Accordingly, one should not be concerned with identifying the desirable set of transactions to be facilitated by the firm as a governance structure; the firm as a governance structure should facilitate the transactions that would have been consummated through market exchanges/contracts in absence of *contractual hazards*. As already mentions, the institutions of corporate governance (e.g., voting membership on the board) should be used only to facilitate the transactions that cannot be facilitated through market exchanges.⁷⁷ *Contractual hazards that cannot be corrected through market contracts*, and not *the desirable set of transactions*, are the central unit of analysis in the transaction cost theory of the firm. This line of argument is incorrect, however. For choosing the model of corporate governance, we must identify the desirable set of transactions to be facilitated by this governance model. We now elaborate on the above line of argument of the transaction cost theory of the firm, while demonstrating its limitations.

The line of argument of the transaction cost theory of the firm assumes that the market exchanges in absence of contractual hazards ensures allocative efficiency and creates economic

⁷⁷ Williamson argues that the use of hierarchy/the firm as a governance structure for transactions should be a 'last resort'. Williamson, 'Comparative Economic Organization: The Analysis of Discrete Structural Alternatives' (n 64) 279. Williamson made a similar point in relation to granting the employees the voting membership on the board of directors. See the relevant discussion in section 3.1 of this chapter.

value. Accordingly, when the firm facilitates these market exchanges by mitigating contractual hazards that cannot be mitigated through contractual mechanisms will ensure *efficient allocation of resources and value creation*. As to efficient allocation of resources, according to Coase theorem (and also according to the first fundamental theorem of welfare), under zero transaction costs, symmetric information, and well-defined property rights, and regardless of the way these rights are distributed, market transactions lead to static efficient allocation of resources.⁷⁸ Accordingly, under high transaction costs and asymmetric information, the *distribution of property rights* affects the efficiency of the allocation of resources.⁷⁹ Given the hazards associated with market transactions necessary for production (e.g., asymmetry of information and high transaction costs), the governance structure of the firm is a form of property rights distribution that ensures efficient allocation of resources by *correcting these contractual hazards*. By doing so, the firm as a governance structure would allocate *resources efficiently* by approximating the efficient contractual outcomes of market exchanges under zero transaction costs and symmetric information.

Second, by facilitating these transactions, the firm as a governance structure does not only ensure static efficient allocation of resources, it also *creates value* (e.g., profits for its shareholders, above market wages for its managers and workers). Under conditions of zero transaction costs and symmetric information, complete contracts consummated between perfectly foresighted rational actors do not only enable these actors to reap plausible gains from trade (exchange allocative efficiency). These contracts also positively affect, if not maximize, the magnitude of *these gains* through many channels, the most important of which is affecting the incentive structure of these actors (particularly their investment incentives⁸⁰). For example, suppose that a firm cannot sell its consumption goods to some of its prospective consumers who place a subjective valuation of the good above its production cost due to high transaction costs. This firm and its consumers do not lose only the potential gains from trade (the difference between the production cost, say 100 euros, and the subjective valuation of the good by the consumer, say 120 euros). Due to these lost

⁷⁸ R. H Coase, 'The Problem of Social Cost' (1960) 3 The Journal of Law and Economics 6–8.

⁷⁹ *ibid* 15–16.

⁸⁰ The fact that governance structures (e.g., contracts and hierarchies) involve different distribution of property rights conceptualized as residual control rights and thus have different effect on the incentives of the parties to invest in the transacted physical asset is the main insight of the property rights theory of the firm. See: Asher, Mahoney and Mahoney (n 21), 8. In addition, see below section 3.2.2 of this chapter on the property rights theory of the firm and the references cited therein.

revenues, the firm may also downsize or even go bankrupt; this represents a loss in *economic productivity*, i.e., in the size of the economic surplus itself.

This loss in economic value becomes more pronounced when the transacted good is a productive asset because the terms of the contract, particularly the distribution of the surplus, affects the incentives of investment in this asset.⁸¹ For example, suppose that the workers and the management can write down an explicit and comprehensive contract in which the workers specify exactly the amount of firm's specific assets investments they are going to make, the increase in firm's value resulting from these investments, and the distribution of this increase in value between shareholders and workers. In this case, workers will have the incentive to make the contracted for specific investments in firm's assets. However, suppose that the contract is implicit and incomplete. This is a realistic assumption because of the high costs of writing complete contracts, the investment in firm's specific assets by each worker is hardly verifiable, the increase in value due to these investments is uncertain, and the sustainability of this increase in value is uncertain as changes in market conditions may make these valuable investments obsolete.⁸² In this case, workers' fear of expropriation by the shareholders may induce them to *underinvest* in firm's specialized assets. Similarly, the management and the shareholders may mutually prefer to write an explicit and complete contract according to which the managers pursue long-term firm's strategies that ensure the creation and sustainability of firm's competitive advantage; if this contract were to be written, the managers will have the right incentives to exert the contracted for efforts to pursue these strategies. Similar to labor contract, the terms of this contract cannot be specified comprehensively; it is necessarily incomplete. Consequently, according to transaction cost theory of the firm, the firm creates value by facilitating the above transactions that the parties would have consummated on the market in absence of market failures/contractual hazards (e.g., information asymmetry, hold-up problem).

These examples are convincing, still there is *no theoretical basis* for claiming that the firm by facilitating the transactions desired by their parties, which cannot be consummated through market exchanges due to contractual hazards increase or maximize economic value. One cannot claim that market exchanges under asymmetric information, zero transaction costs, and complete contracts,

⁸¹ *ibid.* Hart, *Firms, Contracts, and Financial Structure* (n 49) 39–41. John Moore, 'The Firm as a Collection of Assets' (1992) 36(2-3) *European Economic Review* 495.

⁸² Uncertainty and high transaction costs of writing complete contracts are among the major resources for incompleteness of the contracts, see: Hart, *Firms, Contracts, and Financial Structure* (n 49) 23–24.

which *allocates resources efficiently* according to Coase theorem and the first fundamental theorem of welfare, maximizes also the size of economic surplus.

First, as shall be discussed in section 4.1 of the following chapter, markets under conditions of perfect competition, asymmetry of information, and zero transaction costs maximize economic growth. Economic growth theories establish that static efficient allocation of resources ensured by markets under the abovementioned idealized conditions is not the sole driver of economic growth; physical and human capital accumulation and technical progress are other major drivers of growth. Accordingly, creating a corporate governance structure that facilitates the transactions that would have been consummated on the market in absence of contractual hazards/market failures in order to allow the firm to substitute functionally for the market does not ensure the maximization of long-term value creation (i.e., long-term growth) in the market economy.

Further, regardless of whether the market exchanges under the idealized conditions of the first fundamental theorem of welfare maximizes economic growth, this does not implicate that these market exchanges, when facilitated through the institutions of corporate governance, will maximize *long-term firm's value*. The learning and innovative capabilities of the firm are the main drivers of its long-term value creation.⁸³ The firm will be able to create sustained long-term value if and only if the firm has organized the set of relations/transactions (and the associated type of allocation of resources) required for sustaining viable learning and innovative processes. The set of transactions supportive of viable learning process may not be necessarily the same as the set of market exchanges that would have been consummated under the above-mentioned idealized conditions.⁸⁴ For example, the above discussion shows that a complete contract on investment in

⁸³ O'Sullivan M. (n 41), 393–394.

⁸⁴ *ibid* 405–407. The author argues that the allocation of resources for viable and sustainable investment in *learning* should be *organizational, developmental, and strategic*, while the allocation of resources resulting from idealized market exchanges is assumed to be *individual, optimal, and reversible*. The organizational, developmental, and strategic characteristics of resource allocation required for a viable learning process, i.e., the conditions for a viable learning process, will be discussed below. Similarly, Lazonick argues that for a state of perfectly competitive markets to exist and become stable, firms must be *equally inefficient* in overcoming both *technological constraints* and the *increase in variable costs* of production due to workers' shirking and overcrowding associated with the increase in firm's size. If firms were heterogeneous in their *organizational efficiency* in overcoming these constraints (i.e., their efficiency in organizing learning and innovation processes), markets will cease to be perfectly competitive. William Lazonick, 'Innovative Enterprise or Sweatshop Economics? In Search of Foundations of Economic Analysis' (October 2015). Institute for New Economic Thinking Working Paper no. 25, 10–12 <<https://ineteconomics.org/uploads/papers/WP25-Lazonick-Innovative-Enterprise.pdf>>. The conditions for efficient organization of viable learning/innovation processes that enable the firms to overcome their

firm specific assets between labor and the shareholders represented by the firm's management or a complete and explicit long-term contract between the shareholders and the management regarding firm's strategies will enhance both the human capital and the innovative capabilities of the firm. Still, what if most shareholders are short term oriented due to diversification and thus are not interested in consummating these long-term contracts with either the employees or the managers? Would not the explicit comprehensive contracts that are focused on short-term value maximization impede the long-term value creation by the firm? Indeed, a corporate governance model that facilitates the consummation of these contracts that would have been consummated on the market in absence of the contractual hazard of contractual incompleteness would thus impede the long-term sustainability of the firm. In other words, if shareholders have short-term investment horizons, a shareholder value model that ensures their control over the firm may have significant negative long-term effects on the sustainability of the firm by resulting in under-investment of the other stakeholders of the firm in its physical assets.⁸⁵ In contrast, a long-term industrial investors' control over the firm would ensure a long-term perspective for firm's strategy. Here, the facilitation of the same transaction (equity financing) by using the governance mechanisms of shareholder value theory has different effects on firm's long-term sustainability and value creation.

In short, the transaction cost theory provides a '*disciplinary view*' of corporate governance; it can guide us in designing the legal institutions of corporate governance, which ensure the *alignment of the incentives structure* of the stakeholders of the firm.⁸⁶ This alignment of the incentives ensures that the firm operates as an efficient mechanism for static efficient allocation of resources, but the resulting governance system may have significant *negative effects* on the learning and innovative, social, and organizational capabilities of the firm, which are necessary for

constraints (e.g., technological constraints, increase in variable costs with increase in size, and market conditions) are not necessarily the idealized conditions for perfect competition (e.g., perfect information, no hold-up problems). The reason is that the process of learning/innovation is distinct from the process of efficient allocation of resources in markets that presumes equal organizational inefficiency of governing learning processes. For example, a viable process of learning requires a governance structure that facilitates *learning by experimentation and learning by doing*, but (idealized) market transactions are not viable governance structure for facilitating these forms of learning. The below discussion of the conditions of viable learning processes will clarify these points.

⁸⁵ Carney and Gedajlovic (n 44), 342. Filippo Belloc, 'Corporate Governance and Innovation: A Survey' (2012) 26(5) *Journal of Economic Surveys* 855, and see the references cited therein.

⁸⁶ Charreaux G. 'Micro Theories of Corporate Governance' in A. Naciri (ed), *Corporate Governance Around the World* (Routledge 2008) 20–21. Richard N Langlois and Nicolai J Foss, 'Capabilities and Governance: The Rebirth of Production in the Theory of Economic Organization' (1999) 52(2) *KYKLOS* 201–202.

firm's capability to create sustainable value.⁸⁷ Accordingly, if one is to explain value creation by the firm, one cannot argue that the firm by facilitating the would-be market transactions through mitigating contractual hazards substitutes functionally for the market that is best suited for maximizing value because there is no theoretical basis for this claim.

Hence, the central question that the transaction costs theory of the firm leaves open is the following: which *transactions* need to be facilitated through the governance structure of the firm to ensure long-term firm's sustainability and value creation? For example, should we endorse a corporate governance model that gives strong incentives for labor's specific investments or for access to equity finance? Should the governance model or securities regulation discriminate between long term and short term investors? Once this set of transactions is determined, transaction costs theory can provide important insights on how to create a governance structure that ensures the facilitation of this set of transactions.

In sum, Transaction cost theory of the firm fails to identify the set of desirable transactions to be organized in the firm to ensure its sustainable value creation (i.e., sustainable competitive advantage, or long-term value maximization). Consequently, the transaction costs minimization perspective over the firm can guide a design of corporate governance institutions that mimic the market's function in efficient static allocation of resources, but it fails to guide the design of a corporate governance that maximizes the firm's capability to create sustained value. Theoretically, this results from the fact that there is *a disjunction* between the *institutional requirements* for attaining two distinct functions of corporate governance: static efficient allocation and long-term firm's value maximization. On the one hand, for the corporate governance of the firm to ensure *static efficient allocation of resources* in the economy, the institutions of corporate governance should facilitate any transaction desirable by the firm's stakeholders that cannot be consummated on the market due to contractual hazards. On the other hand, for the institutions of corporate governance to ensure long-term value maximization, these institutions should facilitate *the desirable transactions required for supporting a viable learning process that is necessary for the maximization of long-term firm's value*. As already mentioned, there is no theoretical basis for thinking that efficient substitution of the markets by firms would ensure long-term value maximization; in other words, the transactions facilitated by the firm as a cost-minimization

⁸⁷ For a very good survey of the empirical studies on the effects of different institutions of corporate governance on innovation, see: Belloc (n 84).

governance structure may be different from the set of transactions needed for supporting a viable learning process.

Consequently, to ensure firm's maximization of long-term value or sustainability of its competitive advantage (or any other normative objective of corporate governance), there is a need for a positive (or normative) theory of the firm. This positive (or normative) theory should explain (or determine) the conditions for *sustainable growth and competitive advantage of the firm*. Unlike the knowledge-based theories of the firm, the transaction cost theory of the firm was not developed to undertake this task; it was mainly developed to explain the emergence and the boundary of the firm. Transaction cost theory of the firm *assumes and does not develop normatively the desirable set of transactions to be facilitated* by the governance structure of the firm. Every transaction that rational individuals under conditions of symmetric information and zero transaction costs prefer to consummate is assumed to be desirable, but, as already indicated above, this is not necessarily correct.

This explains why the objective of maximization of long-term firm's value advocated by the both the new institutional exponents of the shareholder value and stakeholder theory of corporate governance as a goal of corporate governance regulation is not (and cannot be) derived from the transaction costs theory of the firm because it is a positive theory of the firm. The exponents of both the shareholder and stakeholder theory in the new institutional tradition had thus to argue *normatively* for the objective of long-term firm's value maximization for corporate governance.⁸⁸ Paradoxically, most of the arguments advanced in the neoclassical-new institutional perspective over the choice of corporate governance model that is desirable for maximization firm's long term value is derived from transaction cost theory of the firm that are not, mainly, concerned with explaining long term value creation or maximization.

The above critique of the transaction cost theory of the firm has not gone entirely unnoticed by Williamson. In his discussion of the competence theory of the firm, an important variant of the knowledge-based theories of the firm, Williamson acknowledges that firm's competences, understood as composite transactions (a set of interdependent transactions), need to be integrated into a transaction cost theory of the firm.⁸⁹ Particularly, for firms to engage in a process of learning,

⁸⁸ See, e.g.: Jensen (n 8), 11–13. Sundaram and Inkpen (n 8), 353–356.

⁸⁹ Oliver E Williamson, 'Strategy Research: Governance and Competence Perspectives' (1999) 20(12) Strategic Management Journal 1095–1097.

another missing aspect from the transaction cost theory of the firm,⁹⁰ they need *a capability to learn*; from a Williamsonian transaction cost perspective, the latter would be a specific cluster of interdependent exchanges among the stakeholders of the firm. Furthermore, Williamson concedes that transaction cost economics has not yet succeeded in explaining the evolutionary path of firm's technology;⁹¹ firm's capabilities, particularly learning and innovative capabilities, are needed for explaining technological innovation.

Accordingly, firm's capabilities are the set of desirable transactions required for ensuring sustainable growth and competitive advantage of the firm. Transaction cost theory of the firm needs a knowledge/capabilities theory of the firm for identifying this desirable set of interdependent transactions.

Further, Williamson's conceptualization of firm's capabilities as a cluster of interdependent transactions is problematic. By doing so, he reduces all intra-firm relations into *exchanges/transactions* consummated between boundedly rational and opportunistic actors; this reductionist perspective emphasizes conflict over cooperation and opportunism over trust in the relations among the firm's stakeholders.⁹² Williamson argues that opportunism is a realistic assumption about the behavior of firm's stakeholders; without opportunism, the main problems of economic organization, namely mitigation of contractual hazards, will not arise.⁹³ The problem with this argument is that corporate governance needs a normative theory of the firm that establishes the conditions that the firm should satisfy to sustain its competitive advantage; a positive theory of firm's emergence and boundary is insufficient. Assume that some of the firm's stakeholders are opportunistic, while others are not opportunistic, a more realistic behavioral assumption.⁹⁴ In this case, a corporate governance system based on a theory of the firm that assumes the firm's stakeholders to be opportunistic may fail to establish the conditions for

⁹⁰ Williamson acknowledges that the transaction cost theory of the firm does not address adequately the issue of *learning*. *ibid* 1103. See also: Foss (n 47), 131.

⁹¹ Oliver E Williamson, 'Technology and Transaction Cost Economics: A Reply' (1988) 10(3) *Journal of Economic Behavior and Organization* 357.

⁹² for an important critique of the behavioral assumptions of the new institutional (transaction cost) theory of the firm, see: Brian J Loasby, 'Running a Business: An Appraisal of Economics, Organization and Management by Paul Milgrom and John Roberts' (1995) 4(2) *Corporate and Industrial Change* 475–477.

⁹³ Williamson, 'Strategy Research: Governance and Competence Perspectives' (n 88) 1099.

⁹⁴ Loasby (n 91), 476–477.

individual initiative for utilizing and sharing local knowledge,⁹⁵ for high-powered incentives and intrinsic motivation based cooperation,⁹⁶ and for formation of trust.⁹⁷ The latter is an important element of organizational social capital, which is another important firm's capability.⁹⁸ In addition, by emphasizing opportunism in the relations among the stakeholders of the firm, transaction cost theory fails to account for other coordination problems that can still arise among non-opportunistic actors.⁹⁹ For example, the stakeholders of the firm may share similar objectives, but they disagree on the means of achieving them, or they share both the objectives and their means, but fail to communicate their agreement due to differences in their cognitive maps or due to failures in communications.¹⁰⁰

In short, the transaction cost theory of the firm that formed the main basis of the arguments of the exponents of both the shareholder value and stakeholder model of corporate governance is *not a sufficient epistemological basis* for the choice of corporate governance model because of two reasons. First, it needs a theory of the learning/innovative firm to determine *the desirable set of capabilities* (or interdependent transactions in Williamsonian conceptualization) required for ensuring firm's sustained competitive advantage¹⁰¹ (or long-term firm's value maximization). Once these desirable sets of capabilities/transactions are determined, transaction cost theory can provide valuable insights on the design of the mechanisms of corporate governance, which can facilitate the consummation/formation of these transactions/capabilities through creating the organizational motivation (i.e., incentives structure) required for their formation.^{102, 103}

⁹⁵ Kirsten Foss and Nicolai J Foss, 'Learning in Firms: Knowledge-based and Property Rights Perspectives' (2000) 14(2) European Journal of Economic and Social Systems 124.

⁹⁶ Lazonick (n 83) 39–40.

⁹⁷ Loasby expresses this point eloquently, 'if an organization is designed on the assumption that all its members are cheats and liars, then cheats and liars are the members that it is likely to attract; and if it turns some honest people into cheats and liars, then it generates a dangerous externality.' Loasby (n 91), 476.

⁹⁸ *ibid.* Foss (n 47), 132.

⁹⁹ Geoffrey M Hodgson, 'Opportunism Is Not the Only Reason Why Firms Exist: Why an Explanatory Emphasis on Opportunism May Mislead Management Strategy' (2004) 13(2) Industrial and Corporate Change 406.

¹⁰⁰ *ibid.* 406–410. See also: Foss (n 47), 137–138.

¹⁰¹ Firm's capabilities are the crucial variable underlying its competitive advantage. See: Jinyu He, Joseph T Mahoney and Heli C Wang, 'Firm Capability, Corporate Governance and Competitive Behaviour: A Multi-Theoretic Framework' (2009) 1(4) International Journal of Strategic Change Management 304–305.

¹⁰² See below the discussion of the knowledge-based theories of the firm in section 4.3 and the references cited therein.

¹⁰³ In the following section on property rights theory, I will stick to the conceptualization of capabilities as a set of interdependent transactions because this would facilitate the exposition of the property rights

Second, corporate governance system that ensures the incentives alignment of the firm's stakeholders in light of the opportunistic behavioral assumption may either undermine or fail to support the organizational and social capital of the firm (e.g., trust as well as high-powered incentives and intrinsic motivation for cooperation). Further, it fails to address organizational failures that arise in absence of opportunism such as failures in communications or collective decision-making.

Accordingly, we need to discuss the insights of the knowledge-based theories of the firm, which can allow us to determine this set of transactions to be facilitated by the governance of the firm in order to ensure sustainable value creation (i.e., sustainable competitive advantage or long term value maximization). Still, prior to doing so, we need to investigate whether the property rights theory of the firm, an important new institutional theory of the firm, can guide a value-maximizing design of corporate governance. If so, then, the insights of the knowledge-based theories of the firm may no longer be necessary for guiding the choice of the corporate governance model.

To address whether property rights theory is sufficient for guiding the choice of corporate governance model, the following section outlines the property rights theory and illustrates its relation to the transaction cost theory of the firm. Then, it demonstrates how the property rights theory underlies some of the arguments made in defense of shareholder value and stakeholder theory of corporate governance in new institutional law and economics scholarship. Finally, the section establishes that similar to transaction cost theory of the firm, the property rights theory of the firm provides an insufficient epistemological basis for the choice of corporate governance model.

theory, while connecting it with the concept of firm's capabilities. Then, in the section on the knowledge-based theories of the firm, we introduce a more sophisticated conceptualization of firm's capabilities and its relation to the transactions among the firm's stakeholders. This section will clarify that the composite transactions represent a necessary condition for creating firm's capabilities; once these composite transactions become institutionalized/routinized, they become part of the firm's coordinating capabilities, while functioning as a necessary condition for sustaining other capabilities of the firm.

4.2. The Property Rights Theory of the Firm Is Not a Sufficient Foundation for the Choice of Corporate Governance Model

While the transaction cost theory of the firm conceptualizes the firm as a governance structure of the firm's stakeholders transaction, i.e., as a nexus of contracts, property rights theory conceptualizes the firm as a *distribution of property/ownership rights* over a collection of *physical assets*, where ownership is conceptualized as *residual control* rights.¹⁰⁴ Residual control rights refer to the right to determine the use of the physical assets when its uses are not explicitly specified in the contract;¹⁰⁵ these cases arise frequently due to incompleteness of contracts.¹⁰⁶ Given this conceptualization of the firm, the central problem that the property rights theory of the firm seeks to address is to explain the boundary of the firm; this is the famous “make or buy” decision.¹⁰⁷ The property rights theory provides an analytical framework for this problem, according to which the central question is to investigate who should be allocated the residual control (ownership) of the physical assets of the firm(s). The theory provides an intuitive answer that is the party who makes specific (essential) human capital investments in the physical assets should be granted ownership rights of the asset¹⁰⁸ where ownership right is conceptualized as residual control rights. The underlying rationale for this proposition is straightforward: by having residual control rights over the physical assets, the party that makes the human capital specific investments will have the incentives to make these investments and thus maximize the value of the asset without fear of expropriation from other parties who do not make such investments.¹⁰⁹

Both the transaction cost and property rights theories of the firm are complementary at a conceptual level, but their operationalized analytical frameworks largely diverge. The theory of the firm as a governance structure of the transactions among the stakeholders of the firm (the firm as a nexus of incomplete implicit and explicit contracts) states the following. Given the attributes

¹⁰⁴ Moore (n 80), 496. Oliver Hart and John Moore, ‘Property Rights and the Nature of the Firm’ (1990) 98(6) *Journal of Political Economy* 1120.

¹⁰⁵ Hart, *Firms, Contracts, and Financial Structure* (n 49) 30–31.

¹⁰⁶ *ibid* 29–30.

¹⁰⁷ The boundary of the firm has been the central problem that the property rights theory has been grappling with, see, e.g., Hart and Moore (n 103). Hart, *Firms, Contracts, and Financial Structure* (n 49) 29–72. Moore (n 80), 496–501.

¹⁰⁸ Hart, *Firms, Contracts, and Financial Structure* (n 49) 46. *ibid* 60–61.

¹⁰⁹ *ibid* 33.

of these transactions (frequency, uncertainty, asset specificity, degree of asymmetry of information and conflicts of interests, needs for coordinated adaptation), the transactions should be assigned to the governance structure (e.g., market, hybrids, or the shareholder value or the stakeholder governance structure of the firm) that mitigates the transactions hazards (mainly, transaction costs such as agency costs and hold-up costs) and thus facilitates the consummation of these transactions and minimization of their costs. The capacity of the governance structure to facilitate the transactions depends on the attributes of the governance structure (incentives intensity, administrative control, and legal regime), but the transaction cost theory of the firm does not engage with the conceptualization of the governance structures, which is necessary for *explaining* their attributes. One can think of property rights theory as filling this lacuna. According to this theory, each governance structure is a distinct distribution of property rights over physical assets; these rights are conceptualized as residual control rights. The attributes of each governance structure result of its distinctive distribution of residual control rights over the physical assets involved in the transaction. For example, by allocating residual control rights to employees such as the case in labor-owned firms, employees will have high-powered incentives, while they have low-powered incentives in a shareholder value model where they are denied residual control rights. Here, the incentives intensity, an attribute of the governance structure, depends on the distinctive distribution of residual control rights in each governance structure (labor owned firms and shareholder value firms in our example).

This conceptual complementarity between the transaction cost and property rights theories of the firm does not suggest that the analysis of these theories yields the same results in all cases; they may diverge, particularly due to the differences in their operationalized analytical frameworks. For example, the case for a stakeholder model of corporate governance is easier to establish based on property rights theory. One has to show that labor contracts involving firm's specific investments are incomplete,¹¹⁰ and that these specific investments are indispensable to the value of firm's assets to establish that the employees who make specific human capital investments in firm's physical assets should be given residual control rights.¹¹¹ From the transaction cost perspective, this property rights-based reasoning is incomplete; one has still to show that labor law

¹¹⁰ Incompleteness of the contracts is a pre-condition for justifying the use of corporate governance mechanisms (e.g., voting membership on the board of directors). See: Hart, 'Corporate Governance: Some Theory and Implications' (n 71) 679–680.

¹¹¹ Asher, Mahoney and Mahoney (n 21), 17–18.

and labor contracts are more costly in facilitating transaction specific investments by workers than giving them voting membership on the board. The divergence between property rights and transaction cost theories result from the differences in their analytical frameworks. In comparison to the messier analytical framework of transaction cost theory of the firm, property rights theory is reductive and thus easier to formalize on one hand, but misses important aspects in the analysis, on the other hand. For example, although transaction cost theory does not have a well-developed theory of the determinants of the attributes of corporate governance structures, it does not reduce these determinants to the distribution of residual control rights over physical assets; this reductive understanding of property rights has already been subject to a convincing critique.¹¹² For example, non-residual (specific) control rights in physical assets affects the boundary of the firm (make or buy decision)¹¹³ as well as the attributes of the governance structure and thus its comparative efficiency. By focusing on the distribution of residual control rights, one is implicitly led to emphasize the incentive intensity attribute of the governance structures at the cost of its other attributes. Further, property rights theory also emphasizes asset specificity at the cost of other attributes of the transactions. Moreover, property rights theory assumes away the problem that property rights are hard and costly to define and to allocate accurately;¹¹⁴ this assumption simplifies unrealistically the analysis further. It is not a surprise that property rights theory was easily formalized due its reductive analysis.¹¹⁵ As shall be argued below, it is exactly due to its reductive and unrealistically simplified analysis, property rights theory of the firm is an insufficient basis for guiding the choice of a corporate governance system. For example, distribution of residual control rights affects the efficiency of the allocation of resources internal to the firm.

Some of the arguments for corporate governance model choice advanced from the perspective of neoclassical-new institutional law and economics can be derived from the property rights theory of the firm. For example, one may argue that the workers investing in firm's specific assets are indispensable for the maximization of the value of these assets and thus should be granted residual

¹¹² Harold Demsetz, 'Review of 'Firms, Contracts, and Financial Structure: Clarendon Lectures in Economics by Oliver Hart' (1998) 106(2) *Journal of Political Economy* 448–452.

¹¹³ *ibid* 451–452.

¹¹⁴ Kirsten Foss and Nicolai Foss, 'Coasian and Modern Property Rights Economics' (2015) 11(2) *Journal of Institutional Economics* 402–405.

¹¹⁵ In contrast to the seminal papers of the transaction cost theory of the firm, the seminal papers that developed the property rights theory of the firm were formal. See, e.g., Sanford J Grossman and Oliver D Hart, 'The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration' (1986) 94(4) *Journal of Political Economy*. Hart and Moore (n 103).

control rights.¹¹⁶ Alternatively, one may argue that shareholders will not expropriate workers' returns on firm's specific investment because both the workers' labor and the physical assets subject to the control of shareholders are indispensable for the creation of the value, and thus no party can expropriate the other. Indeed, as an analytical framework, the property rights theory can provide important arguments in support of two governance structures, namely, the stakeholder model and the workers' owned and managed firms, for many reasons, notable among them is that in these cases the break-up of residual control rights and claim to residual income does not take place. First, in the case of equity block-holders, the block-holders make important investments in firm's assets by monitoring the management's investment in firm's specific assets and long term sustainability, providing the management with patient long-term capital, and supporting the management's investment in knowledge creation and accumulation.¹¹⁷ In this case, both shareholders and workers make specific human capital investments in firm's physical assets and thus are entitled to share residual control rights and the resulting claims to residual income. According to the property rights theory of the firm, this model is far superior in its ability to create firm's value to a shareholder value model under the conditions of dispersed ownership where no residual control rights are vested upon workers who invest in essential human capital specific to the firm's assets.¹¹⁸ Second, one may argue for restructuring the regulation of financial system to ensure access of labor to financing or other mechanisms for broad ownership of equity by workers who make specific human capital investments to the firm's assets.¹¹⁹ Indeed, this would be one of

¹¹⁶ Asher, Mahoney and Mahoney (n 21), 17–18.

¹¹⁷ J. Krafft and Ravix J.-L. 'Corporate Governance and the Governance of Knowledge: Rethinking the Relationship in Terms of Corporate Coherence' (2008) 17(1&2) *Economics of Innovation and New Technology* 91–92.

¹¹⁸ This implies that from a property rights theory perspective, a corporate governance system where equity ownership is dispersed, public shareholders enjoy weak legal protection, and the management has de facto residual control right is an intermediate model. In this case, the management will be, partially, loyal to the interests of the workers; in a sense, the workers in this model are partially exercising residual control rights via the management. The US corporate governance model in the post Second World War's period shared some characteristics with this model. In this model, workers and the entrenched management have incentives to invest in firm's specific assets, where product market competition is the primary mechanism that ensures that the management does not shirk or expropriate value. Further, given the weaker residual control rights enjoyed by the workers in this model, the firm has more flexibility in choosing investment strategies that may have negative implications for employees' firm's specific investments, but this in turn weakens the worker's incentives to invest in these specific assets. Overall, strong product market competition is essential for the efficient functioning of this model of corporate governance.

¹¹⁹ Broadening labor's ownership is not a new idea: labor cooperatives and employees stock ownership plans are quintessential mechanisms of broadening equity ownership to include workers. The property rights theory of the firm seems to provide a new strong line of defense of broadening labor's ownership.

the proposals for restructuring corporate governance in developing economies in chapter 12, but let us not jump over there yet.

Given these important arguments, the relevant question becomes the following. If we set aside the transaction costs minimization arguments, are these property rights based arguments *sufficient* for guiding our choice of a system of corporate governance that maximizes long-term firm's value or other objective of corporate governance system such as firm's survival or sustainable competitive advantage? The answer is *no* because of two reasons. First, as already mentioned, the reductive nature and unrealistic simplifications of the property rights theory impede the theory from providing a realistic and rich theoretical basis for choice of corporate governance model. One major simplification is that property rights/ownership of physical assets are conceptualized as residual control rights (and not non-residual control rights or claims to residual income),¹²⁰ and thus assumed to be the sole determinant of the attributes of any governance structure. Not only this significant simplification would make us miss many important attributes of the feasible governance structure, it will break up the underlying line of reasoning of the property rights theory. This point needs further explanation. Given this conceptualization of ownership of firm's physical assets, the theory implicates that the stakeholders who make important investment decisions or essential human capital investments (e.g., firm's asset specific human capital investments) should be given ownership rights, i.e., residual control rights¹²¹ because granting them these rights will secure the returns of their investments from expropriation and thus give them strong incentives to make these investments.¹²²

Consequently, the main implication of this theory as it stands is that workers who contribute asset specific human capital investments are expected to be given residual control rights,¹²³ while outside passive shareholders should not be granted residual control rights. Oliver Hart, an exponent of the shareholder value theory of corporate governance¹²⁴ and one of the prominent scholars who developed property rights theory, understood clearly this implication of his theory, so that he had to write the following:

¹²⁰ Hart, *Firms, Contracts, and Financial Structure* (n 49) 30. Moore (n 80), 496.

¹²¹ Hart, *Firms, Contracts, and Financial Structure* (n 49) 46. *ibid* 60–61.

¹²² *ibid* 33.

¹²³ *ibid* 50.

¹²⁴ Hart, 'Corporate Governance: Some Theory and Implications' (n 71) 680–681.

In large companies, ownership and control rights are often in the hands of outside shareholders rather than key employees. It might be thought that this contradicts the theory presented here since outside shareholders do not take important actions or have essential human capital. However, shareholders make a financial investment in the company and need some protection against this investment being expropriated; ownership and control rights can be seen as providing this protection.¹²⁵

Here, Hart had to revert to the insights of principal-agent and transaction cost theories of the firm to justify granting residual control rights to shareholders. However, as already argued in the previous section, these theories cannot provide a sufficient basis for corporate governance choice because they may result in a governance model that undermines firm's capabilities and thus does not maximize long term firm's value.. Since a theory of sustainable value creation by the firm is the only relevant theory for corporate governance, the agency-based argument advanced by Hart is irrelevant.

What is more interesting than the irrelevance of his argument is why he had to make this argument instead of developing an argument based on the property rights theory of the firm. The reason is that the property rights theory is based on a very intuitive idea: those who contribute specific human capital investments to the firm's assets should be given residual control rights so that they have incentives to maximize *total surplus* that they are secured to *share* due to their residual control rights. This means that workers who contribute firm's specific human capital should own the firm, while workers who do not make such investment, should not be given residual control rights; outside ownership is a sub-optimal ownership structure, but workers are wealth constrained. Their intangible human capital that accumulates over time is not an acceptable collateral for securing bank loans.¹²⁶ By introducing financial investors into the picture, workers, even if granted residual control rights, are not entitled to share the total surplus because they have to share this surplus with shareholders. Here, the underlying rationale of property rights theory breaks down because those who should be given residual control rights (the workers) are no longer those who exclusively share the residual income, and thus they no longer have the same strong

¹²⁵ Hart, *Firms, Contracts, and Financial Structure* (n 49) 50, fn. 29.

¹²⁶ Further, they cannot raise equity while denying the equity holders the right to share residual control; otherwise, they would have to pay high premium for equity. Williamson, 'Corporate Governance' (n 25) 1227.

incentives to make firm's specific investments; they still have some incentives, but these incentives are diluted. For example, workers who own the firm will have incentives to invest in technologies that make their previous human capital investments' obsolete as long as the total surplus of these new technologies compensate for the future costs of learning new skills specific to these technologies. In contrast, in case of a stakeholder model of corporate governance, these workers will not have the incentives to make these investments¹²⁷ unless these investments are critical to the survival of the firm because if they were to make these investments, they will no longer become critical assets to the firm. The shareholders may either cut their wages or replace them with outside workers who may have better skills suited to the new technology and thus save the costs of training them. Ownership right confers both residual control and claim to residual income; outside shareholders get the claim to residual income, while workers in a stakeholder model get residual control rights. The break-up of the residual control rights and claim to residual income undermines the line of reasoning developed by the property rights theory where the residual control rights are granted to those who have claim to residual income because they can affect this residual income through their human capital investment.

One way to address this break-up of the line of reasoning of the property rights theory is to argue that in many cases, bundling residual control and residual income rights maximizes total surplus.¹²⁸ Still, this just complicates the analysis further; now, ownership/governance structures that we need to compare include a set of governance structures where residual control and residual income rights are separated. As Hart illustrates, this is complicated further by the fact that unbundling of residual control and residual income can take place through delegation of authority, where the outside shareholders delegate their residual control rights to the board of directors, then the latter delegates these control rights to the management. Despite this delegation, the shareholders still can exercise control; delegation represents therefore an intermediate form of ownership structure.¹²⁹

In addition to the reduction of ownership rights into residual control rights, which results in undermining the line of reasoning of property rights theory in relation to corporate governance choice, the analytical framework of property rights theory does not ensure the design of a corporate

¹²⁷ Carney and Gedajlovic (n 44), 343.

¹²⁸ Hart, *Firms, Contracts, and Financial Structure* (n 49) 64–66.

¹²⁹ *ibid* 62–63.

governance system that maximizes long-term firm's value (or firm's survival, dynamic competitive advantage, etc.). For maximization of long-term value, one needs to ensure that the firm becomes *a learning and innovative enterprise*.¹³⁰ Both the transaction cost and property rights variants of the neoclassical-new institutional economics lack a theory for the learning/innovative firm.¹³¹ This theory needs to integrate consistently concepts such as knowledge, learning, technology, and innovation. These concepts have been absent from both the transaction costs and property rights account of the firm underlying the shareholder value and stakeholder theories outlined above. Without this theory, one cannot derive the corporate governance institutions that can ensure long-term maximization of firm's value. Indeed, John Moore, one of the main exponents of property rights theory of the firm, acknowledges that the property rights theory marginally introduces technology into the analysis of the firm.¹³² The reason is that property rights theory has been developed to explain primarily the boundary of the firm; it was not intended to explain long-term value creation by the firm.

Still, the fact that the analytical framework of property rights theory lacks a focused analysis of the conditions required for firm's long-term value maximization (particularly the issues of strategic management, knowledge, learning, technology, and capabilities) is not a sufficient reason for dismissing property rights theory as an adequate theory for learning or innovative enterprise. Property rights theory does not demonstrate the desirable set of transactions required for ensuring long-term value maximization by the firm. Still, instead of taking the attributes of the transactions that would have been desirable of the firm's stakeholders as given, it argues for giving the residual control rights of the physical assets involved in the transactions to those who make indispensable investments in these assets. These parties (now the owners of the assets) will have the right incentives to organize in the firm the set of transactions required for long-term maximization of firm's value.

Nevertheless, this would be true only in the case of a limited number of relevant stakeholders and mono-dimensional incentives structures. In relation to the issue of the choice of corporate governance model, this is not the case, however. The number of relevant stakeholders whose actions are largely indispensable to the value of the firm's assets becomes large. These

¹³⁰ O'Sullivan M. (n 41), 393–394.

¹³¹ *ibid* 405 Lazonick (n 83) 45–46.

¹³² Moore (n 80), 495–496.

stakeholders include the shareholders, the creditors, the board of directors, the management, the workers who make firm's specific assets, the workers who do not make specific investments, but whose cooperation is necessary for value creation, the sub-contractors of the firm, firm's suppliers, firms' customers, and community. Further, in relation to corporate governance choice, the incentives and intrinsic motivations of these stakeholders are multi-dimensional and interdependent. Consider, for example, the multi-dimensional incentives structure of the employees: they have incentives and disincentives to innovate, to invest in human capital specific to the firm, to cooperate with other employees, to cooperate with the management, to disseminate information and knowledge to the management and their co-workers, to work hard ... etc. Moreover, due to the numerous and divisible rights over the physical assets of the firm (e.g., residual control rights, non-residual control rights, claims to residual income, and non-voting membership on the board of directors for information sharing purposes),¹³³ the feasible ownership structures that reflect different distributions of these rights to these stakeholders grow exponentially. For example, the owners of the Japanese firm's physical assets do not exercise the residual control rights over employees' actions non-specified in the contract (the control over operating tasks); these residual control rights are rather distributed among the workers of the firm.¹³⁴ Moreover, the number of stakeholders who make indispensable investments in firm's assets and their incentives structures *differ* across the firms in the same industry and across industries due to the differences in the relevant market structure, characteristics of technologies, and intellectual property rights.

Due to these factors, each of the numerous feasible governance structures corresponds to a mix of incentives and intrinsic motivations. To be a viable basis for corporate governance design, property rights theory should guide the design of corporate governance institutions that ensure that each of firm's stakeholders have the *right mix of incentives and intrinsic motivations*. To be desirable, this mix of incentives and intrinsic motivations should ensure that the desirable sets of interdependent transactions/exchanges supportive of the formation of the desirable firm's

¹³³ Due to the various and divisible rights in the firm's assets, property rights theory's conceptualization of ownership of the firm's assets as 'residual control rights' is excessively reductive and thus meaningless. Demsetz, 'Review of 'Firms, Contracts, and Financial Structure: Clarendon Lectures in Economics by Oliver Hart'' (n 111) 449–450. Foss and Foss (n 113), 402–405.

¹³⁴ Masahiko Aoki, 'The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview' (1989) 3(4) *Journal of the Japanese and International Economies* 349–350.

capabilities are organized within the firm.¹³⁵ Property rights theory cannot guide the choice of the desirable governance structure that ensures the realization of this desirable mix of incentives and motivations because it reduces property rights in physical assets into residual control rights. By doing so, it ignores other rights (non-residual control rights, rights to residual income, non-voting membership on the board of directors, etc.), although these rights have significant effects on the incentives and intrinsic motivations of firm's stakeholders. For example, due to its reductive character, the theory can show which governance structure maximizes human capital specific investments by the labor. However, if the governance structure that maximizes human capital specific investments impedes workers' cooperation or reduces access to equity capital, property rights theory cannot inform us whether this system of corporate governance would affect firm's value positively than a comparable governance system that secures access to equity capital and enhances labor cooperation.

The inability of property rights theory to function as *a sufficient* basis for the design of corporate governance institutions becomes even more evident once we introduce change over time (dynamics) into the picture. Property rights theory advocates granting residual control rights to the stakeholders who make critical human capital investments in the physical assets, but these stakeholders change over time (e.g., workers with firm's specific skills). O'Sullivan makes this point persuasively:

the firm-specific skills that result from continued innovation are constantly evolving. Firm-specific skills that were at one time part of a process that enhanced economic performance may fail to do so in another era and may even retard it. To focus on firm-specific skills as the critical dimension of the process of wealth creation is to ignore the dynamics of the innovation process. Linked to a theory of governance, such a perspective is likely to encourage the entrenchment of the claims of economic actors who have participated in and benefited from wealth creation in the past, even when the integration of their skills is no longer a viable basis on which the economy can generate the returns to meet these claims.¹³⁶

¹³⁵ See below the discussion of the knowledge-based theories of the firm in section 4.3 and the references cited therein.

¹³⁶ O'Sullivan M. (n 41), 404. O'Sullivan's critique applies equally to giving the workers who make human capital investments specific to the firm's assets residual control rights because of their *residual-claimants status*. As already indicated, an important insight of the transaction cost of the firm, namely, the asset-specificity of (some) labor-firm transactions provides the ground for the residual claimant status of workers.

Accordingly, a theory of the learning or innovative firm is required for deriving the desirable (dynamic and adaptive) mix of incentives and motivations for the firm's stakeholders. To derive this desirable mix of incentives and motivations, we need to determine the desirable mix of transactions to be organized within the firm. The property rights theory, along with the transaction cost theory of the firm, can then guide our choice of the governance structure that secures the realization of this mix of incentives and motivations.

In short, the property rights theory of the firm provides us with a major insight: the distribution of residual control rights over the use of assets and distribution of value affects the incentives of firm's stakeholders to invest in these assets and thus affects the size of the created value. It still needs a theory of the firm as a learning/innovative organization (e.g., knowledge-based theories of the firm) from which we can derive the desirable set of transactions required for ensuring long-term value maximization by the firm. Once this set of transactions are determined, we need to identify the *desirable/optimal mix of incentives structures and intrinsic motivation* that facilitate the consummation of these transactions, both transaction cost theory and property rights theory can enable us to choose the governance structure that brings into existence such incentives and motivational structures. Below, figure 8.1 in the next section demonstrates the causal mechanisms through which the firm's corporate governance institutions affect the sustainability of the firm's competitive advantage. The causal channel runs as follows: corporate governance institutions affect the set of firm's capabilities underlying the firm's sustained competitive advantage through affecting the mix of incentives and motivations required for materializing the intra-stakeholders' relations/exchanges necessary for the investment in the formation of the firm's desirable capabilities. The numerous details of this figure will become clear after the discussion of the critical insights of the knowledge-based theories of the firm in the following section.

4.3. The Complementary Critical Insights of the Knowledge-based Theories of the Firm

We have already established that both the transaction cost and property rights theories of the firm are insufficient basis for the choice of corporate governance model. To critically complement these theories, we need a theory that establishes the *organizational requirements (the desirable set*

of interdependent transactions to be organized within the firm) for ensuring long-term firm's value maximization, sustainable competitive advantage of the firm, or any other desirable normative objective of corporate governance. Knowledge-based theories of the firm (e.g., resource-based view of the firm, competence theory of the firm, dynamic capabilities theory, and knowledge theories of the firm) are the best candidate for filling this lacuna in the new institutional theories of the firm.

Knowledge based theories of the firm originate primarily from the strategic management and evolutionary economics literature. Strategic management studies have a strong normative orientation as they seek to develop *guidelines for firm's management* for sustaining firm's competitive advantage and long-term profitability.¹³⁷ As already discussed, the standard new institutional conceptualization of the core objective of corporate governance of dispersed ownership firms is to *align the incentives of firm's management and shareholders* to ensure that the management focuses solely on profit maximization. Therefore, one could have expected strategic management studies to be the basis for the design of corporate governance system; instead, as already shown, the positive new institutional theories of the emergence and boundary of the firm have dominated corporate governance debates. Indeed, these theories have also been influential in strategic management studies,¹³⁸ and have been competing with the knowledge-based theories of the firm for guiding firms' strategy.

This section proceeds as follows. It succinctly outlines two major insights of the knowledge-based theories of the firm in relation to design of corporate governance institutions (and legal institutions that affect the firm in general): the first is the transformation of the guiding principle of the design of corporate governance institutions of the firm from long term value maximization to firm's survival and sustained competitive advantage, and the second is the centrality of learning in the design of corporate governance institutions because viable learning processes are the pre-condition for sustained competitive advantage. Following earlier integrative scholarly attempts,

¹³⁷ David J Teece, Gary Pisano and Amy Shuen, 'Dynamic Capabilities and Strategic Management' (1997) 18(7) *Strategic Management Journal* 528. In other words, strategic management 'entails the analysis of internal and external environments of a firm to maximize the utilization of resources in relation to objectives.' Jeffrey Bracker, 'The Historical Development of the Strategic Management Concept' (1980) 5(2) *Academy of Management Review* 221.

¹³⁸ For an overview and discussion of the influence and role of transaction cost economics in strategic management, see: N. J Foss, 'The Strategic Management and Transaction Cost Nexus: Past Debates, Central Questions, and Future Research Possibilities' (2003) 1(2) *Strategic Organization*.

this section then seeks to integrate these insights of the knowledge-based theories of the firm with the insights of the new institutional and knowledge-based theories of the firm. This results in a three-step integrated framework for design of corporate governance institutions. This integrated framework demonstrates that the stakeholder model outperforms the shareholder value model in relation to its ability in organizing viable learning processes within the firm.

4.3.1. The Guiding Principles for Design of Corporate Governance Institutions: From Long-Term Value Maximization to Firm's Survival, Sustained Competitive Advantage, and Firm's Resources, Competences, and Dynamic Capabilities

According to the strategic management literature and knowledge-based theories of the firm, the objective of the firm and its governance institutions is to ensure *the survival/sustainability* of the firm in the dynamic and intensive global competitive markets in which the firm operates.¹³⁹ To ensure *survival and sustainability* of the firm should sustain its competitive advantage,¹⁴⁰ but to do so, the firm should sustain and grow its resources, competences, and capabilities (see below). In other words, the growth of *firm's resources, competences, and capabilities* is necessary for *sustaining firm's competitive advantage* that is in turn necessary for *its long-term survival*.¹⁴¹ One may therefore be tempted to argue that long-term survival is a necessary condition for maximizing *long-term firm's value* because if the firm goes bankrupt, it cannot clearly maximize its value. Although this is obviously true, maximization of long-term firm's value cannot be a useful concrete guiding principle for design of the institutions of corporate governance.

Indeed, the sustainability of competitive advantage and not long-term firm's value maximization should be the guiding principle for design of the institutions of corporate governance. As the famous saying in economics goes: in the long-run, we are all dead! In the new institutional approach to corporate governance, one can argue that the long-term firm's value maximization can be a useful guiding principle for the design of corporate governance system only

¹³⁹ Teece, Pisano and Shuen (n 136), 509.

¹⁴⁰ *ibid.*

¹⁴¹ He, Mahoney and Wang (n 100), 304–305.

if one is to assume away uncertainty and thus assumes that stock prices can reflect not only the present fundamental value of the firm, but also its future path. However, if we include radical uncertainty into analysis, the pertinent *concrete* problem that the corporate governance needs to tackle becomes how the firm can *adapt* to uncertain conditions of the market and not how to maximize its long-term value. More accurately, since one of the major resources of uncertainty is the ability of the competitive firms to learn and innovate, the main challenge of each firm is how to develop their learning and innovative capabilities and thus become a continuous source of uncertainty for competing firms. As O’Sullivan argues, the challenge facing the management of the firm is not the choice of an investment project among well-defined set of possible projects, but how to change the opportunity set of investment projects through learning, knowledge creation and knowledge diffusion, and innovation.¹⁴² Accordingly, the growth and sustainability of the competitive advantage of the firm becomes central to the choice of corporate governance institutions.¹⁴³

In sum, the concrete principle that should guide the design of corporate governance institutions is *firm’s survival*; the latter is attained through the sustainability and growth of the competitive advantage of the firm. Hence, *sustained competitive advantage* should be used as a further guiding principle for the design of corporate governance institutions. Since sustained competitive advantage can be attained through the *growth of the firm’s resources, competences, and capabilities, particularly knowledge resources*. Hence, the growth of firm’s resources (particularly (knowledge) resources) becomes a further guiding principle of the design of corporate governance institutions. In short, instead of long-term firm’s value maximization, firm’s survival, firm’s sustained competitive advantage, and growth of firm’s resources should be *the guiding principles* for the design of corporate governance institutions.

Changing the objective/guiding principle of corporate governance from long-term firm’s value maximization into *firm’s sustainability/survival* has immediate implications on the choice of corporate governance model. For example, labor’s participation in firm’s management becomes a more vexing question. Workers, particularly in the firms where they invest in firm specific assets, are the main stakeholders who are interested in *the survival* of the firm; this legitimizes their

¹⁴² That is why the resource allocation decisions made by the management for supporting innovation are *strategic*. O’Sullivan M. (n 41), 409–410.

¹⁴³ He, Mahoney and Wang (n 100), 294–295.

participation in corporate governance. Still, workers may also inhibit the strategies required for such sustainability by impeding investment in radical innovation or firm's restructuring that may make their firm's specific investments obsolete.¹⁴⁴ In sum, only by moving from the empty and ambiguous objective of long-term firm's value maximization that is analytically incoherent as it assumes away radical uncertainty to the concrete objective of firm's survival and sustainability of its competitive advantage, one can have a more meaningful discussion of the choice of corporate governance model. This is the first major insight of strategic management literature.

4.3.2. Firm's Resources, Competences, and Capabilities and Their Implications for the Conceptualization of the Firm and the Functions of the Institutional Network(s) that Affects the Firm's Performance (e.g., Corporate Governance and Competition Law)

As already mentioned, the guiding principle for the design of corporate governance institutions should be *firm's survival*. Since sustained competitive advantage is necessary to firm's survival, it should be also a further concrete guiding principle for design of corporate governance institutions. Finally, according to the knowledge-based theories of the firm, the growth of firm's resources, competences, and dynamics capabilities are necessary pre-condition for its sustained competitive advantage,^{145, 146} therefore, they should be the most concrete and specific guiding principle for design of the institutional network that affects the firm, which includes, inter alia, corporate governance institutions, competition law, and labor regulation. Given this importance of firm's resources, competences, and dynamic capabilities for design of corporate governance institutions, we need examine them closely.

¹⁴⁴ Carney and Gedajlovic (n 44), 343. O'Sullivan M. (n 41), 404.

¹⁴⁵ Valery S Katkalo, Christos N Pitelis and David J Teece, 'Introduction: On the Nature and Scope of Dynamic Capabilities' (2010) 19(4) *Industrial and Corporate Change* 1178–1179.

¹⁴⁶ In addition to explaining the *sustained competitive advantage* of the firm and providing guidance for strategic management, the knowledge-based theories of the firm have provided explanations for the emergence and boundary of the firm. I will ignore the contributions of these theories in explaining firm's emergence and boundary because they are less relevant to the choice of corporate governance system. Future research should explore the knowledge-based theories' explanations of the emergence and boundary of the firm because these explanations might provide important insights in guiding the choice of corporate governance model. For a brief outline of the explanation of firm's emergence and boundary in knowledge-based theories of the firm, see: Foss and Foss (n 94), 122–123. Foss (n 47), 135–139.

Firm's *resources* are stocks of tangible and intangible (knowledge) assets that are valuable, rare, inimitable, and non-substitutable.¹⁴⁷ They include, inter alia, a knowledge of specific uses of the firm's physical assets,¹⁴⁸ a coordination knowledge (e.g., a knowledge of new ways to coordinate and sequence the productive tasks),¹⁴⁹ a knowledge of the interdependencies (particularly the complementarities) among the firm's knowledge assets and productive tasks,¹⁵⁰ and a knowledge of a more efficient organizational structure.¹⁵¹ Most of these knowledge resources are tacit, localized, decentralized, and distributed across the firm.¹⁵² The firm's knowledge is embodied in knowledge storage mediums, namely, the stakeholders of the firm (mainly, the firm's management team and workers), its organizational routines,¹⁵³ its technology, intellectual property rights, and physical assets.¹⁵⁴

Not only firm's resources are central to its sustained competitiveness, but also are its *competences*. Firm's competences refer to the abilities of the firm to *undertake specific (collective) productive tasks*, which requires coordination of mainly the storage mediums of knowledge (e.g., employees, organizational routines, physical assets, and technology), within *specific time and cost limits*; hence, competences are measurable.¹⁵⁵ In order for the firm to have the competence of undertaking a specific collective productive task, the underlying *transactions/exchanges among the firm's stakeholders* required for undertaking this task should have been *routinized*.¹⁵⁶ Corporate governance systems can ensure the routinization of the coordination process of the knowledge storage mediums through, inter alia, aligning the incentives of firm's stakeholders who carry the firm's knowledge stocks (e.g., managers, workers, sub-contractors) to disseminate and coordinate

¹⁴⁷ Katkalo, Pitelis and Teece (n 144), 1175–1176.

¹⁴⁸ Foss and Foss (n 94), 129.

¹⁴⁹ *ibid* 131.

¹⁵⁰ *ibid* 131–133. Complementarities among the firm's assets need also to be cultivated through a learning process that involves discovering and increasing the asset specificities of the firm's assets. The capability to organize efficiently this learning process is an important firm's capability. *ibid* 133.

¹⁵¹ *ibid* 136–137.

¹⁵² Foss (n 47), 134. J. Krafft and Ravix J.-L. (n 116), 81.

¹⁵³ Organizational routines are *coordination knowledge* institutionalized and embodied into organizational social norms called routines.

¹⁵⁴ Katkalo, Pitelis and Teece (n 144), 1176.

¹⁵⁵ *ibid* 1177.

¹⁵⁶ *ibid*.

this knowledge, and through contributing to the creation of shared contexts of understanding¹⁵⁷ and corporate culture of trust and cooperation.

Firm's resources and competences are necessary, but insufficient, for sustaining the firm's competitive advantage; the firm should also enjoy strong *dynamic capabilities*. Dynamic capabilities refer to the ability of the firm to undertake value capturing and value creating activities ; these activities, particularly the value creating activities, involve continuous reconfigurations of the firm's resource and competence basis.¹⁵⁸ Dynamic capabilities therefore depend on human's cognition and agency;¹⁵⁹ they result from the *innovative/out of the box* utilization of the managerial knowledge resources in creating or capturing value.

Katkalo and his collaborators emphasize that dynamic capabilities are more critical than resources and competences for firm's sustained competitive advantage.¹⁶⁰ Their claim is clearly true if and only if the competing firms in the same sector have *similar* resources and competences, and these resources and competences are *constant* over time. In this case, dynamic capabilities will be the most critical determinant of sustaining the firm's competitive advantage. If other firms' resources and competences change over time, the firm cannot sustain its competitive advantage unless it adapts to these changes in the resource and competence basis of competing firms by changing its resource and competence basis as well. To do so, the firm must have strong dynamic capabilities to seize information about changes of the competing firm's resource and competence basis from imperfect signals about these changes, to anticipate these changes, and to respond quickly to these changes and its expectations of them by changing its competence and resource basis. For the purpose of market entry that is most central to the firms of developing economies, a minimum threshold of resources and competences is required; otherwise, the firm cannot even poorly imitate the products of the established producers. The formation of these resources and competences becomes a central challenge for the firms in developing economies; hence, the legal institutions of affecting the firm in developing countries (e.g., corporate governance and labor regulation) should seek to facilitate and contribute to the formation of these resources and competences.

¹⁵⁷ Foss and Foss (n 94), 124, and see the references cited therein.

¹⁵⁸ Katkalo, Pitelis and Teece (n 144), 1180.

¹⁵⁹ *ibid* 1179–1180.

¹⁶⁰ *ibid* 1179.

Despite the numerous storage mediums of the knowledge stock of the firm, these pieces of knowledge tend to be compatible and/or complementary within the firm due to the conscious efforts of firm's entrepreneur/management in coordinating the distributed bits of knowledge across the firm,¹⁶¹ otherwise, the firm would be incoherent. Accordingly, the firm is not a stock or collection of localized, decentralized, and largely tacit pieces of knowledge; it is a complex system of interdependent and complementary bits of knowledge distributed across the firm and stored in numerous storage mediums.¹⁶² Each firm has its own idiosyncratic complex system of knowledge, which determines their competitive advantage.¹⁶³

Understanding organizations (e.g., firms) as idiosyncratic complex systems of institutionalized interdependent pieces of different types of knowledge is both intuitive and illuminating. Consider, for example, Apple Inc. and a local firm in a developing economy. The former has the *institutionalized* system of knowledge necessary for producing a sophisticated product such as iPhone, while the other firm does not have this system of knowledge. More importantly, Apple Inc. is able to develop and adapt its knowledge system by creating new pieces of knowledge internally (including coordination knowledge) or acquiring new pieces of knowledge from external resources (e.g., research institutions, acquisition of other firms that have developed this knowledge internally, or absorption of new technologies developed by competing firms¹⁶⁴).

In this *knowledge view of the firm*, the function of corporate governance transforms from the *alignment of the incentives of the firm's opportunistic stakeholders* to ensuring the *cooperation of behaviorally heterogeneous stakeholders in formation and continuous development of the complex system of knowledge that sustains the firm's competitive advantage*.¹⁶⁵ To ensure the formation and enhancement of the complex system of knowledge within the firm, the firm has to address two major challenges: *coordination* of existing dispersed knowledge within the firm and *creation* of new knowledge.¹⁶⁶ To coordinate the dispersed knowledge, the corporate governance systems

¹⁶¹ J. Krafft and Ravix J.-L. (n 116), 84, and see the reference cited therein.

¹⁶² Krafft and Ravix define the firm as 'structures of complementary knowledge assets involved in collective learning processes.' *ibid* 87.

¹⁶³ Foss (n 47), 132.

¹⁶⁴ Still, firm's capability to develop and reconfigure its internal system of knowledge is the most critical capability for sustaining its competitive advantage because the firm will fail to acquire knowledge from external resources if it does not succeed in developing an internal system of knowledge that *facilitates the absorption* of this external knowledge. J. Krafft and Ravix J.-L. (n 116), 81.

¹⁶⁵ *ibid* 82. *ibid* 85.

¹⁶⁶ *ibid* 86–87.

should move beyond incentives-alignment function to focus on creating and sustaining *coordination routines and shared cognitive maps* among the firm's stakeholders.¹⁶⁷

With respect to the challenge of creating new knowledge, corporate governance system has to *organize a cooperative process of learning* that ensures the creation of new knowledge and production of new coordination knowledge.¹⁶⁸ Unlike the new institutional theories of the firm that lack any focused analysis of the learning process, the *organization of learning process*, which is the focal point of knowledge theories of the firm, becomes the basis of designing corporate governance institutions. Figure 8.1 below depicts how the firm sustains its competitive advantage through *investment in learning*. Knowledge theory of the firm therefore completes our understanding of the process of *sustained* value creation within the firm and locates consistently the incentive structures of firms' stakeholders and their relations/exchanges in their rightful place in this process of value creation.

¹⁶⁷ *ibid* 87.

¹⁶⁸ *ibid* 89.

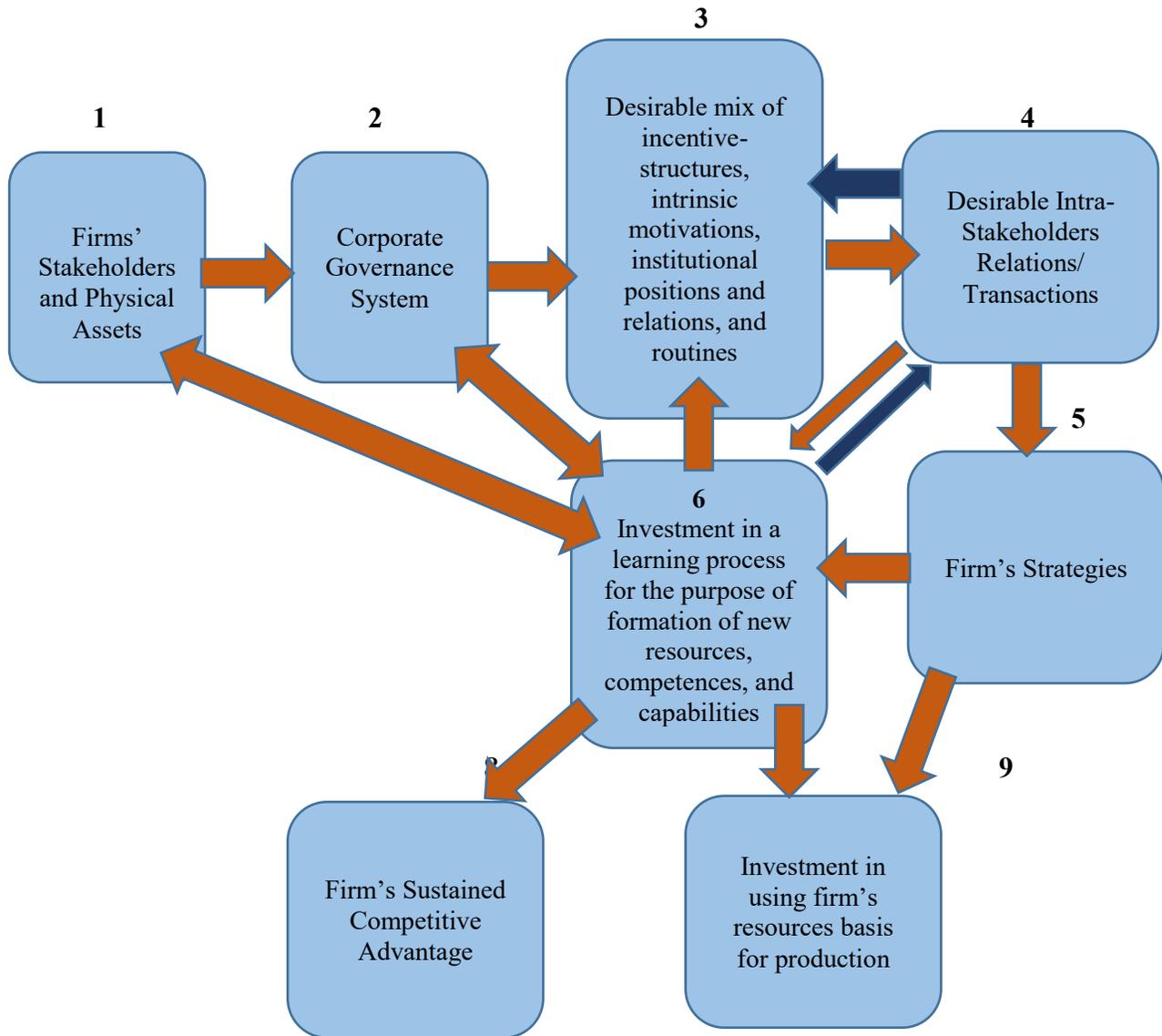


Figure 8.1.: Causal Mechanisms, Constitutive Relations, and Informational Channels Connecting Corporate Governance Institutions and Firm’s Sustained Competitive Advantage. Orange arrows refer to causal or constitutive relations. For example, stakeholders’ relations/transactions (represented in box no. 4) *affect* the learning path of the firm and the resulting firm’s resources, competences, and capabilities (represented in box no. 6). Further, some corporate governance mechanisms such as the board of directors contribute directly to the firm’s resources and capabilities (represented in box no. 6).¹⁶⁹ Some of these capabilities (represented in box no. 6) *constitute* important *routines* (represented in box 3) that coordinate and thus affect stakeholders’

¹⁶⁹ He, Mahoney and Wang (n 100), 299–300.

relations. Similarly, firm's stakeholders and physical assets (represented in box no. 1) may contribute directly to the enhancement of firm's capabilities (represented in box no. 6) due to the knowledge that they carry. Further, some of the newly generated resources and competences of the firm are embodied in firm's stakeholders and/or physical assets. Blue arrows are informational channels; they refer to the fact that the variable in the box of the origin of the arrow provides the informational basis for the design of the variable in the box of the end of the arrow. For example, the desirable set of stakeholders' relations (represented in box 4) guide the design of the desirable set of the incentive structures of these stakeholders (represented in box no. 3). Similarly, the desirable set of firm's capabilities required for sustaining firm's competitive strategy (represented in box no. 6) informs the choice of the desirable set of stakeholders' relations (represented in box no. 4) that may bring about this set of firm's capabilities.

4.3.3. A Three-Step *Integrated* Framework for Design of Corporate Governance Institutions that Ensure *Cost-Effective* Organization of *Viable Learning* Processes Within the Firm

Starting from the *centrality of the learning process* in knowledge theories of the firm, Foss and Foss argue that the insights of the new institutional theories (transaction cost and property rights) and knowledge theories of the firm in relation to sustaining firm's competitive advantage can be integrated.¹⁷⁰ They argue that firms emerge because they govern the process of learning by experimentation *more efficiently* than the markets.¹⁷¹ During the process of learning by experimentation, assets become more time and site specific¹⁷² and uses of the assets need to be changed experimentally, but the continuous renegotiation of the contracts among the team members where each contracting party has a veto power would be very costly.¹⁷³ The authority of management, i.e., the hierarchical structure of the firm, economizes on *the hold-up and renegotiation costs* and thus facilitates the learning process.¹⁷⁴

¹⁷⁰ Foss and Foss (n 94), 124–126.

¹⁷¹ *ibid* 133–134.

¹⁷² *ibid* 133.

¹⁷³ *ibid* 134.

¹⁷⁴ *ibid* 133–134.

Consequently, each organizational structure of the firm (e.g., the shareholder value, the stakeholder model, or any variation of them) affects *differently* the costs of each process of experimental learning. In addition, each organizational structure facilitates *different* processes of learning by experimentation. As already mentioned, the outcome of a learning process is a knowledge stock that is a new capability of the firm. Depending on its focus, each learning process results in a distinct stock of knowledge (e.g., coordination knowledge, process know-how knowledge, or innovation of new products).

In sum, each governance model of the firm results in a different path-dependent process of learning that results in a different stock of knowledge that affects the firm's system of knowledge. The latter is a complex system of interdependent and complementary pieces of knowledge distributed across the firm and stored in numerous mediums. This complex system of knowledge is the core capability of the firm that determines its costs of undertaking the productive tasks required for production, i.e., its production cost underpinning its competitive advantage.¹⁷⁵

In this simplified integrated knowledge and property rights theory of the firm, the comparative efficiency (i.e., cost economizing) of the governance structures of the *same* learning process assumes the choice of a *desirable* process of learning by experimentation. Given the *requirements for the viability* of this *desirable* learning process (i.e., the higher probability that the learning process will achieve its goals¹⁷⁶), we can then choose a cost economizing governance structure for this learning process. The insights of the knowledge theories of the firm are critical for the determination of both the *desirable* processes of learning and *the necessary and sufficiency conditions* for the *viability/efficiency* of these desirable learning processes.

Lazonick and O'Sullivan proposed a set of conditions for forming and sustaining the innovative capability of the firm.¹⁷⁷ Since innovation, which is a production of a new knowledge resource, hinges upon learning,¹⁷⁸ their proposed conditions can be generalized, maybe with some adaptations, to be conditions for ensuring a viable learning process so that these conditions can

¹⁷⁵ *ibid* 121–122.

¹⁷⁶ For an outline of the conditions of an efficient/viable learning process necessary for discovering efficient organization of the complex production system (i.e., sequencing and coordination of the productive tasks), see: *ibid* 133–134.

¹⁷⁷ Lazonick (n 83) 13–14. O'Sullivan M. (n 41), 407–410.

¹⁷⁸ O'Sullivan states that 'by definition, underlying the innovation process is a learning process; if we already knew how to generate higher quality, lower cost products, then the act of doing so would not require innovation.' *ibid* 407.

guide the corporate governance design in both developed and developing economies.¹⁷⁹ As we shall see, In order to fulfill the conditions for viable learning processes, a specific set of cooperative relations (or transactions if we use the language of new institutional theories of the firm) among the firm's stakeholders should be constructed and sustained. Once we derive the set of relations/transactions required for satisfying the viable learning process conditions, the new institutional theories of the firm (the transaction cost and property rights theories) can guide the design of corporate governance institutions that bring about this set of relations and thus fulfill the conditions of viable learning processes. Further, these new institutional theories may demonstrate the existence of many feasible corporate governance models that can satisfy these conditions. In this case, following the insights of the above integrative attempt by Foss and Foss, we can argue that these theories can then guide the choice of the cost-minimizing model among these models. This *three-step integrated analytical framework for design of corporate governance institutions* (i.e., the identification of the *conditions* for viable learning processes, the determination of the feasible corporate governance models that facilitate the stakeholders' *relations and transactions* necessary for the fulfillment of these conditions, and then the *transaction-cost minimization* comparison of these models of corporate governance) combines the insights of the knowledge and new institutional theories of the firm. The following discussion will illuminate briefly the way this three-step integrated framework can guide the choice of corporate governance model for developing countries; still, a full-fledged application of this integrated framework needs a future research project.

The first two *organizational* conditions for viable learning process relate to financing; corporate governance should ensure patient capital financing and the supportive cooperation of the long-term capital provider with the management. Learning process, a long-term process with uncertain returns, needs 'irreversible commitment of resources ... [because] the withdrawal of some of the learners or physical resources from the learning process before it is complete may

¹⁷⁹ Lazonick argues, convincingly, that 'the theory of innovative enterprise ... is highly relevant. Just as an innovative enterprise tends to be at a competitive disadvantage at a low level of output compared with established competitors ... and needs privileged access to resources in the forms of integrated labor and committed finance to generate a competitive product, so too for a young industry in a less-developed nation. ... A national manufacturing industry that engages in learning with the benefit of protected markets may go beyond merely imitation of the production methods of the world leader to engage in "indigenous innovation" that, once the learning has been done, can give it a source of distinct competitive advantage on global markets.' Lazonick (n 83) 17 [emphasis in the original].

endanger the success of the entire undertaking.¹⁸⁰ In addition, to sustain the competitive advantage of the firm, the firm has to be involved in a life-long process of learning; this requires *a constant and prompt supply of financial resources*.¹⁸¹ Due to the unpredictability of the path that learning will take during the process of learning, new financial resources may be needed to support the learning process. In short, both *irreversible commitment* and *constant and prompt supply of financial resources* are necessary conditions for viable learning processes.

To satisfy these conditions, two organizational conditions of the governance of the learning process should be met. First, long-term patient capital is necessary for satisfying the irreversible commitment of (financial) resources condition.¹⁸² Second, to satisfy the constant and prompt supply of financial resources condition, financial investors providing patient capital should support the management's strategies for knowledge creation and knowledge assets coordination. To be supportive, financial investors need to gain inside knowledge about firm's stock of knowledge and relevant managerial decisions because the stock market does not evaluate the intangible knowledge assets of the firm accurately.¹⁸³ They should also provide capital needed for the acquisition of external knowledge assets and internal creation of knowledge assets, and give the management broad discretion in the development of firm's strategies, while holding them accountable ex-post in light of their inside knowledge of firm's strategies.¹⁸⁴ If the financial investors fail to cooperate with the management in this way, the management will be unable to sustain a long term learning process that is indispensable for knowledge coordination and creation.¹⁸⁵ In short, two *organizational* conditions, long-term patient capital and the informed cooperative support of long-term equity investors, are necessary for satisfying the financial conditions for viable learning process, i.e., the irreversible commitment and prompt and constant supply of needed (financial) resources to the learning process.¹⁸⁶ We can refer to these organizational conditions as "finance-related organizational/governance conditions of viable learning processes", or "finance related organizational conditions", for sake of brevity.

¹⁸⁰ O'Sullivan M. (n 41), 407.

¹⁸¹ *ibid* 410–411.

¹⁸² Lazonick (n 83) 14. O'Sullivan M. (n 41), 410–411.

¹⁸³ J. Krafft and Ravix J.-L. (n 116), 91.

¹⁸⁴ *ibid* 91–92.

¹⁸⁵ *ibid* 90.

¹⁸⁶ However, these organizational conditions are not sufficient for satisfying the requirement of the irreversible commitment of resources because they do not ensure the irreversible commitment of non-financial resources (e.g., learners). Hence, further organizational conditions shall be developed below.

According to the second step of the integrated framework, we should therefore examine the compared corporate governance models to identify the models that can satisfy the finance-related organizational conditions. Dispersed ownership structure of the firms when combined with a shareholder value model of corporate governance fails to meet these finance-related organizational conditions. Due to the dispersion of the investors, constant threats of hostile takeovers, and constant and periodical inaccurate equity market's evaluation of the complex system of interdependent knowledge assets embodied in the firm, the management lacks both the cooperative support of its equity investors, who are rationally passive, and lacks the long-term patient capital.¹⁸⁷ Further, the management has to distribute most of the earned profits instead of reinvesting them in further long-term process of learning required for sustaining its competitive advantage.¹⁸⁸ Moreover, a shareholder value corporate governance system of dispersedly owned firms gives strong incentives for the management to leverage the firms to secure higher returns on equity.¹⁸⁹ Highly leveraged firms, regardless of their governance structure, fail to meet finance-related organizational conditions because debt tends to hamper investment in firm's specific assets.¹⁹⁰ Further, high leverage squeezes the firm's free cash-flow, and hence prevents the management from undergoing the radical uncertainty associated with investment in long-term learning processes because the latter, if failed, may push a high leveraged firm into bankruptcy.

In short, in economic systems where dispersed ownership is widespread, a shareholder value model would have a significant negative impact on the learning process. In contrast to the shareholder value model of dispersedly owned firms, firms with a financial structure of equity blockholding complemented with long-term debt financing meets the patient long-term capital and supportive cooperation conditions regardless of their governance model.¹⁹¹ Consequently, in economic systems dominated by equity block-holders and relational banking such as that of post-

¹⁸⁷ The institutional investors, private equity, pension funds, and hedge funds, *arguably*, reinforce this short termism of financial investments in the shareholder value firms. See: Gregory Jackson and Anastasya Petraki, 'Understanding Short-Termism: The Role of Corporate Governance' (Stockholm 2011). Report to the Glasshouse Forum 32–39 <http://sofi-goettingen.de/fileadmin/Textarchiv/WIP2/Praesentationen/jackson-petraki_short-termism.pdf>

¹⁸⁸ O'Sullivan M. (n 41), 410.

¹⁸⁹ Michel Aglietta, 'Shareholder Value and Corporate Governance: Some Tricky Questions' (2000) 29(1) *Economy and Society* 151.

¹⁹⁰ Belloc (n 84), 848, and see the references cited therein.

¹⁹¹ In addition to industrial equity blockholders and retained earnings, commercial banks are the most important providers of long term patient capital, see: Jackson and Petraki (n 186) 26–29.

war Germany, both shareholder value and stakeholder models of corporate governance seem to meet the finance-related organizational conditions.

However, since the legal institutions of the shareholder value model of corporate governance tend to provide incentives for dispersed ownership, while a stakeholder model gives stronger incentives for blockholding investment,¹⁹² a stakeholder model of governance would tend to stabilize the blockholding ownership structure. As already mentioned, it will not impede small investors from investing in equity as long as the corporate governance institutions protect them against outright expropriation of their investments. However, the legal institutions that protect minority shareholders from outright expropriation by majority shareholders will not give rise dispersed ownership as long as the institutions of the shareholder value governance that align the incentives of the management with that of public shareholders are not in place. It seems that this stakeholder model would attract only small investors interested in *long-term* investment horizons or *moderately or low* risk equity investments; hence, these small investors will function as a further, though secondary, source of patient capital.

The second set of conditions of a viable learning process relates to the *incentives and intrinsic motivation* of management and workers and *the coordination* of their knowledge. The management (and the workers, if they enjoy residual control rights or if they can impede management's decision through non-cooperation) should have the proper incentives to choose a learning path *specific* to the firm rather than choosing to replicate a learning path of other firms in the industry. They should also have the incentives to endorse the *best strategies* that serve the *long-term sustained competitive advantage* of the firm.¹⁹³ Further, both the management and the workers should have the incentives to make large and long-term human capital investments in firm's specific assets.¹⁹⁴ They should also have the proper incentives and intrinsic motivation to *cooperate* because collective learning process requires *constant interaction and sharing of knowledge*.¹⁹⁵ Moreover,

¹⁹² Not only formal legal institutions that provide strong protection of public shareholders and ensure the alignment of the incentives of the management with their incentives facilitate the transition to dispersed ownership. Functional substitutes of these legal institutions (e.g., self-regulation of stock-exchanges and reputational mechanisms of securities underwriters) facilitate ownership dispersion as well. Brian R. Cheffins, 'Does Law Matter? The Separation of Ownership and Control in the United Kingdom' (2001) 30(2) *Journal of Legal Studies* 472–476.

¹⁹³ In other words, those who control firm's *strategy* must have the proper incentives required for *strategic* control. Lazonick (n 83) 13–14.

¹⁹⁴ O'Sullivan M. (n 41), 411.

¹⁹⁵ *ibid* 408.

the management and the workers should have shared cognitive maps to prevent communication failures; they need to have *long-term interactions* that result in *coordination routines*, which consist important organizational capital of the firms required for developing these shared cognitive maps. Finally, the management and the workers should *perceive* their share of firm's revenue to be *fair* in order to continue to cooperate in the learning processes. However, a subjectively conceived (as well as an objective) fair distribution of revenues is difficult because of the cumulative and collective nature of the learning processes.¹⁹⁶

These conditions, though necessary, are insufficient for supporting a viable learning process, however. A viable learning process throughout the life of the firm necessitates the ability of the firm to hire managers and workers with knowledge assets that are critical to its on-going learning processes, while firing managers and workers whose knowledge assets are no longer necessary for these processes. Due to the uncertain nature of the learning process, workers hired for supporting a specific learning process need to be fired in case of the failure of this process, but the firm would not hire them unless it is easy for the firm to fire them. Further, as current management and workers may rationally anticipate that specific learning paths may render their knowledge assets less valuable to the firm, they would have strong incentives to avoid these paths, although these paths may be more promising than the adopted alternatives. For example, they may avoid learning paths that involve radical innovations.¹⁹⁷ Anyway, management would tend to avoid some of these learning paths (e.g., radical innovation paths) for non-self-interested reasons because they lack the managerial skills to manage these learning paths; they will only adopt these paths if they are necessary for the firm to survive the competitive process. In contrast, workers have strong self-interested concerns that have strong implications for resisting the choice of these learning paths.

In short, the labor-related conditions of viable learning processes include the establishment of proper incentives for investment in firm's specific assets, cooperation, knowledge-sharing, long-term interactions, ex-post (subjectively conceived) fair distribution of the revenues resulting from

¹⁹⁶ *ibid* 409.

¹⁹⁷ However, a distinction should be made between radical innovations that involve job losses and those that do not. As long as innovation does not involve job losses, the participation of the employees in decision-making tends to reduce their resistance to innovation. Belloc (n 84), 853, and see also the references cited therein.

the learning processes, and labor flexibility (i.e., managerial discretion in hiring and firing labor for no wrongful action on the part of the workers).¹⁹⁸

The incentive and intrinsic motivation structure of labor depends mainly on both corporate governance institutions (e.g., labor's participation in decision-making, labor's non-voting membership on the board, and internal organization of the firm) and labor law norms (e.g., legal norms regulating labor working hours, working conditions, dismissal, on-job training, job description, promotion, and retirement). Accordingly, these labor-related norms in corporate governance and labor law cannot be disentangled; from a systemic perspective, the distinction between corporate governance and labor law strongly observed in both traditional legal scholarship and mainstream law and economics scholarship undertaken by legal scholars and financial economists has no economic basis.¹⁹⁹ Indeed, from a systemic perspective, corporate governance and labor law cannot be considered *distinct, but interdependent*, institutional domains; their close interdependence in relation to their effects on the multi-dimensional incentives and intrinsic motivations of labor justifies considering them as a *single* institutional domain. In this thesis, however, I will tend to analyze them as distinct, but interdependent, institutional domains (see below) for simplifying the analysis. Future research that treats them as a system of interdependent rules in the context of developing countries is urgently needed so that these countries can establish

¹⁹⁸ A final, but a contentious condition for a viable (organizational) learning process relates to the risk-taking incentives of the management. Firm's management and workers tend to be more risk-averse than the diversified public shareholders (but not equity block-holders), and thus they tend to avoid *high-risk* investments in learning and innovation processes. Sundaram and Inkpen (n 8), 354. Hence, Sundaram and Inkpen argue that only a shareholder value model of corporate governance can satisfy the *high* risk-taking incentives condition. *ibid.* The problem with the managerial high-risk taking as a condition for a viable organizational learning process is that it undermines the incentives of the management and labor to make firm specific investments. These investments increase the degree of their risk-aversion; hence, they will have strong incentives to avoid making these investments in a shareholder value firms due to the high-risk profile of the strategies of these firms. In relation to developing economies, learning processes are moderately, but not highly, risky because they do not involve radical innovations as these countries are far below the technological frontier, and thus investments in specialized human capital assets seem to be more important than increasing the risk-appetite of the firm's management. That is why I have excluded managerial *high* risk-taking incentives from the conditions of a viable learning process.

¹⁹⁹ The works of the Japanese economist, Masahiko Aoki on the Japanese corporate governance is a notable exception as he treats labor and corporate governance institutions as the attributes of the Japanese firm conceptualized as a system. See, e.g.: Masahiko Aoki, 'The Japanese Firm as a System of Attributes: A Survey and Research Agenda' in Masahiko Aoki and Ronald Dore (eds), *The Japanese Firm: Sources of Competitive Strength* (Oxford University Press 1994). See also the analysis of the Japanese corporate governance in chapter 11 and the references cited therein.

a legal system supportive of the formation and sustainability of *learning firms* in their economic sphere.

The above-mentioned labor-related organizational conditions for a viable learning process pose a serious problem: *the labor flexibility condition seems to contradict the other conditions*. The organizational conditions, achieved through, inter alia, the legal institutions of corporate governance and labor regulation, which ensure labor flexibility would undermine the other conditions, while organizational conditions that bring about these conditions would restrict labor's flexibility. A stakeholder model of corporate governance would satisfy these conditions, but for the flexibility conditions, while a shareholder value model would ensure flexibility, but it would undermine the other conditions.

In contrast, a labor-owned and managed firm along with no-cause dismissal norm of labor law (the so-called *employment at-will* doctrine) balances the labor-related organizational conditions. In these firms, the workers have an incentive to endorse the learning paths that may involve hiring new workers or firing existing workers as long as the costs of endorsing these learning paths exceeds the costs of these hirings or firings. In these cases, although the worker may lose her job, she would still have an ownership stake in a firm that continues to invest in a viable learning process with high-expected returns. Given the labor's management, workers' replacement will not signal the expropriation of these workers, but the strong viability of a specific learning path. In order to facilitate labor owned and managed firms, significant restructuring of the financial regulation should be made in order to provide labor with access to debt finance. However, this labor owned and managed firm would then tend to be leveraged and financially constrained. This would undermine the above-mentioned finance-related organization conditions of learning at least in the initial stage of the life cycle of these firms until they accumulate retained earnings that can function as a source for internal financing and a viable collateral for external financing. Further, although workers in these firms bear both financial and human capital investment risks; the high returns on these investments tend to compensate the workers for these risks, particularly if the financial risk is reduced through access to debt (and public equity minority stakes) financing. Further, labor owned and managed firms shall meet the insider-control condition of a viable learning process outlined below.

Labor's ownership is therefore the main institution that balances the labor-related conditions of viable learning processes because it mitigates the negative effects of labor flexibility. If other

the institutional domains of capitalism (e.g., labor law and social security law) are included into the analysis, we may be able to design an institutional network that satisfies these labor-related conditions by substituting functionally for labor's ownership. For example, an institutional network that includes a stakeholder model of corporate governance similar to the German model, a deregulated labor market, and a legally mandated profit-sharing scheme²⁰⁰ may also balance these conditions. In this suggested institutional network, shareholders and workers have to cooperate to ensure long-term viability of the firm because in absence of cooperation, the labor-related conditions of learning will not be satisfied, while the shareholders will still incur the costs of co-decision-making processes. If shareholders adopt a confrontational approach with the workers and tend to fire many non-cooperating workers without the consent of the workers' representatives on the board, the firm's reputation will be damaged; no future workers will have the right incentives and motivations required for viable learning processes. The only viable long-term strategy for shareholders is to cooperate with the workers. Similarly, workers have strong incentives in the survival and long-term sustainability of the firm because they secure long-term moderate job security and adequate returns on their human capital specific investments in the firm's through long-term cooperation and satisfying the labor-related conditions for a viable learning process. In other words, assume a game-theoretical model where the players are the majority shareholder(s) and workers' representatives, and the rules of the game include a stakeholder model of corporate governance, employment at-will doctrine, and a mandatory profit-

²⁰⁰ According to Furubotn,

One possibility is to let labor make the investment in human capital but then arrange things so that each worker who invests in firm-specific assets becomes a "partner" in the firm. In other words, each worker undertaking reliance investment can be permitted to join the coalition as a residual risk bearer, *with the understanding that he will share in the firm's net cash flows according to a definite formula*. By granting worker-investors *formal income* and control rights in the firm, certain agency costs that would otherwise exist are obviated, and incentives for cooperation and productivity will tend to be enhanced. Eirik G Furubotn, 'Codetermination and the Modern Theory of the Firm: A Property-Rights Analysis' (1988) 61(2) *The Journal of Business* 170 [emphasis added].

An example of a legally mandated profit sharing scheme is Article 41 of The current Egyptian Company Law no. 159 of the year 1981, which states that 'the workers are entitled to the minimum of either 10% of the firm's profits that the general assembly has decided to distribute to the shareholders, or the sum of the wages of the workers.'

sharing scheme. Suppose further that the strategies available to the players are long-term cooperation or no-cooperation. In this game, the rational choice for the players would be *long-term cooperation*.

In many developing countries where blockholdings are the dominant ownership structure, a stakeholder model of corporate governance, a mandatory profit-sharing scheme, and employment at-will doctrine would satisfy the labor-related organizational conditions of a viable learning process. A shareholder value model, as argued above, would fail to meet these conditions. Finally, a labor owned and managed firms and employment at-will doctrine of labor law would also satisfy the labor-related conditions of a viable learning process.

This brings us to the final governance condition for a viable learning process that is ‘*insider control*’.²⁰¹ Insiders should have control over the governance of the firm because they are better informed about the complex system of interdependent knowledge embodied in the firm and the way the learning processes may enhance this system. Due to the tacit, collective, and cumulative nature of knowledge, only a participant in the learning process can be well-informed.²⁰² These participants are also the only well-situated actors for making well-informed strategic decisions that involve the choice of specific learning paths.²⁰³ Obviously, the management, inside directors, and workers are the only well-informed insiders of the knowledge system of the firm²⁰⁴ and the market structure of its product market, and thus can inform the design of firm’s competitive strategies that involve the choice and governance of the learning processes.

Both labor-owned and managed firms and stakeholder model of corporate governance meets the organizational conditions for insider control, but the shareholder value model fails to meet these conditions, regardless of the ownership structure of the shareholder value firm. In dispersedly owned firms, shareholder value institutions deprive the insiders from control; boards include a majority of outside directors, while labor is not represented on the board. Further, the management has no strategic control over the choice and direction of long-term learning processes because it has to respond quickly to the pressures of the stock market. Similarly, a shareholder value model of a majority-owned firms fail to integrate the knowledge of labor, as they lack board

²⁰¹ O’Sullivan M. (n 41), 411. Lazonick (n 83) 13–14.

²⁰² O’Sullivan M. (n 41), 411.

²⁰³ *ibid.* Lazonick (n 83) 14.

²⁰⁴ Margit Osterloh and Bruno S Frey, ‘Corporate Governance for Knowledge Production: Theoretical Foundations and Practical Implications’ (2006) 3(4) *Corporate Ownership and Control* 165–166.

representation, and inside directors because the board is dominated by outside directors, as mandated by the shareholder value model. However, this model of corporate governance still gives some discretion to the management under close scrutiny of the blockholders. One can mitigate the negative effects of this model, however, if the blockholders are somehow informed about the knowledge system of the firm, its learning processes and the way these processes relate to long-term sustained competitiveness of the firm. Further, labor may be given non-voting representation on the board to share its knowledge in the process of formulating firm's strategies and choice and direction of relevant learning processes. Finally, increasing the insiders on the board can have a further mitigating effect. This moderate form of shareholder value governance (which can be characterized also as a moderate form of a stakeholder model) seems to satisfy partially the insider control condition; still, labor will not have sufficient incentives to share its own knowledge needed for informed insider's control without proper involvement in the governance of the firm or a protective labor regulation.

In short, labor-owned and managed firms as well as stakeholder model of corporate governance combined with mandatory profit-sharing scheme and employment at-will doctrine seem to be the only viable models of corporate governance that meet the (finance-related, labor-related, and insider control) governance conditions for viable learning processes throughout the life of the firm. Labor-owned and managed firms, however, suffer from high transaction costs in collective decision-making, particularly regarding the distribution of the profits, and have a limited access to debt finance because they bear no wealth losses in the case of bankruptcy of the firm.²⁰⁵ Due to these problems, the stakeholder model seems to be the most viable model of corporate governance. Still, since the labor-owned and managed firms seem to meet the organizational learning conditions, future research is needed to investigate whether the cost-related inefficiencies can be reduced through innovative legal solutions (e.g., some inventive reforms in the legal institutions of corporate governance and other neighboring institutional domains such as financial regulation).

In contrast, the shareholder value model, regardless of the ownership structure of the firm, fails to meet the conditions of viable learning processes. In case of dispersed ownership, the shareholder value model seems to fail to meet most of these conditions, while in the case of blockholdings, it fails mainly to satisfy the labor-related conditions. Protective labor regulation (i.e., job security)

²⁰⁵ Aoki, 'The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview' (n 133) 361, and see also the references cited therein.

may mitigate this failure, but as already argued, protective labor law provides insufficient protection for labor's investments in firm's specific human capital. It is also insufficient for ensuring the mix of incentives and motivations required for governance of a viable learning process. Particularly, in developing countries, protected workers tend to shirk because of lack of hard working ethics coupled with their (founded) perception of the unfairness of their share in firm's revenues. Moreover, job security (i.e., cause-based dismissal) is a blunt legal institution that prevents the firm to adapt to changes in circumstances and experimental learning; it protects all workers in all times. This contradicts the flexibility of labor condition of a viable learning process.

This means that from an integrated new institutional and knowledge-based theories of the firm, the stakeholder model (when combined with mandatory profit-sharing scheme and employment at-will doctrine) *has a model superiority* over the shareholder value model regarding its *non-embedded* effects on *learning*. From a systemic perspective, however, the *embedded* effects of stakeholder model on organizational learning may be inferior to the shareholder value model when these models are introduced into specific institutional networks (e.g., a network that includes also a protective labor regulation and Schumpeterian competition law). Indeed, the model superiority of the stakeholder model is contingent on the existence of labor regulation that includes employment at-will doctrine. This suggests that the embeddedness of the stakeholder model in an institutional network that includes protective labor regulation may undermine the positive effects of the stakeholder model on organizational learning because it undermines the labor flexibility condition, an important labor-related organizational condition of viable learning processes. Accordingly, the important insights of the knowledge-based theories of the firm are still insufficient for *systemically informed* choice of corporate governance model for developing countries; we need to complement the integrated approach with a systemic approach. This point shall be discussed in-depth in the systemic critiques section below.

Furthermore, although the stakeholder model of corporate governance seems to outperform a shareholder value model of corporate governance, the superiority of the stakeholder model hinges on the following critical assumptions that underlie the knowledge-based theories of the firm:

Firstly, physical assets can easily be replaced and are thus not unique to corporate development; on the contrary, human assets are crucial elements in the firm's survival and development. Secondly, in the meantime, the value of human capital is increasing, and this leads

individual workers with a greater independence towards the firm and a higher possibility to go and work elsewhere; financing in capital market is also easier for these individuals and eventually enables them to run their own company.²⁰⁶

As already argued in section 3.1 above, the stakeholder model of corporate governance, in theory, does not cause significant reduction in firm's access to finance or impede the process of capital accumulation in the economy. The empirical evidence cannot corroborate this theoretical argument because, as already argued, the empirical studies in this regard are both inconclusive and unreliable.

Furthermore, the stakeholder models may take different forms. These feasible forms of the stakeholder model includes, inter alia, the German co-determination, the Japanese stakeholder model, a co-determination for only the subset of workers who make critical human capital specific investments along with dominance of inside directors over outsiders on the board of directors,²⁰⁷ and a non-mandatory co-determination.^{208,209} These forms of the stakeholder model are not necessarily equivalent; some of them may poorly satisfy the conditions of viable learning processes or protect weakly the minority shareholders against outright expropriation. Therefore, only the stakeholder models that protect minority equity investments from outright expropriation and satisfy the conditions of viable learning processes and thus sustain firm's competitive advantage can outperform the shareholder value model regarding their non-embedded effects on organizational learning, while securing firm's access to (long-term equity) financing. Further, some of these models may not fit the contextual legal, economic, and cultural conditions of some developing economies. Accordingly, chapter 12 shall undertake the task of identifying the form of the stakeholder model that meets the conditions of viable learning, protects minority shareholders against outright expropriation, and suits the economic and cultural particularities of developing countries.

²⁰⁶ J. Krafft and Ravix J.-L. (n 116), 85.

²⁰⁷ Osterloh and Frey (n 203), 165–176.

²⁰⁸ Furubotn (n 199), 170–178.

²⁰⁹ Chapter 12 will discuss these alternative forms of the stakeholder model of corporate governance to identify the most adequate form for developing economies.

In the conclusion of this section, two final remarks are in order. First, this section provides the first full-fledged application of the integrated dimension of the integrated and systemic approach. The cognitive perspective of the knowledge-based theories of the firm highlights the centrality of learning to choice of corporate governance model and enable us to derive the organizational conditions for viable learning processes. This is the first step in the three-step integrated framework for design of corporate governance institutions. Then, the insights of the new institutional theories of the firm have also informed us in the above analysis of the effects of different models of corporate governance on fulfilling the conditions of viable learning processes. This is the second step of the integrated framework; by following this step, we concluded that the stakeholder model of corporate governance outperforms the shareholder value model regarding its non-embedded positive effects on organizational learning. This step also shows that the corporate governance models that satisfy the conditions of viable learning processes are therefore *functionally equivalent*. For example, as far as the long-term patient capital condition is concerned, the corporate governance models that ensure either long-term equity or debt financing would be, roughly, *functionally equivalent*. Given this feasible set of corporate governance models, from a transaction cost perspective, the corporate governance model that minimizes the costs of the organization of the learning process, i.e., the more efficient model, would be more desirable. This comparative organizational analysis of these functionally equivalent models of corporate governance is the third step of the integrated framework. This step has demonstrated the superiority of the stakeholder model to the labor-owned and managed firms due to the high transaction costs associated with the latter governance structure. In short, the resulting corporate governance model from the application of the three-step integrated framework would ensure a *cost-minimized* organization for viable *learning* processes; this model is the result of integrating the *learning processes* related insights of the knowledge-based theories of the firm with the comparative organizational/efficiency analysis of the new institutional theories of the firm.

Second, as already mentioned in chapter 7, the integrated approach provides the *information basis* needed for developing a systemic analysis. As discussed in chapter 6, systemic perspective demonstrates that socio-economic systems have a dual structure of *information and knowledge* as well as *incentives*. By integrating the insights of knowledge-based and new institutional theories of the firm in relation to the knowledge and incentives systems of the firm, the integrated analytical

framework of corporate governance connects both knowledge assets of the firm with the incentive structure of the firm (see figure 8.1 above). By doing so, we have made an important progress towards advancing a *systemic understanding of corporate governance of the firm as a dual structure system*. This systemic understanding still assumes that the corporate governance system of the firm is independent from other institutional domains governing the firm. In the systemic critiques section below, we will relax this assumption to develop a more complete systemic analysis of the issue of corporate governance choice.

4.4. External Critiques of the Neoclassical-New Institutional Choice of Corporate Governance System: Insights from the French Regulation School of Economics

In addition to the critical insights of the knowledge-based theories of the firm, a further external critique emphasizes that shareholder value model *financializes* the corporation and aligns its management with the concerns of capital markets instead of the most important concerns of the product markets and the workers of the firm.²¹⁰ This critique is advanced from the perspective of the French regulation school of economics. The latter has an important Keynesian and Marxian inputs in its ideas, while the Marxian inputs have been fading recently, the Keynesian ideas still influences the school. Due to its Keynesian orientation, the French regulation school tended to emphasize macroeconomic implications of labor regulation. The standard argument of this school of thought has been that labor regulation and labor unions ensure that workers will get wages above subsistence level. These high wages are necessary for stabilizing the aggregate demand of the economy.²¹¹ A stable aggregate demand eased the business cycle in the short run and gave the space and incentives for firms to invest in technical progress and thus sustain long-term growth.²¹² Among the main implications of the regulation theory is that labor deregulation and de-unionization of labor would reduce the bargaining power of workers substantially. This would result in low wages that would not create the aggregate demand required for preventing the economy from heading to recessions in the short run and for sustaining economic growth in the

²¹⁰ Aglietta, 'Shareholder Value and Corporate Governance' (n 188) 149–153.

²¹¹ Michel Aglietta, *A Theory of Capitalist Regulation: The US Experience* (Translated by David Fernbach, Verso 2015, first published in 1979) 407–408.

²¹² *ibid* 407–410.

long-run. Bargaining power and aggregate demand are the analytical concepts borrowed by the Regulation school of thought from Marxian and Keynesian economics respectively.

Aglietta contends that there has been a shift from labor law to corporate governance as a regulation mode of the growth system and supply and demand in modern capitalism; this shift has been induced by adopting the shareholder value model of corporate governance.²¹³ The adoption of shareholder value model required the firms to adopt a set of financial and business strategies to increase return on equity such as restructuring, labor-cost reductions, increasing the productivity of existing capital and thus reducing capital-output ratio, leveraging the corporation (Leverage Buyouts, as an example) and share buy-backs.²¹⁴ These strategies have resulted in increasing the return on equity along with equity prices. Aglietta summarizes the macro-implications of the shareholder value model in his 2000 article as follows:

The self-fulfilling macro-economic dynamic works as follows. Shareholder value sets a requirement in financial return which is reflected in rising equity price appreciation. In turn, the latter is an incentive for institutional investors to increase the share of their portfolio invested in stocks. The counterpart is an increase in the financial wealth of households. This increase stimulates consumption not only out of disposable income but also out of capital gains. Realized capital gains are spent by individuals who have sold the shares bought back by firms which transfer their free cash flow. Unrealized capital gains spur credit demand against collateral. As a result, in the US case, the saving ratio of American households has collapsed. Firms are also contributing to the momentum of aggregate demand. High Tobin q ratios stimulate productive investment, financed by leverage. The macro-economic outcome is a sustained high level of aggregate demand that validates the profit required to keep up with the requirements of corporate governance.²¹⁵

²¹³ Aglietta, 'Shareholder Value and Corporate Governance' (n 188) 153–154. See also: Robert Boyer, 'Complementarity in Regulation Theory' (2005) 3(2) *Socio-Economic Review* 370 in: Colin Crouch and others, 'Dialogue on 'Institutional Complementarity and Political Economy'' (2005) 3(2) *Socio-Economic Review*.

²¹⁴ Aglietta, 'Shareholder Value and Corporate Governance' (n 188) 149–152.

²¹⁵ *ibid* 155–156.

The most fundamental problem with shareholder value model of corporate governance as a mode of regulating capitalism is that it may not be *macro-economically sustainable*. Aglietta expressed his concerns over macroeconomic stability in 2000, much before the financial crisis:

One is left with the impression that the wealth-induced growth regime rests upon the expectation of an endless asset-price appreciation. The dynamic is self-fulfilling as much as it is reflexive because market sentiment induces firms and individuals to act in such a way that expectations are fulfilled. This market sentiment is a co-ordination of expectations around a convention shared by the financial community: the economy has reached a new age of capitalism! Can this convention be robust or fragile? It depends upon a heavily leveraged financial structure and is therefore vulnerable to market liquidity conditions, as shown in the aftermath of the Russian crisis in September–October 1998. Ultimately, the central bank is the linchpin of the whole financial structure. Only the central bank can thwart a melting down of inflated asset prices if an unexpected shock causes the convention to crumble and launches a contagious flight to quality.²¹⁶

In short, shareholder value model of corporate governance of firms with short-term institutional investors as blockholders or dispersed ownership structure risks being financialized and leveraged; hence, in the long-run, the shareholder value model would pose significant risks to systemic financial stability and the macro-economy. These risks are more pronounced in developing countries where developed regulatory frameworks for the financial system are absent.

In conclusion, the internal and external critiques deconstruct the arguments in support of the shareholder value model of corporate governance that is advocated fiercely by most neoclassical-new institutional law and economics scholars. Given this extensive critiques, it seems that developing countries should adopt a stakeholder model of corporate governance. The main challenge confronts developing countries becomes the choice of a stakeholder model: the German co-determination model of a stakeholder governance is different from a Japanese stakeholder model. Further, theoretically, one can envisage many other models of stakeholder governance; for example, the model of corporate governance of American firms in the Fordist era of American capitalism had many important elements of a stakeholder model because the management was

²¹⁶ *ibid* 156.

insulated from strong disciplinary power by stock-markets and thus had wide discretion in this earlier model.

Still, we must discuss the insights of the systemic perspective because the latter may *qualify* our conclusion that developing countries should endorse a stakeholder theory of corporate governance. If the systemic perspective confirms our conclusion, it may also provide us with important insights regarding the choice of an appropriate form of a stakeholder model for developing countries. We now turn to the critical insights of the systemic approach.

5. The Critique Step Continued (The Systemic Critiques): The Insights of Systems Thinking in Management Studies and the Varieties of Capitalism Perspective

Russell Ackoff, a prominent systems thinker in managerial studies, has argued, convincingly, that from a systemic perspective, any socio-economic system (e.g., the firm) should address the humanization problem conceptualized as the problem of the *inability* of the system to satisfy the *morally justified* needs and purposes of the agents/parts of this system.²¹⁷ If the firms fail to address the humanization problem, they will fail to achieve their objectives (e.g., long-term firm's value maximization or sustained competitive advantage).²¹⁸ The above-mentioned labor-related organizational conditions for a viable organizational learning process, which are derived from the knowledge-based theories of the firm, underscores this point because some of these conditions relate to satisfying the needs and purposes of the workers. According to Ackoff, the solution of the organizational humanization problem faced by the firm

requires finding ways in which organizational and individual objectives can be made mutually reinforcing. Therefore, an essential part of the process involves removal of conflict between organizations and their elements. Such removal requires understanding of both corporate and individual objectives. To make work satisfying it is necessary to change the nature of work itself, the environment in which it is done, the compensation and benefits

²¹⁷ Russell L Ackoff, 'The Systems Revolution' (1974) 7(6) Long Range Planning 11. Ackoff, however, seems to assume implicitly that these needs and purposes are necessarily moral; hence, he does not explicitly require these needs and purposes to be morally justified. Further, he does not distinguish between the (basic) needs and purposes of the agents of the system.

²¹⁸ *ibid.*

derived from it, and the opportunities for advancement and *participation in decision making* which affects any of these.²¹⁹

Further, Ackoff argues that a socio-economic system such as the firm should also satisfy the morally grounded needs and purposes of the environment of the system (i.e., the neighboring system in which the firm is embedded); for example, the firm should satisfy the morally grounded environmental and health safety needs of the communities in which these firms operate.²²⁰

In short, from a systemic perspective, any socio-economic system such as the firm should satisfy the morally grounded needs and purposes of its parts (e.g., workers) and environment (e.g., communities). If the firm fails to do so, it will fail to achieve its own objectives (e.g., long-term firm's value maximization) and the objectives of the society that is the larger system in which these firms is a sub-system that derives its *legitimacy and raison d'être* from contributing, and not undermining, these societal objectives (e.g., expansion of human capabilities).

From a systemic perspective, the firms should satisfy the *morally grounded* needs and purposes of its elements and its environment. If they succeed in satisfying these needs and purposes, they do not only succeed in achieving their objectives and the objectives of the larger system in which they are embedded, but they are also satisfying their own *moral obligations*;²²¹ they become *moral/ethical organizations*. In addition, the above-mentioned insights of the knowledge-based theories of the firm have shown that in order to sustain their competitive advantage, firms should function as *learning organizations*. Therefore, firms should function as *ethical learning organizations*. By doing so, firms can maximize *long term social value* that can be conceptualized as *the summation of the long term (economic) value of the firm and the firm's satisfaction of its (systemic) moral obligations to its members and environment*.

The ethical and learning dimensions of the firms are interlinked; the knowledge-based theories of the firm emphasize learning capabilities that enable the firm to sustain its competitive

²¹⁹ *ibid* 12 [emphasis added].

²²⁰ *ibid* 15.

²²¹ To avoid discussing the fixing problem of whether the firm is a holistic entity that can assume moral obligations, we can think of the moral obligations of the firm as the moral obligations of the *firm's stakeholders* who choose to organize their exchanges in the governance structure that takes the form of the firm. Each stakeholder assumes a degree of moral responsibility that is proportionate to its power over the firm's actions. In this perspective, even if workers have limited decision-making power, they may still have a broad moral responsibility for the firm's actions in case they have a broad space for resistance of the decisions made by the shareholders or the management, but they choose not to resist.

advantage. However, this is a restrictive view of learning that restricts learning primarily to the capability of the firm to communicate knowledge efficiently among its stakeholders, and to produce and acquire new knowledge assets. Learning process should also encompass *learning and internalizing the ethical dimension* of the firm.²²² Firm's learning capability should include the ability of the firm to set learning processes where the stakeholders of the firm learn to cooperate, care for the well-being of each other, act honestly (avoid shirking, for example), protect and care for the interests of the weakest stakeholders of the firm, and care for the morally grounded needs of the firm's environment.

For example, the co-determination principle can be interpreted as a legal institution that seeks to contribute to the transformation of the German firms into ethical organizations through creating a learning process where important ethical values are internalized. Co-determination requires the firm's labor, shareholders, and management to negotiate and reach an agreement, otherwise, the firm might not survive. By forcing these stakeholders to negotiate in order to ensure the survival of the firm, co-determination forces these stakeholders to learn not only how to negotiate, but also learning about the concerns of each other, and learning to perceive the problems as conceptualized according to the mental maps of each other. This might result in growing a sense of *mutual empathy and cooperation*.

This example suggests that the stakeholder model by enabling some of the stakeholders to participate in decision-making power (e.g., the co-determination principle) outperforms the shareholder value model in its ability to transform the firm into an ethical organization. In the shareholder value firms, the morality of the decisions of the firms hinges on the moral choices of the majority shareholders in majority-owned firms or the management in dispersed ownership firms, but the management in the latter case will tend to maximize profits at the cost of the moral obligations of the firm. Further, when dispersedly owned firms compete with majority-owned firms, the latter may tend to sacrifice moral concerns for the sake of sustaining or increasing their profits due to competitive pressures of the former firms or due to negative (moral) externalities.

This does not suggest that the German stakeholder model of corporate governance has necessarily succeeded in contributing to the formation of the ethical dimension of German firms, or that this system of corporate governance, if transplanted in other countries, would succeed in bringing about this ethical transformation. This just suggests that the stakeholder model has *the*

²²² I owe this insight to Dr. Mohamed Saafan, for which I wish to thank him a lot.

tendency to influence positively the transformation of the firm into an ethical organization, but the degree of its influence depends on the social norms dominating (each) firm and the general social norms prevailing in the society where the firm operates. More importantly, from a systemic perspective, the capacity of the stakeholder model to influence the ethical dimension of the firm depends also on the institutional network of capitalism in which the stakeholder model is embedded. More accurately, no single institution or institutional domain can undertake the task of transforming the firms of the any economic system into ethical and learning organizations. The institutions constitutive of the institutional network of capitalism should complement each other in undertaking this task. This brings us to the important critical insights of the comparative capitalism perspective.

The informal systemic perspective of the varieties of capitalism (“VoC”) approach to comparative political economy/comparative capitalism can help us advance further systemic critiques to the neoclassical-new institutional approach to the issue of the choice of corporate governance model. As already discussed in chapter 5, the analytical framework of the VoC relies on the analysis of institutional complementarities among the institutional domains of capitalist economies. Based on these complementarities, capitalist economies can be classified into liberal market economies (e.g., the American and British capitalist economies) and coordinated market economies (e.g., German and Japanese capitalist economies).²²³ These institutional complementarities reinforce the effects of the institutional domains regarding specific evaluative criteria such as the time-horizon of firm’s strategies (long vs. short-term), the types of firm’s strategies (shareholder value maximization, firm’s market share sustainability and growth, or firm’s survival), the type of firm’s innovative strategies (incremental vs. radical innovation), the types of human capital investments by workers (general skills vs. firm specific skills), and the firm’s financial structure (high, moderate, or low debt to equity ratio).²²⁴

The main policy implication of the VoC approach is that *policy interventions should be incentive compatible*.²²⁵ Given the incentive structure of the firm created by the institutional

²²³ See section 2.2.2 of chapter 5 and the references cited therein.

²²⁴ For a detailed discussion of these issues, see section 2.2.2 of chapter 5 and the references cited therein.

²²⁵ Peter A Hall and David W Soskice, ‘An Introduction to Varieties of Capitalism’ in Peter A Hall and David W Soskice (eds), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (Oxford University Press 2001) 46–47.

domains of the American *liberal* market economy, regulatory interventions in any of these institutional domains should not disturb this incentive structure. Stricter regulation of labor markets in the US would be an example of an incentive incompatible regulatory intervention. Similarly, the deregulation of labor markets would be incentives incompatible in the German coordinated market economy. In this sense, the VoC approach *endogenizes* the choice of corporate governance model to *the existing institutional network* of capitalism. For the VoC approach, each country should adopt the model of corporate governance that is compatible with the incentive structure of the firm, which has been already created by the *existing institutional network* in which the corporate governance of the firm is to be embedded.

As such, VoC represents an indirect critique of the neoclassical approach that assumes that there is only one optimal model of corporate governance, to which all countries should converge.²²⁶ According to the neoclassical approach, different models of the same institutional domain (the stakeholder and shareholder value models of corporate governance in our case) would be optimal if and only if they are *functionally equivalent* in correcting relevant market and organizational failures.²²⁷ As the above discussion shows, neoclassical-new institutional economists do not consider both models of corporate governance as functionally equivalent: the predominant view supports the shareholder value model for its presumed superior efficiency, while some neoclassical-new institutional economists argue for the superior efficiency of the stakeholder model. In contrast, the VoC emphasizes that the *efficiency* of the corporate governance model is a function of its *degree of compatibility and complementarity* with the existing institutional network.

Indeed, this key difference among the neoclassical and the VoC approaches relates to the methodological outlook of each of them. The first fundamental theorem of neoclassical welfare

²²⁶ Bruno Amable, *The Diversity of Modern Capitalism* (Oxford University Press 2003) 55–56.

²²⁷ *Functional analysis* (e.g., *analysis of functional equivalence*) has become the main analytical framework of what is known as ‘comparative law and economics’, see: Ugo Mattei, *Comparative Law and Economics* (University of Michigan Press 1997) 1–2. some famous comparative corporate law studies have endorsed this analytical framework, see, e.g.: Reinier Kraakman and others, *The Anatomy of Corporate Law: A Comparative and Functional Approach* (2nd edn, Oxford University Press 2009) 3–4. The comparative functional approach used in this book and the analysis of functional equivalence are just other fancy names to the same animal that is the standard neoclassical-new institutional approach. The sole difference between these approaches and the standard neoclassical economic analysis of law is that in standard legal economic analysis, the economic approach is used for analyzing the economic efficiency of *a single* legal system. In contrast, the analysis of functional equivalence involves the use of the standard neoclassical economic approach for analysis of *different* legal systems to uncover whether these systems, though different in their formal legal norms, are equivalent in their economic effects/functions, i.e., whether they are equivalently efficient.

economics suggests that economic regulations should correct market failures; by doing so, regulations can push the real market economy to approximate the optimal allocation of resources of the abstract ideal general equilibrium economy of perfect competition, perfect information, stable preferences, fixed technologies no externalities, and no scale economies.. The first fundamental theorem of welfare establishes that competitive general equilibrium, under specific conditions, is Pareto efficient. To hold, it requires that all input and output markets (financial, labor and products markets of all goods and services produced in the economy) to simultaneously entertain these properties for the economy to allocate resources efficiently. The general equilibrium perspective is clearly *a systemic perspective* that takes into account the *interaction and feedback effects among the markets* where the prices adjust until they reach equilibrium prices that clear all markets simultaneously. Given this systemic perspective, regulators should not bother about market failures that exist beyond their regulatory jurisdiction. Financial regulators should focus on correcting the market failures of financial markets, leaving the correction of market failures of goods markets to competition and utilities regulators, and the correction of labor market failures to labor markets regulators.

The problem with this neoclassical perspective is that it assumes either an institutional vacuum or optimal institutional domains except for the institutional domain subject to analysis. That is why it has been possible for Michel Jensen to argue that shareholder value model maximizes social welfare as long as imperfect competition and externalities are corrected. He basically says that as long as the optimal models of competition and other economic regulations are in place, he needs to worry only about setting up the optimal model of corporate governance. Obviously, this is not a systemic institutional perspective because the *real* institutional network of the capitalist economy in consideration, its structure and properties are absent from the analysis. The underlying assumption is that once we design the optimal institutional domain that corrects its respective market failures, we will end up with optimal institutional network; the latter is the outcome of *the simple addition* of the optimal institutional domains. This is the standard way of how analytical deconstructive approach to institutional design proceeds: it focuses on optimal design of the parts and assumes that the whole is nothing but the sum of these parts.

In sum, the general equilibrium perspective is a systemic perspective that takes into account the interactions of socio-economic agents' demand and supply across simultaneous markets through price adjustments. General equilibrium analysis takes therefore into account some types

of agents' interactions at the agents' network, but ignores the interdependence of institutions at the institutional network.

The neoclassical proponents of shareholder value or stakeholder theory that do not take a general equilibrium perspective assume implicitly *an institutional vacuum* or *irrelevance of neighboring institutional domains* or for brevity, *irrelevance of the institutional network*. The assumption of institutional vacuum underlying the neoclassical analysis of corporate governance implies that there are no other institutions except for the institution or the institutional domain subject to analysis. Unlike the institutional vacuum assumption, the irrelevance of institutional network assumption does not assume away the existence of other institutional domains. Rather, it assumes *a weak or no interdependence* between corporate governance model and other institutional domains so that the effects of the corporate governance model can be considered *independent* from the institutional network in which this model of governance shall be embedded. Due to their micro reductionist perspective, both the neoclassical-new institutional proponents of shareholder value and stakeholder model, for example, implicitly argue that regardless of the chosen models of labor regulation, competition law, industrial policy, their advocated model of corporate governance is more economically efficient than the alternative model of corporate governance.

On the contrary, the VoC adopts a true systemic perspective over the legal institutions of capitalism. It starts with understanding the *real* institutional network of the capitalist model in question and the incentives structures created by this network. Then, it analyses the effects of any institutional domain as an *endogenous* to this *real* network. For example, for analysis of the socio-economic impacts of corporate governance model, it is necessary, as indicated by the VoC, to assess the impact of this governance model as being endogenous and thus dependent on the existing real institutional network in which this model is embedded.

Nevertheless, as far as regulatory design is concerned, the systemic perspective of the VoC has its own problems. For regulatory design purposes, approach the choice of the corporate governance model as *endogenous* to the existing institutional network is problematic; rather, we should rethink the various ways that we can restructure the existing institutional network of capitalism and the functions that each model of corporate governance can undertake under these structures. This issue is discussed in detail in the following step of the application of the approach: the systemic reformulation step.

Prior to moving to the step of systemic formulation of the primary regulatory question in the steps of the application process of the integrated and systemic approach, we can briefly summarize our findings so far. The critical insights of the knowledge-based theories of the firm and the French regulation school demonstrate that the stakeholder model seems to outperform the shareholder value model (particularly when the shareholder value model is combined with dispersed ownership structure of the firm) regarding its *non-embedded* effects on *organizational learning and macroeconomic stability*. The insights of the systemic perspective in managerial studies demonstrate that the firm should satisfy the morally grounded needs and purposes of its members and its environment; it should become *ethical/moral organization*. Hence, the institutions of corporate governance should contribute to the transformation of the firm into an ethical organization. It seems that the stakeholder model outperforms the shareholder value model in its positive *non-embedded* effects on the transformation of the firm into an ethical organization. In short, the stakeholder model seems to outperform the shareholder value model, particularly when combined with dispersed ownership structure, in relation to its *non-embedded effects* on some of the core evaluative criteria of corporate governance that is the transformation of the firm into an ethical and learning organization (i.e., the maximization of long-term *social value*). In other words, the stakeholder model *strictly dominates* the shareholder value model as far as its *non-embedded* effects are concerned.²²⁸

Nevertheless, as the systemic perspective of comparative capitalism demonstrates, what really matters is the embedded, and not the non-embedded, effects of the corporate governance model, i.e., the effects of the corporate governance model when it is embedded in a specific institutional network. For example, if each model of corporate governance is combined with a Schumpeterian model of competition law, it may turn out that the shareholder value model outperforms the stakeholder model in its positive *embedded* effects on the transformation of the firm into a learning and ethical organization. Moreover, it may turn out that the stakeholder model may still outperform the shareholder value model. However, due to institutional complementarities, the aggregate positive effects of the institutional network that includes a shareholder value model and a Schumpeterian model of competition law on the learning and ethical dimensions of the firm exceed the aggregate positive effects of the alternative institutional network that includes a stakeholder

²²⁸ For the definition and discussion of *model dominance*, an important systemic institutional design concept, see section 8.4 of chapter 6.

model and Schumpeterian competition law. Accordingly, we cannot make a *systemically informed* choice of corporate governance model for developing countries without reformulating our primary regulatory question into a systemic question that takes into account the institutional network in which the chosen model of corporate governance will be embedded. This is the task of the following section.

6. Step Three: The Systemic Reformulation of the Primary Regulatory Question

To reformulate the regulatory question systemically, we could use the systemic formulation of the VoC: which model of corporate governance should developing countries adopt given their real institutional network in which the chosen model of corporate governance shall be embedded? This VoC's systemic reformulation of the primary regulatory question would consider the neighboring institutional domains to corporate governance as constant and then investigate which model of corporate governance *fits* the existing institutional network. The problem with this systemic reformulation is that it is highly restrictive. It unrealistically assumes that the variability of the choice of the corporate governance model, and constancy of other institutional domains; in other words, the institutional domains except for the one subject to analysis are assumed to be exogenously given. However, the large-scale neoliberal reforms many developing countries undertook reveal that most of the institutional domains are indeed variable and can be changed. There are political constraints for doing so at once, but over a reasonable period in undemocratic systems such as that of most developing countries, it is reasonable to assume that the government has the power to make wide institutional changes.

Still, for specific developing countries, specific institutional domains may be hard to change. This calls for a more contextualized analysis where the scholar starts his systemic analysis by a feedback from the political sphere about the constant and variable institutional domains. Based on this, the scholar can take the constant domains as exogenously given. Given the remaining variable institutional domains that would give rise to numerous plausible institutional networks, the scholar attempts to identify the reasonable (and not the optimal) institutional network.

For the purposes of this thesis, I assume that all institutional domains are variable; this assumption enables us to establish a *baseline analysis* for developing countries. This baseline analysis needs to be *situated/contextualized* for each country in light of their peculiar social norms,

the history of their legal systems and institutions, and the specific political constraints regarding changing specific institutional domains. Doubtless, given that the stable legal principles and institutions of the legal systems of developing countries and their network of social, cultural and economic institutions, the contextualization of the baseline analysis for a specific developing country is a daunting task that this applied part does not attempt to undertake. Further discussion of the challenges of transplanting the institutional networks of developed countries in developing country is included in section 6 below.

Not only the systemic approach of the VoC is restrictive, it is also *inherently inconsistent*. When examining corporate governance, it assumes constancy of all institutional domains, except for corporate governance, but when addressing competition law, it assumes constancy of all institutional domains including corporate governance except for competition law. As a result, the VoC tends to suggest reforms that would tend to reinforce the status quo.

Subsequently, we need to develop a better systemic formulation of the primary regulatory question that overcome the limitations of the VoC's formulation. To do so, we need first to investigate the neighboring institutional domains to the corporate governance domain to have a better understanding of the institutional network in which the corporate governance model will be embedded. These neighboring institutional domains include, inter alia, competition law, industrial policy, labor regulation, financial regulation, and tax law.

The intellectual history of law and economic thought reveals numerous discussions over the merits and demerits of some of the plausible models of competition law such as the Chicago and post-Chicago models, the Schumpeterian (dynamic competition model), and the Ordoliberal model. Recently, the debate over competition law systems seems to be restricted to the (neoclassical-new institutional) post-Chicago and (Schumpeterian) dynamic models of competition law, with the proponents of each of these models develop micro and macro-arguments in defense of their preferred model.²²⁹ Similar to the neoclassical approach to corporate governance models, the neoclassical (post-Chicago) approach to competition law assumes that there is only one efficient model of competition law regardless of the chosen models of corporate governance, labor regulation, financial regulation and industrial policy (institutional vacuum or irrelevance of

²²⁹ For an overview of this debate and a discussion of the effects of each of these models of competition law on economic growth, see section 2.1.2.2 titled 'Post-Chicago and Schumpeterian Theories of Inter-Firm Relations' in Chapter 11 and the references cited therein.

other institutional domains assumption). Alternatively, it may implicitly assume that there is only one optimal model of competition law given an optimal institutional network in which this model shall be embedded, an implicit assumption finds its justification in the general equilibrium perspective of the first fundamental theorem of welfare.

Similarly, another stream of literature has been concerned with industrial policy. In response to the increase in the international competitiveness of the Japanese industry, the debate among US economists heated over the desirability of adopting industrial policy for the US in the 1980s. Industrial policy proponents attributed the increase in the international competitiveness of the Japanese industries to the Japanese sectoral industrial policies.²³⁰ The critics of industrial policy advocated *competition* as the core of industrial policy; they circulated slogans such as the best industrial policy is no industrial policy or the best industrial policy is competition.²³¹

Although this debate seems to have been settled for competition policy at that time, industrial policy, for both developed and developing countries, has recently gained wide support.²³² The industrial policy debate has thus reopened again, but it has shifted from industrial policy versus

²³⁰ See, e.g. Robert Solo, 'Industrial Policy' (1984) 18(3) *Journal of Economic Issues* 703–706. The author argues for an American industrial policy agency similar to the Ministry of International Trade and Industry in post-war Japan. Richard L Brinkman, 'The Genesis of New Industrial Policy: Equity and Efficiency' (1986) 20(2) *Journal of Economic Issues* 335–342. The author argues that the US should adopt (a research and development) industrial policy in order to overcome the sharp decline in its international competitiveness and productivity in the 1980s.

²³¹ See, e.g. Becker Gary, 'The Best Industrial Policy is None at All' *Business Week* (25 August 1985). Lavoie Don, 'Two Varieties of Industrial Policy: A Critique' (1984) 4(2) *Cato Journal* 459–460. The author argues that an industrial policy agency cannot be entrusted with allocating the investments because it lacks the information required for doing so. Only competitive market processes can efficiently guide investment decisions through price signals that can uncover the relative profitability of the sectors of the economy. *ibid* 470.

²³² Dani Rodrik, 'Industrial Policy: Don't Ask Why, Ask How' (2009) 1(1) *Middle East Development Journal* 4–7. Joseph E Stiglitz, Justin Y Lin and Célestin Monga, 'The Rejuvenation of Industrial Policy' (September 2013). The World Bank Policy Research Working Paper no. 6628, 10–13 <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2333944>. The authors argue that market failures in knowledge/learning markets provide the main economic rationale of industrial policy. Knowledge is a public good and thus markets cannot produce and disseminate it efficiently. Since the technological advances that reduce the technological gap between developing and developed countries are the main drivers of economic growth, industrial policies that target knowledge markets failure are critical to economic growth of these countries. See also: Robert H Wade, 'Return of Industrial Policy?' (2012) 26(2) *International Review of Applied Economics* 227–238. The author contends that global norms supportive of sectoral industrial policies and developmental role of the state are emerging due to the combined effect of three factors. The United States has been employing implicit sectoral industrial policy for the last three decades, low and middle-income developing countries are resorting to sectoral industrial policies, and some prominent economists of the World Bank are advocating sectoral industrial policies for developing countries.

competition policy to be sectoral (vertical) versus horizontal industrial policy.²³³ Horizontal industrial policy refers to general governmental policies that support all the firms of the economy, regardless of the sector in which they operate. They include, inter alia, technological support, some governmental benefits to the employees in times of recession, energy costs subsidization. Sectoral industrial policies are the set of policies that attempt ‘to achieve the national economic and noneconomic goals of a country by intervening in the allocation of resources among industries or sectors of the country, or in the (industrial) organization of an industry or sector.’²³⁴ In cases where these policies are not justified by correction of market failures, they may involve misallocation of resources as they replace or intervene in the functioning of market mechanism in allocation of resources or industrial organization.

Sectoral industrial policies involve that the government picks specific sectors of the economy (the petrochemicals sector, for example) and provides various forms of support: technological, financial, trade protection, export promotion, and regulatory support to this sector. As a result, investors would respond to these sectoral policies by (re)allocating their investments to this sector. In absence of these policies, investors might not have made such allocation of resources. Some industrial policies target specific firms such as Small and Medium Sized Enterprises (SMEs) or troubled industries or target research and development and thus seem to be horizontal policies because they do not discriminate directly between the sectors of the economy. However, these seemingly horizontal policies have effects similar to outright sectoral policies as they affect the sectors of the economy disproportionately.²³⁵ For example, research and development policies channel resources to knowledge-intensive sectors,²³⁶ and support for troubled industries normally targets sectors in decline.

Due to informational problems,²³⁷ inefficiency losses resulting from sectoral industrial policies’ misallocation of resources and high risk of political capture, some development

²³³ Stiglitz, Lin and Monga (n 231) 8–9. The authors argue that there is an emerging consensus over industrial policy; most scholars who reject sector specific industrial policy are still supporters of horizontal industrial policies.

²³⁴ Motoshige Itoh and others, ‘Industrial Policy as a Corrective to Market Failures’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 234.

²³⁵ Rodrik (n 231), 6.

²³⁶ *ibid.*

²³⁷ Howard Pack and Kamal Saggi, ‘Is There a Case for Industrial Policy?: A Critical Survey’ (2006) 21(2) *The World Bank Research Observer* 281–282.

economists and industrial economists reject sectoral industrial policy.²³⁸ Proponents of sectoral industrial policy make three counter-arguments. First, proponents of sectoral industrial policy argue that many governmental interventions in the economy (such as regulations, infrastructure development, or education) would confer benefits on some firms or sectors at the cost of others. These interventions, although they appear to be neutral, are implicit sectoral industrial policies.²³⁹ This does not imply that all socio-economic regulations are implicit sectoral industrial policies; rather, only the sub-set of these regulations that favors specific sectors of the economy can be considered as such. Second, due to market failures, economists reached an almost a consensus that the government should play a role in education, health care, pension systems, and macroeconomic stabilization, despite the informational and political capture problems that would permeate these governmental interventions.²⁴⁰ Instead of debating whether the government should correct market failures in these cases, economists focus on how to overcome the informational and political capture obstacles.²⁴¹ Similarly, research on industrial policy should rather focus on uncovering the conditions under which industrial policy can overcome the informational and political capture obstacles. Third, given the rise of spatially and organizationally decentralized production, the governmental intervention is needed for forming and sustaining collaborative networks among the firms (such as consortiums, joint ventures, and strategic alliances); in these cases, industrial policies are required for correcting network (and not market) failures.²⁴² Fourth, developed economies endorse strong industrial policies, although they are normally dubbed “innovation policies”. For example, over the last decade, both horizontal and sectoral industrial policies have been pursued at the European level.²⁴³ Similarly, the US has a very strong innovation/industrial policy (see below).

²³⁸ *ibid* 292–293.

²³⁹ Rodrik (n 231), 6–7. Stiglitz, Lin and Monga (n 231) 8–9.

²⁴⁰ Rodrik (n 231), 1–2.

²⁴¹ *ibid* 8.

²⁴² Andrew Schrank and Josh Whitford, ‘Industrial Policy in the United States: A Neo-Polanyian Interpretation’ (2009) 37(4) *Politics and Society* 527–531.

²⁴³ For an in-depth overview and assessment of European industrial policies, see: Julie Pellegrin and others, ‘EU Industrial Policy: Assessment of Recent Developments and Recommendations for Future Policies’ (February, 2015). Study prepared for the European Parliament's Committee on Industry, Research and Energy
<[http://www.europarl.europa.eu/RegData/etudes/STUD/2015/536320/IPOL_STU\(2015\)536320_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/536320/IPOL_STU(2015)536320_EN.pdf)>

Similar to the corporate governance and competition law literatures, the literature on industrial policy does not refer to the models of corporate governance, labor law, or financial regulation.²⁴⁴ However, competition appears prominently in the industrial policy literature. This literature has been discussing whether competition can function as an alternative to industrial policy,²⁴⁵ and recently the intersection of industrial policy and competition.²⁴⁶ However, this literature remains predominantly economic: with the exception of few studies,²⁴⁷ legal scholars and law and economics scholars have not yet engaged seriously with this literature. Further, industrial policy literature in economics as well as law and economics literature fail to analyze the interdependencies of industrial policy models and competition law systems.

Similar heated debates relevant to the choice of the models of financial regulation, labor regulation, fiscal policy, etc. exist in their relevant literatures of labor economics, labor law, financial economics, financial regulation, public finance, and fiscal macroeconomics. Similar to the above debates concerning the models of corporate governance, competition law and industrial policy, neoclassical law and economic scholars do not adopt a systemic perspective: they seek to identify the optimal model of labor regulation, financial regulation and fiscal policy, etc. regardless of the institutional network in which these (supposedly) optimal models shall be embedded. Their analysis proceeds on the basis of the strong unrealistic assumptions of institutional vacuum or irrelevance of the institutional network.

Given the numerous neighboring institutional domains to the corporate governance domain, we can attempt to develop a systemic reformulation of the primary regulatory question, which avoids the strong assumptions of institutional vacuum and institutional irrelevance of the neoclassical approach and the restrictive systemic formulation of the VoC. As Part II of the thesis demonstrated, we need first to identify the *institutional network* that shall be the *unit of our*

²⁴⁴ As the below classification of industrial policies in US, post-war Japan, and post-war Germany demonstrates, industrial policies may include some labor or financial policies. Despite this overlap between industrial policy and the institutional domains of finance and labor, the industrial policies literature does not analyze the interdependencies between industrial policy models and these institutional domains.

²⁴⁵ See, e.g., Don (n 230), 470. The author argues that the price signals of the *competitive* market processes can guide efficiently firms' investment decisions. In contrast, Solo argues that competition law is an inefficient and insufficient industrial policy instrument. Solo (n 229), 697–701.

²⁴⁶ See, e.g., Philippe Aghion and others, 'Industrial Policy and Competition' (May, 2012). NBER Working Paper no. 18048 <<http://www.nber.org/papers/w18048.pdf>>.

²⁴⁷ Most legal studies that address industrial policy and its relation to competition law focused on the legal framework of the post-war Japanese industrial policy. See section 2.1 on post-war Japanese industrial policy in chapter 11 and section 5 of chapter 12 and the references cited therein.

analysis and design in which the corporate governance model *is embedded*. Second, we need to identify the type of systemic analysis of the institutional network that we shall conduct: consistency or complementarity analysis. By doing so, we can generate the systemic formulation of the primary regulatory question.

In order to identify the institutional network that will be the unit of our design, we have two alternatives. First, we can identify the institutional domains that are strongly interdependent (e.g., complementary) with the institutional domain of corporate governance. For example, the VoC's literature outlined above demonstrates the existence of strong complementarities among corporate governance, labor law, competition law, and financial regulation in some capitalist economies. One may be tempted to take the institutional network that includes these institutional domains as our unit of analysis. However, this is problematic for two reasons. First, we have discovered ex-post complementarities among these institutional domains, but they remain products of *intentional human design*. By taking this institutional network as our unit of systemic analysis, we ignore the vast possibilities of governing the capitalist economy by using starkly different institutional networks that embed different forms of complementarities. In a sense, we are closing the very door of institutional innovation that systemic perspective opens up. If we are trying to recommend legal reforms for a specific developing country, we must start from analyzing its existing institutional network and the interdependencies among its institutional domains in order to develop reforms that *fit* the existing institutional network, otherwise, we risk the failure of these reforms.²⁴⁸ However, we need not be concerned with this issue because we have already assumed the complete variability of the institutional domains of the capitalist economies of developing countries. Second, as already argued in chapter 5, capitalist economic system is a two-layered network of agents and institutions; hence, institutional networks are not distinct systems; they are *parts* of existing socio-economic systems. From a systemic perspective, we cannot isolate the institutional network from the socio-economic agents' network in the economic system; for identifying the institutional network in which corporate governance is embedded, we need to take into account of the agents' network.

²⁴⁸ The fit of the transplanted foreign legal institutions with the domestic legal system is an important condition for the success of legal transplant, see: Daniel Berkowitz, Katharina Pistor and Jean-Francois Richard, 'The Transplant Effect' (2003) 51(1) *The American Journal of Comparative Law* 179–181. *ibid* 188.

This brings us to the second alternative for identifying the institutional network in which corporate governance is embedded. To identify this network, we need to identify the *socio-economic sub-system* that we are designing this network for its governance. Taking the socio-economic sub-system as our reference system does not imply that we assume institutional vacuum that we are going to fill in with an institutional network. Rather, we assume that this socio-economic system is a *primitive* capitalist system that has a primitive institutional network consisted of the social norms and the main legal institutions that play a constitutive function of the major economic institutions of capitalist market economy. This primitive institutional network, which plays primarily a constitutive function, includes, inter alia, the legal institutions of property rights and the legal personhood and limited liability of corporations.²⁴⁹ In this case, I take this primitive (constitutive) institutional network as exogenously given while considering the rest of legal institutions, most of which are regulative, to be variable. This implies that almost all the legal institutions of socio-economic regulations are variable.²⁵⁰

Still, how can we identify the *socio-economic sub-system* to be governed by *the institutional network that embed corporate governance model*, which we intend to *design*? Here, we have two alternatives: either the firm(s) or the market(s). As to *markets* as our sub-system, the well-established neoclassical general equilibrium representation of the capitalist system depicts the latter as an interdependent set of input markets (labor and capital markets) and output markets (product markets). From a systemic perspective, each of these markets constitutes a *sub-system* of the socio-economic capitalist system. Input markets provide the inputs of production, namely, labor and capital to the product market. Product markets transform the inputs into outputs, which are sold on the product market to consumers. Product markets have two sides: supply and demand. The supply side refers to the production process of the outputs whereas the demand side refers to the forces and institutions that govern the demanded quantities by consumers.

²⁴⁹ Simon Deakin and others, 'Legal Institutionalism: Capitalism and the Constitutive Role of Law' (April, 2015). The University of Cambridge Faculty of Law Legal Studies Research Paper no. 26/2015, 7–20 <http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2601035>

²⁵⁰ Doubtless, we can treat these primitive institutional networks as variable, but this may involve creating socio-economic systems that depart from capitalism. For simplifying the analysis, we take the primitive institutional network of the capitalist system as given. Varying the constitutive (primitive) institutional network of the economic system is a fascinating research project for the future, however.

In contrast, Lazonick argues that the firm, and not (perfectly competitive) markets, should be the central unit of analysis of capitalist economies.²⁵¹ This implies that heterogeneous interactive firms (firm's network or parts of them) become our sub-system to be governed by the institutional network that embeds the corporate governance system. In the same vein, the VoC literature takes a *representative firm* as a unit of analysis and thus simplifies the sub-system governed by the institutional network that includes corporate governance models.²⁵²

To reconcile these positions, we conceptualize markets as the network of interacting firms and other economic actors (e.g., workers and consumers) where their interactions can be mediated by price mechanisms, strategic interaction, or cooperative behavior. This conceptualization of the market is broader than the traditional concept of a neoclassical market where price signals are the major coordinating mechanisms of economic actors. This broader conceptualization enables us to use *the markets as our sub-system* while placing *the firms' network* at the center of our analysis. Particularly, the two-level agents and institutional network of each market determines the dynamics and evolution of that market/sub-system of capitalism. The dynamics and evolution of each sub-system/market depend on the interactions of the socio-economic agents operating in each market; the behavior of these agents and their interactions in each market in turn depend on institutional network of the market.²⁵³

Corporate governance of non-financial firms is one of the main institutional domains in the institutional network that governs the supply side of the product markets. Other institutional domains in this network include, inter alia, competition law and industrial policy. Subsequently, the institutional network governing the supply side of product market seems to be the best candidate as our unit of analysis and design.

However, this would be true if and only if the supply side of product markets is not interdependent with the demand side of product market, and if product markets are not interlinked with labor and financial markets. If this were the case, corporate governance would not have any socio-economic effects on the functioning of the demand side of the product market and financial and labor markets, and the latter and their institutional networks would not have any effect on the supply side of the product market or the effects of corporate governance institutions on firm's

²⁵¹ Lazonick (n 83) 3–5.

²⁵² Hall and Soskice (n 224) 6.

²⁵³ See the relevant discussion of these issues in chapter 5 and the references cited therein.

productivity. However, these markets are interdependent via numerous channels. Changes in the supply or demand of a single market feed into changes in other markets, which are coordinated through price mechanism. For example, lack of access to finance or raw materials has devastating negative effects on the supply side of product markets.

Similarly, the effects of the institutional network of one market depend on the effects of institutional networks of other markets because these institutional networks share the *firm* as their central subject of regulation. They are hardly decomposable. Indeed, if the supply side of product market were independent of the demand side as well as the input markets, then, the interdependence of the effects of the its institutional network with that of the network governing the input markets and the demand side would *recouple* the supply side with the demand side and input markets through the institutional interdependencies linkage.

Given this interdependence of markets and their institutional networks, we cannot consider the supply side of the product market as our system because the functioning of this sub-system depends on the functioning of the demand side of product market as well as the functioning of the input markets. For example, some scholars consider corporate governance to be an element of the financial system due to its strong interdependencies with the elements of the financial system.²⁵⁴ Doubtless, corporate governance belongs to the institutional network that governs the supply side of the product market, but the supply side seems to be strongly interdependent with the demand side and the input markets to prevent us from considering it a distinct system. The question becomes the following: *how can we determine the boundary of the system that includes the supply side of product markets for which we shall design an institutional network to govern?*

This is one of the most vexing problems in systemic thinking: the boundary of the (open) system problem. As chapter 5 shows in detail, systemic thinking attempts to overcome the limits of reductionism and analytical thinking by analyzing the system as a whole; for doing so, systemic perspective examines the *interactions and interdependencies* among the parts of the system. All the parts that are interdependent and interactive with other parts of the system so that if excluded, the behavior, structure, or evolution of the system would differ in non-additive way (non-

²⁵⁴ Hackethal, Schmidt and Tyrell (n 2), 434–435. Reinhard H Schmidt and Marcel Tyrell, ‘What Constitutes a Financial System in General and the German Financial System in Particular?’ in Jan P Krahn and Reinhard H Schmidt (eds), *The German Financial System* (Oxford University Press 2004) 22.

linearly)²⁵⁵ should be included in the analysis and design of the system. Without including these components into analysis, their non-linear interactions and interdependencies shall be excluded as well. However, how can we know that specific parts of the system are non-linearly interdependent or interactive with other parts of the system? In other words, how can we determine the boundary of the system?

To address the boundary problem, systemic thinking indicates that the analysis should start with identifying the system's boundary to differentiate it from its environment.²⁵⁶ System boundary is somehow artificial artefact as different (socio-economic) systems can be highly interconnected,²⁵⁷ however, system boundary implies that the variables constituting the system are more interactive and interdependent than the variables constituting different systems.²⁵⁸ In other words, systems are open and interdependent, but the relations among them are *weaker* than that among the components of each system.²⁵⁹

The empirical studies and theoretical models that demonstrate strong interdependencies among the variables²⁶⁰ indicate that these variables may belong to the same system. Still, we cannot know a priori the intensity of interaction among the variables as long as we follow a reductionist method for analyzing their interdependencies while holding other crucial variables constant. Therefore, we must *experiment* with the system by including new components/variables and check whether the behavior of the system shall change non-linearly. If it does not, then, this part is fragmentable/decomposable from the system and can be analyzed in separation of the system; if not, then, this part is integral to understanding the system. If we are able to include all the components that are integral/central to understanding the system, we have identified the boundary of the system correctly.

²⁵⁵ Non-linear interactions among the components of the system, which take the form of institutional complementarities in the context of institutional analysis, is one of the central justifications for using systemic analysis, otherwise, reductionist analysis would be sufficient for understanding the system. Melanie Mitchell, *Complexity: A Guided Tour* (Oxford University Press 2009) 22–27.

²⁵⁶ Lynn M LoPucki, 'The Systems Approach to Law' (1997) 82 Cornell Law Review 497. Lars Skyttner, *General Systems Theory: Problems, Perspectives, Practice* (2nd edn, World Scientific 2005) 64.

²⁵⁷ LoPucki (n 255), 501. Donella H Meadows, *Thinking in Systems: A Primer* (Earthscan 2009) 95.

²⁵⁸ Herbert A Simon, 'The Architecture of Complexity' (1962) 106(6) Proceedings of The American Philosophical Society 469. *ibid* 473–474. LoPucki (n 255), 499. Skyttner (n 255) 64.

²⁵⁹ Piero Mella, *Systems Thinking: Intelligence in Action* (Springer 2012) 24.

²⁶⁰ See, e.g., Aghion and others (n 245). See also the analysis of the embedded effects of post-war Japanese corporate governance, competition law, and industrial policy and the references cited therein in chapter 11.

To address the interdependencies that exist among the system and the systems in its environment, systemic analysis includes the *environment* of the system into the analysis of the system. However, only what is conceived to be the *most crucial variables* (inputs) from neighboring systems (i.e., the environment of the system) that would affect the functioning of the system subject to analysis should be included.²⁶¹ Here, systems thinkers have to make a subjective judgment regarding what to include and exclude from the *environment* of the system. This seems to be similar to the subjective judgment made by reductionist micro-economists when excluding competition law and industrial policy from their investigation of the appropriate models of corporate governance. This shows that the difference between analytical reductionist and systemic thinking is one of *degree*: both approaches have to *reduce* the system and its environment at one point, but systemic approaches try to capture the crucial variables *inside the system and its environment*. In other words, systemic thinking attempts to capture *the right* degree of reductionism that gives us a good understanding of the system subject to analysis. Still, due to limited capacities of human beings, systemic thinking cannot perfectly transcend this sin of reductionism.

Despite this similarity, the subjective judgment made by systems thinkers is different in two fundamental aspects. First, this judgment is made explicitly, while acknowledging the tentativeness of the systemic analysis for being contingent on the validity of this subjective judgment. Second, the validity of this subjective judgment can be *tested systemically*. Other systems thinkers can replicate the analysis while including some of the excluded variables from the system's environment to check whether the behavior, structure, or evolution of the system will change in a non-linear way.

Given the strong interdependencies among the labor, financial and product sub-systems/markets, ideally, we would consider them to be our system that we would focus on its institutional network, while taking the environment to include social and bio-physical systems in which the capitalist system is embedded. Particularly, the VoC's literature demonstrates that even if these sub-systems were weakly interdependent, the institutional domains governing these sub-systems tend to be strongly interdependent because they share the governance of the firms' network. In other words, these markets (sub-systems) recouple through the institutional linkage, even if they were uncoupled in absence of these institutional networks. As the above-mentioned

²⁶¹ Skyttner (n 255) 63–64. LoPucki (n 255), 505.

labor-related conditions of a viable learning process demonstrate, many institutions of labor law seem to be strongly interdependent with corporate governance institutions.

However, the systemic analysis of the institutional network governing the capitalism (input and output markets and both supply and demand sides of the output market) is very difficult to analysis. We can simply the analysis further by using a systemic modeling trick according to which we focus on the analysis of a sub-system of this system, while treating other sub-systems as its environment. By doing so, we pay more attention to the interaction among the variables constitutive of this sub-system, without ignoring completely their interaction with the other sub-systems. Clearly, this simplification of this systemic analysis increases the tentativeness of its results.

Consequently, we can therefore define the boundary of our system to be the supply side of the product markets. Given this boundary, we can focus on the analysis of the institutional network governing this system, while taking the institutional domains of *labor and financial markets* to be the *environment* of our institutional network. The institutional domains constitutive of the institutional network of the supply side of product markets include, inter alia, corporate governance, competition law, and industrial policy. Accordingly, the regulatory question of the choice of corporate governance model in developing countries can be *systemically reformulated* to be *which constellation of models of corporate governance, competition law and industrial policies would achieve the desirable systemic objectives of the regulatory governance of the supply side of product market in developing countries.*

The way we have determined the system subject to analysis and its environment implies that we would focus less on labor and financial regulations despite their strong interdependencies with corporate governance. This demonstrates the tentativeness of the analysis in this applied part that calls for broader systemic analysis that engages seriously with these institutional domains by expanding the boundary of our system. Further research should replicate the analysis conducted here while expanding the boundary of the system. If the most crucial aspects of labor and financial regulations have been taken into account in the analysis of this applied part, the broader systemic analysis would then confirm most of the conclusions of this part. Indeed, one of the best tests for whether we have chosen the right boundary of the system and the crucial variables from its environment is that our systemic analysis holds despite expanding the boundary of the system or the included variables from the environment.

The above systemic formulation of the regulatory question is still complex. Given the various models of corporate governance, competition law and industrial policy, a large number of possible constellations/institutional networks exist. These constellations, for instance, could include shareholder value governance along with Schumpeterian competition and sectoral industrial policy, or stakeholder model of corporate governance combined with Chicago model of competition law and horizontal industrial policy, etc. Mathematically speaking, if we assume that there are only two models of corporate governance (stakeholder vs stakeholder), competition law (Schumpeterian vs post-Chicago) and industrial policy (sectoral vs horizontal), then, there would be *eight* possible institutional network structures. Tables 8.1 and 8.2 illustrate these possible network structures/constellations.

Corporate Governance Models	Competition Law Models	Industrial Policy Models
Stakeholder	Schumpeterian	Sectoral
Shareholder	Post-Chicago	Horizontal

Table 8.1: Main models of corporate governance, competition law, and industrial policy

	Corporate Governance Model	Competition Law Model	Industrial Policy Model
1	Stakeholder	Schumpeterian	Sectoral
2	Stakeholder	Schumpeterian	Horizontal
3	Shareholder Value	Post-Chicago	Sectoral
4	Shareholder Value	Post-Chicago	Horizontal
5	Stakeholder	Post-Chicago	Sectoral
6	Stakeholder	Post-Chicago	Horizontal
7	Shareholder Value	Schumpeterian	Sectoral
8	Shareholder Value	Schumpeterian	Horizontal

Table 8.2: The possible eight constellations of regulatory governance of the supply-side of the product market (i.e., the institutional networks of the supply side of product markets), assuming that there are only two plausible models of corporate governance, competition law, and industrial policy.

As already argued in chapter 6, according to systemic design concept of *reasonable institutional design*, the objective of institutional network design is not to identify the optimal

network, but rather an institutional network that reasonably achieves our normative objectives. Once we define our task to be the identification of one reasonable institutional network, we can reduce the complexity of systemic institutional analysis through one of two ways. The first is to restrict the analysis to the institutional networks that include the major models of corporate governance, competition law, and industrial policy in table 8.4.1. By doing so, we can reduce the number of institutional networks that we need to compare to eight. Once we find an institutional network among these eight, which reasonably achieves our predetermined objectives, then, we would not need to continue to analyze the other institutional networks, unless, we seek to find a better institutional network. This analysis would still be highly complex because it may involve an assessment of the extent to which each of the eight institutional networks would achieve the objectives of regulatory governance of the supply side of products markets, if for example, none of the first seven institutional networks found to belong the set of reasonable networks. More problematically, since some of these institutional networks have never been adopted by any country, these institutional networks can be assessed theoretically, but *not empirically*.

A second alternative that would reduce the complexity of the systemic analysis of the institutional network of the supply side of the product markets is to restrict the analysis to some existing institutional networks such as those governing the supply side of product markets in US, post-war Japan and post-war Germany.²⁶² This would reduce the institutional networks that we need to compare to three networks. Further, if we find out that one of these institutional networks belongs to the set of reasonable networks, we have then the option not to continue the analysis of the remaining institutional networks. However, systemic analysis of more institutional networks allows us to identify better institutional networks in the set of reasonable networks, understand better the functioning of each of these networks and reduce the tentativeness of the systemic

²⁶² Post-war period refers to roughly the thirty years starting from the end of World War II in 1945 until the mid-seventies because starting from the late 1970s and early 1980s, the legal institutions of the Japanese and German models of capitalism, which were relatively stable until mid-1970s, began to undergo important transformations. For instance, the Japanese Antimonopoly Law was revised in 1977 and Japanese Fair Trade Commission began to shift its practice from weak to moderate enforcement of the Antimonopoly Law. Similarly, the economic and legal institutions of both the stakeholder models of German and Japanese corporate governance began to undergo important changes in the 1980s and early 1990s. These changes included the increased role of takeovers and the disciplining power of capital markets, and the gradual shift to profit maximization as a corporate objective in some major firms, which has been strengthened by a shift from engineering expertise to finance expertise of the hired top management of some of the large firms in these economies.

analysis, and design better institutional network by combining some of the institutional domains of the analyzed institutional domains.

Several reasons justify the choice of the institutional networks of these three jurisdictions. First, because of the extensive theoretical and empirical literature in development studies and comparative capitalism on the legal and economic systems of these national economies, we have a broad informational basis for conducting the systemic analysis of the relevant institutional network in each of them. Second, since the focus of the applied part is on choosing corporate governance system for developing countries, the compared jurisdictions should be relevant to informing their development process. Because of being an ideal example of *Asian developmental states*, the institutional network of post-war Japan is an important legal system to examine for informing legal reform in developing countries. Similarly, the significant influence that the neoliberal orientation of the US model has enjoyed on legal reforms in developing countries, via numerous channels such as the prescriptions of the IMF and the World Bank and American legal assistance to developing countries, justifies a closer examination of this model.

By contrast, the institutional network of post-war Germany does not seem to be as relevant for developing countries as post-war Germany retained most of its human capital and technological capacity needed for economic growth. Post-war German economy was already an advanced economy that was subject to a severe shock of the world-war II; its economy was not undergoing a *development process*, but rather a period of *adaptation* to the shock. Still, the post-war German model of capitalism has been an ideal-type model for a coordinated market economy that has succeeded over more than six decades in sustaining economic growth, international competitiveness, somehow fair distribution, protection of the workers, a strong welfare state, and participatory democratic governance in a number of spheres of its economy such as wage-setting and corporate governance spheres. Given these peculiarities, the institutional network (legal system) of the post-war German model may carry important lessons for developing countries that have not yet been explored.

More importantly, unlike the Japanese model of capitalism that relies heavily on informal communication networks and social norms,²⁶³ the role of social norms was less pronounced in the

²⁶³ See chapter 11 for an analysis of the Japanese capitalist model and the references cited therein. See also chapter 12 on how developing countries can use legal institutions for partially substituting for these social norms in the regulation of both industrial policy and corporate governance.

German model. The German capitalist model seems to replicate functionally Japanese social norms with formal law. For example, both countries had a stakeholder model of corporate governance, but the role of legal norms (e.g., co-determination principle) in creating the stakeholder model surpasses its role in the Japanese context.²⁶⁴ The legal institutions constitutive and supportive of the German model of capitalism allow the legal scholars of developing countries to envisage a myriad of innovative legal institutions that facilitate the transplant of some institutional domains of the Japanese developmental state model despite their lack of the social norms that support the functioning of these domains.

Nevertheless, the examination of the institutional networks of these three jurisdictions is not sufficient for informing developing countries adequately of possible institutional networks for governing their product markets. Although post-war Japan may give developing countries a better understanding of the institutional networks governing the supply side of product markets in Asian developmental states, the analysis of the institutional networks of South Korea and Taiwan are still needed because they share most of their initial socio-economic political and legal conditions with developing countries.²⁶⁵ Further, despite their broad similarities, the differences in the legal systems of these Asian economies had a differential influence over their developmental path.²⁶⁶ Particularly, when taking a systemic perspective, some of these differences might turn to be marginal, but some of them, through the powerful effects of complementarities, may have constituted distinct systemic forces/logics underlying the functioning of the economies of these countries. Moreover, the institutional networks of what is called new developmental states such as Brazil are highly relevant for developing countries.²⁶⁷ Finally, developing countries should not ignore the institutional networks of China and India, despite the large dissimilarities among their socio-economic and political conditions and those of China and India as the latter are important

²⁶⁴ See section 2.3 on corporate governance in post-war Japan in chapter 11 and the references cited therein. See also the discussion on the way that developing countries may endorse the stakeholder model of corporate governance despite they lack the strong social norms that support this model of corporate governance in section 4 on corporate governance in chapter 12.

²⁶⁵ Yong-Shik Lee, 'Call for a New Analytical Model for Law and Development' (2015) 8(1) *Law and Development Review* 30–31.

²⁶⁶ Ohnesorge, John K. M. 'Developing Development Theory: Law and Development Orthodoxies and the Northeast Asian Experience' [2007] *University of Pennsylvania Journal of International Economic Law*, 230.

²⁶⁷ See section 2 of chapter 11 for a brief discussion of the differences between Asian developmental states and what is dubbed as the 'new developmental states' in law and development literature and see the references cited therein.

repertoire of lessons for legal reform that is supportive of socio-economic development. Due to time and space limits, I confine myself to the institutional networks governing the supply side of product markets in US, post-war Japan and post-war Germany, while leaving the highly needed extension of this applied part to the examination of the *institutional networks of product markets* of South Korea, Taiwan, China, India and Brazil to future research projects. Interestingly, we should not expect the institutional networks of these countries to correspond to any of the idealized eight possible constellations in table 8.2 because they might have their own distinct systems (institutional sub-networks) of corporate governance, competition law, or industrial policy that does not fit the idealized dualities outlined in this table.

By taking the institutional network of the product markets in US, post-war Japan, post-war Germany as our unit of analysis, we can thus systemically reformulate our primary regulatory question concerning choice of corporate governance model to become as follows. Which institutional network of the institutional networks governing the supply side of product market in US, post-war Germany, post-war Japan is inherently *consistent and complementary* in achieving *the desirable objectives* of product markets governance in *developing countries*? To simplify the analysis further, I will focus on *the consistency rather than complementarity analysis* of these institutional networks, leaving the more complex and daunting analysis of complementarities to further research projects.

In sum, the systemic perspective has transformed a standard regulatory question such as choice of the model of corporate governance or competition law or industrial policy in developing countries into a question of assessment of the consistency of American, post-war German and post-war Japanese *models of governance/institutional networks* of product markets. The objective of this assessment is to determine which model is inherently consistent and more suitable for achieving the objectives of regulatory governance of the supply side of product markets in developing countries. In order to reach this simplified, though still complex, systemically reformulated question, we had to make numerous simplifications. This opens the door for a wide range of further research projects that investigate the institutional networks of market economies without these simplifications. The systemic reformulation of the regulatory question stage of the integrated and systemic law and economics approach has thus been completed. We are now in a good position to move to step four of the application of the proposed approach by investigating the sub-questions required for examining our systemically formulated regulatory question.

7. Step 4: Sub-Questions Required for Addressing the Systemic Formulation of the Primary Regulatory Question

In order to address the systemically formulated regulatory question, we need first to classify the models of corporate governance, competition law, and industrial policy adopted in US, post-World War II Japan and Germany²⁶⁸ (the classification or the characterization Question). Second, in order to assess the consistency of the American, post-war Japanese and post-war German institutional networks of the supply side of product markets, we need to develop criteria for assessment this network. This represents simultaneously both the first step in the four-step process of consistency analysis of institutional networks developed in chapter 6²⁶⁹ and the three first steps in the systemic process of designing consistent institutional networks (see figure 6.1 in chapter 6). Third, by following the remaining three-step of the consistency analysis process, we complete the consistency analysis of each of these institutional networks with respect to each of these evaluative criteria; this completes step 4 in the process of designing consistent institutional networks, namely, consistency analysis of real institutional networks (see figure 6.1 in chapter 6). Then, by following the systemic institutional design concepts developed in chapter 6 (steps from 5 to 8 in figure 6.1 in chapter 6), we can suggest a consistent and reasonable institutional network for governing the supply side of product markets in developing countries; this network will include the desirable model of corporate governance that developing countries are recommended to endorse. This answers *systemically* our primary regulatory question (i.e., the choice of corporate governance model for developing countries). In sum, the four sub-questions that we need to tackle in order to address our systemically formulated question are as follows:

a) The Classification Question: here we need to provide a characterization of the models of corporate governance, competition law, and industrial policy in the three jurisdictions.

b) The Normative Basis or Regulatory Objectives Question: here, we develop the *normative framework* for assessing the institutional networks of product markets in *developing countries*? The following two chapters 9 and 10 shall address this sub-question. We derive from this

²⁶⁸ For brevity, I omit sometimes the adjective “post-war” when referring to the post-war German and post-war Japanese models. Hence, when I intend to refer to the current German or Japanese models, I will mention this explicitly.

²⁶⁹ See section 7 in chapter 6.

normative framework the assessment criteria of the consistency of the compared institutional networks.

c) The Consistency Assessment Question: Based on these assessment criteria, we examine the *consistency* of the compared institutional networks of US, Germany, and Japan. By following the four-step process of consistency analysis outlined in section 7 of chapter 6, chapter 11 conducts this consistency analysis.

d) Given the assessment of the consistency of compared institutional networks undertaken in (c), we then seek in chapter 12 to design an *institutional network* that is *consistent and reasonable* for governing the supply side of product markets in developing countries. To do so, we use the systemic institutional design concepts developed in section 8 of chapter 6. Further, given the contextual economic, social, and legal conditions of developing countries, we suggest some context-specific legal frameworks for each of the institutional domains that form the proposed consistent institutional network. For example, we suggest that for a stakeholder model of corporate governance to function properly in developing countries, the legal framework that implements the stakeholder model of corporate governance in developing countries should be different from that of Germany. Then, we provide a brief outline of the main features of this legal framework. In the process of designing a consistent institutional network of product markets in developing countries, we identify the desirable models of corporate governance, competition law, and industrial policies to include in this institutional network. This answers *systemically* our primary regulatory question concerning the choice of corporate governance model for developing countries.

In the following section we address the classification sub-question (a), while tackling sub-questions (b), (c), and (d) in the following chapters.

8. The Classification of the Corporate Governance, Competition Law, and Industrial Policy Systems in Post-War Germany, Post-War Japan and the US

We can classify the models of corporate governance, competition law, and industrial policy by drawing on both doctrinal legal research and relevant economic and non-economic schools of thought. Doctrinal analysis helps us identify the main distinct legal institutions constitutive of these

models such as the dual board structure and the co-determination principle in German corporate governance, for example.²⁷⁰

However, doctrinal analysis is insufficient for classifying the model of each institutional domain because each of these models (e.g., stakeholder model of corporate governance) is not solely consisted of legal institutions; some of the *stable economic equilibriums* of these systems such as relationship banking in the case of German corporate governance have become *institutionalized*.²⁷¹ They function as economic institutions; some of these institutions acquire a *normativity* that guides the behavior of relevant agents, and thus are perceived by them as exogenous rules of the game.²⁷² The Japanese management practice of balancing the interests of the firm's shareholders and employees is a good example of normative economic institutions. This practice reflects a *normative understanding* shared among the firm's stakeholders; according to this shared understanding, the management should be balancing these interests.²⁷³ This normative practice emerges out of non-normative economic institutions such as the main bank system and Keiretsu.²⁷⁴

Other economic institutions such as the pattern of ownership structures of the firms are somehow problematic: they do not function as institutionalized normative rules that guide the behavior of relevant agents. Still, these institutions (e.g., ownership structures) affect the chosen strategies by the agents; they affect behavior *indirectly*. Based on this, we can distinguish between economic institutions that affect behavior directly (normative economic institutions) and those that affect behavior indirectly (non-normative economic institutions). In sum, the institutions

²⁷⁰ For example, Jürgens and his collaborators argue that the main economic and legal institutions constitutive of the German corporate governance model are the co-determination principle, the dominant role of banks on the supervisory board and the central role of the management that does not place shareholder value maximization as the top priority of its policy objectives. See: Jürgens, Naumann and Rupp (n 1), 59–66.

²⁷¹ As already mentioned in chapter 5, Aoki conceptualizes “institutions” as summary representation of the stable equilibriums of the games played by socio-economic agents, see: Masahiko Aoki, *Toward a Comparative Institutional Analysis* (The MIT Press 2001) 26–27.

²⁷² For a practice to acquire normativity, three conditions should be satisfied. The relevant actors have common understanding regarding the rightfulness of this practice, most of these actors act according to this practice, and the nonconforming actors are condemned. Neil MacCormick, *Institutions of Law: An Essay in Legal Theory* (Oxford University Press 2007) 14–18.

²⁷³ See section 2.3 on post-war Japanese corporate governance in chapter 11 and the references cited therein.

²⁷⁴ See section 2.3 on post-war Japanese corporate governance in chapter 11 and the references cited therein.

constitutive of the corporate governance, competition law, and industrial policy systems are of two types: economic and legal, and the economic institutions are of two types: normative and non-normative.

The distinct types of the institutions constitutive of the systems of corporate governance, competition law, and industrial policy result in two serious problems. First, this poses a serious challenge to legal transplant of any of these systems in developing countries because economic equilibriums that have been institutionalized cannot be transplanted. In absence of these economic institutions, individuals and firms in developing countries would respond differently to the transplanted legal institutions. The second problematic implication of the dual legal and economic nature of the institutions constitutive of the models of the institutional domains, which relates also to the transplant problem, is *the circular causal relationships (i.e., closed feedback loops)* that link legal and economic institutions. For example, have the economic institutions of German corporate governance sustained the legal institutions and thus prevented any process of legal change from taking place in the political sphere, or have the legal institutions that do not provide sufficient protection to minority shareholders given rise to the economic institutions of block-holdings and cross-shareholdings? It seems that a closed feedback loop connects both legal and economic institutions of German corporate governance so that the answer to both questions is in positive. The knowledge of the existence of this positive closed feedback loop is insufficient for guiding the decision of transplanting a specific legal system in developing countries. These countries lack some of the economic and legal institutions of the German model; if we transplant the legal institutions, we cannot know whether these institutions would give rise to the economic institutions. Positive feedback loops between the economic and legal institutions are observed in the German, Japanese, and American models *ex-post*, but we do not know whether introducing the legal institutions of any of these models in developing countries would result in the economic institutions that would sustain and complement the transplanted legal institutions in a closed-feedback loop *ex-ante*. In chapter 12, we will attempt to develop context-specific models of the institutional domains of corporate governance, competition law, and industrial policy to overcome, at least partially, these problems of outright legal transplant.

After identification of the main legal and economic institutions constitutive of these models, we need to go through relevant schools of thought and theories to establish the main ideal type models of competition law, corporate governance and industrial policy associated with these

schools of thought. We can then classify the real models of the institutional domains of our compared institutional networks according to their *proximity* to the ideal type models of relevant schools of thought. We need not go through this cumbersome process, however; the relevant literature on corporate governance, competition law, and industrial policy has already classified these models, hence, we can rely directly on the findings of this literature.

Subsequently, we can provide the following initial classification of the compared models. The post-war German corporate governance was *a stakeholder model of corporate governance* implemented through an inside control model.²⁷⁵ Hackethal, Schmidt and Tyrell argue that the main stakeholders of the German stakeholder model include blockholders, banks (mainly, the Hausbank), employees, and management. This excludes the minority shareholders and institutional investors who are not associated with the banks, as well as the interests of the environment from the governance coalition of the German corporation.²⁷⁶ This governance coalition has the common objective of the long-term stable growth of the firm and not short-term shareholder value maximization.²⁷⁷

As to post-war German competition law, it went through three stages. In 1947, a decartelization law, modelled upon the US antitrust law at that time, has been introduced.²⁷⁸ The law has mainly targeted the prohibition of cartel agreements;²⁷⁹ this law succeeded in preventing the continuation of pre and during-war cartelization practices of large German firms.²⁸⁰ For adopting a German model of competition law, political parties and business interested entered into almost a decade of public debate; one side of the public debate argued for an Ordo-liberal model of competition law, while the other side, mainly business interests, advocated a relaxed model of competition law.²⁸¹ The German competition law enacted in 1958 (the “German competition law”) reflected a compromise that was strongly influenced, but not dominated, by the Ordo-liberal model of competition law.²⁸² Four main Ordo-liberal influences on the German competition law are

²⁷⁵ Hackethal, Schmidt and Tyrell (n 4), 665–666.

²⁷⁶ *ibid* 665.

²⁷⁷ *ibid* 666.

²⁷⁸ David J Gerber, *Law and Competition in Twentieth Century Europe: Protecting Prometheus* (Oxford University Press 1998) 268.

²⁷⁹ *ibid* 269.

²⁸⁰ *ibid*.

²⁸¹ *ibid* 271.

²⁸² *ibid* 276–277. David J Gerber, ‘Constitutionalizing the Economy: German Neo-liberalism, Competition Law and the “New” Europe’ (1994) 42 *The American Journal of Comparative Law* 65.

noteworthy. First, the objective of the German competition law was to protect the rights and freedoms of competitors and consumers, namely, the firms' freedom to compete and consumers' freedom to choose;²⁸³ the objective was not to maximize total or consumers' welfare.²⁸⁴ Second, the 1957 competition law established a (semi)-independent competition agency in charge of enforcement of competition law (the Federal Cartel Office (the "FCO")), which has transformed, under the influence of Ordo-liberal ideas, into a de facto independent agency.²⁸⁵ Third, this competition law provided for a per se prohibition of cartels.²⁸⁶ Forth, the FCO, legal academics, and courts were largely relying on the Ordo-liberal model of competition law for the interpretation and enforcement of the German competition law.²⁸⁷ Still, this competition law deviated from the Ordo-liberal model of competition law. First, it included explicit exemptions from the per se prohibition of cartelization, but due to the strong influence of Ordo-liberalism, these exemptions (e.g., import cartels²⁸⁸), except for rationalization/crisis cartels and cooperative agreement among SMEs, were rarely used.²⁸⁹ Further, the German competition law enacted in 1958 did not provide for a control of mergers, i.e., mergers that may result in highly concentrated markets were not subject to a pre-notification or pre-approval system.²⁹⁰ In 1973, two important reforms of the competition law took place; the former introduced a merger control and thus introduced a further

²⁸³ Gerber, *Law and Competition in Twentieth Century Europe* (n 277) 286. Gerber, 'Constitutionalizing the Economy: German Neo-liberalism, Competition Law and the "New" Europe' (n 281) 36–37. *ibid* 51.

²⁸⁴ This is the main difference between the Ordo-liberal and the post-Chicago model of competition law. Peter Behrens, 'The 'Consumer Choice' Paradigm in German Ordoliberalism and its Impact upon EU Competition Law' (22 July 2014). Europa-Kolleg Hamburg, Discussion Paper no. 1/14. <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2568304>. For recent proposals for adoption of the Ordo-liberal model of competition law, see: Ignacio H Anchustegui, 'Competition Law through an Ordoliberal Lens' (2015) 2(2) *Oslo Law Review* 156–173.

²⁸⁵ Gerber, *Law and Competition in Twentieth Century Europe* (n 277) 278. *ibid* 280. Gerber, 'Constitutionalizing the Economy: German Neo-liberalism, Competition Law and the "New" Europe' (n 281) 65. The establishment of an independent agency entrusted with enforcement of competition law is a main contribution of Ordo-liberal thought on competition law, see: *ibid* 54–55.

²⁸⁶ Gerber, *Law and Competition in Twentieth Century Europe* (n 277) 279–280.

²⁸⁷ *ibid* 282–283. *ibid* 285. Gerber, 'Constitutionalizing the Economy: German Neo-liberalism, Competition Law and the "New" Europe' (n 281) 66–68.

²⁸⁸ Unlike import cartels that were seldom used, around 127 export cartels were operational since 1957. Georg Koopmann, Christoph Kreienbaum and Christine Borrmann, *Industrial and Trade Policy in Germany* (Nomos Verlagsgesellschaft 1997) 66.

²⁸⁹ Gerber, *Law and Competition in Twentieth Century Europe* (n 277) 293–294.

²⁹⁰ *ibid* 277.

Ordo-liberal element into the German model of competition,²⁹¹ while the other provided a safe-harbor for the cooperative agreements among the SMEs.²⁹²

In short, the Ordo-liberal model of competition law influenced the post-war German competition law strongly, but the latter deviated from the Ordo-liberal model in endorsing a strict interpretation of prohibited cartels, giving a broad space for cooperative agreements among the SMEs, and providing for no control of mergers. The 1973 has brought the competition law more in line with the Ordo-liberal model by introducing merger control regulation, but it has encouraged and broadened further the scope of permissible cooperation among the SMEs.

With respect to industrial policy of post war Germany, until the mid of 1950s, West Germany supported coal and steel, transportation and housing sectors.²⁹³ Afterwards, sectoral industrial policies became exceptional, and focused mainly on the aerospace, information technology, and nuclear power sectors.²⁹⁴ In addition, Germany had a long history of supporting *sunset* industries that are industries in decline through financial subsidies; most of industrial policies subsidies were allocated to these sectors instead of sunrise industries that are growing industries or industries with high growth potential.²⁹⁵ Most of these subsidies went to large and medium sized firms at the cost of small firms.²⁹⁶ Some important instances of governmental direct support to specific sunrise industries took place, particularly in the form of support of (sector-specific) basic and applied research and developed;²⁹⁷ indeed, industrial policies in support of research and development (so-

²⁹¹ *ibid* 305.

²⁹² *ibid* 303.

²⁹³ Sigurt Vitols, 'German Industrial Policy: An Overview' (1997) 4(1) *Industry and Innovation* 18.

²⁹⁴ *ibid*.

²⁹⁵ For a detailed discussion, see: Koopmann, Kreienbaum and Borrmann (n 287) 110–114. Henning Klodt, 'Industrial Policy and Repressed Structural Change in West Germany' (1990) 207(1) *Jahrbücher für Nationalökonomie und Statistik* 28–29.

²⁹⁶ Koopmann, Kreienbaum and Borrmann (n 287) 117.

²⁹⁷ Ha-Joon Chang, Antonio Andreoni and Ming L Kuan, 'International Industrial Policy Experiences and the Lessons for the UK' (October, 2013). Future of Manufacturing Project, Evidence Paper no. 4, 26 <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/277162/ep4-international-industrial-policy-experiences.pdf>. Indeed, further instances of German governmental support to sunrise industries have been taking place recently. They include the active role of the German Federal government in supporting the creation and growth of biotechnological sector. See: Karen E Adelberger, 'A Developmental German State?: Explaining Growth in German Biotechnology and Venture Capital' (1999). BRIE Working Paper 134 6–11 <<http://escholarship.org/uc/item/8z55s60f>>. These policies also include what is known as 'green industrial policy' that involves direct support for renewal energy. Chang, Andreoni and Kuan (n 296) 27. For example, Germany plans to provide a sector-specific support to auto industry's production of electric cars. Ben Knight, 'Germany Sets Out Major Cash Incentive For

called innovation policy) have been a stable pillar of Germany's (sector-specific) industrial policy (see below). Further, after German reunification, Germany pursued sectoral industrial policies to support specific key sectors (e.g., infrastructure investment) in Eastern Germany.²⁹⁸

In addition to these indicative instances of sectoral industrial policy, for the purpose of supporting German firms across all the sectors of the German economy, post war Germany provided a *generalized institutional framework of three components, namely, financial, technological, and labor market policies, that target the factors of production.*²⁹⁹ First, Germany supported the banking sector and changed radically its lending orientation from short term commercial lending of the pre-war period to long-term industrial financing afterwards.³⁰⁰ Further, through its interventions in the banking sector, Germany was able to secure *cheap long-term finance* for both start-ups and SMEs.³⁰¹ Second, Germany has invested heavily in (sector-specific) basic and industrial/applied research and development.³⁰² Third, Germany targeted the increase of its skill base across all industries through public education, and public vocational training system.³⁰³

In short, Germany's industrial policy through support for labor skilling and provision of long-term industrial financing was horizontal; large firms, medium sized firms, and the SMEs have benefited from these policies across the whole sectors of the German economy. Support for basic and applied research and development (what is currently referred to as innovation policy) has been *sector-specific*. Further, Western Germany in the short period following World War II as well as Eastern Germany after re-unification witnessed strong sectoral industrial policies. This suggests that Germany uses sector-specific industrial policies in times of severe economic shocks. Overall, Germany had a strong horizontal industrial policies coupled with sector specific policies that shifted from support of specific sectors in the early stages of post-war period to take the form of

Electric Car Buyers' *Deutsche Welle (DW)* (18 May 2016) <<http://www.dw.com/en/germany-sets-out-major-cash-incentive-for-electric-car-buyers/a-19266326>>.

²⁹⁸ Chang, Andreoni and Kuan (n 296) 27.

²⁹⁹ *ibid* 25.

³⁰⁰ Vitols (n 292), 23–24.

³⁰¹ *ibid* 24. The industrial policies supportive of SMEs were intended to address the cost burdens imposed by the German institutional network on the SMEs (e.g., labor institutions). Rachel Parker, 'From National Champions to Small and Medium Sized Enterprises: Changing Policy Emphasis in France, Germany and Sweden' (1999) 19(1) *Journal of Public Policy* 65–66. Since the 1980s, the German governmental support of the SMEs has become even stronger. *ibid* 72–74.

³⁰² Chang, Andreoni and Kuan (n 296) 26. Vitols (n 292), 26–29.

³⁰³ Chang, Andreoni and Kuan (n 296) 25. Vitols (n 292), 29–30.

innovation policy. Along these stable horizontal and sectoral policies, other instances of sectoral industrial policies that target sunset industries took place.

As to the post-war Japanese institutional network, Japan adopted a stakeholder model of corporate governance.³⁰⁴ Although the stakeholders' interests represented in the governance coalition of the Japanese firm are largely similar to the governance coalition of the German corporate governance, Aoki, rightly, argues that both systems of corporate governance '*operated on quite different mechanisms in terms of industrial relations, contractual arrangements, selection/replacement of management and so on, not to mention their differences in statutory legal arrangement.*'³⁰⁵ In other words, the economic and legal institutions and their complementarities, which gave rise to and sustained the stakeholder orientation of both systems of corporate governance, are different.³⁰⁶ Consequently, despite sharing the stakeholder model, the effects of each stakeholder system of corporate governance on the each of the assessment criteria of the supply side of the product markets might not be similar.

In addition to its stakeholder model of corporate governance, Post-war Japan endorsed *aggressive sectoral* industrial policy of two types: promotion and adjustment industrial policies. Industrial promotion policies targeted specific sectors of the economy that were perceived as key (newly created and/or rapidly growing) industries necessary for creating an internationally competitive modern and diversified industrial structure of the Japanese economy (i.e., *sunrise industries*).³⁰⁷ In addition, industrial adjustment policies assisted *troubled industries (sunset industries)* through guiding their adjustment process.³⁰⁸

With respect to competition law, pre-war Japanese governments, starting from the Meiji era in 1868, where the Japanese industrialization process began to take place, perceived *excess*

³⁰⁴ Caslav Pejovic, 'Japanese Corporate Governance: Behind Legal Norms' (2011) 29 Penn State International Law Review 489.

³⁰⁵ Masahiko Aoki, 'Whither Japan's Corporate Governance?' in Masahiko Aoki, Gregory Jackson and Hideaki Miyajima (eds), *Corporate Governance in Japan: Institutional Change and Organizational Diversity* (Oxford University Press 2007) 440.

³⁰⁶ For a brief discussion of the difference between (idealized representation) of the German and Japanese models of corporate governance, see: *ibid* 437–438.

³⁰⁷ Motoshige Itoh and others, 'Industry Promotion and Trade' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 257–258. Yutaka Kosai, 'The Reconstruction Period' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 39–43.

³⁰⁸ For an overview of Japanese industrial adjustment assistance policies, see: Suelo Sekiguchi and Toshihiro Horiuchi, 'Trade and Adjustment Assistance' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 372–386.

competition, which is equivalent to *effective competition* under modern post-Chicago competition law, as detrimental to the industrialization process.³⁰⁹ Most of the pre-war Japanese markets were moderately oligopolistic with moderate number of SMEs and large firms; few markets were close to monopolies.³¹⁰ Most of these oligopolistic markets were cartelized; cartels were initially legally permissible, then, became governmentally promoted.³¹¹ Trade associations and business conglomerates called *Zaibatsu*³¹² ensured the effectiveness of cartel agreements.³¹³ Due to these cartels and the power of *Zaibatsu*, new market entries were difficult. The post-war American occupation of Japan dissolved the *Zaibatsu*,³¹⁴ deconcentrated around 25 large Japanese firms,³¹⁵ prohibited most of the activities of trade associations,³¹⁶ and enacted an Antimonopoly Law modelled upon the US antitrust law in 1947.³¹⁷

The Japanese government, bureaucracy, and business distrusted competition as a mechanism for promoting industrialization and economic growth because the successful pre-war industrialization took place under *oligopolistic cartelized* markets.³¹⁸ Therefore, the Japanese government substantially amended the American-style antimonopoly law in 1949 and then in 1953 after gaining independence in 1952 to give a space for (anticompetitive) sectoral industrial policies.³¹⁹ The 1953 legal amendments brought about three major changes. First, instead of per se illegality of cartels, the law introduced a rule of reason for assessment of cartels; according to this rule, cartels that promote the public interest are legal, whereas cartels that are found to harm

³⁰⁹ Alex Y Seita and Jiro Tamura, 'The Historical Background of Japan's Antimonopoly Law' (1994) 115 *University of Illinois Law Review* 129–130.

³¹⁰ *ibid* 133.

³¹¹ *ibid* 135–136.

³¹² *Zaibatsu* combines were family controlled business groups. The holding company of the *Zaibatsu* combines controlled large subsidiaries that spanned across the financial, manufacturing, trading, and service sectors of the economy. The *Zaibatsu* firms did not have monopolistic positions in the markets where they operate, but the large firms operating in each market belonged to *Zaibatsu* combines, which enabled these *Zaibatsu* combines to enforce efficient cartels across the sectors of the economy. *ibid* 139.

³¹³ *ibid* 137–138.

³¹⁴ For a historical overview of the process of *Zaibatsu* dissolution, see: *ibid* 148–154.

³¹⁵ *ibid* 159.

³¹⁶ Ulrike Schaede, *Cooperative Capitalism: Self-Regulation, Trade Associations, and the Antimonopoly Law in Japan* (Oxford University Press 2000) 77.

³¹⁷ Seita and Tamura (n 308), 165. The enacted Antimonopoly Law was even stricter than the US antitrust law. For instance, it required all mergers to be approved by the Japanese Fair Trade Commission regardless of the resulting market share of the merged firms. Further, it considered dominant position to be per se illegal, even if the dominant firm has not engaged in abusive anti-competitive practices.

³¹⁸ Schaede (n 315) 74.

³¹⁹ *ibid* 78.

public interest are illegal.³²⁰ Based on this rule of reason, ministries in charge of each industry and the Ministry of International Trade and Industry (the “MITI”) began to use administrative guidance³²¹ for establishing cartels in their relevant supervised industries.³²² Further, the Antimonopoly Law explicitly exempted recession cartels and rationalization cartels from the Antimonopoly Law.³²³ Recession cartels are cartels formed between the firms in the same sector when facing a sharp decline in demand that pushes products price below their average cost.³²⁴ In contrast, rationalization cartels are formed in order to support the formation and growth of the industry;³²⁵ it is a form of industrial promotion policy. Other categories of explicitly exempted cartels were added by other pieces of regulation. First, numerous special industry laws included an exemption of the relevant industry from prohibition of cartels.³²⁶ Second, export trade association cartels were also explicitly permissible.³²⁷ Third, SMEs cartels were also explicitly exempted from the Antimonopoly Law.³²⁸ Forth, in 1963, a new category of exempted cartels called “investment cartels” was introduced.³²⁹ These cartels could be used for both promotion and adjustment assistance industrial policy purposes. Explicitly exempted cartels exceeded 1000 during the 1960s,³³⁰ and this number does not include the large number of administrative guidance based cartels,³³¹ or the equivalently large number of illegal cartels, given the relaxed enforcement of Antimonopoly Law, as discussed below.

Given the abolition of per se illegality of cartels, the broad legal exemptions for cartelization, and the weak enforcement of Antimonopoly Law, most post-war Japanese markets were *de facto* cartelized. As to abuse of dominant position, the 1953 revisions prohibited unfair trade practices that included, inter alia, abuse of dominant position, however, the Japan Fair Trade Commission (the “JFTC”), the agency entrusted with the enforcement of Antimonopoly Law, weakly enforced

³²⁰ *ibid* 81.

³²¹ Administrative guidance is a *non-binding* administrative act. It shall be discussed in chapter 12.

³²² *ibid* 82–83

³²³ *ibid* 144.

³²⁴ *ibid*.

³²⁵ *ibid*.

³²⁶ *ibid* 84.

³²⁷ *ibid* 85–88.

³²⁸ *ibid* 88–90.

³²⁹ *ibid* 96.

³³⁰ For the relevant numbers of formally exempted cartels broken down by their exemption category in post-war Japan, see figure 3.2 in: *ibid* 86.

³³¹ *ibid* 90.

the prohibition of unfair trade practices despite the widespread anti-competitive trade practices in the Japanese markets.³³² Anyway, most Japanese markets were not monopolistic, but moderately oligopolistic; given both the oligopolistic structure and the cartelization of most markets, the abuse of dominant position could have hardly taken place.

Not only the Antimonopoly Law was substantively relaxed in 1953, its enforcement by the JFTC was extremely weak. Prior to the revision of the Antimonopoly Law in 1953, the JFTC tried to enforce the law vigorously in 1951 by opening 68 antitrust investigations.³³³ However, under the pressure of the Japanese government and bureaucracy, the JFTC relaxed its enforcement substantially, particularly after the Japanese independence in 1952, resulting in a sharp decline in anti-trust investigations and cases brought by the JFTC.³³⁴ Until the 1990s, the JFTC brought only 10 criminal cases, 4 of which were in the 1990s.³³⁵ Prior to the 1977 revision of Antimonopoly Law, the JFTC ordered the firms that engage in anticompetitive practices such as illegal cartels to cease and desist; if the firms accepted its order, it did not impose penalties over them.³³⁶ Interestingly, most of these firms tended to formally accept the recommendation of the JFTC, and then continue their illegal cartels.³³⁷ Moreover, for strategic industries in the Japanese economy, the JFTC did not bring formal cases. Rather, it used informal actions such as issuing a warning or a caution to the relevant firms in which it asked them informally to discontinue the cartel.³³⁸ Further, private antitrust suits were rare in the Japanese context.

In sum, in comparison to modern post-Chicago model of competition law, the post-war Japanese Antimonopoly law was extensively relaxed to the extent that cartelization was *de facto* normal business activity. Japanese ministries, particularly the MITI used cartels for promoting some strategic industries, the SMEs, and export-oriented sectors and for assisting temporarily or structurally declining industries in their adjustment process. Further, industrial promotion policies encouraged mergers and formation of business groups, even if these policies were to result in

³³² *ibid* 166–167.

³³³ *ibid* 78. For the number of formal cartel cases brought by the JFTC over the period from 1948-1997, see figure 3.1 in: *ibid* 71.

³³⁴ *ibid* 78–79.

³³⁵ *ibid* 150.

³³⁶ *ibid* 117.

³³⁷ *ibid* 149.

³³⁸ *ibid* 159.

highly concentrated product markets.³³⁹ Tsuruta captures well the marginal role that competition law played in post-war Japan, ‘there was little attempt to bring antitrust policy to bear on the problem of market domination by oligopolistic firms, and it was not until the 1970s that antitrust policy come to have its rightful position in the arena of economic policy.’³⁴⁰ As chapter 11 shall discuss, the marginal role of competition law does not necessarily imply that competition played no role in the key domestic product markets of the post-war Japanese economy.

In contrast, the current US institutional network of the supply side of product markets is different from that of both post-war German and Japanese networks. The US model of anti-trust exhibits a high proximity to the post-Chicago model of competition law; we will examine the post-Chicago model thoroughly in chapter 11 so that we need not examine this model here. It suffices to say that in this model, in contrast to the Japanese model of Antimonopoly Law, cartels and abuse of dominant positions are per se illegal and mergers that are most likely to result in anti-competitive practices are also prohibited, unless efficiency gains from the merger outweigh the cost of its anti-competitive inefficiencies.³⁴¹

Unlike the stakeholder model characterization of the Japanese and German corporate governance, which can be considered as *stylized fact* in the relevant literatures, the classification of the American model of corporate governance is controversial. Jill E. Fisch reviews the academic debate over the classification of American corporate governance system and concludes that:

Shareholder primacy functions more as a norm than an enforceable legal rule. Although corporate law mandates managerial fidelity to shareholder interests both through shareholder election rights and through fiduciary principles, existing law does not actually require officers and directors to make operational decisions with the sole objective of shareholder wealth maximization.³⁴² Terming shareholder primacy a "norm" implies that, as a practical matter, directors seek to maximize shareholder wealth even if they do not

³³⁹ Akira Iwasaki, ‘Mergers and Reorganizations’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 498–500. Ryutaro Komiya, ‘Introduction’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 13.

³⁴⁰ Toshimasa Tsuruta, ‘The Rapid Growth Era’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 83.

³⁴¹ For a comparison of Schumpeterian and post-Chicago models of competition law, see section 2.2.2 of chapter 11 and the references cited therein.

³⁴² Jill E Fisch, ‘Measuring Efficiency in Corporate Law: The Role of Shareholder Primacy’ (2006) 31 *The Journal of Corporation Law* 650.

face a legally enforceable obligation to do so. Indeed, there are widespread claims that ... the shareholder primacy norm is an accurate description of business practice.³⁴³ [Still, some counter-evidences suggest the primacy of the management rather than the shareholders.]³⁴⁴

Consequently, the American system of corporate governance tends to be a *shareholder value oriented model*, but it encompasses various forms of bias towards management at the cost of shareholders.

With respect to industrial policy, the US is normally considered to be akin to a neoliberal model of capitalism that has *no industrial policy*, but this is far from the truth; the US is indeed a ‘hidden developmental state’.³⁴⁵ The research and development (i.e., innovation) policy in the US strongly supports knowledge driven sectors of the economy, particularly aerospace, defense related technologies, life sciences, energy sectors,³⁴⁶ pharmaceuticals, biotechnology,³⁴⁷ information and communication technology, and nanotechnology.³⁴⁸ Some examples can illuminate the extensive role of the American government in supporting as well as creating new markets in these areas: 75% of radical new drugs are developed by the publicly funded research labs and not by private pharmaceutical corporations,³⁴⁹ the budget of National Institutes of Health allocated to promoting basic and applied research in life sciences sectors amounted to 30.9 billion dollars in 2012,³⁵⁰ and under the auspices of its national nanotechnology initiative, the US allocates around 1.8 billion dollar annually for research and investment in nanotechnology.³⁵¹ In addition to *funding* of research and development, which includes direct and indirect funding in the form of tax credits for R&D expenditures, building and sustaining collaborative networks among the firms of the same

³⁴³ *ibid* 654.

³⁴⁴ *ibid* 655.

³⁴⁵ Fred Block, ‘Swimming Against the Current: The Rise of a Hidden Developmental State in the United States’ (2008) 36(2) *Politics and Society* 183–193.

³⁴⁶ Ketels, Christian H. M. ‘Industrial Policy in the United States’ (2007) 7(3) *Journal of Industry, Competition and Trade* 153–154.

³⁴⁷ For an overview of the American sectoral support to pharmaceuticals and biotechnology, see: Mariana Mazzucato, *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (Anthem Press 2013) 64–71.

³⁴⁸ For an overview of the American sectoral support to nanotechnology, see: *ibid* 83–86.

³⁴⁹ *ibid* 66–67.

³⁵⁰ *ibid* 69.

³⁵¹ *ibid* 85.

sector has been an important research and development industrial policy instrument in the US.³⁵² Further, the US extends significant financial and technological support to the SMEs.³⁵³ Finally, the US's trade policy is protective of its national industries, while vigorously opening foreign markets for its export oriented industries.³⁵⁴

These policies create an overall industrial policy system that can be characterized as *sectoral* as far as knowledge-driven sectors of the economy are concerned, particularly aerospace, defense, life sciences, pharmaceuticals, biotechnology, nanotechnology, and energy sectors, and *horizontal* as far as trade policies, (technological) support of SMEs, and creating and sustaining collaborative (mainly research and development) industrial networks are concerned.³⁵⁵ Overall, the core of the US industrial policy is *Research and Development (i.e., innovation) policy*, which extends beyond funding basic research, which is an important hidden type of sectoral industrial policy because it involves allocating resources to basic research in specific sectors of the economy, into the state acting as an active entrepreneur and venture capitalist.³⁵⁶ The knowledge-intensive sectors in the US are the main beneficiaries of these extensive, but hidden sectoral industrial policies.

Table 8.3 below illustrates the classification of the legal systems of corporate governance, competition law, and industrial policy, which constitute the German, Japanese, and American institutional network governing the supply side of their product markets. When comparing this classification to the eight possible institutional networks in the above table 8.2 of this chapter, none of the real-world institutional networks is identical to any of these idealized institutional networks. The American institutional network comes close, but not identical, to the institutional network

³⁵² Schrank and Whitford (n 241), 531. Wade (n 231), 228–232.

³⁵³ Ketels, Christian H. M. (n 345), 154–156.

³⁵⁴ *ibid* 156–158.

³⁵⁵ Despite his clear articulation of the above American interventions in the economy, Ketels considers that these interventions do not constitute an overall consistent industrial policy. *ibid* 158. This characterization of American industrial policies is problematic because it is based on a conceptualization of industrial policy as the set of *centrally planned and implemented* policies for supporting specific sectors of the economy. Clearly, there is no centrally planned industrial policy strategy in the US, however, the above-mentioned decentralized US interventions in the economy have been stable over decades due to their legal institutionalization; these interventions have created a pattern of stable sectoral and horizontal industrial policies. For an overview of the regulations, agencies and programs constitutive of American industrial policy, see: Nathan A Adams, 'Monkey See, Monkey Do: Imitating Japan's Industrial Policy in the United States' (1996) 31(3) *Texas International Law Journal* 537–546. Further, the overall pattern of industrial policies in US reveal loosely coupled and complementary policies rather than inconsistent ones. Schrank and Whitford (n 241), 530–533.

³⁵⁶ For an overview of the entrepreneurial and venture capitalist roles played by the US in knowledge intensive sectors, see: Mazzucato (n 346) 62–86.

number three in table 8.2 that includes a shareholder value corporate governance, a post-Chicago model of competition law, and sectoral industrial policy. Post-war Japanese institutional network is close to the institutional network number one in table 8.2 that consists of a stakeholder model of corporate governance, Schumpeterian competition law, and sectoral industrial policy. The German model seems to be closest to the institutional network number two in table 8.2 that consists of a stakeholder model of corporate governance, a Schumpeterian model of competition law, and sectoral industrial policy. We could simplify the assessment of the compared institutional networks in the following chapters by using the *idealized* institutional networks that *approximate* these real-world institutional networks. However, this idealization would prevent us from understanding the systemic logics/forces created by these institutional networks, which result from the peculiarities of the model of each institutional domain and the peculiar interdependencies among these institutional domains in each institutional network. For example, despite that post-war Germany and Japan share the stakeholder model of corporate governance, these seemingly identical models of corporate governance differ on the underlying mechanisms of their operation, their non-embedded and embedded socio-economic embedded effects, and their interdependencies with other institutional domains in each of the German and Japanese institutional networks. Idealization would make us miss these important differences between the German and Japanese institutional networks. More importantly, idealization would prevent us from perceiving the way the institutional network has been evolving over time and the way this evolution might have been a necessary adaptive responses to the socio-economic changes. For example, as shall be discussed in chapter 11, the post-war Japanese industrial policy has been *adaptive* to changes in the economic conditions of the Japanese economy.³⁵⁷ For these reasons, the assessment of the compared institutional networks would be based on their classification in table 8.3 below instead of their approximate idealized classifications in table 8.2. In fact, the compared institutional networks represent additional possible constellations of the institutional networks of the product markets to the idealized eight constellations outlined in table 8.2. This reflects the broad institutional alternatives open to developing countries; these choices have been significantly reduced in law and economic development literature discussed in chapter 11 into a duality of neoliberal versus developmental state models.

³⁵⁷ See section 2.1 on post-war Japanese industrial policy in chapter 11 and the references cited therein.

We cannot assess the institutional network of the supply side of product market accurately without having an understanding of its environment that is the larger institutional network in which our institutional network is embedded. As argued above, the most important institutional domains in the environment of our institutional network are labor and financial market institutions. Therefore, few words on both of these institutional domains are needed. Both post-war Germany and Japan had regulated labor markets and strong social norms that protect the employees against dismissal at will in comparison to the somehow more flexible labor markets in the US. As to their financial systems, both Germany and Japan are bank based financial systems, while the US is a market based financial system.

The Models of Corporate Governance, Competition Law, and Industrial Policies Constituting the Compared Institutional Networks of Product Markets	US	Japan	Germany
Corporate Governance Systems	<ul style="list-style-type: none"> - Tends to be a shareholder value model - Some bias towards management at the cost of shareholders 	<ul style="list-style-type: none"> - Stakeholder model - Inside control model 	<ul style="list-style-type: none"> - Stakeholder model - Inside control model

	- An external control model		
Competition Law Models	Post-Chicago model	<ul style="list-style-type: none"> - Cartels are not per se illegal and narrow scope of prohibited collusion (collusion evidenced in writing is required for prosecuting cartels) - Broad exemptions from antimonopoly law (such as export cartels, SMEs cartels, investment cartels) - No merger control regulation - Weak enforcement of this substantively relaxed 	<ul style="list-style-type: none"> - Strong influence of Ordo-liberal Model of Competition Law (independent competition law agency, the objective of competition law is to protect the economic freedom of both competitors and consumers and not the maximization of consumers' or total welfare, per se prohibition of cartels, strong influence of Ordo-liberal model of competition in interpretation of the German competition law) - Important deviations from the Ordoliberal model (exemptions from the per se prohibition of cartelization, particularly rationalization cartels, export cartels, and

		Antimonopoly Law	cooperative agreements among the SMEs and the lack of merger control until 1973 when merger control regulation was enacted)
Industrial Policy Models	<ul style="list-style-type: none"> - Weak horizontal and sectoral Industrial Policies for non-knowledge intensive sectors - Strong sectoral industrial policies for knowledge-intensive sectors of the economy (i.e., strong innovation policy) 	Strong sectoral industrial policy	<ul style="list-style-type: none"> - Horizontal industrial policies (e.g., support of the SMEs, financial policy, labor market policies) - Sectoral industrial policies in four cases: <ol style="list-style-type: none"> a. Severe shocks of the economy (e.g., post-world war II, post-German reunification) b. Some strategic sunset industries c. Innovation policy d. Few instances of support for some sunrise industries

Table 8.3: Classification of the Models of Corporate Governance, Competition law, and Industrial Policy Constituting the Institutional Network of the Supply Side of Product Markets in post-war Germany, post-war Japan, and the US.

9. Conclusion

In this chapter, we have followed the steps of the integrated and systemic approach outlined in chapter 7 to address a traditional regulatory question in corporate governance literature that is the choice of a corporate governance model for developing countries (the primary regulatory question). First, we review the way neoclassical approach tackles this question (the neoclassical literature review step), then, we use the cognitive perspectives of neoclassical economics, non-neoclassical schools of thought and theories, and systemic thinking to advance internal, external and systemic critiques to the neoclassical answer(s) to the primary regulatory question (the critiques step). Using relevant insights from systemic thinking, we have then developed *a systemic* reformulation of the primary regulatory question to become the assessment of the consistency of the institutional networks governing the supply side of product markets in US, post-war Germany and post-war Japan (the systemically formulated question step). By addressing this systemically formulated question, we will be able to answer systemically our primary regulatory question. Then, we have illustrated that we need to examine four sub-questions in order to address this systemically formulated question. This chapter has addressed the first of these four sub-questions, namely, the classification question; the following chapters shall tackle the remaining three sub-questions. Chapters 9 and 10 uses the integrated and systemic approach to develop an integrated and systemic assessment criteria (normative framework) of the institutional network of the supply side of product markets in developing countries to use these evaluative criteria for assessing the consistency of the compared institutional networks. Chapter 11 assesses the consistency of the compared institutional network with reference to these assessment criteria. Based on the findings of this consistency analysis, chapter 12 seeks to design a consistent and reasonable institutional network for the supply side of product markets in developing economies, which may reasonably satisfies the assessment criteria developed in chapter 10.

Chapter

9

Integrated and Systemic Critique of the Neoclassical-New Institutional Normative Theory of Economic Regulations

1. Introduction

After classifying the models of corporate governance, competition law, and industrial policy in our compared jurisdictions (the classification sub-question), we can now examine the normative objectives sub-question. The latter relates to the determination of the normative framework/theory for economic regulations (i.e., the institutional networks) of the supply side of product markets based on which these regulations *should* be assessed and designed. Despite being necessary to addressing the primary regulatory question (and the systemically formulated question as well), the normative framework question is *a standalone question* distinct from our primary question. To address this question, we thus need to go through the eight processual steps for applying the integrated and systemic approach since the above four steps relating to corporate governance model choice cannot inform our investigation of this separate regulatory question.

Alternatively, we can endorse the neoclassical-new institutional normative theory of economic regulations and move directly to the third sub-question. However, this would introduce enormous *neoclassical-new institutional bias* to our *consistency assessment* of the compared institutional networks because the outcomes of this assessment hinge upon the underlying normative framework. Particularly, one of the most important neoclassical contributions to analysis and design of economic legal institutions is its normative theory of economic regulations, which replaced the legal language and the normative perspective of *justice, distribution, rights, and legitimacy*, with that of *market and organizational failures*. This *normative* paradigm shift brought about a fundamental shift in what is considered socially *desirable and economically sustainable* legal institutions of capitalism in a globalized economy. Moreover, despite its far-reaching implications, the neoclassical normative theory of

economic regulations is one of the *most vulnerable* neoclassical regulatory insights, as this chapter shall demonstrate.

Consequently, we will use the integrated and systemic to develop a normative theory (i.e., assessment criteria) for the institutional network governing the supply side of product markets in developing economies. Given the standalone nature of this sub-question, this would be our first complete application of the integrated and systemic approach to a regulatory question. Indeed, this and the following chapter where the integrated and systemic normative framework of economic regulations of product markets is developed are among the most important contributions of this thesis. If the proposed normative framework is to be accepted, scholars, particularly in developing economies, will need to reassess and recommend important reforms of the socio-economic regulations (and indeed the constitutions as we shall see in the following chapter) in their relevant countries in light of the proposed normative framework.

Since one chapter cannot accommodate the application of the sophisticated and long steps of the integrated and systemic approach to the assessment criteria, this application will be divided into two chapters. This chapter shall cover the first two steps of the integrated and systemic approach, i.e., the literature review of the neoclassical-new institutional normative theory/assessment criteria of economic regulations and the step of internal, external, and systemic critiques of this neoclassical normative theory. The following chapter then completes the remaining steps of the application of the approach and develops an alternative integrated and systemic normative framework of the economic regulations of the supply side of the product markets in developing economies.

The structure of this chapter is as follows. Section 2 outlines the neoclassical-new institutional normative theory of economic regulations (the neoclassical literature review step). Section 3 develops the internal critique of this neoclassical normative framework. Drawing on the insights of moral philosophy, development economics, constitutional economics, and political economy, section 4 develops the external critiques. Section 5 develops the systemic critique of the neoclassical normative theory. By doing so, the internal, external and systemic critiques step will be completed. Section 6 concludes this chapter.

Prior to engaging with the sections of this chapter, one remark on the terminology is necessary. In law and economics literature, the terminology of *normative theory of regulation or law* is used to refer to the normative framework for the evaluation and design of legal institutions; this normative theory has two functions; it provides the normative basis for the

assessment/evaluation of legal norms and the normative basis for their *design*.¹ Since I am particularly interested in the assessment of the compared institutional networks, I use the terminology of “*normative theory*” and “*assessment criteria*” interchangeably although the latter refers specifically to the evaluative, but not the design function of the normative theory. Still, as the below discussion shall demonstrate, the neoclassical normative theory of regulation relies predominantly, though not exclusively, on one assessment criterion for economic regulations that is Kaldor-Hicks efficiency as implemented by cost-benefit analysis, and thus if we seek accuracy, assessment criterion, not criteria, would be a better interchangeable terminology with the term “neoclassical normative theory”. Further, I use the terminology of “normative theory” and “normative framework” interchangeably in order not to distract the reader with a futile and irrelevant discussion around whether the normative theory of regulation is really a theory or a framework. In sum, I will use the terminology of normative theory, normative framework, and assessment criteria interchangeably. Since we have settled this terminological issue, we can now turn to our substantive discussion.

2. Step One (Neoclassical Literature Review): Neoclassical Economic Approach to the Normative Objectives of Economic Regulations

According to the Neoclassical-new institutional law and economics approach, economic regulations’ objective is to ensure efficient allocation of resources through the *correction of market (and organizational) failures*.² In the standard view of public economics, the government’s functions are generally divided into *economic efficiency*, *income distribution*, and *macro-stabilization* functions.³ The government undertakes its efficiency function by

¹ Matthew Adler, ‘Beyond Efficiency and Procedure: A Welfarist Theory of Regulation’ (2000) 28 Florida State University Law Review 288. Johan Den Hertog, ‘General Theories of Regulation’ in Boudewijn Bouckaert and Gerrit De Geest (eds), *Encyclopedia of Law and Economics, Volume III: The Regulation of Contracts* (Edward Elgar 2000) 224. Cento Veljanovski, ‘Economic Approaches to Regulation’ in Robert Baldwin, Martin Cave and Martin Lodge (eds), *The Oxford Handbook of Regulation* (Oxford University Press 2010) 19.

² See, e.g., Roger J Bergh and Alessio M Paccas, ‘An Introduction to the Law and Economics of Regulation’ in van den Berg, Roger and Alessio M Paccas (eds), *Regulation and Economics: Encyclopedia of Law and Economics* (2nd edn. Edward Elgar 2012) 4–5. *ibid* 7–9. Veljanovski (n 1) 19–22. For a brief overview of the market imperfections that a benevolent government concerned with correction of market failure should enact, see: *ibid* 20–22. Den Hertog (n 1) 225–230.

³ Richard A Musgrave and Peggy B Musgrave, *Public Finance in Theory and Practice* (4th edn, McGraw-Hill 1984) 6–16. Joaquim Silvestre, *Public Microeconomics: Efficiency and Equity in Public Policy* (Edward Elgar 2012) 4–5. See also the discussion of the role of the government in the economy and the references cited therein in section 5.2 of the following chapter.

correcting market failures. Economic regulations are the major policy instruments used for market failure correction.⁴ As discussed below, some law and economics scholars argue that in addition to market and organizational failures correction functions (i.e., economic efficiency function), legal institutions (including economic regulations) should assume some income distributional functions.⁵

However, why neoclassical law and economics scholars argue that economic laws should focus on correcting market failures, why should not these regulations be concerned with income, wealth or power distribution, justice, capabilities expansion, innovation, capital accumulation, economic growth, or the stability, resilience or flexibility of the economic system? To understand the rationale for assigning the economic efficiency function (i.e., the correction of market and organizational failures) to economic regulations, we need to turn to

⁴ In addition, taxation is the major policy instrument employed for undertaking the redistributive function of the government, while macroeconomic fiscal and monetary policies are the major instruments for undertaking the macro-stabilization function.

⁵ For example, the so-called Yale school of law and economics endorses both efficiency and distribution as the functions of legal institutions, see: Francesco Parisi, 'Positive, Normative and Functional Schools in Law and Economics' (2004) 18(3) *European Journal of Law and Economics* 264–265. See also: Joseph E Stiglitz, 'Government Failure vs. Market Failure: Principles of Regulation' in Edward J Balleisen and David A Moss (eds), *Government and Markets: Towards a New Theory of Regulation* (Cambridge University Press 2010) 22. See also the below discussion of the distribution weighted social welfare functions proposed by some law and economics scholars and the references cited therein. Unlike the narrow focus on economic efficiency and income distribution in law and economics approach to regulation, the *non-economic* accounts of the rationale of socio-economic regulations are *broad*. For example, Prosser argues that economic efficiency, protection of consumers, protection of human rights, social solidarity, and/or regulatory participation and deliberation are appropriate rationales for economic as well as non-economic regulations. See: Tony Prosser, *The Regulatory Enterprise: Government, Regulation, and Legitimacy* (Oxford University Press 2010) 11–18. See also: Mike Feintuck, 'Regulatory Rationales Beyond the Economic: In Search of the Public Interest' in Robert Baldwin, Martin Cave and Martin Lodge (eds), *The Oxford Handbook of Regulation* (Oxford University Press 2010) 39–56.

the normative basis for law and economics, i.e., normative economics or as it is called in modern economics, *welfare economics*.^{6,7}

Neoclassical welfare economics embraces one *ultimate* objective for the society that is the *maximization of its social welfare*.⁸ To do so, two *instrumental objectives* are pursued: economic efficiency and distributive justice, for each of which efficiency and distribution criteria have been developed.^{9,10} As for legal institutions other than tax law, they are assigned the function of ensuring economic efficiency. Distributive justice function is almost limited to

⁶ Neoclassical welfare economics played a major role in assigning the primary function of market failures correction to economic regulations. In addition to the role of welfare economics in this regard, further reasons explain why law and economics scholars have been obsessed with market failures correction as the primary function of economic regulations. First, the dominance of microeconomic perspective in law and economics scholarship at the cost of both macro and systemic perspectives explain why macro-concerns were largely absent from neoclassical law and economics. Further, the claim that taxation is more efficient than legal institutions in distributing income helped to set aside the distributional functions of legal institutions (for a discussion of this claim, see section 5.2 of the next chapter and the references cited therein). Moreover, the insistence on *optimizing* regulation required quantification, but quantification is very difficult to achieve without *one metric of evaluation*. The development of this mono-metric mandates the rejection of the incommensurability of values. This resulted in reducing the regulatory effects on many important objectives into a quantified monetized cost or benefit. Finally, neoclassical economists have formulated some of these normative objectives (e.g., innovation) in terms of market failures correction (see the discussion of this issue in section 4.2 below and the references cited therein).

⁷ Mishan distinguishes between welfare economics and normative economics. Welfare economics is concerned with evaluating policies based on their effects on the efficient allocation of resources in the economy. Normative economics is broader than welfare economics because it is concerned with evaluating policies with reference to a myriad of normative criteria such as their effects on unemployment rate, economic growth, and inflation. Edward J Mishan, *Introduction to Normative Economics* (Oxford University Press 1981) 3. This proposed distinction has no implications for the normative neoclassical theory of economic policy or economic regulations. In modern economics, normative economics is nothing but welfare economics, and normative neoclassical analysis is nothing but welfare analysis. One can think of the systemic normative theory of economic regulations developed in the following chapter as a revival of Mishan's distinction of normative and welfare economics, while considering the latter with its focus on allocative efficiency as a part of the former.

⁸ The standard description of the objective of welfare economics is that it ranks states of the world brought about by the feasible economic policies and institutions according to levels of social welfare associated with each of these states. By doing so, welfare economics enables the policy maker to choose the policies that generate the states of the world that involve the highest level of social welfare. See: *ibid* 3–4. Yew-Kwang Ng, *Welfare Economics: Towards a More Complete Analysis* (Palgrave Macmillan 2004) 2–5. Allan M Feldman, 'Welfare Economics' in Steven N Durlauf and Lawrence E Blume (eds), *The New Palgrave Dictionary of Economics* (2nd. Palgrave Macmillan 2008) 2.

⁹ Silvestre (n 3) 3.

¹⁰ Welfare economics does not use the terminology of *ultimate and instrumental objectives*. The terminology of *ranking* the states of the world brought about by compared economic policies and institutions according to the social welfare level of each state is normally the standard terminology. See, e.g., Ng (n 8) 2–5. I use these concepts, ultimate and instrumental objectives, because they are the bedrock of the systemic normative theory of economic regulations developed in the next chapter. This would facilitate the comparison of the neoclassical normative theory of regulation outlined in this chapter with the systemic normative theory proposed in the next chapter.

taxation in modern economics.¹¹ We can therefore focus on efficiency criteria, and examine how these criteria justify the assignment of the function of market failure correction to economic regulations. Then, we discuss how these efficiency criteria are perceived to maximize *social welfare* in law and economics, which is the *ultimate objective* of the economic policy and legal institutions in welfare economics. Finally, given this discussion, we can distill the moral philosophical positions underlying the neoclassical normative theory of economic regulations.

With respect to efficiency criteria, three main efficiency criteria are used in law and economics, namely, Pareto efficiency, Pareto improvement, and Kaldor-Hicks efficiency. Pareto improvement allocation is an allocation that makes at least one person better off without making anyone worse-off.¹² Pareto efficient allocation of resources refers to an allocation of resources under which it is not possible to reallocate resources to make one person better off without making another person worse off.¹³ Pareto optimality as such seems to be a *unanimity*¹⁴ and “*no-loss*” criterion.¹⁵ In defining the terms (better-off) and (worse-off), Pareto allocative efficiency relies on satisfaction of subjective preferences (ordinal utility) of the individuals,¹⁶ *regardless of the morality of these preferences and whether they objectively increase the well-being of the individuals.*¹⁷ For example, suppose that the society consists of two individuals *A* and *B*. *A* prefers the state of the world *X* to the state of the world *Y* because she believes that it is fairer (or because it tolerates her drug addiction). If agent *B* is indifferent between state *X* and state *Y*, then, state *X* Pareto dominates State *Y*.

Pareto optimality as a criterion for *efficient allocation of resources* seems to be morally compelling; why would anybody object to a Pareto improving reallocation of existing resources that makes at least one person better off without making another person worse off? Indeed,

¹¹ Law and economics scholars who advocate the assignment of distributive justice functions to legal institutions in addition to economic efficiency are either advocating distribution weighted Kaldor-Hicks efficiency criterion implemented through distribution weighted cost-benefit analysis or a distribution weighted cardinal social welfare function. These proposals shall be discussed below. Therefore, we do not need to review the vast economic literature on distributive justice for the purposes of the review of the neoclassical normative theory of economic regulations.

¹² *ibid* 26. Silvestre (n 3) 5.

¹³ *ibid* 6.

¹⁴ Guido Calabresi, ‘The Pointless of Pareto: Carrying Coase Further’ (1991) 100(3) *Yale Law Journal* 1215.

¹⁵ Warren J Samuels, ‘Welfare Economics, Power, and Property’ in Warren J Samuels and A. A Schmid (eds), *Law and Economics: An Institutional Perspective* (Martinus Nijhoff 1981) 16.

¹⁶ Daniel M Hausman and Michael S McPherson, *Economic Analysis, Moral Philosophy and Public Policy* (2nd edn, Cambridge University Press 2006) 65.

¹⁷ Robert Hockett, ‘Why Paretians Can’t Prescribe: Preferences, Principles, and Imperatives in Law and Policy’ (2009) 18 *Cornell Journal of Law and Public Policy* 406.

many objections have been raised against Pareto optimality. First, assuming it is morally compelling; it is *useless*; most, if not all, legal institution would impose a cost at least on one person, hence the feasible legal institutions that make at least one person better off without making any other person worse-off, if existent, are very limited.¹⁸ Indeed, almost all economic regulations make at least one person worse-off. Competition law, stakeholder model of corporate governance, and labor regulation make producers and shareholders worse-off, while shareholder value corporate governance may also make the labor and the management (which can benefit from equity agency problem in absence of this model of governance) worse-off.

Still, with respect to the set of legal institutions that may make no one worse-off, while making at least one person better-off, why cannot Pareto optimality be morally compelling? Five reasons justify questioning the Pareto criterion: the lack of *normativity* of the Pareto principle, the *relativity* of Pareto optimality as a maximization concept, distributional concerns, improper protection of the weak, and its weak link to the promotion of well-being/social welfare.

First, Hockett, convincingly, argues that the Pareto criterion cannot prescribe; it is not a *normative principle*.¹⁹ In other words, if a state of the world *X* is a Pareto improvement over another state of the world *Y*, this does not imply that the government should enact the legal institutions that ensure the movement from state *X* to state *Y*. The crux of Hockett's argument is that Pareto improving legal institutions may infringe the principle of equality (equal agency) among the individuals. Further, these institutions may not even improve the objective well-being of the individuals because they rely on preference satisfaction regardless of the substance of these preferences. By failing to respect equality of agency and promotion of objective well-being, Pareto improving legal institutions lack *normative* justification; in other words, Pareto criterion does not provide a *sufficient* normative justification for legal institutions.²⁰

¹⁸ Calabresi (n 14), 1216–1217.

¹⁹ Hockett (n 17), 400–401.

²⁰ Hockett's sophisticated line of argument goes as follows. For the government to enact these legal institutions there should be *ethical reasons* for its action. Hockett suggests that *only generally applicable and abstract principle of equal agency can normatively* justify the enactment of legal prescriptions (i.e., legal institutions). *ibid* 427–440. He explains equal agency as follows: "If a putative ethical imperative [i.e., legal rule] put into conditional form delimits the class of prospective recipients [i.e., obligor] to less than full generality, ask whether it does so by reference to responsible choices exercised by those recipients. (Responsible choosing is just what agency is.) That gets at the ethics-consistent form of antecedent condition precisely because it comports with agency. ... How about delimitations of the class of prospective beneficiaries [of the legal rule]? Same principle, albeit with a wrinkle presented by the fact that not all claims held by beneficiaries of ethical principles are the product of specific undertakings by those of us who are obligated. If a putative ethical imperative put into conditional form delimits the class of prospective beneficiaries to less than full generality, ask two

Second, Pareto Optimality is a maximization concept that is *relevant* to the given legal, technological and preferences constraints of the economic system.²¹ Pareto optimality is indeed nothing but “the marginal conditions of joint constrained maximization.”²² Given a set of constraints that includes current legal institutions, consumers’ preferences, current technology, current distribution of income, distribution of wealth and power, and that the utility of consumers’ and firms’ profits do not go below their current levels,²³ the economist derive *the conditions for the maximization* of the consumers’ utilities and firms’ production.²⁴ These optimality conditions and the resulting maximum (i.e., optimal allocation of resources) are *relevant* to these *constraints*. For every set of constraints, there is a comparative optimal/efficient allocation of resources.²⁵ In sum, Pareto allocative efficiency refers to the

things: first, whether it does so by reference either to responsible choices exercised by those beneficiaries, just as with recipients; and second, whether the delimiting is done by reference to welfare deficits suffered by those beneficiaries for which they are not responsible.” *ibid* 438. Agent equality is a reasonable idea, to which most legal scholars would subscribe. It simply says that each legal rule should respect the equal agency of the individuals; otherwise, it would lose its minimum normative justification because it would cease to be general and abstract. These rules that infringe equal agency would be arbitrary and discriminatory, or in the words of Hockett, they would be conscriptions or naked preferences, but not legitimate legal prescriptions. However, Paretian social welfare functions (i.e., social welfare functions that produce ranking of the social states that does not infringe the Pareto criterion) would consider the state *Y* of the world better than state *X* even if the former may be inconsistent with the equality of agency principle. To function as a normative principle, the Paretian social welfare function must rank the states of the world not only according to *preferences satisfaction*, but also according to the principle of agent equality. However, if it were to do so, it would cease to be a Paretian social welfare because the latter by definition ranks the states of the world *only* according to *preferences satisfaction*. *ibid* 459–462. Doubtless, one may attempt to deconstruct Hockett’s argument by claiming that the principle of equal agency is not necessarily a minimum moral justification for legitimate legal prescriptions. Rather, the general principle that the government should increase the aggregate welfare of its citizens as long as no one is made worse-off can function as such generally applicable and abstract ethical principle justifying legitimate legal prescriptions. This counter-argument can hardly convince a legal scholar because it implies the sacrifice of the minimum requirement of agent equality in the design of legal institutions. Even if we assume that this counter-argument is convincing, it would not deconstruct Hockett’s argument because social welfare can only increase if we refine individuals’ preferences from unethical preferences; this implies that another ethical principle used for preferences refinement is still needed for justification of legal institutions based on Paretian social welfare functions. Similarly, once we include this ethical principle in the arguments of the Paretian social welfare function, it would cease to be Paretian because it would not be exclusively dependent on the satisfaction of individuals’ preferences.

²¹ Samuels (n 15) 25, and see the references cited therein.

²² *ibid* 21–22.

²³ *ibid* 18–20.

²⁴ *ibid* 22. Under a set of unrealistic assumptions, the conditions for Pareto optimality are derived from the solution of these maximization problems. See: Ng (n 8) 36–37. For an overview of these unrealistic assumptions, see: Samuels (n 15) 18–20.

²⁵ *ibid* 22–23. *ibid* 32–35. A. A Schmid, ‘Institutional Law and Economics’ (1994) 1(1) *European Journal of Law and Economics* 37–38.

maximization of the consumers' utility and producers' production given a set of constraints that involve a static stationary economy (e.g., stable preferences and fixed technologies).

Accordingly, a Pareto optimal allocation of resources under one set of constraints may be *inferior* to a *sub-optimal* allocation of resources under a different set of constraints.²⁶ This statement may be very surprising for many neoclassical law and economics scholars, but this important statement is not only correct; it is quiet intuitive. Let us give two examples to illustrate this point. Suppose the existence of two models of corporate governance; the first encourages incremental innovation and credit financing such as a stakeholder model, which is adopted by the German economy and the second encourages radical innovation and access to low cost equity financing such as a shareholder value model, which is adopted by the American economy. Suppose that the technologies used in the production process of each of these economies would be somehow different as in the former, technologies will tend to be more embedded into the production process, while in the latter, firms would be using generalized technologies. Given these different institutions of corporate governance and their comparable different technologies, the *efficient* allocation of capital and labor over productive activities in these economies will be different because the *returns* on equity and credit capital and asset specific investments by labor in both systems are different. Let us assume that the efficient allocation of capital and labor in the stakeholder model economy results in a growth rate of 3%, while the efficient allocation of capital and labor in the shareholder value economic results in a growth rate of 2%. Suppose, however, that the stakeholder model economy adopts sub-optimal labor market institutions that hamper the efficient allocation of labor, and the cost of this inefficiency is (-0.5%) of growth rate. Still, the *sub-optimal* allocation of labor in this economy combined with an efficient allocation of capital ensures a higher growth rate than *the optimal* allocation of labor and capital in the shareholder value economy. The reason is that some of the constraints (i.e., the legal institutions of corporate governance in our example) under which the optimal allocation of resources was derived were different.

Similar results ensue if the Pareto allocations are derived given different *initial distribution of income*. Suppose that high level of income equality results in higher economic growth rate (e.g., 3.5% growth rate) than unequal distribution (e.g., 2 % growth rate). Suppose that Germany has more equal distribution of income than the US. Both the US and the German economies are our compared states of the world. Given these states of the world, we may derive the set of Pareto improving legal institutions that make at least someone better off, while

²⁶ Samuels (n 15) 25.

making nobody worse off. Suppose that the US adopts this set of Pareto efficient legal institutions, which would result in better allocation of resources, which result in a 5% increase in its growth rate so that its growth rate is now 2.5%. Suppose that Germany adopts allocatively inefficient legal institutions that sustain its low level of income equality and that the cost of these inefficiencies in terms of GDP growth rate is -0.5% so that its total growth rate is 3%. The US does not adopt these set of inefficient institutions and thus does not have to pay these inefficiency costs, but has the high level of income inequality that corresponds to 2% growth rate of GDP growth. In this example, given the *difference in the initial distribution of income*, the sub-optimal institutions ensure higher growth rate (2.5%) than the set of optimal institutions (2%) because these inefficient institutions sustain this initial level of income distribution.

In both examples, I have compared optimal and sub-optimal allocations of resources in both examples according to the metric of *economic growth rate* that corresponds to each of the compared allocations, and not according to *Pareto criterion*. In the first example, the comparison has taken place between the optimal and sub-optimal allocation of labor corresponding to allocatively optimal and sub-optimal labor market institutions. In the second example, the comparison takes place between the optimal and sub-optimal allocations of resources corresponding to allocatively efficient institutions and allocatively inefficient, but distribution enhancing legal institutions. The reason for using growth rate as a normative metric for comparison is telling; these allocations of resources are Pareto non-comparable because each of them corresponds to *a different set of constraints*. Mathematically, they are solutions to *different maximization problems*. To compare them, we had to use a criterion other than

Pareto optimality such as their respective effects on economic growth rate in our example,²⁷ or their effects on overall subjective well-being.²⁸

One cannot exaggerate the importance of this insightful critique of Samuels to Pareto optimality, which extends also to Pareto improvement criterion. In legal scholarship, only law and economics scholars use the irritating and arrogant²⁹ adjective “*optimal*” to describe their proposed legal institutions or regulatory interventions. They have borrowed the concept from economics, but they fail to see that optimality is always *contingent on* the current distributions of income, wealth, and power, and on the current institutional network of capitalism. More problematically, as we have already seen, these real world contextual constraints, particularly the institutional network, are not included as constraints; rather, simplifying unrealistic assumptions are normally used. This implies that optimality conditions are *relevant to the model* itself. Legal institutions that ensure the attainment of these conditions are thus *optimal relevant to the model*.

Two major implications flow from this critique. First, the distributional effects of legal institutions have important implications to allocative efficiency because for each set of institutions and its corresponding income distribution, there is a corresponding optimal

²⁷ One might argue that in some cases, these allocations are Pareto comparable if at least one individual prefers one allocation to the other and nobody objects to the movement to the allocation preferred by this individual. This is, however, highly implausible for two reasons. First, the capital-labor allocation in each of the stakeholder model economy (e.g., Germany) and the shareholder value economy (e.g., the US) benefit some actors at the cost of others. The movement from one allocation to another would imply harming some actors, while benefiting others. The harmed actors will always object to this movement. The labor in Germany, for example, will object to the repeal of the co-determination principle, and the shareholders in the US will object to the introduction of a co-determination rule. Second, each allocation is generated based on the preferences of the individuals in each economy. These preferences are *endogenous* to the existing legal institutions, income and wealth distribution and resource allocation patterns in previous periods, i.e., these preferences are endogenous to the constraints of the Pareto optimality maximization problem. Hence, the individuals in each of the compared states of the world (stakeholder model economy and shareholder value economy in our example) have their own distinct preferences. Accordingly, it is not possible to compare these allocations based on Pareto criterion because the efficiency of allocations is a function of individuals’ preferences. Allocations are only comparable if individuals’ preferences are stable across the compared allocations, which is not the case if the constraints (e.g., income and wealth distribution and legal institutions) vary.

²⁸ Adler argues for using objective values (that reflect convergent idealized individual’s preferences) for measuring and comparing the subjective welfare effects of Pareto non-comparable states of the world, see: Adler, ‘Beyond Efficiency and Procedure: A Welfarist Theory of Regulation’ (n 1) 297–300.

²⁹ I am committed to avoiding the provocative style of writing in this thesis. The use of the adjectives “irritating” and “arrogant” does not deviate from this commitment; it is simply the *accurate* description of the widespread practice of the unqualified use of the adjective “optimal” in law and economics scholarship.

allocation of resources.³⁰ Second, there is a need for *normative criteria* (e.g., economic growth rate) for comparing the efficient (or inefficient) allocation of resources that corresponds to a specific set of constraints (i.e., institutions, income distribution, preferences, and technologies) with the comparable efficient (or inefficient) allocations corresponding to a different set of constraints because these allocations are Pareto non-comparable.

Third, regarding the distributional concern, the Pareto criterion may justify allocations of resources that make the rich richer while leaving the poor at their status quo. Further, in the case where the initial state of the world involves high level of inequality, Pareto criteria cannot justify income distribution because income distribution will make the rich worse-off; Pareto criteria carry a status quo bias.³¹

Forth, Pareto criterion could justify legal arrangements under which the weak can be exploited because it ignores *economic power*. For example, Coase theorem states that under well-defined property rights and zero transaction costs, private bargaining leads to Pareto efficient allocations.³² Hence, Coase theorem can be used to justify deregulated labor markets, as deregulation may facilitate labor contracts as a governance structure for labor markets; this governance structure would ensure efficient allocation of labor resources, assuming low transaction costs. For example, through private bargaining, the optimal level of working safety conditions shall be set; if workers desire high safety conditions, they can bargain for high working safety conditions against reducing their wages. Deregulated labor markets enable both employers and employees to set contractual terms that increase their respective welfare in comparison to its status quo. The problem with this argument is that, even if we assume rationality, perfect information and zero transaction costs, it neglects the fact that workers may not have outside options through which they can ensure minimum living standards while being safe from exposure to high occupational risks, given the monopsonistic structure of labor markets in developing economies. In contrast, due to unemployment, employers, in many cases, have outside options to the negotiating worker. Samuels develops lucidly this critique of Pareto optimality:

The choice of Pareto-optimality is choice from within the individual's opportunity set. A paradigmatic and revealing ... example of the "voluntarist" argument is ... emigration with the inference that if one elects not to emigrate ... then that individual

³⁰ Samuels (n 15) 32–35. Schmid (n 25), 37–38.

³¹ Towfigh and others, *Economic Methods for Lawyers* (Edward Elgar 2015) 30.

³² R. H Coase, 'The Problem of Social Cost' (1960) 3 *The Journal of Law and Economics* 6–8.

is satisfied, ergo in a Pareto-optimum situation. But this is only choice from an opportunity set, an acceptance of one injury (the disutilities of remaining at home) to avoid another presumably more undesirable one. The individual has a choice between the alternatives of remaining and emigrating but he has no choice as to the range of his options and their respective relative costs. To call his choice Pareto-optimal is only to say that he made it, to thoroughly neglect the structure of and the forces governing his opportunity set. ... A Pareto-optimum situation may mean either no *desire* to change or an *inability* to change. ... *Pareto optimal transactions are only chosen adjustments within the opportunity set structure accorded by the status quo structure of power or mutual coercion.*³³

In sum, although the Pareto criterion derives its moral justification from consent, many market transactions involve forms of tacit coercion due to the unequal distribution of power. Economists consider any movement from the status quo to Pareto optimal allocation welfare enhancing, ignoring the tacit forms of coercion that made this movement the only available choice for some parties. The above analysis is not restricted to labor regulation; it can be extended to other economic regulations such as corporate governance. For example, a legal arrangement under which German workers are allowed to waive the co-determination principle or other rights to the voice may seem more efficient than the existing regime because under the former German workers can sell their participation rights to the shareholders resulting in welfare enhancing transaction. Neoclassical law and economics would perceive this transaction as welfare enhancing par excellence, despite the forms of tacit coercion that the workers may have been subject to in accepting this transaction. This point will be clearer when we discuss the concept of economic power and the protection of the weak in law and economics literature in the following chapter.

Finally, due to its endorsement of subjective welfarism (see below), Pareto criterion considers the satisfaction of any individual preference a source of well-being. However, this is not true because the satisfaction of immoral and harmful preferences (e.g., the preferences of someone to consume addictive drugs), or the satisfaction of preferences based on false beliefs may indeed decrease individuals' welfare.³⁴

Despite the numerous critiques of Pareto optimality, this criterion still underlies the neoclassical normative theory of economic regulations, particularly the assignment of the correction of market failures function to economic regulations. Given the above

³³ Samuels (n 15) 27–29 [Emphasis in the original].

³⁴ Hausman and McPherson (n 16) 123–128. Hockett (n 17), 405–406.

conceptualization of Pareto optimality, neoclassical economists have been concerned with developing the *ideal conditions* under which Pareto optimality can be attained. Here economists have used a traditional trick of neoclassical economics that institutional economists, sociologists, and traditional legal scholars (except for law and economics subset) would find hard to accept. These non-neoclassical scholars would normally ask whether an existing economic system such as the German economic system is Pareto optimal. If not, a legal scholar or a sociologist would then ask, why this is so? And how to intervene to ensure that the economic system would be allocatively efficient. Here, the non-neoclassical scholar takes the current legal institutions, preferences, technology, income, wealth and power distributions in the German system as given, and then investigate the *optimal allocation of resources* given these constraints. This would be a very demanding analysis, given the interdependence of the institutions and the interdependence of the constraints; as already mentioned, technologies, preferences, and distributions are endogenous to existing legal institutions, and these institutions are in turn endogenous to the preferences, technologies and distributions they generate.

Indeed, more than fifty years ago, Coase defended the necessity for starting the analysis and design of institutions from an understanding of the *real economic system*. He argued that

[An important] feature of the usual [neoclassical] treatment of the problems discussed in this article is that the analysis proceeds in terms of a comparison between a state of *laissez faire* and some kind of ideal world. This approach inevitably leads to a looseness of thought since the nature of the alternatives being compared is never clear. In a state of *laissez faire*, is there a monetary, a legal or a political system and if so, what are they? In an ideal world, would there be a monetary, a legal or a political system and if so, what would they be? The answers to all these questions are shrouded in mystery and every man is free to draw whatever conclusions he likes. Actually very little analysis is required to show that an ideal world is better than a state of *laissez faire*, unless the definitions of a state of *laissez faire* and an ideal world happen to be the same. But the whole discussion is largely irrelevant for questions of economic policy since whatever we may have in mind as our ideal world, it is clear that we have not yet discovered how to get to it from where we are. A better approach would seem to be to start our analysis with a situation approximating that which actually exists, to examine the effects of a proposed policy change and to attempt to decide whether the new situation would be, *in total*, better or worse than

the original one. In this way, conclusions for policy would have some relevance to the actual situation.³⁵

In contrast, neoclassical economists adopt ahistorical and non-contextual approach through which they ask the following question: What are the required properties of an abstract unrealistic model of the economy that would ensure the attainment of the conditions for Pareto optimality? To address this question, they first derive the conditions for Pareto optimality.³⁶ Then, they investigate which *abstract models* of the economy can meet these conditions for Pareto optimality.³⁷ Then, they compare the properties of their model with those of real economic systems. Once they identify a difference (the so-called market failure), they argue that policy or regulatory intervention may be required in order to ensure that *economic reality would approximate the economic model*.³⁸

Through following the above approach, neoclassical economists have come to establish and agree to the first fundamental theorem of welfare. According to this theorem, under strong conditions, perfectly competitive markets are Pareto optimal.³⁹ These conditions include perfect information, perfect competition, complete markets, absence of externalities, absence of public goods, absence of scale economies, absence of transaction costs, stability of preferences, fixed technology, rational utility maximizing consumers, and rational profit maximizing firms.⁴⁰ The first fundamental theorem of welfare holds only if these strong unrealistic conditions hold in *all markets simultaneously*. In other words, it is a general equilibrium theorem. For example, suppose the conditions of the first fundamental theorem of welfare holds for the labor market but not for the product market. In this case, the theory would inform us that the market economy is not Pareto optimal, but it would not be able to inform us that labor markets independently are Pareto optimal; it may not be Pareto optimal. The theory is simply silent on this issue because it is not a partial equilibrium theory. Similarly, if the conditions of the theory hold for the product market for wheat but not for the product market of laptops, for example, then, we cannot conclude that the product market of wheat is Pareto optimal. This is indeed the core of the critique of the general theory of the second best discussed

³⁵ Coase, 'The Problem of Social Cost' (n 32) 43 [emphasis added].

³⁶ For a brief overview of the conditions of Pareto optimality see: Ng (n 8) 28–36. For a more elaborate discussion, see: Mishan (n 7) 35–107.

³⁷ Ng (n 8) 38–42. R. F Boadway and Bruce Niel, *Welfare Economics* (Wiley-Blackwell 1984) 62–81.

³⁸ *ibid* 130.

³⁹ Feldman (n 8) 3. Boadway and Niel (n 37) 64.

⁴⁰ Richard W Tresch, *Public Finance: A Normative Theory* (2nd, Academic Press Inc. 2002) 9. Feldman (n 8) 3. Boadway and Niel (n 37) 83.

in the previous chapter. In sum, for attaining Pareto optimality, *the conditions for the first fundamental theorem of welfare must hold for all markets simultaneously.*

After identifying the conditions for the ideal economic system under which Pareto optimality is attained, a debate over whether these conditions hold for the *real* capitalist market economy has taken place. The Chicago school of economics endorsed the view that the real capitalist economies approximate the ideal perfectly competitive markets assumed in the first fundamental theorem of welfare.⁴¹ The predominant view in modern economics, however, is that most, if not all of these conditions do not hold in reality, and thus market failures are abundant.⁴² Market failures are thus the failure of the real economic system to allocate resources efficiently because some of the above conditions of the first fundamental theorem of welfare do not hold. As such, the list of market failures include, inter alia, imperfect competition, asymmetry of information, transaction costs (because these costs impede private bargaining and thus impede both exchange efficiency and production efficiency because the reallocation of factors of production is undertaken through contractual relations), incomplete markets and increasing returns to scale and unemployment.⁴³ Even if these failures are corrected, the conditions for Pareto optimality will not hold unless the preferences of economic agents are *stable* and technology is *fixed*.⁴⁴ Changes in preferences or technology would shift the economy away from its static efficiency state. In sum, market failures refer to the instances where one of the conditions of the first fundamental theorem of welfare does not hold.

Consequently, neoclassical law and economics scholars have provided a simple answer to the very complex question of the objectives of economic regulations. They have taught generations of legal scholars working on competition law, corporate governance, and regulations of banking, labor, and the environment that they need to identify market failures in the situation under analysis. Once identified, they need to inquire how they can use legal intervention in order to correct these failures. Coase has cautioned that before recommending regulatory intervention, scholars need to factor in the costs of regulatory intervention and then compare the costs of the regulatory governance structure with the inefficiency costs of market failures associated with the (deregulated) market as an organizational structure because the

⁴¹ Mark Blaug, 'The Fundamental Theorems of Modern Welfare Economics Historically Contemplated' (2007) 39(2) *History of Political Economy* 196.

⁴² Joseph E Stiglitz, *Whither Socialism?* (The MIT Press 1994) 27–44. Stiglitz, 'Government Failure vs. Market Failure: Principles of Regulation' (n 5) 15–16.

⁴³ For an overview of some of these market failures, see: Boadway and Niel (n 37) 107–129.

⁴⁴ Feldman (n 8) 5.

regulatory governance structure may be more costly than the governance structure of markets.⁴⁵ Market failures are not sufficient for justifying regulatory intervention; only regulatory interventions that produce net benefit, as revealed by a *cost-benefit analysis*, are justified.⁴⁶

The concept of market failures, however, ignores that markets are only one form of economic organization (governance structure) of economic transactions; the firm (hierarchy) is another mode of governance.⁴⁷ Coase claims that firms emerge to replace markets in governing some transactions when the firms are less costly than markets in governing these transactions.⁴⁸ Still, the firm, due to organizational failures such as agency costs, fails to *maximize* its efficiency as a governance structure. This implies that both markets and firms as organizational structures coordinating economic activities fail to maximize their own efficiency: market and firm's failures are thus the main sub-categories of *organizational failures*.⁴⁹

Agency costs internal to the firm understood as a nexus of incomplete contracts are the main forms of firm's organizational failures in new institutional economics. These costs include the costs of the principal-agent relation of the shareholders and the management (the equity agency problem), the costs of the agency relation between the management and the firm's creditors (the debt agency problem), and the costs of the agency relation between the management/shareholders and labor (the labor agency problem). They also include the costs associated with the conflict of the incentives structure of the majority and minority shareholders.

In contrast to the concept of Pareto efficiency underlying the correction of market failures, the normative basis for minimization of the transaction costs associated with the governance structure of the firm is more obscure. Posner, for example, argued that market failures such as information asymmetry are the source of transaction costs; transaction costs are not a distinct

⁴⁵ Coase, 'The Problem of Social Cost' (n 32) 18–19. Steven G Madema and Zerbe Jr. Richard O. 'The Coase Theorem' in Boudewijn Bouckaert and Gerrit De Geest (eds), *Encyclopedia of Law and Economics, Volume I: The History and Methodology of Law and Economics* 877. Richard Zerbe Jr. and Howard E McCurdy, 'The Failure of Market Failure' (1999) 18(4) *Journal of Policy Analysis and Management* 565. Veljanovski (n 1) 22.

⁴⁶ Zerbe Jr. and McCurdy (n 45), 565. In the words of Boadway and Bruce, 'market failure is a necessary but not a sufficient condition for [regulatory] intervention since the planner [e.g., the regulator] may not be able to do any better than the market.' Boadway and Niel (n 37) 15.

⁴⁷ Oliver E Williamson, 'Transaction Cost Economics Meets Posnerian Law and Economics' (1993) 149(1) *Journal of Theoretical and Institutional Economics* 103.

⁴⁸ R. H Coase, 'The Nature of the Firm' (1937) 4(16) *Econometrica* 390–391.

⁴⁹ Williamson (n 47), 103. *ibid* 105.

analytical or normative concept.⁵⁰ Posner's argument holds only if we perceive the firm as a *purely* nexus of contracts, i.e., as an extension of the market.^{51, 52} This is, however, inaccurate. Transaction costs internal to the firm cannot be a result of *market* failures because firms are not an extension of the market; they are rather a distinct alternative mode of coordinating economic transactions. This implies that minimization of the costs of the organizational mode of the firm should seek a normative justification other than Pareto efficiency underlying the first fundamental theorem of welfare. Obviously, the minimization of agency costs imposes costs on some stakeholders, while benefiting others. Accordingly, in the cases where the minimization of agency costs (e.g., equity agency costs) results in benefits to some stakeholders (e.g., stockholders) that exceed the costs incurred by other stakeholders (e.g., management and labor), *Kaldor-Hicks efficiency* as implemented by cost-benefit analysis justifies the minimization of these agency costs. Further, assuming that the shareholder value firms maximize long-term profit, equity agency problem can be considered not only a firm's organizational failure, but also a market failure. The reason is that if firms do not maximize their profits, one of the underlying conditions for the first fundamental theorem would not hold, namely, the profit maximizing firms.⁵³

In sum, in neoclassical-new institutional law and economics, economic regulations should assume the functions of market failure correction and transaction costs (mainly agency costs) minimization. The correction of market failures finds its normative rationale in Pareto efficiency underlying the first fundamental theorem of welfare; by correcting market failures, economic regulations would push the real economic system to approximate the first-best Pareto efficient idealized model of the market assumed in the first fundamental theorem of welfare. If the firms were perceived as a *purely* nexus of contracts, and thus as an extension of the market,

⁵⁰ Richard A Posner, 'The New Institutional Economics Meets Law and Economics' (1993) 149(1) *Journal of Theoretical and Institutional Economics* 80–85. The author argues that the intellectual value of transaction costs economics lies in orienting law and economics scholars to focus on important neglected questions. However, the proposed analytical concepts in transaction cost economics (e.g., asset specificity and bounded rationality) make no novel intellectual contributions because they have already been part of the neoclassical market failures framework (e.g., asymmetry of information, costs of information, and bilateral monopoly).

⁵¹ The other condition required for Posner's argument to hold is that transaction costs should be zero if all market failures other than transaction costs are eliminated. If this is not the case, then, transaction costs are not a result of market failures; they are rather a standalone type of market failure.

⁵² Cheung expresses this idea by stating that 'it is *not* quiet correct to say that the "firm" supersedes "the market." Rather, one type of contract supersedes another type.' Cheung, Steven N. S. 'The Contractual Nature of the Firm' (1983) 26(1) *Journal of Law and Economics* 10.

⁵³ As already discussed in the previous chapter, this is the crux of Jensen's argument in defense of the shareholder value model of corporate governance.

transaction cost minimization would enable efficient contracting within the firm, and thus allocative efficiency according to Coase theorem. According to this view, minimization of agency costs finds its normative basis also in Pareto efficiency according to the first fundamental theorem of welfare. If one is to reject this conceptualization of the firm as an extension of the market, then, minimization of agency costs finds its normative justification in Kaldor-Hicks efficiency discussed below.

Consequently, Agency problems are the organizational failures triggering the regulation of corporate governance. The market failure of imperfect competition is the rationale for competition law. The market failure of information asymmetry between depositors and the banks regarding the quality of depository institutions' assets is the primary economic rationale for banking regulation because in case of a bank's insolvency, information asymmetry would trigger a bank run. Further, environmental regulation finds its rationale in the market failure of negative externalities. Not only market failure gives the rationale for regulation, it also determines the extent of regulatory intervention and regulatory instruments. In sum, in neoclassical law and economics, any legal institution in any institutional domain in the institutional network of capitalism that cannot be justified with reference to one form or another of market or organizational failures is *inefficient*.

This is the first important element in the neoclassical normative theory of economic regulations. Any legal norm should have a justification in one form of market or firm's organizational failures. If not, it then lacks an adequate rationale. Many law and economics scholars may stop in their analysis of legal institutions at this point. They use market and firm's failures as a "diagnostic approach" to guide their analysis and design of legal institutions.⁵⁴ We call this step in the normative theory of economic regulations, *the economic rationale, or the economic justification step*. Below, based on the insights of economic growth, it will be clear that some regulatory interventions may find their rationale in economic growth theory, but not in market failures, and others may find their rationale in market failures, but they cannot be justified with reference to their effects on economic growth.

Most law and economics go further steps beyond the economic rationale step that is the comparison of *the efficiency benefits of the market or organizational failure correcting institution and its costs*. In the jargon of neoclassical welfare economics, this is called *social or applied welfare analysis*. If the legal institution produces no cost, then, it is obviously a Pareto improvement because the state of the world that it brings into existence would make at

⁵⁴ Zerbe Jr. and McCurdy (n 45), 559.

least one person better off due to efficiency benefits, while making no body worse off. Most, if not all, legal institutions produce costs upon at least one person, and thus they cannot be Pareto improvement. For example, strongly socially desirable regulations such as labor safety regulation impose costs on the producers, and thus cannot represent a Pareto improvement. Similarly, competition laws also impose costs on the producers, the shareholder value system of corporate governance imposes costs on the management and the labor, and the stakeholder model of corporate governance may impose costs on minority shareholders.

Two standard methods exist for social welfare analysis: *cost-benefit analysis* based on the welfare standard of Kaldor-Hicks efficiency and *social welfare functions*. We explain each of them and their relation to each other below.

A Kaldor-Hicks efficient allocation is an allocation of resources that makes at least one person better off (the winner(s)) and at least one person worse off (the loser(s)), but the winners can, but are not required to, compensate the losers and are still better off (the potential compensation test).⁵⁵ Obviously, the potential compensation condition does not require actual compensation of the losers by the winners.⁵⁶ The neoclassical normative theory of regulation endorses Kaldor-Hicks efficiency as its major normative criterion for assessment and design of regulation.⁵⁷ Similar to Pareto efficiency and Pareto improvement, Kaldor-Hicks criterion shares a welfarist moral foundation; we determine whether the individuals are made better-off or worse-off by reference to *satisfaction of their actual preferences*. Cost-benefit analysis is the applied welfare economics' *operationalization* of Kaldor-Hicks efficiency, or in other words, cost-benefit analysis finds its justification in the concept of Kaldor-Hicks efficiency.⁵⁸

Similar to Pareto improvement criterion, cost-benefit analysis compares two states of the world; the state of the world in absence of regulation (the non-regulation state) and the state of the world resulting from the enactment of the regulation (the regulation state of the world).⁵⁹ To have a baseline example for guiding the discussion of cost-benefit analysis, the German model of corporate governance will be our non-regulation state of the world (i.e., the initial state), and that the regulation state of the world involves the abolition of the co-determination rule. The question is then that in light of its costs and benefits, should co-determination be abolished? Given this baseline example, we can proceed with explicating cost-benefit analysis.

⁵⁵ Ng (n 8) 48.

⁵⁶ *ibid* 48.

⁵⁷ Adler, 'Beyond Efficiency and Procedure: A Welfarist Theory of Regulation' (n 1) 244–249.

⁵⁸ Hausman and McPherson (n 16) 145. Towfigh and others (n 31) 31.

⁵⁹ Matthew D Adler and Eric A Posner, *New Foundations of Cost-Benefit Analysis* (Harvard University Press 2006) 13.

In order to compare the regulation and non-regulation states of the world, cost-benefit analysis compares *the costs and benefits* of the regulation; if the regulation produces net monetized benefit, then, it should be adopted.

This brings us to the question of how *costs and benefits of legal institutions* are conceptualized and measured in cost-benefit analysis. The regulatory intervention shall benefit some individuals (the shareholders in our example), while harm others (the workers); the former are better-off under the regulation state of the world and the latter are worse-off. Similar to Pareto efficiency, individuals are better-off if the positive effects of the regulation state of the world on their subjective well-being conceptualized by satisfaction of their actual preferences exceed their negative effects. For example, suppose the abolition of co-determination increases the shareholder value of the firm and that some shareholders *feel bad* about deprivation of the workers from the voice guaranteed by the co-determination. The regulation state of the world confers some benefits and inflicts some harm over the shareholders, but if the shareholders believe that the benefits exceed the harm, then, they would be better off under the regulation state of the world. This implies that shareholders can measure all the goods they value, whether monetary (e.g., short term increases in profits) and non-monetary (voice) according to *one metric of measurement*.⁶⁰ As we shall see below in the section on constitutional economics critique, this is a very strong assumption. Similarly, the workers must be able to measure all the positive and negative effects on the non-monetary and monetary values they prefer (i.e., the arguments of their utility function) according to the same metric of measurement that the shareholders use.

In our example, the abolition of co-determination will produce net benefits to the shareholders, given their actual preferences over material gain and voice, and net losses to the workers, given their actual preferences over material loss and voice. In cost-benefit analysis, the method of measurement for these net gains and losses for the winners (the shareholders) and the losers (the workers) in the state of the regulation is called *compensating variation*,⁶¹ which is a ‘money metric of change in well-being.’⁶² Compensating variation refers to the amount of money, which measure the *preferred values (of the winners)*, that the winners are willing to accept (or pay in case we use willingness to pay instead of willingness to accept) in order not to come back to the non-regulation state of the world (or in order to bring about the

⁶⁰ *ibid* 16.

⁶¹ *ibid*.

⁶² Matthew Adler and Eric A Posner, ‘Happiness Research and Cost-Benefit Analysis’ (2008) 37(S2) *Journal of Legal Studies* 267.

regulation state of the world in case we use willingness to pay).⁶³ This amount of money would reflect the positive compensating variation the regulation brought to this individual. Similarly, we can calculate the compensating variation (which would be in negative now) for worse-off individuals that they are willing to pay (or accept) in order to prevent the introduction of the regulation (or in order to compensate them for loss of utility resulting from the introduction of the regulation in case we use willingness to accept). For valued goods transacted on the market, *market prices* would reflect willingness to pay. For values that are not transacted on the market (e.g., workers' voice guaranteed by co-determination because the latter is a mandatory rule), willingness to pay (or to accept) measured using, for example by using contingent valuation questionnaires, attempts to mimic the market valuations (i.e., prices), which are absent in relation to these values.⁶⁴

Then, the researchers choose the *weights* to assign to each of the benefits and costs as measured by compensation variations,⁶⁵ then, they *add* the compensating variations of both winners and losers in the regulation state.⁶⁶ If these compensating variations are positive, the regulation will bring about net benefits. If zero, it will result in no net benefits, and if negative, it will result in net losses.⁶⁷ In short, cost-benefit analysis is 'the sum of CVs' [compensation variations] test.'⁶⁸

As we have already seen in the previous chapter, the standard defenses of shareholder value models of corporate governance in neoclassical law and economics endorses this cost-benefit analysis logic. The underlying argument is straightforward. The shareholder value model maximizes the value of the firm, and thus the material gains of the shareholders will exceed the losses incurred by the workers because the inefficiencies of the two-masters problem and equity agency problems shall be eliminated. Such arguments, although enshrined in cost-benefit analysis, fail to meet the sophisticated requirements of adequate cost-benefit analysis. Such cost-benefit analysis in law and economics of corporate governance literature ignores important costs and benefits such as gains and losses in voice, or preferences for fairness. Even if we assume that cost-benefit analysis takes adequately these preferred values into account, the abolition of co-determination may still confer net benefits upon the shareholders that exceed

⁶³ Adler and Posner (n 59) 16.

⁶⁴ Amartya Sen, 'The Discipline of Cost-Benefit Analysis' (2000) 29(S2) *Journal of Legal Studies* 945–947. See also: Andrew T Fogalia and Andrew K Jennings, 'A Happiness Approach to Cost-Benefit Analysis: Foreword' (2013) 62(8) *Duke Law Journal* 1505.

⁶⁵ Sen, 'The Discipline of Cost-Benefit Analysis' (n 64) 938.

⁶⁶ Amartya Sen calls this feature of cost-benefit analysis, "additive accounting". *ibid* 938–939.

⁶⁷ Adler and Posner (n 59) 17.

⁶⁸ Adler and Posner (n 62), 266.

its net costs imposed on the employees. Most shareholders will attach higher monetary value to the gains in the voice than the monetary value the workers would attach to the loss in the voice. This is because shareholders tend to benefit more from this voice due to the increase in the shareholder value of the firm. Further, they tend to be wealthier than the workers are.

Similarly, in competition law, the normative standards of *total welfare* and *consumer welfare* are two different versions of cost-benefit analysis.⁶⁹ Total welfare standard is a straightforward cost-benefit normative foundation; suppose that the legal norm of competition law (e.g., merger regulation) facilitates mergers that will involve productive efficiencies due to increase in the scale or scope of production, while increasing the price-cost margins due to the associated increase in market power of the merged firm. If the productive efficiency benefits exceed the consumers' loss in welfare as measured in consumer surplus, this legal norm increases the total welfare, i.e., the net *monetary* benefits. If consumer welfare standard is to be adopted, this implies that these mergers should be prohibited. The consumer welfare standard is a *weighted* cost-benefit analysis according to which consumers' welfare is given a weight of one.⁷⁰ Similar to cost-benefit arguments in corporate governance, the preferences of the consumers and producers regarding the fairness of these legal norms are not taken into account. For example, consumers may consider that mergers that involve an increase in market power of the merging firms resulting in redistributing income from consumers to producers are *unethical*. These mergers do not only decrease their utility because of the loss in their income, but also due to the vindication of unfair practice. Adequate cost-benefit analysis should take these preferences regarding fairness into account and measure them according to a market based valuation mechanism such as compensating variation.

In sum, cost-benefit arguments that we observe in law and economics literature on corporate governance or competition law tends to be a simplified version of adequate neoclassical cost-benefit analysis. In this simplified cost-benefit analysis, only the monetary effects of the legal institutions are taken into account;⁷¹ this means that maximization of the aggregate wealth is the normative objective underlying neoclassical law and economics.⁷²

⁶⁹ Adler, 'Beyond Efficiency and Procedure: A Welfarist Theory of Regulation' (n 1) 245–246.

⁷⁰ Wolfgang Kerber, 'Should Competition Law Promote Efficiency? Some Reflections of An Economist on the Normative Foundations of Competition Law' in Josef Drexl, Laurence Idot and Joël Monéger (eds), *Economic Theory and Competition Law* (Edward Elgar 2009) 106. *ibid* 114.

⁷¹ According to Amartya Sen, 'The neglect of the so-called human costs relates partly to this despotic quest for complete orderings. These are cases in which a little more sophistication in the technical exercise can allow us to include many variables that some technocrats find too messy to incorporate.' Sen, 'The Discipline of Cost-Benefit Analysis' (n 64) 941.

⁷² Parisi (n 5), 269.

Hence, endorsing the adequate cost-benefit analysis that takes into account the costs and benefits in terms of gains and losses in preferred non-monetary values (e.g., voice or fairness) might change the analysis in the cases where the net losses of these values exceed the monetary net gains emphasized in the standard neoclassical law and economics analysis.

Not only cost-benefit arguments in law and economics scholarship ignore the preferences for non-monetary values, they tend to ignore the *path dependency* of cost-benefit analysis. Adequate cost-benefit analysis is based on the individuals' preferences in the initial state of the world. However, these preferences are endogenous to the legal institutions of this state of the world. For example, Given the institutions of a stakeholder model of corporate governance in Germany, German employees may attached higher value to the voice than that attached to voice by their US counter-parts; similarly, US shareholders may attached higher value to their voice in comparison to their German counter-parts. Given the heterogeneity of the preferences across the US and German employees and shareholders, the cost-benefit calculus of the co-determination principle may turn out to be different. In Germany, the abolition of this principle may produce net losses, while the introduction of the principle in the US might produce net losses. One cannot observe, however, sensitivity to the endogeneity of the preferences of the stakeholders to the initial state of the world in the cost-benefit arguments in law and economics literature on corporate governance; these arguments assumes implicitly a universal initial state of the world (normally, a state with no co-determination). This assumption implies a bias towards this assumed initial state of the world and ignores the individuals' real preferences of formed endogenously to the institutions of the realistic initial state of the worlds.

In sum, standard cost-benefit arguments in law and economics literature ignore the preferences for non-monetary values and the real preferences of the stakeholders that are endogenous to the existing institutions of the initial state of the world. These arguments fail to meet the requirements for *adequate* neoclassical cost-benefit analysis.⁷³ By doing so, individuals' preferences over non-monetary values are excluded from law and economics analysis. The latter focuses exclusively on preferences over *monetary* values. For avoiding these critiques, law and economics analysis should endorse adequate cost-benefit analysis. Still, as we shall see in the following sections, adequate cost-benefit analysis that takes into

⁷³ Amartya Sen has argued that *different versions of cost-benefit analysis* are used in practice across different areas of scholarship; hence, the scholars should attempt to infer and compare these types of cost-benefit analyses. Sen, 'The Discipline of Cost-Benefit Analysis' (n 64) 933. The above discussion reveals that cost-benefit arguments in law and economics literature tend to diverge from the more sophisticated neoclassical form of cost-benefit analysis.

account individuals' preferences over non-monetary values (e.g., fairness and voice) attracts significant critiques.

Given the above explanation of the adequate cost-benefit analysis and its simplified version used in law and economics scholarship, one can investigate their moral foundations. Adequate cost-benefit analysis is a proxy for maximizing *the aggregate subjective well-being of the individuals* as captured by the satisfaction of their actual preferences.⁷⁴ This moral theory is referred to as 'preferentialism'⁷⁵ or 'preference based view of well-being',⁷⁶ according to which the satisfaction of individuals' actual preferences is assumed to maximize their well-being.⁷⁷ If some individuals prefer non-monetary values (e.g., fairness in transaction, respect or voice), then, the realization of these non-monetary values will result in an increase in their subjective well-being. According to neoclassical cost-benefit analysis, income affects the subjective well-being of these individuals, hence, there will be always, or at least in most cases, a *finite* amount of money that can compensate for the loss of these non-monetary values (i.e., there will be always a defined compensation variation).⁷⁸ By measuring all the preferences, whether over monetary or non-monetary values, according to one metric of measurement (monetary values/compensation variations), cost-benefit analysis can ensure the maximization of these monetary values representing individuals' preferences. The maximization of the latter would then ensure the maximization of the aggregate subjective well-being (i.e., preferences satisfaction). Moral philosophy critique below will show that this moral justification of cost-benefit analysis is far from being convincing.

With respect to the simplified version of cost-benefit analysis normally invoked in law and economics scholarship, it focuses on maximization of aggregate wealth and ignores individuals' preferences for non-monetary values. Hence, preferential welfarism (subjective well-being) cannot be the moral foundation of this form of cost-benefit analysis. Further, the systemic critiques below and the next chapter will show that cost-benefit analysis fails to ensure the maximization of wealth; even if we assume that wealth is a morally justified objective to be maximized, then, only a systemic normative theory of economic regulations can ensure its maximization.

⁷⁴ Adler and Posner (n 62), 266.

⁷⁵ *ibid* 257.

⁷⁶ Adler, 'Beyond Efficiency and Procedure: A Welfarist Theory of Regulation' (n 1) 262. Hausman and McPherson (n 16) 120.

⁷⁷ Adler, 'Beyond Efficiency and Procedure: A Welfarist Theory of Regulation' (n 1) 262. For which reason, cost-benefit analysis is considered a *hedonic* decision procedure. Fogalia and Jennings (n 64), 1505.

⁷⁸ Adler and Posner (n 59) 159–161.

In addition to cost-benefit analysis, social welfare functions, though rarely used in law and economics scholarship with the exception of the areas of taxation and environmental regulation, are another method for assessment of legal institutions.⁷⁹ Social welfare functions can be defined as functions that rank the states of the world according to the degree of the *aggregate well-being* of the individuals.⁸⁰ This implies that these functions are concerned with *aggregate well-being* of the individuals in the society, where aggregate well-being depends on the well-being of each individual and nothing else.⁸¹ Welfarist social welfare functions reflect the moral theory of welfarism. According to welfarism, aggregate well-being is morally relevant, but not morally conclusive⁸² and that individuals' well-being is defined as satisfaction of their (actual or idealized) subjective preferences.⁸³ Accordingly, welfarist social welfare function ranks the states of the world according to the extent of the satisfaction of individuals' preferences, i.e., their utilities.⁸⁴ The ranking of the states of the world is function of the utilities of the individual; the social welfare increases if the utility of any of the individuals increases.

The problem is therefore the following: “should *ordinal or cardinal utility* be the basis for *the welfarist social welfare function*?” To address this question, we illustrate briefly the difference between ordinal and cardinal utility functions. Ordinal utility function ranks the preferences of the individual over specific alternatives. For example, if individual *A* prefers a state of the world *x* brought by a specific legal institution over another state *y* resulting from an alternative legal institution, ordinal utility function will rank these preferences as $x \succ y$ i.e., *x* is preferred to *y*. Similarly, if another individual prefers *y* to *x*, his ordinal utility function will represent his preferences $y \succ x$. Ordinal utility functions do not however measure how much utility (i.e., subjective well-being or the mental state of happiness) individual *A* will gain (or lose) if the legal institution *x* (or *y*) is adopted.⁸⁵ Hence, ordinal utility functions do not allow inter-personal comparisons of utility. In contrast, cardinal utility functions measure exactly how much units of subjective well-being individual *A* will gain (or lose) if the legal institution *x* (or *y*) is adopted, and how much units of subjective well-being individual *B* will

⁷⁹ Matthew Adler, *Well-Being and Fair Distribution: Beyond Cost-Benefit Analysis* (Oxford University Press 2011) xiii.

⁸⁰ *ibid* 6.

⁸¹ Louis Kaplow and Steven Shavell, ‘Fairness versus Welfare’ (2001) 114(4) *Harvard Law Review* 985.

⁸² Adler, ‘Beyond Efficiency and Procedure: A Welfarist Theory of Regulation’ (n 1) 288.

⁸³ Amartya Sen, *Development as Freedom* (Oxford University Press 1999) 59. *ibid* 67–68.

⁸⁴ Adler, *Well-Being and Fair Distribution* (n 79) 61–62.

⁸⁵ Robert S Pindyck and Daniel L Rubinfeld, *Microeconomics* (7th edn, Prentice Hall 2009) 80–81.

lose (or gain) if the legal institution y (or x) is adopted.⁸⁶ Since the utility of each individual is measured according to the same metric that is units of subjective well-being (or units of happiness if we conceptualize subjective well-being to be equivalent to happiness/pleasure), inter-personal comparisons of cardinal utilities is possible.

If ordinal utility functions are the basis for the social welfare function, the latter would have the objective of *aggregating the subjective preferences (i.e., ranking) of the individuals over the alternative states of the world into a social preference (i.e., ranking) of these states of the world*.⁸⁷ For example, suppose there are three alternative legal institutions (e.g., shareholder value model of corporate governance, the German stakeholder model of corporate governance, the Japanese stakeholder model) and each of them would bring a different state of the world. Each of these states of the world has its own distinct features, i.e., its own distinct rates of economic growth, distinct levels of firm's learning, and different levels of protection of labor. Suppose also that the society is comprised of three individuals: a shareholder, a worker, and a manager, and each of them ranks these states of the world differently according to their perception of the effects of each state of the world on their individual welfare, i.e., according to their subjective preferences over these states of the world. The ordinal social welfare function's objective therefore is to derive the social ranking of these states of the world that would make at least one of these individuals better off, while making none of them worse-off.⁸⁸ Arrow has shown, however the impossibility of the existence of such a social welfare function under some reasonable conditions.⁸⁹ Hence, ordinal social welfare functions cannot be used for assessing the social welfare implications of legal institutions.

To overcome this hurdle, another trick is used for constructing ordinal social welfare functions that is the *aggregation* trick. Here, the individuals of the society are assumed to be identical homogeneous consumers, and then the social welfare function would be the same as

⁸⁶ *ibid* 81.

⁸⁷ This explanation of social welfare functions applies equivalently to both Bergson-Samuelson and Arrow's social welfare functions because the individuals' ordinal utilities form the arguments of both of these functions. See: Prasanta K Pattanaik, 'Social Welfare Function' in Steven N Durlauf and Lawrence E Blume (eds), *The New Palgrave Dictionary of Economics* (2nd. Palgrave Macmillan 2008) 2–3. *ibid* 6.

⁸⁸ This is because ordinal social welfare functions are based on the individuals' ordinal rather than cardinal utilities and these social welfare functions do not incorporate inter-personal comparisons of utility, *ibid*.

⁸⁹ Kenneth J Arrow, 'A Difficulty in the Concept of Social Welfare' (1950) 58(4) *The Journal of Political Economy* 339–343. For a brief explanation of Arrow's impossibility theorem, see: Towfigh and others (n 31) 136–143.

the maximization of the utility of a representative consumer.⁹⁰ Although every economic actor is necessarily a consumer, this aggregation conceals the losses borne by the consumers in their other economic roles as shareholders, managers, or workers. Further, it ignores the losses born by some consumers because heterogeneity of consumers is normally assumed away. Hence, this approach cannot construct a proper social welfare function. A similar technique that attracts the same critiques is the social planner's objective function. Here, the scholar assumes the existence of a social planner and assigns an objective function that this planner desires to maximize. The maximization of this function is then assumed to maximize social welfare, but this is not a welfarist social welfare function, as it clearly reflects the preferences of this hypothetical social planner.⁹¹

Amartya Sen has shown, however, that the use of *ordinal utility functions* and rejection of *inter-personal comparisons of utility* are the main reasons for Arrow's impossibility results.⁹² In other words, there exist social welfare functions that depend on individuals' cardinal utilities and incorporate inter-personal comparisons of utility. More importantly, there exist social

⁹⁰ This is the main method of assessing the social welfare implications of economic growth. In economic growth literature, many social welfare functions based on this aggregation trick have been proposed. They include, inter alia, the maximization of the utility function of an infinitely lived consumer with no discount rate for future consumption, or with discount rate for future consumption. Elena D Rey and Miguel-Angel Lopez-Garcia, 'On Welfare Criteria and Optimality in Endogenous Growth Model' (2012) 14(6) *Journal of Public Economic Theory* 928. Obviously, the social welfare effects of economic policies such as subsidizing or taxing education hinge upon the chosen social welfare function. See: *ibid* 929–941. This shows that unless the social welfare function is normatively justified, the social welfare assessment of economic policies will reflect the researcher's choice of the social welfare function instead of the objective well-being of the society.

⁹¹ We encounter this hypothetical social planner and his hypothetical regulatory (social) objective function in numerous theoretical and empirical studies of law and economics. In corporate governance, the implicit assumption is that the social objective function is to maximize firm's value. Empirical studies almost exclusively focus on assessing the effects of legal institutions of corporate governance on firm's value. Similarly, the theoretical studies on corporate governance focus on the effects of legal institutions of corporate governance on firm's value. In this literature, the maximization of the objective function of firm's value becomes implicitly our social welfare function. Similarly, in competition law, the obsession there is how to maximize consumer's welfare measured by consumer's surplus, or to maximize total welfare measured by the sum of consumer and producer surplus. In banking regulatory studies, the regulatory objective function is to minimize the default risk of banks under some constraints such as ensuring access to cheap finance. None of these regulatory objective functions is a social welfare function. The legal institutions of corporate governance, competition law, banking regulation that maximize firm's value, consumers' welfare, and minimize default risk may impose significant costs on some stakeholders, or on some other objectives that the majority of the individuals in their social role as citizens value (e.g., income or wealth distribution or macroeconomic stability). Proper social welfare analysis of these legal institutions should take into account these costs as well.

⁹² Amartya Sen, 'Personal Utilities and Public Judgements: or What's Wrong with Welfare Economics?' (1979) 89(355) *The Economic Journal* 546–547. Sen summarizes this point as follows: 'Rules of social judgement based on richer utility information escape Arrow-type impossibility problems.' *ibid* 547. See also: Pattanaik (n 87) 6–8.

welfare functions that depend on non-utility information such as individuals' rights, capabilities, or primary goods that the individuals enjoy in the compared states of the world resulting from the compared legal institutions.⁹³

Accordingly, in contrast to the welfarist ordinal social welfare functions, the so-called utilitarian social welfare function is a function of the *cardinal* utilities of the individuals of the society.⁹⁴ This utilitarian social welfare function is the simple addition of the cardinal utility of each individual in the society. If the legal institution affects negatively the subjective well-being of individual, while affecting positively the subjective well-being of another, both the exact losses and gains in units of subjective well-being of the former and the latter shall be included in the function. Hence, the utilitarian social welfare function can give us the exact units of subjective well-being that measure the positive or negative change in social utility brought about by a legal institution. .

Kaplow, Shavell, Adler, and Dibadj, prominent law and economics scholars in legal scholarship, have advocated *cardinal* social welfare functions for design and evaluation of legal institutions.⁹⁵ Some of them, Adler and Dibadj, argue for some modifications of the utilitarian social welfare function to reflect modified preferences (instead of the real preferences) so that uniformed, immoral, personally harmful, costly, cheap, and adaptive subjective preferences can be excluded,⁹⁶ and they advocate giving more weight to distribution (the so-called Prioritarian social welfare function).⁹⁷

⁹³ The social welfare function that has non-utility information (whether ordinal or cardinal utility) as its own arguments (e.g., capabilities) would cease to be welfarist social welfare function. These non-welfarist social welfare functions can therefore present important challenges to the neoclassical normative theory of economic regulations. For example, these non-welfarist social welfare functions can be embedded into the systemic normative theory of economic regulations developed in the following chapter, but I leave this important task of embedding these non-welfarist social welfare functions into the proposed normative framework of economic regulations to future research.

⁹⁴ Adler, *Well-Being and Fair Distribution* (n 79) 71–74.

⁹⁵ Reza Dibadj, 'Weasel Numbers' (2006) 27(3) *Cardozo Law Review* 1354–1364. Adler defends a form of cardinal social welfare functions called "continuous Prioritarian social welfare functions", see: Adler, *Well-Being and Fair Distribution* (n 79) 307–308. Kaplow and Shavell argue for social welfare analysis of legal rules; this analysis can be made by using a formal social welfare function. See: Kaplow and Shavell (n 81), 1011–1016. For the form of this social welfare function, see: *ibid* 985–986, fn. 41.

⁹⁶ Adler, 'Beyond Efficiency and Procedure: A Welfarist Theory of Regulation' (n 1) 262–264. Dibadj (n 95), 1355–1360.

⁹⁷ Adler, *Well-Being and Fair Distribution* (n 79) 307–311. Dibadj (n 95), 1362–1363. For a short discussion of Prioritarianism in moral philosophy, see: Brad Hooker, 'Rule Consequentialism' in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2008) s. 3, paras. 20–24, <<http://plato.stanford.edu/archives/win2008/entries/consequentialism-rule/>>

Indeed, with respect to these cardinal social welfare functions, Hockett developed a forceful argument for including distributional concerns. He argues that these cardinal social welfare functions need to *aggregate the gains and losses of the satisfaction* of each individual of the society resulting from the introduction of the legal institution subject to analysis. To do so, the social welfare function must include *an aggregation rule*, but this rule is nothing but a *fairness standard or distributive rule*.⁹⁸ The aggregation rule would attach weight to the utility losses and gains suffered by each individual of the society. If they attach equal weight to the utility losses and gains suffered and enjoyed by the poor and the rich, this aggregation rule distributes the same *losses and gains in individual utility* evenly among the individuals of the society. Accordingly, a legal institution that increases the utility of a rich individual by (5) units of subjective well-being, but causes a utility loss to a poor individual by (4) units of subjective well-being would be social welfare enhancing by one unit of subjective well-being. If we endorse a distribution weighted social welfare function suggested above, then, we may give the utility of the poor, for example, double the weight given to the utility of the rich, then, this legal institution would be welfare-reducing by (3) units of subjective well-being, and thus should not be enacted. To put this point in the words of Hockett,

We call the fully specified set of weighting arrangements for any SWF [i.e., social welfare function] its "aggregation rule." And I trust it is more or less obvious now what this might have to do with ... distributive structure and explicitly articulated ethical principles. In essence, how ... [the regulator] weights differing persons' individual satisfaction functions in computing a social

⁹⁸ Hockett (n 17), 451. Marco Fabbri and Castro de Britto, Diogo Gerhard, 'When Choosing the Social Welfare Function Really Matters: A Quantitative Analysis' (9 March 2013). Rotterdam Institute of Law and Economics (RILE) Working Paper Series 2013/01 2–3. Kaplow and Shavell (n 81), 987–988. Given the three famous aggregation rules of social welfare functions (utilitarian, Rawlsian, and Nash), and different forms of individual utility function (polynomial, algorithmic, exponential, and wealth as a proxy to utility), the authors show that different social welfare functions specifications (i.e., different aggregation rules or different types of utility function) rank the states of the world differently. Fabbri and Castro de Britto, Diogo Gerhard (n 98) 6–8. This different ranking of the states of the world is a direct result of the fact that social welfare, as *subjectively* conceptualized by each of these famous social welfare functions (utilitarian, Rawlsian, and Nash), is not only a function of the degree of satisfaction each individual of the society enjoys. These social welfare functions also depend on how these satisfactions are distributed among the individuals. See: Hockett (n 17), 410–411. Although the choice of a social welfare function appears to be a value judgment concerning the appropriate aggregation rule (i.e., distribution rule) that can ensure higher social welfare (i.e., aggregate satisfaction), the choice of the appropriate aggregation rule that can maximize the preferences satisfaction (happiness) is an empirical question. However, it is a tough one because it requires the comparison of *the psychological states of the same individuals* in the states of the world resulting from the institutional arrangements and policies that would maximize each of the proposed social welfare functions.

welfare aggregate will determine who ... [the regulator] thinks should receive what scarce resources in what amounts. It will, in other words, determine the legally mandated distribution of entitlements.⁹⁹

Still, the major problem is how to measure the units of subjective well-being of the individuals. Adler, rightly, observes that if we use the willingness to pay to measure the units of subjective well-being, then, cardinal social welfare functions would be nothing but another sophisticated version of cost-benefit analysis.¹⁰⁰ The results of cost-benefit analysis (or as also referred to in legal literature as *wealth maximization*) would approximate that of cardinal social welfare analysis.¹⁰¹ Similarly, it is argued that Prioritarian social welfare function and distribution weighted cost-benefit analysis would generate approximate results.¹⁰² Accordingly, the critiques advanced below to cost-benefit analysis would apply largely to cardinal social welfare functions that are operationalized through *cost-benefit analysis*.

The approach of cardinal social welfare functions (including the happiness approach to legal institutions that has not been discussed above) goes beyond the standard neoclassical normative theory of economic regulations that relies predominantly on market and organizational failures correction and the neoclassical or the simplified versions of cost-benefit analysis. The approach of cardinal social welfare functions has been proposed for overcoming three main critiques of the neoclassical normative theory of regulation, particularly the problem of inter-personal comparisons of utility and the neoclassical inattention to income distributional effects of economic regulations. Further, the approach of cardinal social welfare functions aims to inform the design of economic regulations that maximize aggregate subjective well-being because the neoclassical endorsement of actual preference satisfaction account of well-being results in designing economic regulations that may not maximize aggregate subjective well-

⁹⁹ *ibid* 451.

¹⁰⁰ Matthew D Adler, 'Beyond Cost-Benefit Analysis: Social Welfare Functions, Fair Distribution, and Policymaking' (19 March 2012). Penn Program on Regulation, REGBLOG <<http://www.regblog.org/2012/03/19/beyond-cost-benefit-analysis-social-welfare-functions-fair-distribution-and-policymaking/>>. Dibadj is critical of these methods of measuring cardinal utilities because they bring us back to cost-benefit analysis. Dibadj (n 95), 1359. To resolve this problem, he suggests that 'to achieve this, a cardinality function (x) converts a preference set into a numerical value by establishing a cardinal scale that indicates the degree to which an individual's preferences are welfare-enhancing-the higher the number, the closer it matches the welfare-enhancing set (w_i).' *ibid* 1361. Still, he does not show how this cardinal scale, based on which the conversion of cardinal utility into numerical values, is to be constructed.

¹⁰¹ Kaplow and Shavell state that 'maximization of wealth (defined, perhaps, with respect to current prices) may in fact reasonably approximate maximization of social welfare in many contexts.' Kaplow and Shavell (n 81), 997.

¹⁰² Adler (n 100).

being. Still, as long as the normative framework of social welfare functional analysis is not operationalized through a more sophisticated versions of cost-benefit analysis (e.g., distribution weighted cost-benefit analysis), it still attaches most, if not all, the critiques of the neoclassical normative theory of regulation outlined below.

In sum, neoclassical welfare economics provides the normative framework/theory for assessment and design of economic regulations. This normative theory finds its moral basis in consequentialist welfarist (actual preference satisfaction) moral philosophy.¹⁰³ For assessing the social welfare implications of any legal institution, law and economics scholars investigate whether there is a market or organizational failure that may justify this legal institution; if not, this legal institution is deemed inefficient. If this legal institution finds its rationale in a market or organizational failure, law and economics scholars typically engage in a comparative organizational analysis. They investigate whether private ordering, hierarchy, or an alternative legal institution may be less costly than the proposed regulatory intervention. If this is the case, then this regulatory intervention has no economic justification. This is the economic rationale (justification) step. Legal institutions that pass the economic justification stage are not necessarily social welfare enhancing because their costs may outweigh their efficiency gains. Law and economics scholars typically use cost-benefit analysis and rarely use cardinal social welfare functions to assess whether legal institutions are welfare enhancing or reducing by assessing whether they produce net monetized benefits or costs. Law and economics scholars who advocate cardinal social welfare analysis tend to argue for operationalizing their proposals through the neoclassical or a modified version of cost-benefit analysis. Finally, law and economics scholars, however, tend to use a simplified version of the neoclassical cost-benefit analysis, which does not take into account the actual preferences of the individuals in the initial state of the world and ignores their preferences for non-monetary values. Given this somehow detailed exposition of the neoclassical-new institutional normative theory of economic regulations, we can now turn to the second step of the integrated and systemic approach: the internal, external, and systemic critiques stage.

¹⁰³ See below the critical discussion of the moral foundation of the neoclassical normative theory of regulation.

3. The Internal Critiques of the Neoclassical Normative Theory of Economic Regulations: Scitovsky Paradox, the General Theory of the Second Best, Multiple Meanings of Economic Efficiency, and Inter-personal Comparisons of Utility

Briefly, the major internal critiques of Kaldor-Hicks efficiency criterion as implemented by cost-benefit analysis include the Scitovsky paradox, the general theory of the second best, the multiple meaning of economic efficiency, and inter-personal comparisons of utility. According to Scitovsky paradox, if a regulatory intervention results in a Kaldor-Hicks efficient movement from an allocation x to an allocation z , it can be shown that a reallocation of resources from z back to x is also Kaldor-Hicks efficient.¹⁰⁴

Further, as already discussed in the previous chapter, the general theory of the second best demonstrates that correcting some market failures, while not correcting others due to binding constraints that prevent their correction does not guarantee the enhancement of the allocative efficiency of the economy.¹⁰⁵

Moreover, the concept of economic efficiency in the neoclassical welfare economics is only consistent within its welfarist (i.e., preferences satisfaction) normative framework. Economic efficiency has one meaning under the welfarist framework of neoclassical welfare economics, which is usually referred to rhetorically as *the size of the pie*.¹⁰⁶ However, if we adopt a non-welfarist normative framework, the neoclassical concept of economic efficiency would appear to carry *different meanings in different situations*. Let us consider two examples of economic efficiency enhancing transactions to illustrate how the concept of economic efficiency may carry more than one meaning. First, consider a sale transaction between two individuals who have different subjective valuations of the transacted consumption good. If the transaction cost is low so that this transaction can be consummated, this transaction will be efficiency enhancing. Here, efficiency corresponds to *satisfaction of the subjective preferences* of the buyer and the seller; this transaction increases the social welfare (the size of the pie) because it involved an increase in the subjective well-being of the transacting parties by satisfying their subjective preferences. Now, assume that the transacted good is a factor of production (e.g., a machine), and when this factor of production is used in the buyer's firm, it produces higher

¹⁰⁴ Ng (n 8) 48–51.

¹⁰⁵ See the discussion of the General theory of the Second Best in section 3 of the previous chapter and the references cited therein.

¹⁰⁶ See, e.g., Hausman and McPherson (n 16) 144–145.

marginal productivity than its productivity in the seller's firm. In this case, the size of the pie also increased, but here the increase is not limited to the aggregate subjective satisfaction of the buyer and the seller because the *aggregate material wealth/productivity* of the society increases as well. In the first case, the transaction resulted in an increase in the aggregate subjective satisfaction and not in the productivity of the society.

The reason that economic efficiency in neoclassical welfare economics may involve situations where material wealth increases and others where only subjective satisfaction increases is that economic efficiency is defined with reference to subjective preference satisfaction (recall the definition of better-off and worse-off in the efficiency criteria above). Accordingly, as long as the increase in material wealth may involve increase in subjective preferences satisfaction, it would be also efficiency enhancing. Indeed, as we shall discuss below, if a high rate of increase in material wealth (i.e., economic growth rate) does not maximize the long-run consumers' welfare (i.e., their subjective satisfaction), it would be considered suboptimal/inefficient rate of economic growth from the perspective of neoclassical welfare economics. In other words, economic efficiency within *the welfarist normative framework* of neoclassical economics has a consistent meaning, but once we challenge this normative framework, we would discover that *economic efficiency has different meanings* in diverse economic settings.

Consequently, if we endorse a non-welfarist normative framework (e.g., the capabilities approach or the Rawlsian theory of justice), then, only some forms of neoclassical economic efficiency may be desirable. More accurately, given a different normative framework, an economically inefficient economic institution from a neoclassical welfare perspective may be economically efficient in the new framework; the conceptualization and measurement of economic efficiency depends on the normative theory we adopt. This point shall become clearer when we discuss below how Coase theorem may not hold if we adopt the capabilities approach for the measurement of negative externalities.

The multiple meanings of economic efficiency critique is particularly important for the development of a systemic and integrated normative framework for economic regulations in the following chapter. In the cost-benefit framework, the monetized gains or losses as measured by compensation variations (using market prices where they exist) in any of the types of efficiency (allocative, productive, and dynamic) are just added up because these losses or gains reflect *equivalent loss or gain in subjective welfare*. In other words, given that subjective welfare is the ultimate objective of economic regulation in the neoclassical framework, losses and gains in different types of economic efficiency can be translated, using cost-benefit

analysis, into losses and gains in subjective welfare. In contrast, a non-welfarist normative framework results in a conceptual and analytical distinction between the types of economic efficiency (allocative, productive, and dynamic) because subjective welfare is no longer the ultimate objective of economic regulations. Hence, in the next chapter, these different types of efficiency shall be considered *different* instrumental objectives in the proposed systemic normative framework of economic regulations; the losses and gains in each of them cannot be monetized or added up.

Finally, new welfare economics has moved away from cardinal utility and social welfare functions of the old welfare economics because old welfare economics involved the unscientific practice of measurement and comparisons of individual cardinal utilities.¹⁰⁷ Given the impossibility of ordinal social welfare function, new welfare economics had to resort to cost-benefit analysis, but the latter involves *inter-personal comparisons of utility* where the market-based money metric of compensation variations has been the proxy for the individual utilities.¹⁰⁸ However, if we were to accept inter-personal comparisons of well-being, why would these comparisons be founded on market-based money metric?¹⁰⁹ Why would not we base these comparisons on cardinal utility (as in the research program of happiness economics)? Even better, why would not we base these comparisons on primary goods (as in the Rawlsian moral perspective), needs, or capabilities; particularly, these comparisons would be much easier because they involve the comparison of objective and substantive conceptualization of well-being across individuals?¹¹⁰

In sum, the internal critiques (Scitovsky paradox and the general theory of the second best) demonstrate that economic regulations that are focused solely on correction of market and organizational failures do not ensure *allocative efficiency* or *the maximization of the subjective welfare* of the individuals' of the society. Further, as we have already seen, the simplified version of cost-benefit analysis does not ensure the maximization of the subjective welfare as well. In addition, the critiques of Pareto efficiency outlined in the previous section demonstrate that even if economic regulations that are focused on correction of market and organizational failures were to achieve Pareto allocative efficiency, this is insufficient justification for

¹⁰⁷ Herbert Hovenkamp, 'The First Great Law and Economics Movement' (1990) 42(4) Stanford Law Review 1034–1035.

¹⁰⁸ *ibid* 1041.

¹⁰⁹ Sen, 'The Discipline of Cost-Benefit Analysis' (n 64) 948–950.

¹¹⁰ Sen has been a forceful defender of broadening the informational basis of social evaluation of socio-economic policies and institutions to include non-utility information (e.g., rights and capabilities), see, e.g.: Sen, 'Personal Utilities and Public Judgements: or What's Wrong with Welfare Economics?' (n 92) 547–554.

endorsing this primary function of economic regulations. The reason is that an alternative sub-optimal (or Pareto non-comparable) allocation of resources given a different distribution of wealth, income, and power may be more desirable than the Pareto optimal allocation if we endorse economic growth or capabilities expansion as our normative criterion for comparing these allocations. These critiques deconstruct the market and organizational failures justification of economic regulations. As the systemic and integrated normative framework of economic regulations will establish, economic regulatory interventions in situations where market or organizational failures do not exist can still be economically justified; further, economic regulations that correct market failures may lack normative justifications. The development economics critique below will reinforce the strong claim made here.

This, however, does not suggest that market and organizational failures are no longer relevant to regulatory analysis. First, the next chapter shall argue that allocative efficiency is still an important, but not the primary, economic objective for economic regulations in developing economies. Second, with respect to important regulatory objectives in developing economies such as economic growth, market and organizational failures, particularly in factor markets, are important *analytical* concepts for determining whether the regulatory intervention enhances economic growth. Still, in this case, both market and organizational failures would lack their normative teeth because the relevant normative criterion would be whether the regulatory intervention enhances economic growth and not whether it corrects market and organizational failures.

Not only internal critiques deconstruct the economic justification step in the neoclassical-new institutional normative theory of economic regulations, it deconstructs the cost-benefit analysis step as well. First, simplified cost-benefit analysis in law and economic literature is preoccupied with maximization of material wealth; it is a bad proxy for maximization of subjective welfare. Further, it involves inter-personal comparisons of utility, but uses a market-based money-metric for measuring utilities. Objective accounts of well-being (e.g., primary goods, needs, or capabilities) ensure a more accurate measurement of the well-being of the individuals in comparison to the bias to the rich's preferences embedded in the market valuations of subjective preferences in cost-benefit analysis. The following sections will present further external and systemic critiques of cost-benefit analysis and its welfarist normative basis. Given the critiques of neoclassical cost-benefit analysis, the integrated and systemic normative theory of economic regulations avoids the neoclassical cost-benefit analysis and its associated critiques by developing a system of objectives. We now turn to the external and systemic critiques of the neoclassical normative theory of regulation, in particular,

its focus on correction of market and organizational failures (economic justification step) and cost-benefit analysis.

4. External Critiques: the Critical Insights of Moral Philosophy, Development Economics, Constitutional Economics, and Law and Political Economy

By focusing on correction of market and organizational failures as the primary, if not the sole, objective of economic regulations, the normative insights of legal theory, the capabilities approach of Amartya Sen, socio-economics and institutional economics demonstrate that the neoclassical normative theory of economic regulations downplays important values and objectives for legal institutions of capitalism. These *overlooked values* include, inter alia, fairness, procedural fairness, distribution of wealth and income, distribution of power, and the protection of the weak, equality in opportunity and improving the functionings and extending the capabilities of the individuals. Due to time and space limits, this section cannot examine all the valid external critical insights of the relevant non-neoclassical schools of thought and theories. Rather, this section focuses on three sets of external critiques based on the insights of the theories and schools of thought of moral philosophy, development economics, constitutional economics, and law and political economy.

This section elaborates on the critical insights of moral philosophy because of the vagueness of the moral basis of neoclassical welfare economics that underlies the neoclassical normative theory of economic regulations. Further, neoclassical welfare economics is rarely questioned as *a moral basis* for *economic* regulations; in contrast to other areas of law (e.g., family law), law and economics scholars rarely engage in moral discussions about banking regulation, capital markets regulation, competition law, or corporate law. When they reflect morally on economic regulations, the moral discussions is generally limited to whether legal institutions should play a role in income distribution in addition to their primary function of ensuring economic efficiency (see below). Uncovering the subjective moral choices made in neoclassical normative theory of regulation would enable us to challenge this theory and to develop a morally reflective law and economics approach to economic regulations.

Further, the reason for elaborating on the insights of development economic is that these critiques are the most relevant for advancing a normative theory for economic regulations in developing countries, as economic development comes at the top of the priorities of these countries. Particularly, the neoclassical normative theory of economic regulations outlined

above does not distinguish between the functions of economic regulations in developing and developed economies.

In addition, the institutionalization of cost-benefit analysis in law-making process in developed economies highlights the importance of the critiques advanced by the insights of constitutional economics, and law and political economy; particularly, such critiques are rarely discussed in law and economics literature. Further, these critiques resonate with legal theory that considers the *normative* theory of law to be the reflection of citizens' preferences expressed in the political sphere of the society; it is politics not markets that should make the law. We now turn to develop each of these sets of external critiques in turn.

4.1. External Critiques of the Neoclassical Normative Theory of Economic Regulations: Insights from Moral Philosophy

We have already seen that the preferences satisfaction (i.e., welfarism) is the moral theory underlying the neoclassical normative theory of economic regulations. However, in order to develop a deeper understanding and critique of the moral basis of the neoclassical normative theory of regulation, we need to outline briefly moral theory. By doing so, we can then situate the normative theory of economic regulation within the larger debates in moral philosophy. This will be sufficient for developing an informed moral critique of the moral basis of the neoclassical normative theory of regulation.

Value theories (theories of the intrinsic good) and Moral theories (the theories of the right) are the major theoretical constructs of moral philosophy.¹¹¹ Value theory refers to the evaluation and ranking of the states of the world as intrinsically good or bad.¹¹² Assume, for example, that there are two states of the world. The first is characterized by a high rate of economic growth coupled with high income and wealth inequality and the second involves a lower rate of economic growth coupled with more equal distribution of wealth and income. Value theory aims at providing a *complete ranking of the states of the world* based on the *degree of goodness or badness* in the compared states. Value theory establishes its ranking according to a *morally neutral* concept of the good and the bad. In other words, the concept of

¹¹¹ Thomas Hurka, 'Value Theory' in David Copp (ed), *The Oxford Handbook of Ethical Theory* (Oxford University Press 2005) 357.

¹¹² *ibid.*

the good these theories establishes is not necessarily morally good as it can be morally neutral.¹¹³

Major value theories include well-being or welfare centered theories (hedonism, happiness, desire satisfaction, objective account of well-being) and non-well-being centered theories such as perfectionism. Two famous accounts of well-being/welfare have been proposed in the literature: the subjective conceptualization of the well-being and the objective account of well-being (the so-called objective list approach to well-being).¹¹⁴ Four approaches have been advocated for conceptualizing subjective well-being, namely, hedonism (i.e., sensual pleasures), happiness, actual preference satisfaction, and modified preference satisfaction (welfarism or desire satisfaction).

Hedonism states that the goodness of the state of the world depends on the *aggregate (net) pleasure* in this state of the world.¹¹⁵ The good is defined in terms of *sensual pleasure* and the bad is defined in terms of *sensual pain*.¹¹⁶ Happiness constitutes a variant of hedonist value theory, where happiness is conceptualized to be the mental state of satisfaction or good feeling whether it finds its sources in sensual or non-sensual (intellectual) pleasures.¹¹⁷ The second major value theory is desire satisfaction whose major form in economics is *preference satisfaction or welfarism*. This theory defines the good in terms of the satisfaction of individuals' (actual or idealized) preferences.¹¹⁸ As already mentioned, the actual preferences satisfaction form of welfarism underlies the neoclassical normative theory of regulation. The other type of welfarism is sophisticated preferentialism, according to which idealized preferences (i.e., the preferences of a fully informed, rational, self-interested individual) replace the actual preferences as a basis for the judgment of the goodness of the compared

¹¹³ For example, being in a state of illness is a state of the world that can be considered a *morally neutral* good or a bad state of the world. *ibid* 358. From a religious moral perspective, however, this separation between the goodness of the state of the world and morality cannot be sustained in many cases because in this perspective, humans are *important* carriers of values; being ill is neither a good nor a bad state of the world. Rather, if one acts *morally* and endures his illness in patience, then, it is a good state of the world; otherwise, it is a bad state of the world. Still, the religious moral perspective gives a space for the morally neutral good. For example, assuming that there exists no humans at all, from a religious perspective, a state of the world full of beauty (e.g., nature) is better than a state of the world full of ugliness because, as it is well-established in Islam for example, God is beautiful and loves beauty.

¹¹⁴ For a brief overview of these theories of well-being, see: Hausman and McPherson (n 16) 119–133. Adler and Posner (n 59) 28–35.

¹¹⁵ Hurka (n 111) 359.

¹¹⁶ *ibid*.

¹¹⁷ Adler and Posner (n 62), 257–259. Hurka (n 111) 360–361.

¹¹⁸ *ibid* 362.

states of the world.¹¹⁹ Finally, the objective accounts of well-being attempts to define individuals' well-being objectively without relying exclusively on the informational basis of individuals' preferences.¹²⁰

Finally, similar to the numerous variants of the well-centered value theories, numerous perfectionist theories of values have been developed;¹²¹ an important theory of them defines the good in terms of *the fulfillment of the individual's distinctive properties as humans*.¹²² In this perspective, paternalistic regulations that would result in states of the world where individuals make better achievements are better than regulations consistent with the subjective preferences of individuals, which may bring about an imperfect state of the world. For instance, regulations prohibiting smoking or requiring high protection of environment beyond the level of protection desired by the individuals are perfectionist forms of regulations.¹²³

Religious theories of values are important broader variant of perfectionist theories; they define the good and the bad states of the world according to *abstract principles/values* regardless of the degree of the satisfaction of individuals' preferences in these states of the world.¹²⁴ In these religious theories, the good state of the world is the state in which the individuals succeed in complying with the values that may run counter their own preferences.¹²⁵ The states of goodness represent states of human's emancipation from many of her own (immoral) desires/preferences.¹²⁶ In this process of emancipation, the human's preferences *change* in the process of becoming a better human being; the human being desires

¹¹⁹ Hausman and McPherson (n 16) 128–129. Adler, *Well-Being and Fair Distribution* (n 79) 34–35. Hurka (n 111) 363.

¹²⁰ See below the brief discussion of Sen's capabilities approach and the references cited therein.

¹²¹ For a short overview of perfectionism, see: *ibid* 364–367.

¹²² *ibid* 365–366.

¹²³ *ibid* 375–577.

¹²⁴ This account of the religious theories of values reflects the Islamic theory of value because this is the theory that I am most familiar with.

¹²⁵ The Noble Quran states that 'Indeed, mankind is in loss, Except those who believe and *do righteous good deeds* and enjoin one another to *[follow] the truth*, and enjoin one another to *patience*.' translation of the meaning of verses 2 and 3, chapter 103 [emphasis added]. Hence, in Islamic value theory, the good states of the world include the states in which individuals undertake good deeds that may run counter their desires, and endure patience for their commitment to these good deeds.

¹²⁶ Islam condemns strongly human's preferences and desires as a basis of morality and human action. For example, the Noble Quran states that 'Allah created the heavens and the earth with reason, so that every soul may be requited for what it has earned, and they will not be wronged. *Have you seen him who has taken his own desire to be his god* and Allah has, *knowing (him as such)*, left him astray, and sealed his hearing and his heart, and put a cover on his sight. So who will guide him after Allah? Will you not then take admonition?' translation of the meaning of verses 22 and 23, chapter 45 [emphasis added].

what is ethical and intrinsically valuable even if it runs counter her self-interested desires.¹²⁷ This is a significant difference between perfectionist and religious theories of value on one hand and subjective well-being theories of value (desire satisfaction theories). The latter ranks the states of the world according to their degree of desire satisfaction, while the former ranks the states according to the *values materialized in each state, and one important value of them is whether human beings have been successful in overcoming their immoral or self-interested desires.*

In sum, value theories attempt to conceptualize the morally neutral *good* that can be then operationalized into an evaluative (ranking) standard of *the feasible states of the world* brought about by the compared feasible regulatory interventions.

In contrast, moral (ethical) theories refer to the set of theories that attempt to provide *moral ranking of (public and private) actions.*¹²⁸ To do so, moral theories establish a moral principle according to which actions of individuals or public bodies can be ranked morally.¹²⁹ As these moral standards may be sophisticated to be applied by individuals or policy makers to their actions, moral theories may attempt to provide *decision procedures* for the implementation of

¹²⁷ With respect to Islamic value theory, the Noble Quran lists clearly the intrinsic values that human beings should desire and observe. It is beyond the scope of this thesis to enumerate these intrinsic values, but we can give two brief examples that illustrate some of these intrinsic values. The Noble Quran states that ‘Say: Come, I will recite unto you that which your Lord has made a sacred duty for you: Join not anything in worship with Him; be good and dutiful to your parents; kill not your children because of poverty - We provide sustenance for you and for them. And do not approach immoralities - what is apparent of them and what is concealed. And do not kill a soul [whose life] Allah has made inviolable except by way of justice and law. This has He commanded you so that you may use reason. And do not approach the orphan's property except in a way that is best until he reaches the age of full strength. And give full measure and weight with justice - We do not impose on any soul a duty but that which it can bear. whenever you speak, speak justly though it be (against) a relative. And fulfil the covenant of Allah. That is what He has enjoined you with, that possibly you would be mindful.’ translation of the meaning of verses 151 and 152, chapter 6. Many of these Islamic intrinsic values extend to the economic sphere. For example, consumerism is condemned; the Noble Quran states that ‘And the servants of the Most Merciful [Allah] are those who walk on the earth in humbleness, and when the ignorant address them (with bad words), they say [words of] peace ... And [they are] those who, when they spend, are neither extravagant nor niggardly, but hold a medium [way] between those [extremes].’ translation of the meaning of verses 63 and 67, chapter 25 [emphasis added].

¹²⁸ Normative ethics is the branch of moral philosophy concerned with the development of moral theories, see: John G Messerly, *An Introduction to Ethical Theories* (University Press of America 1995) 10.

¹²⁹ Moral theories, including deontological theories of morality, apply to both the actions of private individuals and public authorities; the design and enactment of legal institutions are clearly among the most important actions of public authorities. For a defense of the applicability of deontological morality to public actions, See: Eyal Zamir and Barak Medina, *Law, Economics, and Morality* (Oxford University Press 2010) 57–78.

moral standards.¹³⁰ We can think of moral theories in the terms of figure 9.1 below. Moral theory establishes a moral standard that provides the basis for the development of a decision procedure for the implementation of this moral standard. In the neoclassical normative theory of economic regulations, cost-benefit analysis is the main decision procedure for its underlying moral foundation (see below), while social welfare functions represent another decision procedure advocated in law and economics literature.¹³¹

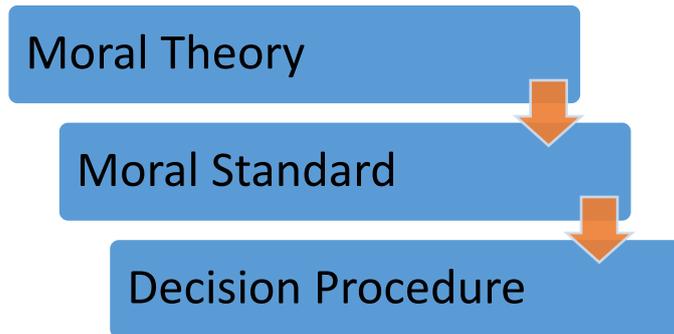


Figure 9.1 Operationalization of Moral Theories

In moral philosophy, consequentialism and deontology are the major sets of theories of moral (private or public) actions.¹³² According to consequentialism, the consequences of the actions are the *only* morally relevant consideration for their moral ranking.¹³³ In deontological moral theories (e.g., virtue ethics, Kantian moral theory, Rawlsian contractarian theory, and religious moral philosophies), consequences are morally relevant for assessing the morality of actions, but not morally conclusive.¹³⁴ In addition to considering the consequences, the rightness of action is assessed based on some abstract principles of morality or rights and duties (that may be partially derived from the good will or the intrinsic properties of the actions); these principles or rights and duties may thus trump the weight given to the consequences in assessing the rightness of some actions.¹³⁵ For example, if the government chooses to enhance

¹³⁰ Adler, *Well-Being and Fair Distribution* (n 79) 14. For example, the moral theory of “act consequentialism” endorses the *decision procedure* of “rule consequentialism” instead of “act consequentialism” to implement its moral standard that requires the choice of *the acts* that maximize the individuals’ aggregate subjective well-being. See: Hooker (n 97) s. 4, paras. 13-15.

¹³¹ Adler, *Well-Being and Fair Distribution* (n 79) 14–15.

¹³² Georg Spielthener, ‘Consequentialism or Deontology?’ (2005) 33(1) *Philosophia* 217

¹³³ Adler, *Well-Being and Fair Distribution* (n 79) 22. Walter Sinnott-Armstrong, ‘Consequentialism’ in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2014) s. 2, para. 2 <<http://plato.stanford.edu/archives/spr2014/entries/consequentialism/>>

¹³⁴ Spielthener (n 132), 221.

¹³⁵ *ibid* 221–222.

economic growth at the cost of deregulation of labor and environmental regulatory protection, then, this governmental action, which may take the form of legal norm or economic policy, may be moral in consequentialist moral philosophy if the benefits of this action outweigh its costs. In deontological moral philosophy, these actions will be immoral because they infringe the moral obligations of the government (and of the people this government represents) to prevent the exploitation of the weak, and to protect the environment.

In sum, when the government is confronted with the choice of one of plausible legal institutions (e.g., stakeholder vs. shareholder value corporate governance), it is confronted with *a moral* problem. According to consequentialism, only the consequences of each of these alternative governmental actions (legal institutions in our example) are morally relevant. However, these consequences are *not sufficient* for moral ranking of these alternative legal institutions. If we know that the alternative systems of corporate governance have diverse implications for firms' value, firms' innovation capabilities, and the distribution of firms' revenues among its stakeholders, then, how can we rank these systems according to consequentialist moral theory? In its response, consequentialism contends that there is a need for a *value* theory to rank *the consequences* that are *the states of the worlds* resulting from the alternative actions (i.e., the systems of corporate governance in our example).¹³⁶ Hence, in consequentialist moral theory, the *moral* (i.e., *the rightness of individuals' and public actions*) depends on the *good* (i.e., *intrinsic value of the consequences of these actions*).¹³⁷

Law and economics adopts the moral theory of consequentialism in which legal institutions are evaluated according to an impersonal evaluation of their overall consequences.¹³⁸ The actual preference satisfaction variant of welfarism is the mainstream consequentialist moral theory of economic regulations in neoclassical law and economics. In contrast, the modified preference satisfaction variant of welfarism and the happiness variant of utilitarianism are the most famous consequentialist moral theories that have been advocated to replace the actual preference satisfaction variant of welfarism underlying the neoclassical normative theory of economic regulations. Sen's capabilities approach, another consequentialist moral theory, has

¹³⁶ *ibid* 219.

¹³⁷ *ibid.* Julia Driver, *Consequentialism* (Routledge 2012) 5–6. Sinnott-Armstrong (n 133) s. 2, para. 6. According to Paul Hurley, the good (intrinsic value) underlying consequentialism is the 'goodness of the overall states of affairs.' Paul Hurley, *Beyond Consequentialism* (Oxford University Press 2009) 18

¹³⁸ *ibid* 2.

also been advocated as a normative basis for legal institutions,¹³⁹ but to the best of my knowledge, it has not been yet advocated as a normative basis for economic regulations.¹⁴⁰

All these consequentialist theories (utilitarianism, welfarism, the capabilities approach) share the individuals' well-being (i.e., individuals' welfare) as their underlying intrinsic value based on which the goodness of the consequences of public actions (e.g., legal institutions) is to be assessed. As already mentioned, two accounts of well-being are offered in the literature: subjective and objective. The accounts of subjective well-being include hedonism, happiness, and actual or idealized preference satisfaction.

According to utilitarianism, the moral ranking of actions should depend on individuals' *aggregate subjective well-being (welfare) conceptualized as either sensual pleasures or happiness* (i.e., net benefits in subjective well-being) resulting from the actions.¹⁴¹ In the case where happiness is reduced only to the sum of sensual pleasures and pains, then, *hedonism* is the value theory underlying utilitarianism.¹⁴² If happiness is conceptualized to be the mental state of satisfaction or good feeling, whether it finds its sources in sensual or non-sensual (intellectual) pleasures,¹⁴³ then, *happiness as a mental state* becomes the underlying value theory of this form of utilitarianism.¹⁴⁴ According to classical utilitarianism, the aggregate happiness is calculated by the "unweighted sum of individual [cardinal] utilities."¹⁴⁵ By endorsing the happiness based utilitarian perspective, the happiness approach to legal institutions argues for the evaluation of legal institutions in light of their effects on the *individuals' aggregate happiness*.¹⁴⁶

¹³⁹ See, e.g.: Martha C Nussbaum, 'Capabilities as Fundamental Entitlements: Sen and Social Justice' (2003) 9(2-3) *Feminist economics*. Martha C Nussbaum, 'Constitutions and Capabilities: Perception Against Lofty Formalism' (2007) 121 *Harvard Law Review*.

¹⁴⁰ Still, some insights of the capabilities approach have informed some scholarly works in the area of economic regulations, see, e.g.: Matthias Goldmann, 'The Financial Crisis as a Crisis of Public Reasoning' in Benjamin Isakhan and Steven Slaughter (eds), *Democracy and Crisis: Democratizing Governance in the Twenty-First Century* (Palgrave Macmillan 2014) 74–83.

¹⁴¹ Hooker (n 97) s. 1, para. 1.

¹⁴² Sinnott-Armstrong (n 133) s. 3, paras. 1-2. Hooker (n 97) s. 2, para. 1. Driver (n 137) 15.

¹⁴³ Adler and Posner (n 62), 257–259. Hurka (n 111) 360–361.

¹⁴⁴ Adler and Posner (n 62), 257–259.

¹⁴⁵ Adler, *Well-Being and Fair Distribution* (n 79) 33.

¹⁴⁶ Mirko Bagaric and James McConvill, 'Goodbye Justice, Hello Happiness: Welcoming Positive Psychology to the Law' (2005) 10(1) *Deakin Law Review* 22–26. Similarly, Adair Turner argues that economic policies in developed countries should shift its focus from increasing *economic growth* rate to promoting *happiness* because after the attainment of a specific threshold of GDP per capita, empirical evidence shows that the *sole* increase in GDP per capita does not have a significant positive effect on individuals' happiness. See: Adair Turner, *Economics After the Crisis: Objectives and Means* (The MIT Press 2012) 3–11. Accordingly, instead of the *sole* focus on long-term economic growth, the economic policies and institutions of developed economies should reduce unemployment, promote individuals' freedom, equality and environmental sustainability because they are, along with GDP per capita, the

In contrast to the hedonist and happiness accounts of well-being as the intrinsic value underlying utilitarianism, the consequentialist theories of welfarism and the capabilities approach adopt other accounts of well-being as their underlying intrinsic value. Welfarism defines well-being of individuals in terms of *satisfaction of their actual or idealized preferences*.¹⁴⁷ Since the actual preferences of the individuals may not increase their well-being because they may not be rational or may be forming their preferences on basis of imperfect information, Adler and Posner, famous exponents of welfarism in regulatory theory, advocate that well-being should be defined in terms of *satisfaction of ideal preferences*.¹⁴⁸ Ideal preferences are the preferences of the individuals under ideal conditions of rationality and perfect information.¹⁴⁹ As already discussed, Matthew Adler argues for what he calls a “welfarist theory of regulation” under which regulations should be normatively evaluated according to their satisfaction of ideal preferences of those directly affected by these regulations.¹⁵⁰

In contrast, Amartya Sen argues for an objective understanding of individuals’ well-being.¹⁵¹ According to Sen, well-being of individuals increases if their set of capabilities has been expanded, regardless of the satisfaction of their preferences.¹⁵² Martha Nussbaum has developed a list of these capabilities¹⁵³ and argued that instead of formalist judicial interpretation of the constitutions, the constitutional courts should interpret the constitutions in a way that respects the context-specific capabilities of the individuals,¹⁵⁴ in other words, these courts should constitutionalize these capabilities. In short, Sen’s capabilities approach is a

main drivers of happiness. See: *ibid* 28–33. *ibid* 70–74. For important discussions of the happiness based normative theory of law, see the scholarly works in the edited volume: Eric A Posner and Cass R Sunstein (eds), *Law and Happiness* (Chicago University Press 2010).

¹⁴⁷ Adler, *Well-Being and Fair Distribution* (n 79) 32–35. Hooker (n 97) s. 2, para. 4. This consequentialist moral theory is referred to also as “preference utilitarianism”. See: Sinnott-Armstrong (n 133) s. 3, para. 6.

¹⁴⁸ Adler and Posner (n 59) 35–39.

¹⁴⁹ Hausman and McPherson (n 16) 128–129.

¹⁵⁰ Adler, ‘Beyond Efficiency and Procedure: A Welfarist Theory of Regulation’ (n 1) 265–267.

¹⁵¹ Sen, *Development as Freedom* (n 83) 74–76. Amartya Sen, ‘The Living Standard’ (1984) 36 *Oxford Economic Papers* 84–87.

¹⁵² Sen, *Development as Freedom* (n 83) 74–76. Sen, ‘The Living Standard’ (n 151) 84–87.

¹⁵³ Nussbaum, ‘Capabilities as Fundamental Entitlements: Sen and Social Justice’ (n 139) 41–42.

¹⁵⁴ Nussbaum, ‘Constitutions and Capabilities: Perception Against Lofty Formalism’ (n 139) 24–33. Nussbaum argues that according to the capabilities approach, a competent judge will ask ‘what the people are actually able to do and to be, what the history of their efforts is, and whether the freedoms and rights at issue are real for them, or distant and unavailable abstractions ... [this] requires an ability to grapple with the manifold features of a concrete case in all their historical and contextual complexity.’ *ibid* 32–33.

consequentialist moral theory combined with an *objective account of well-being* as its underlying value theory.

The above consequentialist moral theories, hedonistic and happiness based utilitarianism, preference satisfaction view of well-being (preferential welfarism), and the capabilities approach's objective account of well-being, are called *welfarist consequentialist* theories because their underlying value theories relate exclusively to factors that affect individuals' well-being (i.e., welfare).¹⁵⁵ If a consequentialist moral theory adopts a perfectionist or a religious theory of value, then, it ceases to be *welfarist*.¹⁵⁶

The subjective welfarism version of consequentialism underlying the neoclassical normative theory of regulation received many critiques in moral philosophy. In addition to the above critiques that emphasize that the satisfaction of these preferences may not enhance the subjective well-being of the individuals and may be immoral, other major criticisms point out that utilitarianism (including its subjective welfarism version) can justify actions that infringe important values such as fairness (justice), rights, distribution, and individual autonomy.¹⁵⁷ For example, suppose that competition law that endorses the standard of total welfare maximization maximizes the aggregate subjective welfare of the individuals. From the utilitarian perspective, this law is morally desirable, although it may tolerate the distribution of income from the consumers to the producers. In the view of non-utilitarian moral theories, this form of income distribution may be deemed unfair. Similarly, a shareholder value model of corporate governance that does not protect labor's asset specific investments against expropriation may be perceived unfair, although it might maximize the individuals' aggregate subjective well-being.

Deontological ethics stands in stark opposition to consequentialism. *Kantian ethics and contractarian ethics* are the main deontological theories of ethics. Kantian ethics starts from the position that actions should be evaluated morally according to their underlying *motivations* and not according to their *consequences*; motivations are the only morally relevant

¹⁵⁵ Sinnott-Armstrong (n 133) s. 3, para. 9. Hooker describes these theories as *utilitarian*. See: Hooker (n 97) s. 2, para. 9. However, it is better to use the term "welfarist" in order to distinguish "classical utilitarianism" that adopts hedonist or happiness accounts of well-being from "welfarism" and the "capabilities approach", which adopt different accounts of well-being.

¹⁵⁶ Sinnott-Armstrong (n 133) s. 3, para. 10. As we shall see in the next chapter, based on the integrated and systemic approach, I adopt the welfarist theory of capabilities expansion, but I complement it with the concept of "ultimate local objectives"; these local objectives can find their moral foundation in non-welfarist consequentialist moral theories and deontological ethics.

¹⁵⁷ Driver (n 137) 16.

consideration.¹⁵⁸ According to Kant, the only real good thing in the world is the *good will*.¹⁵⁹ Moral actions that arise from the good will are actions made out of *moral duties*.¹⁶⁰ Moral duties are derived from a moral (universal) law or principle called the “categorical imperative”.¹⁶¹ This moral universal principle requires the human being to act only according to a *maxim* that meets two conditions: first, this human being *can* act according to this maxim in a world in which this maximum is a universal law.¹⁶² Second, this human being *desires* that this maxim becomes a *universal law* to which all human beings must conform; in other words, this human being *desires* to act according the *maxim* in the world governed by this universal law.¹⁶³ For example, from a Kantian perspective, keeping one’s promise is a *moral duty*.¹⁶⁴ If one does not keep his promises for self-interested reasons, he will be acting according to a *maxim* that states that one should not keep his promises whenever this is more beneficial to himself;¹⁶⁵ we can call this maxim, “opportunism”. If this maxim becomes a universal law, then, we will live in a world in which no body keeps his promises. However, in this world, one cannot act according to the maxim of opportunism because for this maxim to function, many human beings should be keeping their promises; otherwise, opportunism would not pay off because it presumes that others take one’s promises seriously.¹⁶⁶ In other words, breaking one’s promises is inconceivable in a world in which there is nothing called “promise”.¹⁶⁷

In contrast to utilitarianism, Kantian ethics is *ethics of constraints* (ethics of limitations) and not a theory for moral ranking of actions.¹⁶⁸ Kantian ethics establishes whether a legal rule infringes the universal law by setting an incentives structure for individuals that would *induce* them to infringe their moral duties. However, Kantian ethics envisage the existence of *wide range of actions* that are *morally neutral*.¹⁶⁹ Kantian ethics only identify the actions that are either morally obligatory because they arise from moral duties or morally prohibited because

¹⁵⁸ E. J Bond, *Ethics and Human Well-Being: An Introduction to Moral Philosophy* (Blackwell Publishers 1996) 170–171.

¹⁵⁹ *ibid* 171.

¹⁶⁰ *ibid* 170–171.

¹⁶¹ Robert Johnson and Adam Cureton, ‘Kant’s Moral Philosophy’ in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2016) s. 3, paras. 3-4, <http://plato.stanford.edu/entries/kant-moral/>. *ibid* s. 4, para. 1.

¹⁶² *ibid* s. 5, para. 1.

¹⁶³ *ibid* s. 5, para 1.

¹⁶⁴ *ibid* s. 5, para. 4.

¹⁶⁵ *ibid* s. 5, paras 4-5.

¹⁶⁶ *ibid* s. 5, para. 5.

¹⁶⁷ *ibid*.

¹⁶⁸ Bond (n 158) 166–171.

¹⁶⁹ *ibid* 171.

they infringe moral duties; all other actions are therefore morally neutral.¹⁷⁰ In contrast, utilitarianism provides an (almost) complete moral ranking of all actions.

Despite the long-standing division of moral philosophy into consequentialism and deontological ethics, modern moral philosophy is witnessing a convergence of these polar positions. Many exponents of deontology think that the causal consequences of actions, although not the only relevant moral consideration, are morally relevant.¹⁷¹ For example, in non-welfarist consequentialist theories, the goodness of the consequences is assessed with reference to both well-being and non-well-being related criteria (e.g., fairness, equality, and minimization of the infringements of moral rights and duties).¹⁷²

Threshold or moderate deontology, for example, reflects an intermediate position between standard deontological and consequentialist theories. The idea of threshold deontology goes as follows: the attainment of good consequences or avoidance of bad consequences cannot justify infringement of a deontological constraint unless these good or bad consequences reach a specific threshold.¹⁷³ The famous non-economic example would be torture. According to Kantian ethics, torture involves an intended infringement of the right of bodily integrity; hence, it is universally and absolutely wrong, even if torture may result in producing information that would save the lives of millions of innocent individuals.¹⁷⁴ According to threshold deontology, we create a threshold, e.g., 100,000 lives. If the torture may prevent the loss of this number of lives, then, it is morally justified. If it would result in saving less than 100,000 lives, then, it is morally unjustified.¹⁷⁵ The arbitrariness in determining the threshold is one of the fundamental critiques of threshold deontology.¹⁷⁶ Despite this critique, the legal scholars, Eyal Zamir and Barak Medina, advocate threshold deontology as a normative basis for all branches of law, including economic regulations.¹⁷⁷

¹⁷⁰ *ibid* 170–171.

¹⁷¹ Spielthener (n 132), 221–222, and see the references cited therein. See also: Zamir and Medina (n 129) 41.

¹⁷² Sinnott-Armstrong (n 133) s. 3, paras 10–12. Hooker (n 97) s. 3, paras. 1–2.

¹⁷³ Zamir and Medina (n 129) 46.

¹⁷⁴ *ibid* 52.

¹⁷⁵ For a discussion of torture from a threshold deontological perspective, see: *ibid* 126–176.

¹⁷⁶ For a discussion of this critique, see: *ibid* 53.

¹⁷⁷ *ibid* 76–78. Although threshold deontology appears to be an interesting compromise between deontology and consequentialism, I do not subscribe to threshold deontology in relation to economic regulations (as will be clear from the systemic normative theory of economic regulations proposed in the next chapter) because it involves a deconstruction of the concept of deontological morality by making morality contingent on economic welfarist concerns. One needs only to recall some of the horrific implications of this theory such as the legitimization of torture or targeted killing above specific threshold of probable bad consequences to understand how it deconstructs the very deontological constraints it attempts to integrate into analysis. Although these horrific implications are less apparent

In short, some deontological ethicists consider causal consequences of actions as morally relevant (although they may differ on how to include these causal consequences in their advocated deontological moral standards). Similarly, some consequentialist moral philosophers consider the *motivations and implications* of the actions *morally relevant*. For example, as above-mentioned, Adler, in his welfarist theory of regulation, argues that individuals' subjective preferences should be the main moral standard for evaluating legal rules, but he accepts that we could attach some weight to deontological constraints and distribution.¹⁷⁸ According to his construction, social welfare function is not only a function of the subjective idealized preferences of affected individuals but also a function of deontological and distributional justice. The interesting question would then be how this approach of Adler, as a consequentialist, differs from the position of threshold deontology; we will discuss this issue briefly below.

Contractarian moral theories represent the third famous stream of moral theories. The most famous of which is Rawlsian justice. It states that the moral rules are those of a *hypothetical contract* that all individuals would have agreed to under the veil of ignorance.¹⁷⁹ It is argued that the individuals under the veil of ignorance would agree to two major principles: the principle of liberty and the maximin principle.¹⁸⁰ The maximin principle refers to the maximization of the welfare of the worst-off from the population. Accordingly, suppose that the labor is the worst-off economic actors, and that the shareholder value model of corporate governance maximizes the aggregate subjective welfare, but at the cost of labor. Suppose also that the stakeholder model increases the welfare of the workers. In this example, the shareholder value model of corporate governance is morally desirable from a welfarist utilitarian perspective, while the stakeholder model is morally desirable from a Rawlsian perspective because it complies with the maximin principle.

In sum, the neoclassical normative theory of economic regulations endorses the welfarist variant of utilitarianism, the most famous consequentialist moral theory. For the judgment of the goodness of the consequences, the neoclassical theory endorses the value theory of desire

in the context of the regulation of the economic sphere, threshold deontology still involves the *same process of deconstructing morality* if followed in designing the institutions of this sphere. Still, threshold deontology, if applied honestly, represents an improvement over the standard cost-benefit analysis that does not integrate deontological constraints at all and represents therefore the extreme form of deconstructing deontological morality in the design process of the legal institutions governing the economic system.

¹⁷⁸ See the discussion of social welfare functions in section 1 above and the references cited therein.

¹⁷⁹ Messerly (n 128) 56.

¹⁸⁰ *ibid.*

satisfaction, particularly its actual preference satisfaction variant. The above exposition of the theories of value and morality reveals that the value and moral concerns raised by most of these theories are neglected by the neoclassical normative theory of regulation. The overlooked value theories include hedonism/happiness research program, the idealized preference satisfaction variant of desire satisfaction theory, the objective theories of well-being (e.g., the capabilities approach), perfectionism, and religious value theories. The overlooked moral theories include the non-consequentialist moral theories (e.g., Kantian ethics, virtue ethics, and contractarian ethics such as Rawlsian justice). Table 9.1 below outlines the *subjective* moral choices underlying the neoclassical normative theory of economic regulations.

1. What should law and economics scholars appraise?
 - a. *√Outcomes of economic regulations*
 - b. Processes

2. What method(s) of regulatory appraisal should law and economics scholars use?
 - a. *√Single method of appraisal (cost-benefit analysis)*
 - b. Multiple ethical perspectives, depending on problem

3. What matters about outcomes of economic regulations?
 - a. *√Consequences for individuals (ethical individualism)*
 - b. Consequences for groups or the environment

4. Which features of regulatory outcomes for individuals matter?
 - a. *√Welfare (i.e., economic well-being)*
 - b. Freedom
 - c. Rights
 - d. Justice

5. What is welfare?
 - a. *√The satisfaction of actual preferences*
 - b. The satisfaction of idealized preferences
 - b. Some mental state, such as happiness (hedonism)
 - c. “Objective” goods (objective account of well-being); e.g. achievements, personal relations, health, or capabilities.

6. How does welfare (as preference satisfaction) bear on the evaluation of outcomes of economic regulations?
 - a. *√Market evaluation and the efficiency/welfare criteria*
 - b. Add up preference satisfaction (cardinal social welfare functions)

7. What role do other ethical notions play in analysis and design of economic regulations?
 - a. *√for some law and economics scholars, they are of no importance, and for others, income distribution should be a moral concern for economic regulations.*
 - b. Independent: important, but not a concern of economic analysis of economic regulations

- c. Their importance is derivable from their consequences for welfare
- d. Must be integrated into the economic appraisal
- g. Of no importance

Note: Responses in *italics* are those of the neoclassical normative theory of economic regulations

Table 9.1: Moral Foundations of the Neoclassical Normative Theory of Economic Regulations. Adapted from (Hausman and McPherson, 2006).¹⁸¹

Obviously, the adoption of a non-consequentialist moral theory (e.g., Kantian ethics, virtue ethics, or contractarian ethics such as Rawlsian justice) as a normative basis for economic regulations would result in an institutional network for capitalism that diverges largely from the network that is morally desirable from the neoclassical normative perspective. The above examples in relation to the fair or Rawlsian just competition law and corporate governance and how they may diverge from the morally desirable institutions according to the neoclassical normative theory demonstrate clearly this point.

Indeed, even the adoption of a consequentialist moral theory, but a non-welfarist objective theory of well-being (e.g., the capabilities approach), would also justify legal rules different from the normatively justified rules in neoclassical law and economics. Moreover, this non-welfarist moral basis would have deeper implications in law and economics; it may transform the *conceptualization and/or measurement of some market failures*. Consider, for example, a market failure such as negative externalities, which arise from the mismatch between private cost and social cost.¹⁸² Pollution is a standard example of negative externalities because the private costs of pollution incurred by the polluting producer are lower than the social costs that are the total costs of pollution, which are equivalent to the sum of the costs incurred by the polluter (i.e., the costs of production that causes this pollution) and the costs incurred by the injured parties.¹⁸³ The magnitude of the negative externality of pollution depends on the difference between social and private costs of pollution. In neoclassical welfare economics, the pollution costs incurred by the injured parties are *measured* by the amount these parties are willing to pay to the polluter to stop the polluting activities (i.e., willingness to pay) (or the amount they are willing to accept from the polluter in return for the continuation of his

¹⁸¹ Hausman and McPherson (n 16) 19.

¹⁸² Pindyck and Rubinfeld (n 85) 646–648.

¹⁸³ *ibid* 645–648.

activities, i.e., willingness to accept).¹⁸⁴ Suppose, for example, that the pollution costs measured by the injured parties' willingness to pay are *one million euros*. In contrast, if we were to endorse *individuals' capabilities* as a moral basis for law and economics, the pollution costs incurred by the injured parties might be much higher than the one million euros. In this case, the pollution costs would be measured according to the extent the pollution hampers the expansion of the injured parties' capabilities such as the capability to lead a healthy life. If this productive, but polluting, activity would deprive the injured individuals from the minimum acceptable level of a healthy life, then, the pollution would have then *infinite social cost*.¹⁸⁵

In short, the adoption of a non-welfarist consequentialist moral theory (e.g., the capabilities approach) may have significant implications on the conceptualization and/or measurement of some market failures such as negative externalities. This would in turn affect the assessment and design of relevant legal institutions. If we use the neoclassical welfarist *willingness to pay* as a basis for measurement of negative externalities, then, the legal institutions that ensure the payment of a compensation in an amount of one million euros to the injured parties would internalize the negative externalities of pollution. However, if we adopt the capabilities approach, then, the polluting activity should be transferred to another location where it does not undermine the minimum threshold of individuals' capabilities because this would be the only legal solution for internalizing the pollution externalities.

Furthermore, the dependence of the measurement of negative externalities on the endorsed moral theory would pose challenges to some cherished theorems underlying much of (informal) law and economic analysis, as undertaken by legal scholars, such as *Coase theorem*. According to Coase theorem, under zero transaction costs and well-defined property rights, private contracting (market transactions) allocate property rights over resources to the contracting party that has the higher subjective valuation of the resources and thus market transactions allocate these resources *efficiently* regardless of the initial distribution of property rights; in other words, under these conditions, *market transactions internalize externalities*.¹⁸⁶ However, Coase theorem would hold if and only if negative externalities (i.e., the difference between social and private costs) are measured according to the neoclassical welfarist method of willingness to pay (or willingness to accept). Coase theorem would not hold if we use the capabilities approach to measure the social costs. We need to explain briefly Coase theorem to

¹⁸⁴ For simplifying the analysis, we assume that the costs incurred by the injured party would be the same whether we use their willingness to pay and their willingness to accept for measuring these costs.

¹⁸⁵ See the proposal of setting a minimum threshold for what I call the "ultimate objectives" of economic regulations in sections and 3 of the next chapter.

¹⁸⁶ Coase, 'The Problem of Social Cost' (n 32) 6–8.

illustrate this point. In the above example, suppose that the law gives the injured parties the *legal right* not to be harmed by the polluting activity. According to Coase theorem, suppose that the polluting party's willingness to pay for purchasing this right (i.e., the right to pollute) is higher than the injured party's willingness to accept in return for this right (i.e., the one million euros) because the polluting productive activity generates profits above the one million euros. In this case, the polluting party will purchase this right and continue its polluting (productive) activities. According to Coase theorem, this sale of the right to pollution results in an efficient allocation of resources because it internalizes the negative externalities of pollution and results in net social gains measured by the net profits made by the polluting party.

However, if we use the capabilities approach for measuring the negative externalities of pollution, then, the externalities may be of infinite if they undermine the minimum threshold of the injured parties' capabilities. In this case, the sale of the right to pollution would not internalize these negative externalities and thus would not result in an efficient allocation of resources; it would rather result in an inefficient allocation of resources. This implies that although the conditions of Coase theorem are satisfied (i.e., well-defined property rights), Coase theorem does not hold in this case; market transactions do not internalize externalities and do not allocate resources efficiently. This would have significant legal implications; the minimum thresholds of individuals' capabilities should not be protected by property rights or liability rules; rather, these minimum thresholds should be protected by inalienable rights, which are non-transferable rights.¹⁸⁷

Indeed, the above results will also hold if one were to adopt a moral theory other than the capabilities approach. For example, according to a variant of the so-called utilitarianism of rights, a non-welfarist consequentialist moral theory, rights have a lexical ordering over welfarist values (e.g., preference satisfaction as measured by monetary values or happiness).¹⁸⁸ According to this theory, legal institutions should protect these rights even if this protection would produce a net social cost. If one were to adopt this strand of utilitarianism of rights, one could argue that the minimum threshold of capabilities is constitutive of *a right* that has a lexical ranking over welfarist values and thus cannot be infringed. In other words, the social cost of a specific activity (e.g., pollution) is measured according to whether it infringes a human

¹⁸⁷ For an overview of the difference between property rights, liability rules, and inalienable rights and the economic efficiency and distributional justifications for creating each of these rights, see: Guido Calabresi and A. D. Melamed, 'Property Rules, Liability Rules, and Inalienability: One View of the Cathedral' (1972) 85(6) Harvard Law Review 1105–1115.

¹⁸⁸ Sinnott-Armstrong (n 133) s. 3, para. 12.

right; if it does so, then, the costs of this activity would be infinite, or at least it would be finite, but inconsistent with the social cost of this activity as measured by the willingness to pay method.

Once Coase theorem is challenged, the significant legal implications of the theorem would be challenged as well. One of the major implication of Coase theorem for the design of legal institutions is that market transactions would allocate resources efficiently if transaction costs are low, but since they are high, legal institutions should assume the function of reducing transaction costs to allow markets to function efficiently. If the reduction of transaction costs is not possible, then, legal institutions should replicate the outcomes that markets would produce if they were operating under zero transaction costs.¹⁸⁹ However, once we measure the social costs underlying externalities by using a measurement technique other than neoclassical market-based cost-benefit analysis, market mechanisms under zero transaction costs would not ensure efficient allocation of resources. No efficiency justification can be made for legal institutions to assume the function of reducing transaction costs or replicating market outcomes. As already mentioned, the other significant legal implication of Coase theorem is that regulatory intervention is only justified if its costs are lower than the cost of market as a governance structure. This is sensible only if we calculate correctly the costs of market as a governance structure. If we endorse a non-welfarist normative theory, the costs of the market, as an economic organizational structure, would far exceed the social cost of negative externalities as measured by market-based cost-benefit analysis; as indicated above, this may be infinite in some cases. This implies a much stronger case for regulation.

In sum, the neoclassical normative theory of economic regulations finds its moral foundation in the actual preference satisfaction variant of welfarism. According to this moral foundation, the aggregate subjective well-being of the individuals is not only morally relevant; it is an exclusive moral criterion. Economic regulations should be assessed only with reference to their effects on the individuals' aggregate subjective well-being, i.e., subjective welfare. Now, it becomes clear why the efficiency criteria of Pareto optimality, Pareto improvement, and Kaldor-Hicks efficiency are also called *welfare criteria* in welfare economics. Given two states of the world associated with alternative legal institutions (say shareholder value and stakeholder model of corporate governance), these criteria are supposed to inform us which state of the world involves higher level of *subjective welfare*. A Pareto or Kaldor-Hicks

¹⁸⁹ Richard A Posner, 'Law and Economics in Common-Law, Civil-Law, and Developing Nations' (2004) 17(1) Ratio Juris 68–69.

dominant state of the world (and the regulation associated with this state of the world) is supposed to be a subjective welfare enhancing.

However, Kaldor-Hicks efficient legal institutions, i.e., legal institutions that produce net monetized benefit according to cost-benefit analysis, do not necessarily increase subjective welfare conceptualized as aggregate preferences satisfaction. To show this point clearly, we recall our example on co-determination principle that formed the basis for our exposition of cost-benefit analysis in section 1 of this chapter. In this example, the regulatory question was whether we should abolish the co-determination principle. By applying cost-benefit analysis, one may expect that the abolition of co-determination may produce net monetized benefits because the shareholders will be willing to pay an amount of money for abolishing co-determination (the benefits of the abolition of co-determination) more than the amount the workers are willing to pay to maintain the status quo (the costs of the abolition of co-determination). One may argue that the increase in shareholders' profits due to increase in the value of the firm poste-abolition of co-determination would be higher than the loss in wages suffered by the employees. The increase in profits and loss in wages may function as proxies for the shareholders and employees' willingness to pay. Accordingly, one may argue that the abolition of co-determination rule would produce net monetized benefits, and thus increase the aggregate welfare of both shareholders and employees. This is, however, problematic; legal institutions that produce net monetized benefits do not necessarily increase the aggregate welfare.¹⁹⁰ First, cost-benefit analysis uses willingness to pay (compensation variations) as proxies for preferences satisfaction (utility) of the shareholders and workers; however, the increase in the wealth of the relatively wealthy shareholders may translate in a small increase in their utility in comparison to the significant decline in the utility of workers due to their income loss. Monetary gains and losses are poor proxies to gains and losses in welfare, particularly when individuals have differential wealth levels.¹⁹¹ Monetary gains and losses are particularly poor proxies for welfare in the case of non-monetary values (so-called intangible goods¹⁹² such as voice). Each worker must be able to know exactly how the voice guaranteed by co-determination contributes to his well-being; in other words, he must be able to measure the increase in the cardinal marginal utility resulting from enjoying the voice and to convert

¹⁹⁰ Hausman and McPherson (n 16) 147.

¹⁹¹ *ibid* 149.

¹⁹² This is the economic terminology used for referring to "non-monetary values". It is obvious how this terminology commodifies the values by referring to them as "goods". For which reason, I stick to the terminology of "non-monetary" values.

this increase into an accurate monetary amount. This is exactly like trying to answer the following question: “from a scale of 1 to your whole wealth, how much money represents your love to your daughter?” Not only the monetary gains and losses are poor measurements of welfare, they also depend on the individual’s initial wealth. The relatively wealthy shareholder is willing to pay more for the voice than the relatively poor workers; this implies a bias against the legal institutions that confer benefits to the relatively poor stakeholders.¹⁹³ Finally, the effects of the abolition of co-determination are uncertain; we do not know for sure how much the value of the German firms in the long-run will be affected by this regulatory change. Not only the abolition would affect the current managerial practices, it would affect the social norms and ethics of the work place, the asset specific investments by labor, and the future trajectory of the institutional change in the institutional network of the capitalist economy. Not only shareholders and workers cannot estimate these effects accurately, but also the economist that may be tempted to argue that the abolition of co-determination will increase firms’ value. Uncertainty is one of the major reasons that legal institutions that produce net monetized benefits may be significantly decreasing individuals’ aggregate welfare.¹⁹⁴ In short, adequate neoclassical cost-benefit analysis does not ensure the enactment of legal institutions that maximize aggregate social welfare. Assuming that abolition of co-determination principle increases the firms’ value and produces net monetized benefits, this cannot support a claim that the abolition of co-determination would increase the social welfare, whether conceptualized as preferences satisfaction or happiness. Hausman and McPherson summarize this point well:

It is illusory to suppose that one could acquire information concerning “the real benefits and drawbacks” of policies in isolation from broader moral questions about fairness. Willingness to pay or to accept compensation is at best an imperfect indication of preference satisfaction – one that privileges the status quo distribution – and preference satisfaction is at best an imperfect indicator of welfare. That the winners from a policy change could (but do not) compensate the losers does not show that the policy increases the capacity to satisfy preferences, let alone that it increases welfare. And information concerning the net benefits of a policy is of course nowhere near showing that the policy is right.¹⁹⁵

¹⁹³ *ibid.*

¹⁹⁴ *ibid* 151.

¹⁹⁵ *ibid* 153.

Further, as already mentioned, the simplified version of cost-benefit analysis in law and economics literature does not maximize subjective welfare because it ignores the preferences for non-monetary values and ignores the actual preferences at the initial state of the world.

The fact that economic regulations that produce net monetized benefits may not maximize subjective welfare obviously implies that economic regulations that correct market or organizational failures, but produce net monetized losses may not maximize subjective welfare; particularly, I am not aware of any (neoclassical or non-neoclassical) reason that supports the claim that these regulations would maximize aggregate subjective welfare.

Not only correction of market and organizational failures and cost-benefit analysis do not ensure the maximization of aggregate welfare, the presupposed moral foundation and ultimate objective of economic regulations in the neoclassical perspective, the aggregate subjective welfare (aggregate actual preferences' satisfaction) itself seems is a *very tenable* moral foundation for regulatory governance of capitalism, particularly in developing economies. First, actual preferences satisfaction does not capture well individuals' welfare; satisfaction of *idealized* preferences (e.g., rational self-interest and well-informed preferences) or an objective account of well-being (e.g., capabilities approach) captures much better individuals' well-being.¹⁹⁶ Both accounts of well-being will approximate each other,¹⁹⁷ but as long as individuals choose the list of objective goods constitutive of their well-being through the political process, one can avoid the paternalistic critiques of the objective accounts of well-being and thus openly endorse them.

However, although the economic well-being of the individuals is morally relevant, its aggregate level is not necessarily so in the context of developing countries.¹⁹⁸ In these countries, most of the population are already far below the minimum acceptable threshold of well-being conceptualized in terms of capabilities, and thus the relevant moral objective is not to increase individuals' *aggregate* well-being, but to ensure that each individual meets a minimum threshold of its basic capabilities. *Distribution of the minimum threshold of the basic capabilities* and not the *aggregation* of capabilities is the morally relevant concern in the context of developing economies. To clarify this point, suppose that there are two states of the world; in the first state, the individuals meet the minimum acceptable level of their basic capabilities, but this state is achieved at the cost of sacrificing the maximization of the

¹⁹⁶ Adler, 'Beyond Efficiency and Procedure: A Welfarist Theory of Regulation' (n 1) 301.

¹⁹⁷ Adler and Posner (n 62), 260–261.

¹⁹⁸ See contra: Adler, 'Beyond Efficiency and Procedure: A Welfarist Theory of Regulation' (n 1) 302–313.

aggregate well-being. In the second state, some individuals do not meet their minimum acceptable level of capabilities, but it involves higher aggregate level of capabilities expansion. According to the criterion of the distribution of minimum threshold of capabilities across individuals, the first state is morally desirable than the second.

However, the distribution of well-being to ensure the attainment of the *minimum threshold* of capabilities does not imply income or wealth, or capabilities equality (i.e., distributive justice). Suppose that there are two states of the world; in the first state, the individuals meet the minimum acceptable level of their basic capabilities, but this state involves a high degree of inequality, while in the *more egalitarian* second state of the world, some individuals do not meet their minimum acceptable level of capabilities. According to the criterion of the distribution of minimum threshold of capabilities across individuals, the former state is morally desirable than the latter.¹⁹⁹ In short, the *pattern* of the distribution of *the minimum threshold of the capabilities* (and not their aggregate value or the egalitarian distribution of the capabilities above this minimum threshold) is morally relevant in developing countries.²⁰⁰

Further, the distribution of the minimum acceptable level of well-being conceptualized as capabilities expansion is morally relevant, but not morally conclusive.²⁰¹ The economic system is not an isolated sphere from non-economic spheres of human existence; legal institutions of capitalism should not infringe acceptable concepts of justice and morality (for example, protection of the weak or Kantian universal law) in order to ensure higher material gains in economic well-being. Legal institutions, whether in the economic or non-economic spheres of the society, should always ensure that Kantian deontological obligations are not infringed. Doubtless, the insistence on the establishment and maintenance of this moral core of legal institutions would have a cost on the ability of these institutions to achieve economic well-

¹⁹⁹ An important debate in the consequentialist moral theories relates to whether the evaluation of the consequences should be made according to the *aggregation* of the intrinsic values (i.e., the *maximization* of total well-being) or the *distribution* of intrinsic values (e.g., the maximization of *average* well-being). See: Sinnott-Armstrong (n 133) s. 3, paras. 16-17. Driver (n 137) 67–84. With respect to developing economies, instead of endorsing these positions (i.e., the maximization of total or average well-being), I endorse the position of fair distribution of the minimum threshold of basic capabilities, which is akin to the basic needs theory in development economics, but it replaces needs with capabilities.

²⁰⁰ This argument is consistent with a position in value theory called “well-roundedness” according to which the distribution of intrinsic values, and not only their aggregate level, matters in evaluating the states of the world. Hurka (n 111) 368–370. For example, a state of the world with too much wealth, but too little protection of the weak is worse than a state of the world that has a balanced level of each of these values (wealth and protection of the weak).

²⁰¹ In the same vein, Adler argues that well-being conceptualized as the aggregate satisfaction of the individuals’ idealized preferences is morally relevant, but not conclusive. See: Adler, ‘Beyond Efficiency and Procedure: A Welfarist Theory of Regulation’ (n 1) 313.

being that involves the attainment of important capabilities (e.g., reduction of poverty, expansion of publicly provided health care or education). As long as the people are willing to pay this cost, their choices should be respected. Particularly, a legal system that ignores morality deconstructs the very meaning of law, and the very meaning of the human life itself; a just, but poor, society realizes the very purpose of human existence, while a rich, but unjust society degrades and deconstructs any meaning for human life. For our case, the comparison is even easier because it does not involve wealth versus poverty, but takes place between a rapid, but unfair, process of wealth accumulation and expansion of economic capabilities and a relatively slower, but fair, process.

Indeed, the fair process may be equally, or even more rapid than its unfair equivalent. The moral core of legal institutions would ensure a minimum sustainability of the legal institutions required for the attainment of the economic well-being; otherwise, the legal institutions shall undergo important revisions for each stage of development, which will disturb the process of accumulation of wealth. More stable legal institutions ensure sustainable economic expectations that are necessary for sustainable process of economic growth. Further, moral legal institutions would create sense of fairness among the weak of the economic system (e.g., the labor), which will enhance their intrinsic motivation for productivity and cooperation.²⁰² Moreover, since the distribution of well-being, and not its aggregate value, is the morally relevant concern in the context of developing economies, fair legal institutions will tend to achieve the morally desirable distribution of economic capabilities.

In short, economic regulations that correct market and organizational failures or produce net monetized benefits as per cost-benefit analysis do not ensure the maximization of the aggregate subjective welfare conceptualized as individuals' actual preferences satisfaction.

²⁰² Fairness increases the productivity of the economy because economic agents in a fair economy tend to avoid conflicts, shirking, opportunism, and engage in cooperative behavior. This allows the formation and the sustainability of economically efficient social norms such as the norms of trust and cooperation in the economy. Research in labor economics gives credence to this important proposition, see, e.g.: Alain Cohn and Fehr, Ernst, Goette, Lorenz, 'Fair Wages and Effort Provision: Combining Evidence from a Choice Experiment and a Field Experiment' (2015) 61(8) *Management Science*. See also: Bruce E Kaufman, 'Economic Analysis of Labor Markets and Labor Law: An Institutional/Industrial Relations Perspective' in Cynthia Estlund and Michael L Wachter (eds), *Research Handbook on the Economics of Labour and Employment Law* (Edward Elgar 2012) 74, and see the references cited therein. Further, fair economic system ensures the internalization of moral values. These internalized values enable the economic system to operate partially on the basis of the less costly and more stable intrinsic motivation of the economic actors instead of their extrinsic motivation. There has been a growing literature in economics on intrinsic motivation. For an overview, see: Wiegwart Lindenberg, 'Intrinsic Motivation in a New Light' (2001) 54(2/3) *KYKLOS*. For an engaging informal overview of intrinsic and extrinsic motivation, see: Daniel Pink, *Drive: The Surprising Truth About What Motivates Us* (Riverhead Books 2009) 1–84.

Even if these regulations were to maximize aggregate satisfaction of individuals' actual preferences, they do not ensure the maximization of their well-being. A more morally defensible account of well-being is an objective one such capabilities expansion. Further, in developing countries, the distribution of the minimum threshold of basic capabilities rather than the aggregate well-being is the morally relevant concern for regulatory governance of capitalism. Finally, legal institutions of capitalism should not focus solely on well-being; they should respect important moral principles and concepts of justice such as Kantian ethics of constraints and the protection of the weak even if these institutions would have a higher cost in terms of economic well-being. As already argued above, we should take a long-term perspective that enables us to factor in the benefits of the evolution of the social norms of trust, cooperation, and intrinsic motivation in the economic system. Given these benefits, this cost in economic well-being, however, is not as high as may appear when taking a short-term perspective that ignores these benefits. If this argument turns out to be correct, legal institutions that comply with the moral requirements of deontological theories would be maximizing well-being in the long-run and thus are also consistent with the moral requirements of welfarist consequentialist theories.²⁰³

In the next chapter, we will see that the proposed integrated normative framework of economic regulations shall endorse a capabilities concept instead of a subjective preferences' satisfaction concept of well-being, a distributive instead of aggregative concept of well-being, and moral concerns such as the protection of the weak regardless of their effects on economic well-being. By doing so, it avoids the moral critiques advanced against the neoclassical normative theory in this section.

²⁰³ Indeed, both deontologists and consequentialists share some variants of this argument. For example, Bond defends Kantian ethics by arguing that it promotes long run communal well-being. See: Bond (n 158) 171–176. See also: Zamir and Medina (n 129) 48. Similarly, the exponents of act consequentialism justify the adoption of a rule-consequentialist decision procedure that may involve sacrifice of short run gains in aggregate well-being by arguing that this decision procedure ensures the maximization of long-run aggregate well-being. See: Hooker (n 97) s. 4, para. 16. Despite I argue that the respect for non-monetary values and deontological moral principles maximizes long-term standard of living, I must emphasize that my position still holds even if this argument turns out to be wrong: sacrifices in material welfare should be made in order to sustain non-monetary values and deontological moral principles.

4.2. External Critiques of the Neoclassical Normative Theory of Economic Regulations: Insights from Development Economics

Ha-Joon Chang, a prominent development economist, argues that static allocative efficiency may not contribute significantly to economic growth.²⁰⁴ Indeed, correcting *some* market failures as conceptualized by neoclassical microeconomics may even have *adverse effects* on economic growth. The reason is the conceptual difference of Pareto allocative efficiency underlying the correction of market failure function of economic regulations and economic growth. Allocative efficiency is a static concept that ensures the maximization of consumers' utilities and production, given the existing inputs of the economy.²⁰⁵ On the contrary, economic growth is a dynamic and evolutionary process of capitalist change required for a sustainable increase in the output of the economy over time. Schumpeter eloquently expresses this tension between correction of some market failures that would enhance allocative efficiency in the short term and long term economic growth:

A system—any system, economic or other—that at *every* given point of time fully utilizes its possibilities to the best advantage may yet in the long run be inferior to a system that does so at *no* given point of time, because the latter's failure to do so may be a condition for the level or speed of long-run performance.²⁰⁶ ... There is no more of paradox in this than there is in saying that motorcars are traveling faster than they otherwise would *because* they are provided with brakes.²⁰⁷

Many examples can illustrate the tension between *correcting some market failures and enhancing economic growth*. The socially optimal savings rate that would maximize long-term consumption for the Chinese people is below the current Chinese savings rate.²⁰⁸ From the

²⁰⁴ In the words of Chang, 'if a more liberalized economy is allocatively more efficient, it cannot be argued that such an economy will grow faster.' Ha-Joon Chang, 'Institutions and Economic Development: Theory, Policy and History' (2011) 7(4) *Journal of Institutional Economics* 479. See also: Ha-Joon Chang, 'The Economics and Politics of Regulation' (1997) 21(6) *Cambridge Journal of Economics* 715. *ibid* 720. Heinz W Arndt, "'Market Failure" and Underdevelopment' (1988) 16(2) *World Development* 220.

²⁰⁵ Blaug (n 41), 190.

²⁰⁶ Joseph A Schumpeter, *Capitalism, Socialism and Democracy* (5th edn, first published 1976, Routledge 2003) 83.

²⁰⁷ *ibid* 88–89.

²⁰⁸ Lan Lu and Ian M. McDonald, 'Does China Save too Much?' (2006) 51(03) *The Singapore Economic Review* 298–299.

social welfare perspective of welfare economics, this is not a socially optimal level of savings, but from an economic growth perspective, higher savings rate increases the level of GDP growth. In addition, Schumpeter argued that competition should be perceived as a dynamic process of creative destruction, and not as a static state of the system; in this process, the most innovative firms should not be deprived from the monopoly rents they acquire due to their investment in risky innovations in order to have the sufficient incentives for risk-taking and innovation.²⁰⁹ Since innovation, according to neoclassical and endogenous growth theories, is the main driver of economic growth, competition law that tolerates *temporary* monopolies, while securing free entry into these monopolistic markets, seems to be more conducive to economic growth. In addition, Allyn Young argues that increasing returns to scale, a well-established market failure, is one of the major sources of economic growth.²¹⁰ Further, imperfectly competitive markets enable domestic firms to grow in size, reap scale economies (national champions), and thus enhance its international competitiveness. Further, the imperfectly competitive markets would enable domestic firms to have sufficient internal resources for self-financing, speeding up the process of capital accumulation in developing countries, which would enhance the level of GDP growth.

In addition, correction of some market failures that have no adverse effects on economic growth is not sufficient for supporting economic growth. For supporting economic growth, legal institutions and economic policies need to assume the *functions* of enhancing Innovation and learning, International competitiveness of domestic firms, formation and growth of financial, technological and organizational capabilities of domestic firms and market creation. These objectives are distinct from market failures correction, although some of them such as innovation can be conceptualized in terms of allocative efficiency (in the analytical framework of market failures), this conceptualization is unwarranted. Below, I briefly discuss each of these economic growth conducive functions of legal institutions.

²⁰⁹ See section 2.2.2 on the Schumpeterian model of competition law in chapter 11 and the references cited therein.

²¹⁰ Allyn Young, 'Increasing Returns and Economic Progress' (1928) 38(152) *Economic Journal* 527–540. See also: Jeannette C Mitchell, 'The Doctrine of Market Failure and Early Development Theory' (2006) 44 *History of Economics Review* 52–54. Paul Romer develops a formal model of economic growth based on increasing returns to scale; in this model, physical capital exhibits diminishing returns, but intangible capital (i.e., knowledge) exhibits increasing returns to scale. Paul Romer, 'Increasing Returns and Long-Run Growth' (1986) 94(5) *Journal of Political Economy* 1014–1025.

Indeed, neoclassical and endogenous economic growth theories have been emphasizing learning and dynamic efficiency (innovation) as major drivers of economic growth.²¹¹ Ha-Joon Chang considers the models of economic regulations adopted by some economies such as Japan, which diverged from both the neoclassical-new institutional law and economics approach and the American model of economic regulations, as *developmental model of economic regulations*.²¹² He argues that in this developmental model, the main function of economic regulations function is not to correct market failures in order to maximize kaldor-hicks allocative efficiency, but rather to maximize *innovation capabilities* (dynamic efficiency) and *international competitiveness* of national industries.²¹³ The basic idea underlying the developmental model of economic regulations is that allocative efficiency has *relatively* minimal effects on economic growth in comparison to the growth effects of dynamic efficiency.²¹⁴ Accordingly, instead of market failure correction, *innovation capabilities and international competitiveness* of domestic industries are the main functions of economic regulations in the developmental model of economic regulations. As chapter 12 will show, the recent Brazilian new developmental state model emphasizes international competitiveness and innovation.²¹⁵

As regards innovation, in the neoclassical perspective, innovation/dynamic efficiency is conceptualized as a *problem of resources allocation* to be resolved by the allocation of the efficient amount of today's resources for innovation given the *expected* increases in these resources resulting from this innovation in the future.²¹⁶ Lipsey, convincingly, argues that this an inaccurate conceptualization of innovation because of it does not take into account the

²¹¹ In the neoclassical Solow growth model, it is shown that the effectiveness of labor plays the most important role in driving economic growth rate, but the effectiveness of labor was assumed an exogenous black-box variable that may include, inter alia, education, or technical progress. Paul Romer, *Advanced Macroeconomics* (4th edn, McGraw Hill 2012) 27–29. In contrast, in endogenous growth theory, technological progress (i.e., knowledge accumulation) has been shown to be the main driving factor of economic growth rate. *ibid* 145. In the endogenous growth models, some of the determinants of knowledge accumulation have been identified; thus, the black box of technological progress has been partially whitened. For an overview of some of these endogenous growth models, see: *ibid* 102–134.

²¹² Chang, 'The Economics and Politics of Regulation' (n 204) 706–708.

²¹³ *ibid* 706. *ibid* 720–721.

²¹⁴ This does not suggest, however, that allocative efficiency has necessarily insignificant positive effects on economic growth, but rather in situations involving a trade-off between allocative efficiency and productive efficiency or innovation, the positive effects of productive efficiency or innovation on economic growth may be much more significant than that of allocative efficiency.

²¹⁵ See the discussion of the new developmental state in section 2 of chapter 12 and the references cited therein.

²¹⁶ Kenneth J Arrow, 'Economic Welfare and the Allocation of Resources for Invention' in Harold M Groves (ed), *The Rate and Direction of Inventive Activity: Economic and Social Factors* (Princeton University Press 1962) 623.

uncertain implications of innovation; most innovations result in qualitative changes in the economy that are hard to quantify *ex-ante*.²¹⁷ The transformative structural economic effects of general-purpose technologies such as the computer, the internet, and the electricity on the economy are good example of these uncertain unmeasurable effects.²¹⁸ Accordingly, if there are two possible regulatory interventions (A) and (B). (A) enhances the allocative efficiency at the cost of reducing firms' learning and innovation capabilities, and the other improves firms' learning and innovation capabilities at the cost of allocative efficiency losses due to tolerating some market failures that have adverse, neutral, or minimal positive effects on economic growth. Then, (B) seems to be a more sensible regulatory intervention for developing countries.

With respect to international competitiveness, neoclassical welfare economics seems to assume that if market failures are corrected, then, there is *an automatic process* through which firms can form and grow their (technological, financial, and organizational) capabilities. Instead, in the developmental state model, there is no automatic process of building up these capabilities; developing countries should support the formation and growth of the capabilities of their domestic firms to ensure their international competitiveness. Chapter 8 has already argued that the growth and sustainability of firms' resources, competences, and capabilities are crucial for the formational and sustainability of firms' competitive advantage.²¹⁹ Once we acknowledge the role of firms' capabilities in the process of economic development,²²⁰ the regulatory role of the government should be oriented to supporting the formation and the sustainability of these capabilities; particularly, many of these capabilities depend in their formation and sustainability on governmental action.

²¹⁷ Richard G Lipsey, 'Technological Transformation, Intellectual Property Rights and Second Best Theory' (2007) 4(2) Review of Economic Research on Copyright Issues 17–19. Arrow recognizes the uncertain implications of innovations, but he argues that

All that could be hoped for is the estimation of future rates of return from those in the past, with investment in invention being increased or decreased accordingly as some average rate of return over the past exceeded or fell short of the general rate of return. The difficulties of even *ex post* calculation of rates of return are formidable though possibly not insuperable. Arrow, 'Economic Welfare and the Allocation of Resources for Invention' (n 216) 623.

²¹⁸ Lipsey (n 217), 6–8.

²¹⁹ See section 4.3 on the knowledge-based theories of the firm in chapter 8 and see the references cited therein.

²²⁰ Doubtless, the frantic search for creating new competitive advantage via forming and sustaining static and dynamic capabilities may raise some moral questions regarding the endorsement of competition as an organizing mechanism for global capitalism and for strategic firms' management. These questions are better left for future research, however.

Since innovation is the major factor underlying economic growth in developed economies, the firms' capabilities required for innovation are of critical importance. In the context of developing countries, however, *innovation* seems irrelevant because developing countries are far below the technological frontier.²²¹ Instead of innovation, developing countries should focus on investment²²² through *imitation*, i.e. the imitation of the processes of the production of already existing products produced by the firms in developed economies, assuming that the firms of developing economies have a plausible comparative advantage in these existing products. Indeed, imitation, a largely inaccurate term, requires a difficult process of learning how to produce the innovations already produced by developed countries by going through *a complex learning process similar to the process that the firms of the developed economies have already gone through*. The process of innovation may seem to be more difficult than the process of imitation necessary for catching-up because the latter involves going through the path that others have already gone through, but this is incorrect. First, we largely do not know, for example, why post-war Japan, and China grew so fast; the debates over the drivers of Japanese outstanding performance hinted to in chapter 11 reflects that the path is not as clear as it is perceived to be. Similarly, we still do not know accurately how the Japanese, German, and American firms are different, and how these differences contributed to their competitive advantages. The main reason for this lack of knowledge relates to the strong interdependencies among the large aspects of the systems responsible for economic growth and for firms' competitive advantage. We still know little about the coherence, complementarities, and dynamics of these systems although we have enormous detailed knowledge about various parts of these systems. Given this lack of knowledge, imitation is particularly a very difficult process because firms do not know exactly what should they imitate. Brynjolfsson and Milgrom illustrate this point articulately,

It can be exceedingly difficult to search through a space of strategies with numerous elements that are complementary, and imitators may suffer large penalties from even small errors in attempting to match a particular combination of practices. Subtle complementarities can make imitation difficult even across plants in the same firm, where the participants are working to facilitate knowledge transfer, let alone across firm boundaries. Intel now follows a "copy-exactly" policy when new chip fabs are built. Previously, when the company copied only those

²²¹ Dani Rodrik, 'Second-Best Institutions' (2008) 98(2) American economic review 100, and see also the reference cited therein.

²²² *ibid.*

elements of a previous fab that managers thought were important, the new fabs experienced much lower yields for several months. Rather than try to identify and implement each of the missing complementary elements of the coherent system, the copy-exactly approach replicates every element of the old fab, down to the choice of paint color and orientation of windows, regardless of whether it has any known relationship to the chip fabrication process.²²³

Moreover, imitation (and catching-up) requires a fundamental change in the social norms and routines at the individual and organizational levels to allow for the creation of learning related capabilities. Innovation, on the other hand, requires the enhancement and the efficient use of the already existing learning related capabilities in an institutional environment that is already supportive of this efficient use or enhancement. The so called “imitation” requires a complex process of *transforming* the individuals and the organizations, a process that is confronted with intensive resistance from the stakeholders who are lagging in acquiring these learning related capabilities, while innovation is a process of the efficient use and enhancement of existing learning related capabilities of the individuals and the organizations.²²⁴

In the context of developing countries, the core of static and dynamic capabilities is therefore *technological learning* as the process necessary for *knowledge accumulation underlying successful imitation*.²²⁵ The process of imitation and catching-up is a difficult process of learning and knowledge accumulation.²²⁶ Similar to individuals, firms need to go through the difficult and long-term process of learning; technology purchase, for example, is not a learning process; it is far from supporting a sustainable development process. Learning and adaptive firms are more difficult to form than large sized firms are. To illustrate this point by analogy, consider the learning process of well-educated managers, academics, policy

²²³ Erik Brynjolfsson and Paul Milgrom, ‘Complementarity in Organizations’ in Robert Gibbons and John Roberts (eds), *Handbook of Organizational Economics* (Princeton University Press 2013) 14–15.

²²⁴ This does not only explain why economic catch-up through imitation is difficult, but it also explains why the transplant of democratic institutions in developing countries is equally difficult in developing countries because democracy requires a transformation of the way of thinking, thought habits, and routines at both the individual and organizational levels. For democracy to function, a largely new stock and distribution of knowledge has to be *embedded and internalized* at the individual and organizational levels, despite the intensive resistance of most stakeholders who already entertain the anti-democratic stocks of knowledge, thought habits, and organizational routines.

²²⁵ Karl Wohlmuth, ‘Global Competition and Asian Economic Development: Some Neo-Schumpeterian Approaches and Their Relevance’ in Karl Wohlmuth and Toshihiko Hozumi (eds), *Schumpeter and the Dynamics of Asian Development* (LIT Verlag 2000) 33, and see also the reference cited therein.

²²⁶ *ibid.*

makers and engineers in Germany, for example. Not only they have learned the knowledge necessary for undertaking their relevant productive tasks; they are able to *think critically, manipulate and adapt this knowledge*. They are able to produce new knowledge, given their existent stock of knowledge. More importantly, they have *learned how to learn*; they can increase their stock of knowledge by self-learning. The process of producing scientific research by a team of scholars is similar to that of producing a knowledge-intensive product by a firm. Nonetheless, most social scientists in developing countries are unable to produce *new knowledge* although they may not be lacking the relevant scientific resources because they are lacking these learning related capabilities. Similar to individuals, the ability of domestic firms in developing countries to learn, self-learn, think critically about and manipulate their systems of knowledge, and produce new knowledge is the core of the process of catching-up. Indeed, organizational learning is much difficult than the process of individuals' learning because it requires, inter alia, creating new organizational routines, institutionalized team work ethics, and organizational adaptability to changes in conditions. For example, if a Japanese manager assumes the task of managing an Egyptian firm, she cannot transform the existing managerial practices into Japanese management techniques. Transformation of the management techniques requires, inter alia, a stock of knowledge and specific distribution of this knowledge across the human resources of the firm and specific managerial-labor institutionalized relations, which a Japanese manager, although having an extensive knowledge and experience of Japanese managerial techniques, cannot simply create in the context of an Egyptian firm.

In sum, static and dynamic firm's capabilities, particularly learning related capabilities are the most crucial drivers of economic growth. In the context of developed economies, these capabilities are perceived to be necessary for innovation, while in the context of developing economies, these capabilities are necessary for imitation and catching-up. The way these capabilities contribute to both innovation and imitation is not significantly different once we understand imitation and industrial catching-up as a process of learning how to produce the innovations already produced by developed countries by going through *the same learning process* that the firms of these countries have already gone through. Surprisingly, these concerns for firms' static and dynamic capabilities and learning are almost absent from the mainstream law and economics literature on corporate governance based on the agency theory of new institutional economics,²²⁷ post-Chicago competition law based on modern industrial

²²⁷ See section 4.3 on knowledge-based theories of the firm in chapter 8.

organization,²²⁸ and banking regulation based on neoclassical-new institutional financial economics. Instead, the dominant (neoclassical) normative framework for these economic laws focuses on minimizing transaction costs and ensuring allocative efficiency through correction of relevant market and organizational failures.

Furthermore, Andrew Schrank and Josh Whitford emphasize that for successful development, economic policies and legal institutions should focus on correcting *network* failures in addition to market and organizational failures; particularly, the rise of spatial and organizational decentralization of production calls for inter-firm coordination.²²⁹ The challenge is how the state can *create and sustain the cooperative relations (networks)* among its domestic firms of the same sector or among the firms of different sectors that belong to the same value chain to enhance their productive, technological, and marketing capacities, and the international competitiveness of the domestic sector as a whole.

Not only correction of some market failures may have adverse or minimal positive effects on economic growth, the sole focus on correcting market failures ignores one of the major impediments to economic growth in developing countries that is *missing product markets* problem. Doubtless, incomplete or missing markets problem is one of major market failures; however, in neoclassical economics, missing or incomplete markets failure is not a fundamental standalone market failure. Instead, missing markets is a *consequence* of another *more fundamental* market failure.²³⁰ For example, markets are missing in basic research because of the public goods nature of this research (positive externalities) so that private actors cannot exclude other firms from commercial use of this research. Markets might be missing in some second hand products (e.g., used cars) due to information asymmetry.²³¹ Accordingly, the fact that cars or airplanes manufacturing markets are missing in most developing countries is not deemed as a neoclassical market failure of incomplete or missing markets, but rather a result of deeper causes such as market failures in financial and labor markets. These failures can then be corrected by economic regulations that focus solely on these failures.

²²⁸ In contrast, innovation (and firms' learning capabilities) is at the core of the Schumpeterian model of competition law. See the comparison of post-Chicago and Schumpeterian competition laws in sections 2.2.2 and 2.2.3 of chapter 11.

²²⁹ Andrew Schrank and Josh Whitford, 'Industrial Policy in the United States: A Neo-Polanyian Interpretation' (2009) 37(4) *Politics and Society* 527–531.

²³⁰ For example, Arndt argues that high transaction costs is the most crucial market failure that causes the problem of missing markets in developing economies, see: Arndt (n 204), 227.

²³¹ George Akerlof, 'The Market for "Lemons": Quality Uncertainty and the Market Mechanism' (1970) 84(3) *The Quarterly Journal of Economics* 489–491.

Unfortunately, the correction of the market failures in factor markets has not succeeded in addressing the missing product market problem. Indeed, the markets for most of the high added-value products are missing in most developing countries. Hence, Chang, correctly, argues that *market creation* (and not correction of market failures for enhancing allocative efficiency) should be one of the major functions of governmental developmental (regulatory and non-regulatory) policies.²³² Similarly, Mazzucato argues that the market failures approach to innovation is not a viable economic basis for defining the role of (developed) states in innovation-led growth. The market failures approach constrains the role of the state in supporting basic research.²³³ In addition to investment in basic research, Mazzucato argues that developed countries should assume the role of entrepreneurs and venture capitalists in *creating and shaping the markets* for new technologies.²³⁴ She argues that investment in developing innovations, beyond the stage of basic research, requires long-term *patient* capital of *large magnitude* and the willingness to assume high degree of unquantified risks (*uncertainty*),²³⁵ however, both commercial banks and shareholder value oriented venture capital funds are not willing to provide such long-term patient capital or assume the uncertainty of investment in innovation.²³⁶ The state should then act as a venture capitalist by providing long-term patient capital for high-tech private firms²³⁷ and should act as an entrepreneur by *selecting* to invest in specific areas of innovation and developing these innovations in publicly funded institutions. By doing so, the state was able to *create* new product markets in information technology, biotechnology, new pharmaceutical drugs, renewable energy and nanotechnology. Mazzucato expresses this point eloquently:

The history of technological change teaches us that choosing particular sectors in the process is absolutely crucial. The internet would never have happened without it being forcefully ‘picked’ by DARPA [Defense Advanced Research Project Agency in the US], and the same holds for nanotechnology which was picked by the NSF [National Science Foundation in the US] and later by the National Nanotech Initiative [in the US]. And, most importantly, the green revolution will not take off until it is firmly picked and backed by the state.²³⁸

²³² Chang, ‘The Economics and Politics of Regulation’ (n 204) 717–718.

²³³ Mariana Mazzucato, *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (Anthem Press 2013) 21.

²³⁴ *ibid* 20–25.

²³⁵ *ibid* 59–60.

²³⁶ *ibid* 47–50.

²³⁷ *ibid* 138–140.

²³⁸ *ibid* 27.

The argument of Mazzucato is highly relevant for developing countries. Creating new product markets in *existing* high added value products such as automobiles or computers' manufacturing requires long term patient industrial capital of large magnitudes and involves high degree of uncertainty that is aggravated by the competitive advantage and large R&D investments of foreign corporations dominating the global markets of these products.²³⁹ Particularly, domestic entrepreneurs in developing countries lack the technological, financial, and organizational capabilities of these foreign firms. Therefore, domestic private entrepreneurs, being also more risk averse and more capital constrained than their counterparts in developed economies, would not assume the uncertainty of creating new domestic product markets. For creating these markets, developing countries should thus act as an entrepreneur and venture capitalist. In addition, developing countries should support the build-up and growth of the technological, financial, and organizational capabilities of domestic firms, which are constitutive of these newly created markets.

Indeed, neoclassical and new economic growth theories have been *outcome and not process* oriented. They, rightly, suggest that some variables such as physical capital, human capital, and technological process are the main drivers of economic growth, but they do not engage with the *process of economic development* (i.e., the process through which these drivers of growth are created, increased, and brought together for creating new product markets and forming internationally competitive domestic firms). Development process is thus the process of creating new markets and building up the technological, financial, organizational, adaptive, and learning capabilities of domestic firms in existing and newly created markets. The analytical and diagnostic framework of market failures,²⁴⁰ *though necessary* for guiding the development process because Stiglitz has shown that *some* forms of market failures constrain the economic growth of developing countries,²⁴¹ is *not sufficient* for guiding this process of economic development.

²³⁹ Iain Pirie, 'Globalization and the Decline of the Developmental State' in Ben Fine, Jyoti Saraswati and Daniela Tavasci (eds), *Beyond the Developmental State: Industrial Policy into the Twenty-First Century* (Pluto Press 2013) 158–159. Interestingly, Pirie argues that given these significant entry barriers to technologically dynamic key sectors of the global economy, sectoral industrial policies may no longer be sufficient for supporting the formation of competitive domestic firms in these sectors. *ibid* 157–163.

²⁴⁰ Zerbe Jr. and McCurdy (n 45), 559.

²⁴¹ Joseph E Stiglitz, 'Markets, Market Failures, and Development' (1989) 79(2) *The American Economic Review* 197–201. Further, Arndt distinguishes between two forms of market failures: the failures of the markets in undertaking their allocative functions and their failure in undertaking their creative functions. Only the correction of the failures of the markets in undertaking their creative

In sum, correction of some market failures may have either adverse or minimal positive effects on economic growth, whereas correction of others may have significant positive effects. Further, some drivers of economic growth such as innovation, international competitiveness, creation of markets, and formation and growth of firm's capabilities are not captured by correction of market failures. Accordingly, delimiting the objectives of economic regulations to correcting market (and organizational) failures without due attention to the effects of these regulations on economic growth via their effects on market creation, innovation, international competitiveness and formation and growth of firms' capabilities is unwarranted.

4.3. External Critiques of the Neoclassical Normative Theory of Economic Regulations: Insights from Constitutional Economics and Law and Political Economy

Neoclassical welfare economics adopts a *welfarist* moral philosophy based on the preferences of the *consumers* in the *markets*. The neoclassical reasoning is that this approach respects the sovereignty of the individuals in determining what is good for them.²⁴² This is a weak argument given that neoclassical welfare economics disregards individuals' preferences expressed in the political sphere as a basis for welfare analysis. Consider the above example concerning the Chinese growth model, given the preferences of the Chinese consumers, the savings rate in China is not socially optimal because it does not maximize long-term consumption.²⁴³ However, suppose that the Chinese people are given the choice to express their preferences for their desirable rate of growth that the government should seek to achieve, while provided with full information about the level of long-term consumption associated with each rate of economic growth. In this case, they might however prefer the sub-optimal savings rate that does not maximize long-term consumption, but generates higher growth rate. They might choose the sub-optimal higher growth rate as it may enable the government to redistribute more resources for the poor, support its defense expenditures for national security reasons, and solidify its economic power in global market economy. In this case, if the Chinese people value these other objectives (eradication of poverty, national security, and national economic power)

functions would have significant positive effects on economic growth. Arndt (n 204), 220–222. For example, 'monopoly in new technology, such as patent rights, impedes the transfer of technology to developing countries. It might be classified [therefore] as a form of failure of the creative function.' *ibid* 221.

²⁴² Mishan (n 7) 10–11.

²⁴³ Lu and McDonald (n 208), 298–299.

more than the loss of their long-term consumption maximization, they may choose higher growth rate associated with a sub-optimal high savings rate.

To illustrate this point further, consider the rules of corporate law. Coase argued that absent transaction costs, private bargaining results in efficient transactions involving efficient allocation of resources provided that property rights are well-defined, and regardless of how property rights are initially distributed.²⁴⁴ Based on Coase theorem, corporate law and economics scholars advocated what has become to known as the hypothetical bargain theory.²⁴⁵ The argument runs as follows. Coase theorem shows that private contracts (market exchanges) allocate resources efficiently under zero transaction costs. Since transaction costs are high (due to bargaining costs, search costs and market failures such as information asymmetry), these costs block efficient transactions from taking place. Legal institutions should thus replicate efficient market transactions that have been blocked due to transaction costs. To do so, we ask the question “what would have the fully rational parties (the addressees of the legal rule) have contracted for in absence of transaction costs and asymmetry of information?”,²⁴⁶ then, they encapsulate the answer to this question in a legal rule. The legal rule is therefore the outcome of a hypothetical efficient bargain that has never taken place due to high transaction costs. To facilitate efficient transactions, legal rules should be of default and not mandatory nature to enable the parties to bargain around the rule if it is more efficient for them to do so.²⁴⁷ These default rules are designed to reflect the efficient transactions that the parties could have reached, absent transaction costs. These rules are replicating efficient market outcomes that could not take place due to transaction costs, and thus are allocatively efficient. This implies that mandatory rules such as German co-determination are inefficient because it is hard to argue

²⁴⁴ Coase, ‘The Problem of Social Cost’ (n 32) 6–8.

²⁴⁵ Frank H Easterbrook and Daniel R Fischel, *The Economic Structure of Corporate Law* (Harvard University Press 1991) 22.

²⁴⁶ *ibid.*

²⁴⁷ This is not to suggest that mandatory corporate rules have no place in the contractarian theory of corporate law. It has, however, a limited place restricted, mainly, to the protection of shareholders against later-comer terms. They refer to the amendment of corporate’s charter during the life of the corporation. *ibid* 32–34 These later-comer terms justify mandatory regulatory intervention because they may involve opportunistic exploitation of outside shareholders. Jeffrey N Gordon, ‘The Mandatory Structure of Corporate Law’ (1989) 89(7) *Columbia Law Review* 1573–1588. This argument can also justify mandatory legal protection of the workers who make asset specific investments if labor law and labor contracts fail to provide adequate protection against their opportunistic exploitation after they have already made firm’s specific investments. Still, this argument is based on the preferences’ of the parties to the labor contract as expressed in the economic sphere, and thus still finds its basis in the neoclassical normative theory of regulation. In the above discussion, I am interested in developing an argument for mandatory legal participation of labor in corporate governance by critiquing the neoclassical normative theory of regulation that takes the preferences of the individuals as economic actors as basis for justifying legal intervention.

that co-determination is an outcome of an efficient transaction between the shareholders and the workers of the firm that has been blocked by high transaction costs. Given the concentrated ownership of German firms and the concentrated representation of workers at firm and industry levels, the transaction costs of bargaining between workers and the shareholders are not that high, they can agree to co-determination rights for workers voluntarily if they prefer so. Given that they have not agreed to co-determination rights prior to the introduction of the co-determination rule in Germany, this rule is inefficient. Jensen and Meckling eloquently express this new institutional (Coasian) way of thinking:

If codetermination is beneficial to both stockholders and labor, why do we need laws which force firms to engage in it? Surely, they would do so voluntarily. The fact that stockholders must be forced by law to accept codetermination is the best evidence we have that they are adversely affected by it.²⁴⁸

Regardless of whether the co-determination rule is efficient or inefficient, from a law and economics perspective, this rule should be of a default, and not a mandatory, nature.²⁴⁹ If it were an inefficient rule, shareholders and employees would still have the opportunity to correct this inefficiency by agreeing that workers give up their co-determination rights in exchange for higher wages or any other benefits. The mandatory character of co-determination prevents this efficient transaction from taking place.

The problem with this line of argument is similar to the problems outlined in relation to the Chinese savings rate example. Efficiency of market transactions is determined with reference

²⁴⁸ Michael C Jensen and William H Meckling, 'Rights and Production Functions: An Application to Labour-Managed Firms and Codetermination' (1979) 52(4) *The Journal of Business* 474. Suppose that we endorse the normative framework of welfare economics, this argument still does not hold. Assuming that this argument is correct and that shareholders are harmed by co-determination, this does not automatically imply that co-determination is welfare reducing unless we equate welfare to shareholder value maximization. If we endorse long term firm's value maximization as the normative objective of corporate governance, co-determination gives the labor the power to participate in *the distribution* of the *firm's surplus*. The distribution affects the surplus because it affects the labor efforts of the workers and their investment in firm's specific assets. Charreaux G. 'Micro Theories of Corporate Governance' in A. Naciri (ed), *Corporate Governance Around the World* (Routledge 2008) 20. Suppose that co-determination as a distribution rule maximizes firm's surplus, but gives the shareholders' a rent lower than the rent they would extract under no co-determination. Shareholders will prefer not to adopt voluntarily a co-determination principle although it maximizes the social welfare conceptualized as firm's total surplus because they extract less profit under co-determination.

²⁴⁹ Oliver Hart, for example, argues that the case for mandatory rules for corporate governance is weak. In his view, the design of corporate governance rules should be left to the interplay between the entrepreneurs (founders of the firm), the shareholders and the would-be shareholders of the firm. Oliver Hart, 'Corporate Governance: Some Theory and Implications' (1995) 105(430) *The Economic Journal* 886–888.

to the preferences of the employees and the shareholders as expressed in the market place. In other words, it is determined with reference to *their preferences acting as economic agents in the economic sphere of the society*. If the co-determination rule is put on a referendum, the majority of the society including workers and shareholders may prefer mandatory co-determinations rights for employees. They may prefer so, for example, because a mandatory co-determination would ensure a socially responsible corporate governance of German firms, which reduces shareholder-employees' conflict and maximize long-term social value of the firm.

Similarly, Kerber defends a liberal rights-based normative basis for competition law instead of the consumer welfare standard adopted by the EU and US competition laws or total welfare standard.²⁵⁰ According to this rights-based perspective, economic actors (e.g., consumers and producers) are entitled to some basic liberal rights (e.g., property rights, free entry into markets, and freedom to compete on merits) that competition law should protect regardless of the effects of this protection on consumer welfare or total welfare.²⁵¹ He endorses a constitutional economics perspective as a normative basis for his line argument and summarizes the differences between constitutional economics and the welfare economics perspective to be that according to the former,

The preferences of citizens are viewed as the ultimate normative criterion. They should decide to what extent allocative efficiency and/or dynamic efficiency should be strived for, to what extent competition law should protect consumers from exploitation or competitors from being hurt through predatory strategies, and to what extent society is willing to sacrifice some 'total welfare' in order to prevent redistribution through market power. ... Constitutional economics would claim that the outcome of these political decisions [regarding the goals of competition law] should reflect *citizens'* preferences.²⁵²

Given this constitutional economics perspective, Kerber argues that the *citizens* in the political process would *prefer* a rights-based competition law to a purely consumer welfare or a total welfare standards.²⁵³

²⁵⁰ Kerber (n 70) 111–118.

²⁵¹ *ibid* 116–117.

²⁵² *ibid* 110.

²⁵³ *ibid* 111–115.

Neoclassical law and economics scholars would reject the above line of argument because it presupposes that the preferences of the economic agents are not consistent.²⁵⁴ Inconsistency of agents' preferences runs counter the instrumental rationality assumption that presupposes that the preferences of the agents meet the conditions of consistency and transitivity. Further, it runs counter the possibility of representing these preferences by ordinal utility function because consistency and transitivity of preferences are necessary requirements for such functional representation.

In fact, humans, by acting in their various social roles, have inconsistent preferences. They experience *role conflict*. Schefold expresses lucidly this conflict:

Consider the following model of a Greek citizen in classical Athens. He fulfils three roles, as father, warrior, and philosopher or statesman, and he pursues three different activities: household management, defence of the city and statecraft. For the father, the household comes first, defence next and the state third, because its government can be left to others. As a warrior, he is most concerned about defence, second about the state and he is prepared to neglect the family. The philosopher ranks justice in the state highest, next that in the household, and defence comes last, even if he is not quite like Socrates prepared rather to suffer evil than to do it. These are cyclical preferences, which cannot be aggregated to consistent preferences for the fulfilment of all roles simultaneously, by the same argument by which we prove that it is in general not possible to aggregate the preferences of individuals so as to obtain a general welfare function. Hence there is no utility function for our citizen.²⁵⁵

In the above examples, the Chinese people in their *economic role as consumers* might have preferences over savings rate and its associated growth rate of the economy, which are different from their preferences when acting in their *social role as citizens*. The same applies to the employees and shareholders of the German corporation acting in their social roles as economic agents and as citizens, and the preferences of the individuals as consumers or as citizens in the case of competition law.

²⁵⁴ I owe this insight to Prof. Bertram Schefold, for which I wish to thank him a lot.

²⁵⁵ Bertram Schefold, 'Marx, Sombart, Weber and the Debate about the Genesis of Modern Capitalism' (2014) 6(2) *Journal of Institutional Studies* 19. See also: Michael Hechter, 'Role of Values in Rational Choice Theory' (1994) 6(3) *Rationality and Society* 325; and Karine Nyborg, 'Homo Economicus and Homo Politicus: Interpretation and Aggregation of Environmental Values' (2000) 42(3) *Journal of Economic Behavior and Organization* 306.

This brings the intriguing question of why individuals when acting in different social roles may rank differently the same alternatives. To address this question, we need to understand *internal value conflicts* that individuals experience in decision situations. Rational choice theory assumes that given the choices with which they are confronted, individuals can rank these choices from the most preferred choice that would maximize their utility to the least preferred one, and then choose their most preferred choice. However, in order to come up with a ranking of the choices, the individual has to *evaluate* each of them. However, there are multiple criteria for evaluation: the self-interested desires for wealth, power, and prestige on one hand and intrinsic values that reflect moral principles, on the other hand.²⁵⁶ The individual confronts the vexing problem that each of these criteria for evaluation results in its own ordering of the available choices.²⁵⁷ Consider the example of a manager who needs to decide whether to fire the number of the employees that maximizes the profits. According to the value of *shareholder value maximization*, firing the number of employees that would maximize profits is the best alternative, but according to the value of *meritocracy*, retaining hard working employees as long as the firm can achieve non-maximized profits would be ranked as the best choice. Here, there is a wide range of choices starting from zero profits to maximum profits that has a correspondence number of employees that can be fired.²⁵⁸ Which choice should the manager make then from this large number of choices, given the wide range of orderings of these choices on basis of each of self-interested desires and intrinsic values that function as his evaluative criteria? This is a multi-dimensional evaluative problem that can be resolved if the individual can *measure quantitatively* the effects of each choice on the relevant self-interested desire or intrinsic value according to *one metric* in order to be able to come up with one ordering of the alternative choices. However, individuals do not have “complete and consistent internal trade-off functions among different dimensions of evaluation that would allow ... [their] choices to be represented by a single utility scale.”²⁵⁹ This is partly a result of the fact that it is hard to quantify *ethical* aspects of the choice or to compare different intrinsic values.

²⁵⁶ Hechter (n 255), 318–323. The author considers the self-interested desires to be instrumental values as he defines values as internal criteria for evaluation, and thus separates values from morality. However, values theory underlies morality of actions and thus should not be separated. Accordingly, these self-interested desires are not values unless we consider selfishness as a value, which would be a deeply distorted understanding of morality. The fulfilment of these desires would thus be either ethically permissible, desirable or required only with reference to other intrinsic values.

²⁵⁷ Gregory S Kavka, ‘Is Individual Choice Less Problematic than Collective Choice?’ (1991) 7(2) *Economics and Philosophy* 145.

²⁵⁸ See chapter 2 for a detailed discussion of this decision situation and the reference cited therein.

²⁵⁹ *ibid* 162.

Given the internal conflicts of self-interested desires and values, the social role that the individual occupies when she makes the choice considerably influences that choice through various channels. First, each social role calls upon the individual to attach more weight to specific values that would imply a distinct ranking of choices that correspond to this social role. In her role as a consumer, the Chinese individual does not invoke at all any of the values that she would invoke when occupying the social role of a citizen, or she would attach little weight to these values. In this case, even if the individual can measure the alternatives according to *one metric* so that she can come up with one ordering of the alternatives despite the multi-evaluative criteria (i.e., the multiple values), the ranking would depend on the social role that the individual occupies. This is because the distribution and weights of the criteria of evaluation (i.e., the distribution and weight of the individual's values) differ across the social roles. Second, the rule of aggregation itself might depend on the social role that the individual occupies. The individual in his role as a consumer may use the money metric (how much he is willing to accept or pay for a specific outcome) for aggregation in order to come up with one ordering of the alternatives. However, in her social role as a citizen, she may use another metric for aggregation that may be similar to the one I develop in the next chapter in evaluating economic regulations. This implies that even if the distribution and weights of the values is the same across the social roles that the individual occupies, the individual in each social role may rank the alternatives differently because the rules of aggregation that she uses are not the same across her social roles. Third, assuming that the individual is not that rational self-conscious calculative person, but rather she opts for using heuristic rules. Heuristic rules are context-dependent and the social role the individual occupies. In their role as economic agents in the market, individuals seem to act according to the heuristic rule, "maximize self-interest under the constraint of no significant sacrifice of intrinsic values", but in their role as citizens, they seem to behave according to the heuristic rule, "maximize the collective good unless this would cause you a significant personal harm". Forth, assuming away rationality assumption, each social role may have a framing effect that induces the individual to make choices that she would not have made, if she were occupying another social role when confronted with the same decision situation.²⁶⁰

Therefore, the individual has different preferences (i.e., different rankings of the alternative options) that depend on the social role he occupies assuming that he can aggregate the orderings

²⁶⁰ A good example on this framing effect comes from valuation of environmental goods for the purpose of cost-benefit analysis of alternative policies, see: Nyborg (n 255), 317–318.

of the alternatives made according to each of the criteria of evaluation salient in each social role. If he cannot make such aggregation, the individual would have a different set of preferences that would correspond to each criterion of evaluation. For simplicity, let us assume that the individual can come up with one ordering that corresponds to each social role he occupies. Similar to collective choice, Arrow's impossibility theorem implies that the set of preferences of the individual cannot be aggregated and represented by a utility function.²⁶¹ According to the Arrow's impossibility theorem, it is impossible to aggregate the different preferences of different individuals into a social preference for the society that meets some reasonable requirements such as transitivity.²⁶² Given that the individual in his different social roles has different set of preferences attached with each social role he occupies, this individual is indeed two distinct individuals/selves (assuming he has only two distinct preferences). In order to represent his overall preferences, we need to aggregate them first, but this is impossible according to Arrow's impossibility theorem.

The society assigns different social roles to humans and thus creates contradictions in their preferences. Due to evolutionary processes, one of the major characteristics of modern societies is that humans have more complex value and desire systems and social roles. Preferences are therefore endogenous to social roles, and the latter depend on the normative order in which the social roles are embedded. One of the implications of the impossibility theorem is that preferences become cyclical, in other words, the Chinese people may vote for a sub-optimal high savings rate associated with high growth rate. However, acting as consumers, they may resist governmental policies attempting to force them to save more than what they consider to be maximizing their utility as consumers. As Schefold argues, Plato states that role conflicts can be resolved only by recourse to a meta-ranking, i.e., a constitution.²⁶³ In this constitution, we can envisage a solution where *the preferences of the individuals, which are associated with one social role would count, while the preferences associated with their other selves shall be excluded.*

Neoclassical welfare economics endorses the preferences of individuals as expressed in their social role as economic agents in the economic sphere as the basis for evaluating costs and benefits of socio-economic policies and regulations. Instead, socio-economic regulations should be *evaluated* with reference to individuals' preferences acting in their social role as citizens in the political sphere. Doubtless, the evaluation of *some* of the economic effects of

²⁶¹ Schefold (n 255), 19. See also: Kavka (n 257), 157–160. Nyborg (n 255), 308.

²⁶² Arrow, 'A Difficulty in the Concept of Social Welfare' (n 89) 339–343.

²⁶³ Schefold (n 255), 19.

socio-economic regulations such as allocative efficiency can be based solely on individuals' preferences acting as economic agents;²⁶⁴ however, the *overall evaluation* of socio-economic regulations that takes into account, but is not limited to, their allocative economic effects should be made on basis of the preferences of the individuals as citizens. In other words, determining

²⁶⁴ This is by no means an unqualified statement. For example, given the preferences of the individuals as consumers, economists argue that competition allocates the resources of the economy efficiently. This would be true if and only if the competitive market mechanism ensures the allocation of the resources to its highest *social* value uses. Neoclassical economists argue that absent market failures, in particular externalities, private and social benefits and costs are equal. Pollution is the typical example of negative externalities. Due to this externality, producers will allocate more investments to polluting productive activities than what is socially optimal because, absent regulation, they do not incur private costs for the resulting increase in pollution. However, absent market failures such as externalities, competitive market mechanism would equate both private and social benefits, where both private and social benefits and costs are calculated in light of the preferences of the individuals as consumers and producers, i.e., in their social role as economic agents. However, this is questionable, particularly in light of the economic conditions of developing countries. In the latter, for example, brilliant legal scholars paid exorbitantly in law firms leave academia, judiciary, and governmental regulatory and supervisory agencies for law firms. Most of the activities of law firms are, primarily, distributional; they involve redistribution of the already produced economic surplus among the litigants, while producing little gains in terms of economic growth. Turner (n 146) 17–18. The same applies to brilliant researchers in other fields, who tend to migrate from academic research, governmental decision-making positions, and policy research institutions to high paid positions in private sector that may have marginal positive effects on economic growth. With the rise of financial capitalism prior to the financial crisis of 2007-2009, brilliant physicists have migrated from high social value basic research positions to highly paid, but socially detrimental, financial engineering jobs in the financial sector. Similarly, private investors underinvest in education in developing countries due to the low income of the consumers in these countries who cannot sustain a high demand for good quality education. In other words, these poor consumers cannot express their preference for education in the market because they lack the financial resources to demand high quality education. Accordingly, suppose that the government has calculated accurately these positive externalities of education and health care on economic growth, social cohesion and the sustainability of the democratic institutions and internalized these externalities. In this case, a residual wedge between private and social value would persist because the preferences of the individuals *who afford to express their preferences in the market as consumers through demand* and the profit maximizing behavior of the firms are the determinants of *competitive market prices* that function as the allocative mechanism of the economic resources. In these cases, efficient allocation of resources based on competitive market mechanism would shift the resources of the economy from high social value investments (such as academic research, governmental policy research centers, bureaucracy, education, and health care) to high private value investments that may have low social value. Although neoclassical economists show that this competitive allocation of resources is efficient, as it would maximize the sum of producer and consumer welfare (this is the famous first theorem of welfare), they have not yet shown that this static competitive allocation would maximize allocative efficiency as measured according to the preferences of the individuals in their social role as citizens. Further, they have not yet shown also that this competitive market would maximize the rate of long-term economic growth. Accordingly, even the question of whether the resources of the economy is allocated efficiently depends on whether we define the social value with reference to the preferences of the individuals in their social role as economic agents (i.e. consumers and producers) or in their social role as citizens. This reflects the simple, but largely overlooked, fact stressed by David Kennedy (see below) that the question of allocation of the resources of the economy is a fundamental *political* question about the type of society that the citizens choose to create and live in.

whether the economic growth rate maximizes long term consumption can be only made on the basis of the individuals' preferences as consumers, however, given that a specific rate of economic growth may not be maximizing long term consumption, the individuals acting as citizens should determine whether to pursue this rate of economic growth or not. In sum, the political sphere (the value system of individuals as citizens) and not the market sphere (the value system of individuals as economic agents) should provide the evaluative framework for socio-economic laws, based on which these laws could be assessed and designed.

One may claim that a purely welfarist moral position²⁶⁵ or a deference to democracy can support the endorsement of the individuals' preferences in their social role as citizens to be a basis of regulatory design. Although both welfarism and the value of democracy may give credence to the endorsement of the preferences of the individuals as citizens, further deeper moral reasons underlie the argument of this section. First, humans seek a meaning to their very existence, without which their existence is pointless. The only meaningful purpose for human existence is their struggle to give rise to the moral values they cherish in both their private and public spheres. Only through their preferences as citizens, these values can have a considerable weight in the design of public policies and legal institutions.

Further, one can also develop a liberalism-based critique to the reliance on the individuals' preferences as economic agents. Selfish self-interested rational humans living in societies dominated by individualistic values would create legal institutions that reflect these very values, even if they expressed their preferences as citizens. However, individuals with collective social values, inclination to protect the weak and the environment, willingness to sacrifice material gain for attainment of moral values can reflect these values in their legal institutions *only if* their preferences as citizens are counted. This implies that in the latter case, the reliance on the preferences of individuals as consumers implies a high degree of paternalism and restrictions of individual's freedoms (anti-liberalism) because it precludes these individuals from creating the form of the economic system that reflects who they are and who they aspire to be.

²⁶⁵ By implicitly endorsing this welfarist moral position, Nyborg suggests that in order to interpret the valuation of environmental goods made by the individuals in their social role as citizens as reflective of social benefits, 'one must first be willing to postulate a 'meta' social welfare function, obtained by aggregating individual *social welfare judgments*. Further, we need to assume that such judgments of social welfare are cardinal and interpersonally comparable, and that each person's judgment should have an equal weight in the meta social welfare function. These are obviously very unconventional assumptions, although similar assumptions are frequently made about *well-being functions*.' Nyborg (n 255), 319 [emphasis in the original].

Obviously, this argument does not imply the rejection of paternalistic governmental policies and institutions per se because the government has to endorse some paternalistic legal institutions if they were necessary to bring into existence the values of the citizens as expressed in the political sphere of the society. It rather implies that these paternalistic institutions should be strongly justified with reference to the preferences of the citizens. Further, this argument shows the futility of the liberalism and freedom-based claims of neoliberalism and Chicago school of law and economics; under the guise of ensuring respect for the preferences of individuals as economic actors, these strands of thought rationalize unjustified severe paternalistic and anti-liberal legal institutions that negate the preferences of the individuals in their social role as citizens.

Related to the external critical insights of constitutional economics are the important external critiques proposed by law and political economy perspective.²⁶⁶ In neoclassical welfare economics, legal institutions should be *designed* to correct market failures. In this framework, legal institutions are merely *instruments* for achieving specific (economic) objective. The above critiques revolve around two questions. First, from a moral philosophical perspective, are not there other important values that law and economics scholars miss by emphasizing market (and organizational) failures function of legal institutions? And, given that there are wide range of objectives that are missed, how to determine which objectives legal institutions should pursue? The answer provided for the first question is that yes, there are other important objectives that legal institutions of capitalism should pursue such as economic growth, (re)distribution, formation and growth of firm's capabilities, and protection of the weak. The answer provided for the second question is that individuals acting in their social role as citizens and not as economic agents should determine which objectives are to be pursued. If we take these critiques seriously, they would still involve instrumentalizing legal institutions to bring about these objectives. In both cases, legal institutions function as the rules of the (economic) game that ensure that the ensuing equilibrium of the game corresponds to the pre-specified objectives.

By contrast, in what can be dubbed as law and political economy perspective, attention is paid to how legal institutions regulating capitalism can constrain the policy space for

²⁶⁶ I wish to thank Prof. Dr. Feichtner a lot for drawing my attention to the intricate relation between law and political economy. In particular, I benefited a lot from reading her scholarly work: Isabel Feichtner, 'Transnational Law of Natural Resource Exploitation: The Role of Law in Constituting, Transforming and Resolving Distribution Conflicts Over Extractive Resources' Unpublished Manuscript

democratic governments, and undermine the democratic institutions by redistributing political power, entitlements, and capabilities.²⁶⁷ In a sense, legal institutions regulating markets are constitutive of the center-periphery of both the economic system and *the political system*.²⁶⁸ Law redistributes economic power, rents, and income that can then be translated into political power.²⁶⁹

More importantly, since legislators cannot devise detailed rules for each contingency, law also distributes law-making authority to the stakeholders of every regulated sphere to enable them to create and adapt some of the rules that govern that sphere. Kennedy therefore argues that law's main function is to distribute *authority* fairly among the relevant stakeholders and thus create and broaden the sites and spaces for *deliberation and contestation* among these stakeholders.²⁷⁰ Three brief examples can illustrate this important point. Consider first corporate governance. Corporate governance can be regulated in two ways: first, the legislator can devise a detailed list of rules that attempt to move beyond the design of a governance framework to intervention into financing and business strategy of the firm. Second, the legislator can regulate some aspects of corporate governance by mandatory rules, and then *delegate the rule- and decision-making authority* regarding other aspects of corporate governance to some relevant stakeholders. In this case, the exercise of delegated power can be restricted by a detailed set of rules, or it can be guided by a set of standards that give wide discretion to the power holders. Rule and decision-making powers can be delegated to shareholders as it is the case of shareholders supremacy principle or it can be distributed among shareholders, the board, the management, and the employees, as is already done according to the co-determination principle. Shareholders' Supremacy is an example of concentrated power and centralized governance, whereas co-determination is an example of participatory, democratic, decentralized, and social governance.²⁷¹

²⁶⁷ David Kennedy, 'Law and the Political Economy of the World' (2013) 26 *Leiden Journal of International Law* 19. *ibid* 38. Daron Acemoglu and James A Robinson, 'Economics versus Politics: Pitfalls of Policy Advice' (2013) 27(2) *Journal of Economic Perspectives* 173–175.

²⁶⁸ Kennedy (n 267), 34–35.

²⁶⁹ Acemoglu and Robinson (n 267), 173–175.

²⁷⁰ Kennedy (n 267), 27. *ibid* 35.

²⁷¹ Katharina Pistor, 'Codetermination: A Sociopolitical Model with Governance Externalities' in Margaret M Blair and Mark J Roe (eds), *Employees and Corporate Governance* (Brookings Institution Press) 163–165. The author makes a distinction between co-determination as a form of *social governance* that is concerned with the division of interests between labor and capital and *firm-level governance*, an American concept, which focuses on the division of interests between shareholders and management, i.e., equity agency problem. The author then argues that co-determination as a form of social governance negatively affects firm-level governance. *ibid* 177–181.

Similarly, in the case of industrial policy, the legal system of industrial policy can be rules-based, as proposed in chapter 12.²⁷² In this system, the administrative agency entrusted with industrial policy has almost no discretionary powers; it is required to follow detailed rules, while being subject to judicial supervision. Alternatively, the legal system for industrial policy can delegate broad discretionary powers to the industrial policy agency, while requiring the agency to deliberate with industry and other stakeholders such as representatives of consumers and environmental protection organizations prior to decision-making. This deliberative regime for industrial policy is close to the Japanese model outlined briefly in the next chapter.²⁷³

Finally, the governance of universities can be made through detailed and long list of legislative or administrative regulatory rules or through a set of few legislative rules, while delegating the design of other rules to the relevant stakeholders in the university sphere. The distribution of decision and rule making authority can also be concentrated in the hands of the head of the university or the deans of the faculties or it can be distributed among a wide range of stakeholders, and thus transform the university into a site for deliberation and contestation. In each of these three examples, firm, the firm-government relations, the university can be regulated by detailed rules (or standards) or can be transformed into *participatory spaces* of deliberation and contestation of the rules- and decisions that govern these spaces.

Doubtless, participatory and deliberative governance established by the law is both intrinsically and instrumentally valuable. It is intrinsically valuable because *deliberation* is an intrinsic value. Further, it is instrumentally valuable because the creation of a wide range of sites of deliberation would enable the individual to practice democracy in his day-to-day activities. More importantly, it creates a sense of responsibility in the individuals about the success of the sphere over which they share authority. The German or Japanese employee would be more concerned and would feel more responsible about the success of her corporation than her American counter-part. In addition, practicing democracy and sharing responsibility are necessary conditions for sustaining democratic institutions. Finally, deliberative and participatory governance ensures the design of *context-sensitive* rules and decisions and enhances the *adaptive capacity* of these rules and decisions to changes in the context.

²⁷² See section 5 on industrial policy in chapter 12.

²⁷³ It is noteworthy, however, that the post-war Japanese model of industrial policy, though deliberative, excluded the representation of the interests of labor, consumers, and environmentalists. Instead, the model has represented the public interest as envisaged and represented by the Ministry of International Trade and Industry (the MITI) and the private interests of the business community.

In law and political economy perspective, the preferences of the relevant stakeholders as expressed in the regulated sphere determine the objectives that some of the rules regulating this sphere should seek to achieve. This raises two questions. The first is which stakeholders should be allocated rule and decision-making power. The history of co-determination reveals the complexity of this question as reflected in the debates over whether labor unions or the state should be also granted representation on the supervisory board of German corporations.²⁷⁴ The second is the scope of rule and decision-making power that should be delegated to these stakeholders and the scope of the rules that should be enacted by the legislative body. Here, kicks in the main insight of law and political economy perspective: the main function of legislative rules is to distribute authority, power, entitlements, and capabilities to the weak stakeholders²⁷⁵ so that these stakeholders can participate in the rule and decision making process. *Legislative rules should empower the weak and give voice to the voiceless.* These distributive rules such as co-determination principle should be mandatory, otherwise, the weak would be either tempted or forced to trade away the rights and powers that default non-mandatory legislative rules may confer upon them. Particularly, the law cannot restore the balance in power; it cannot transform the weak/peripheral stakeholders into strong/central actors by simply granting them legal rights because legal rights cannot be automatically translated into power and capabilities.²⁷⁶

Law and political economy thus differs *fundamentally* from the neoclassical welfarist normative theory of socio-economic regulations. The normative focus of this approach is not on correcting market and organizational failures, but on *distributive effects* of these regulations. Here, distribution is not limited to distribution of income and wealth, but includes also *distribution of power, capabilities and entitlements.*²⁷⁷ In this approach, the focus is then on how these distributional effects impact democratic institutions, on one hand, and how the law, through its distributional effects, has the potential to create local sites for deliberation and contestation among the relevant stakeholders in which some of the important rules and decisions concerning the governance of these local sites are made. Doubtless, legal institutions that can ensure fair distribution in a way that is consistent with democratic governance and that

²⁷⁴ *ibid* 173.

²⁷⁵ Kennedy (n 267), 11. *ibid* 34–35. I use the term “the weak” to refer to the periphery in the center-periphery interpretive and analytical framework of Kennedy. It is noteworthy also that Kennedy’s focus is on international law and global political economy; still, his analysis applies equally to national law and political economy.

²⁷⁶ Feichtner (n 266).

²⁷⁷ *ibid.* Kennedy (n 267), 8–9. *ibid* 25–26.

are conducive to the creation of local sites of deliberation are not necessarily *allocatively efficient*. This choice between the allocatively efficient institutions on one hand, and the distributionally fair and democratically sustaining and enhancing institutions, on the other hand, is a political choice that the individuals in their social role as citizens should make.

More problematically, the law and political economic perspective favoring decentralization and distribution of rule and decision-making process in the various institutional domains of the economic sphere may collide with the constitutional economic perspective that requires the respect of the preferences of the individuals in their social role as citizens. Suppose that the citizens prefer an economic system that is solely focused on wealth accumulation regardless of anything else (an obviously immoral choice). Clearly, the distribution of rule and decision-making powers to socio-economic stakeholders according to law and political economic perspective would undermine the capacity of the economic system to accumulate wealth. As Foucault reminds us, power is *productive*;²⁷⁸ the decentralization of power would involve loss of productivity at least in the short run in some cases. Participatory governance cannot ensure the creation of the institutional network that can satisfy the objectives of governing the economic system desired by the citizens. This inconsistency between the institutional network that meets the requirements of the constitutional economic perspective and the institutional network required from the law and political economy perspective may also hold even if the citizens prefer a moral economic system (e.g., a system oriented toward capabilities expansion and respect for deontological constraints). However, in this case, one can expect only few instances of inconsistencies; both perspectives would recommend similar institutional networks in most cases. For example, a stakeholder model of corporate governance seems to meet both the requirements of the citizens' preferences for a moral regulatory governance of the economic system and the requirements of a participatory and democratic governance of the firm. Still, these few inconsistencies are a tough problem that future research on the normative theory of economic regulations needs to tackle.

The perspective of law and political economy raises another difficult question concerning whether developing countries should use the law for creating sites for deliberation and thus *politicize* the governance of their corporations, industrial policy, and universities, etc. The created spaces for deliberation in developing countries are most probably going to fail in their task of governing themselves because of many reasons. These reasons include, inter alia, the

²⁷⁸ Michel Foucault, 'Truth and Power: An Interview with Michel Foucault' (1979) 4(13) *Critiques of Anthropology* 136–137.

little historical experience in practicing democracy, the large differences in education among relevant stakeholders, the conflation of personal and public interest, the dominance of personal relations over rational deliberation in decision-making process, and the lack of a common ground over most of the critical issues. However, without creating these spaces for deliberation, the citizens of developing countries would not have the spaces for learning how to practice democracy, and thus there would be little hope for these societies to move toward democratic governance. More importantly, without these sites of deliberation, the citizens of developing countries would continue to *blame* the domestic actors with centralized power for the socio-economic failures of their countries instead of sharing the responsibility for these failures as a necessary starting point for correcting these failures.²⁷⁹ The solution to this predicament should be contextualized. For some institutional domains such as industrial policy, a rules-based legal system that gives little space for deliberation is more appropriate because the main stakeholders relevant to this domain are the administration/bureaucracy and the industry. And thus the risk of political capture, particularly given the high level of corruption in public administration in developing countries, rules out the possibility for creating a deliberative governance structure similar to the Japanese regime outlined briefly in the next chapter. For other institutional domains such as corporations and universities, creating a space for deliberation seems to be the right choice because it would empower the weak stakeholders in these domains. However, the scope of rule and decision making power conferred upon the stakeholders of these spaces of deliberation should be more limited than the powers conferred upon the stakeholders in the comparable sites for deliberation in developed countries, while broadening this scope over time.²⁸⁰

²⁷⁹ Blaming game in some developing countries is part of both the public discourse of the political authority and the day-to-day discourse of the people. The latter are blaming the government for every socio-political and economic failure and the government blames the people for most of these failures. Although it is true that the passivity of the citizens in some developing countries is one of the major sources of the socio-economic and political failures in these countries, this passivity is a result of long decades of political oppression of any proactive reformist movement and the centralization of rule and decision-making in the hands of the government.

²⁸⁰ In the above discussion, I have been concerned with demonstrating how the perspective of law and political economy emphasizes important *regulatory* objectives overlooked by neoclassical welfarist theory of regulation. Law and political economy perspective has also important implications over the choice of governance framework of the economy. In particular, in developing countries with a political economy characterized by an efficient bureaucracy that suffers from low or moderate corruption, along with an inefficient or highly corrupt judiciary, a bureaucratic informal model of governance similar to that of post-war Japan, which avoids the formality of legal institutions and rule of law, would be more advisable. By contrast, for countries with moderately corrupt judiciary, but highly corrupt or inefficient executive branch and bureaucracy, a rules-based legal system for governing capitalism would be more advisable. We discuss this issue further in section 5 on industrial policy in chapter 12.

In conclusion, the constitutional economics and law and political economy perspectives mandates shifting the rule- and decision-making in the economic sphere from the reliance on the preferences of individuals as economic actors to their preferences as citizens, and from centralized rule-making to participatory governance of the spheres of the economic system. This implies a shift from markets to politics as a basis for the normative theory of economic regulations; *politics in both democratic and non-democratic systems* is not unproblematic, however. Without going into the problems of this shift to politics, which deserves a standalone study, one can highlight one major problem. It is not possible to put every legal institution on referendum. Not only this is impractical, but also individuals in their social roles as citizens do not have complete information about the various aspects of each legal institution. Moreover, assuming that the government and the media will provide them with complete and correct information (a highly unrealistic assumption), individuals may not have the time or cognitive capacity to process the information regarding every legal institution. Indeed, that is one reason why we have parliaments. Instead, by using the integrated and systemic approach, the next chapter proposes a normative framework for economic regulations in which some of its components, namely ultimate objectives of the economic system, should be put on referendum and then encapsulated into a *substantive economic constitution*. Other scholars may suggest normative systems different from the one developed in the following chapter. These normative systems could be then debated in the political sphere and some versions of them could be ultimately put on referendum for the citizens. This system would then constitute the normative basis for the economic system, on basis of which legislators and regulators should design economic regulations subject to the constitutional review of the constitutional court. These issues are discussed in the next chapter.

5. Systemic Critiques of the Neoclassical Normative Theory of Economic Regulations

In addition to the external critiques, the systemic perspective can help us formulate some systemic critiques. Three systemic critiques could be advanced to the neoclassical approach to normative criteria underlying the assessment of economic regulations. First, the first fundamental theorem of neoclassical welfare economics suggests that economic regulations should correct market failures, by doing so, we will be pushing the real market economy to approximate the optimal allocation of resources of our abstract ideal economy of perfect competition, perfect information, freedom of externalities and scale economies, stable

preferences and fixed technologies. The first fundamental theorem of welfare establishes that competitive general equilibrium, under specific conditions, is Pareto efficient. To hold, it requires that all input and output markets (financial, labor and products markets of all goods and services produced in the economy) to entertain these properties for the economy to allocate resources efficiently. The general equilibrium perspective is clearly a systemic perspective that takes into account the interaction and feedback effects among the markets where the prices adjust until they reach equilibrium prices that clear all markets simultaneously. Given this systemic perspective, regulators should not bother about market failures that exist beyond their regulatory jurisdiction. Financial regulators should focus on correcting the market failures of financial markets, leaving the correction of market failures of goods markets to competition and utilities regulators, and the correction of labor market failures to respective regulators.

Given the systemic perspective of general equilibrium analysis underlying the regulations' function of market failure correction, *regulations shall be systemically consistent*. This has been the essence of Jensen's general equilibrium argument for shareholder value theory of corporate governance: he argued that assuming that there are no other market failures (i.e., assuming that other socio-economic regulations correct perfectly other market failures such as imperfect competition and externalities), a shareholder value model will maximize social welfare. The same argument could thus be made for competition law, assuming that all other market failures are perfectly corrected by respective socio-economic regulations, competition law model that ensures perfect competition shall maximize social welfare conceptualized as Pareto allocative efficiency.

As has been argued above, the general theory of the second best undermines these arguments substantially. Given the binding constraints, i.e., the markets failures that are impossible to correct perfectly due to technical or political reasons, no claim could be made that correcting other market failures will push the real economy towards the abstract competitive general equilibrium in which resources are allocated efficiently.

More problematically, neoclassical law and economics assumes implicitly that Kaldor-Hicks maximizing regulatory interventions can ensure Pareto allocative efficiency. Indeed, the path to Pareto optimal allocation can be through Pareto improvement allocations or through Kaldor-Hicks allocations. However, Pareto improvement regulatory interventions ensure that at least one person is made better off and nobody is made worse off. Despite the implications of general theory of the second best, these Pareto improvement regulatory interventions have some credit. These interventions may not be pushing the system towards a Pareto efficient allocation because other market failures may be binding. Since these interventions improves

the allocation of resources by making at least some individuals better off, these interventions, most probably, guide us over the path towards a Pareto efficient allocation. A similar claim cannot be made in relation to Kaldor-Hicks regulatory interventions. As the latter imposes costs on some actors and thus moves them below their preference curves, it is likely that these interventions do not guide us over a path towards any of the Pareto optimal allocations on the contract curve.

More problematically from a systemic perspective, by focusing on correcting market (and organizational) failures, neoclassical law and economics approach loses sight of the *incentives structure* of the socio-economic agents created by the institutional network it ends up establishing. Assume that economic regulations should have a sole objective of correcting market failure. Isolated regulatory interventions that focus on correction of relevant market failures, but lose sight of the resulting agents' incentive structures is an inefficient way for correcting these market failures. Let us give two examples to illustrate this point.

Correcting the organizational failure of equity agency problem between the shareholders and the management of financial institutions in order to enable these firms to maximize their profits would result in excessive risk taking by the management. Since shareholders of the banks are highly diversified, they are more inclined to take more risks in exchange for higher returns, as they have already diversified idiosyncratic risks away in their portfolios. Excessive risk taking increases the default risk of financial institutions whose failure imposes negative externalities on the stability of the financial system and the real economy. Bank regulators traditionally respond to this negative externality problem by requiring higher capital ratios to force the banks to internalize these externalities by reducing risk-taking. Here, correcting the equity agency problem in the corporate governance sphere exacerbates the negative externalities problem in the financial markets sphere. In other words, both regulatory interventions are well grounded in correcting market and organizational failures rationales; however, they have created *inconsistent incentives structure* for the management of financial institutions that made correcting the negative externalities problem more costly. Indeed, requiring higher capital ratios may strengthen the incentives of the management for taking higher risks because higher equity capital would reduce the return on equity, and the management that is hard-wired to profit maximization will have stronger incentives to take more risks given higher capital. The management can take these excessive risks through

changing the composition of their assets by investing in riskier assets.²⁸¹ Regulators have traditionally responded by requiring risk-adjusted capital.²⁸² Given the incentives structure of banks management, the latter began to use other evasion strategies such as using the internal risk models for downplaying the riskiness of some assets on the banks' balance sheet, or using regulatory arbitrage strategies for concealing their excessive risk taking. This perverse incentives structure resulting from two regulations focused on correcting market and organizational failures increases considerably the resources allocated to regulatory compliance and enforcement, and given the imperfect oversight, increases the cases of excessive risk taking that goes undetected, which exacerbate the negative externalities problem.

Similarly, shareholder-value oriented corporate governance would induce the management to maximize the profits at the costs of environment, consumers, and labor. Although neoclassical law and economics may provide an efficiency rationale for the regulation of environmental protection, consumer protection, and labor markets, the management would still have the incentives to infringe these regulations as long as the benefits of infringement are higher than its costs. In other words, the shareholder-value regime of corporate governance aggravates other forms of market failures such as environmental externalities. The shareholder-value regime of corporate governance would thus increase the costs of enforcement of environmental regulations because it would reduce the incentives for voluntary compliance.

The inherent tensions between economic regulations that may function in a self-defeating way gives rise to what can be called the "*inconsistent incentives structure problem*" resulting from losing sight of *the institutional network*. Neoclassical approach has lost sight of the institutional network because it assumes the latter to be the optimal simple addition of the set of economic regulations focused on correcting relevant market and organizational failures in their respective corporate and market spheres. This assumption implies that there is no need for analyzing the structure of the institutional network.

The socio-economic implications of economic regulations that go beyond their effects on allocative efficiency justify the assignment of objectives other than correcting market failures to these regulations. Given these multi-objectives, losing sight of the incentives structure created by the institutional network becomes more problematic. An economic regulation that tackles a specific market failure may redistribute power from the weak to the strong, stifle firms' learning capabilities, and may have negative or minimal positive effects on economic

²⁸¹ Daesik Kim and Anthony M Santomero, 'Risk in Banking and Capital Regulation' (1988) 43(5) *The Journal of Finance* 1220.

²⁸² *ibid.*

growth. This regulation undermines the effects of other regulations that may attempt to improve on the latter objectives. Given the multiple objectives of socio-economic regulations, the inherent tensions between economic regulations that may function in a self-defeating way give rise to what can be called, the “*normative inconsistency problem*”.

When maximization of the micro-objectives of an economic regulation undermines the attainment of the micro-objectives pursued by other economic regulations, the normative inconsistency takes place at the micro-level of interaction between different economic regulations. I call this type of normative inconsistency *horizontal normative inconsistency*. For example, the latter takes place when one regulation enhances allocative efficiency, but undermines the micro-objective of protection of the weak or learning sought by other economic regulations. I distinguish horizontal normative inconsistency from what I call *vertical normative inconsistency*. The latter would refer to the situation where the normative objectives of the economic regulations do not promote the ultimate systemic or macro-objectives of the socio-economic system. For example, the following chapter, following Amartya Sen, argues that ultimate systemic objectives of the socio-economic system should be expanding individuals’ capabilities. Economic regulations that do not contribute to this ultimate objective or that have adverse or minimal positive contributions to expanding the individual capabilities are lacking moral/normative justification. Similarly, if they fail to contribute to the desirable level of macro-objectives such as economic growth, they would have little normative ground. To overcome both horizontal and vertical normative inconsistency of economic regulations, the objectives of the micro-economic regulations must be designed as a function of consistent macro system level objectives. I call this proposal the “*normative consistency requirement*”. We will return to the discussion of the normative consistency requirement when we suggest the reasonable normative path concept in the following chapter.

Cost-benefit analysis conducted in absence of systemic perspective exacerbates the above *systemic* problems of *inconsistent incentives structure, horizontal and vertical normative inconsistencies*. For each regulatory intervention, regulators calculate its costs and benefits, holding other institutions constant.²⁸³ By holding other institutions constant, they do not rethink the structure of the institutional network, and the way this network may be restructured to create

²⁸³ Baldwin argues that the dominant bureaucratic process of cost-benefit analysis ‘take[s] any existing control as given and ... consider[s] whether the addition of a new regulation will pass a cost-benefit test. The consideration of alternatives is liable, accordingly, to be straightjacketed by existing regulatory frameworks.’ Robert Baldwin, ‘Better Regulation: The Search and the Struggle’ in Robert Baldwin, Martin Cave and Martin Lodge (eds), *The Oxford Handbook of Regulation* (Oxford University Press 2010) 266.

consistent incentives structure for the socio-economic agents at a lower cost.²⁸⁴ Rather, they consider the externalities that the regulatory intervention may impose on the incentives structure or on the objectives of other existing regulations as *costs* that are justified as long as the overall benefits of regulatory intervention outweigh these costs.

Not only piecemeal cost-benefit analysis results in an inefficient regulatory structure, it provides law and economics scholars of no sense of which objectives are maximized at the cost of which objectives. Consider the famous debates in Europe about labor market deregulation. Competent economists may take into account not only the allocative efficiency effects of deregulation, but also other economic effects on growth and even social costs. They may even increase the weights of social costs in their cost-benefit calculation. If all socio-economic regulations have been subject to this form of cost-benefit analysis,²⁸⁵ we cannot simply know how socio-economic regulations affect innovative capacity of the market economy, its allocative efficiency, the distribution of power, wealth and income, and economic growth, etc. In other words, although each regulation passes cost-benefit analysis, we have lost sight of *the global effects of institutional network consisting of these regulations*.

Shavell and Kaplow argue that wealth maximization (ensured by cost-benefit analysis) is a good proxy for maximization of social welfare conceptualized as the preference satisfaction view of well-being.²⁸⁶ Their argument implies that the aggregation procedure of cost-benefit analysis maximizes the subjective well-being as the ultimate objective of the economic sphere of the society, but the above internal and external critiques have already shown that nothing warrants this claim. First, nothing guarantees that their aggregation procedure maximizes economic growth (the economic development external critiques); particularly, their neoclassical perspective loses sight of the aggregate effects of the institutional networks on the drivers of economic growth. Second, the above-mentioned critical insights of moral philosophy, constitutional economics, and law and political economy critiques established that economic well-being conceptualized as the satisfaction of individuals' preferences in their

²⁸⁴ In other words, the process of cost-benefit analysis 'militate[s] against ... the placing of problem-solving at the centre of regulatory design ... The [regulator's] incentive to adopt a problem-centred approach may be weak ... because it may demand an unpacking of the way that a host of existing regulatory regimes impinge on a problem and an examination, within ... [the regulatory cost-benefit] process, of potential ways to reshape and re-deploy those regimes in combination with any new regulations.' *ibid.*

²⁸⁵ I am abstracting here from the standard problems of cost-benefit analysis outlined in the literature such as commodification of values, values incommensurability, and wealth bias in order to focus on the systemic critiques.

²⁸⁶ Kaplow and Shavell (n 81), 997.

social role as economic agents should not be the ultimate objective of the economic sub-system of the society.

In sum, cost-benefit analysis implementing Kaldor-Hicks standard loses sight of the forest for the trees. It loses sight of the micro, macro and systemic effects of the institutional network (and thus the cost-benefit analysis of the network, assuming we accept cost-benefit analysis in principle²⁸⁷) for the effects of individual institutions, whose costs and benefits hinge on the institutional network in which they are going to be embedded. In other words, piecemeal cost-benefit analysis obscures which ultimate objectives we are maximizing or trying to achieve reasonably.

By losing sight of the ultimate objectives of the society and the economic system, and by involving inconsistent incentives structures, normative horizontal and vertical inconsistencies, the neoclassical normative theory of economic regulations results in what can be considered an “*infinite regulatory regress/sequence problem*”. This problem results from the frequent readjustment and reform of legal institutions, while taking other institutional domains of the institutional network *as given*. In other words, it results from ignoring the systemic approach to analysis and design of legal institutions. To illustrate this problem, we can recall some of our above examples. Corporate law and economics scholars by advocating legal reforms in the corporate sphere that ensures shareholders’ primary will increase the negative externalities the firms in the economy imposes on the labor and the environment. Given these increased externalities, labor and environmental law and economics scholars will recommend the tightening of labor and environmental regulations or their enforcement. The management would follow regulatory arbitrage strategies to avoid these tightened regulations or enforcement. These strategies would require further regulatory response in the spheres of environmental and labor regulation. This example shows that due to the inconsistent incentives structure and horizontal normative inconsistency problem resulting from ignoring a systemic perspective, the legal reforms in the corporate sphere has resulted in a sequence of costly legal changes in the environmental and labor law spheres. If consistent horizontal and vertical normative objectives were assigned to the institutional network that includes labor, environmental and corporate laws, consistent models of these institutional domains could have been designed, while avoiding this infinite regress of regulatory interventions that are mistakenly considered to regulatory *reforms*.

²⁸⁷ Amartya Sen for example accepts cost-benefit analysis in principle as a sensible way of normative reasoning about alternatives, but rejects some aspects of its implementation, see: Sen, ‘The Discipline of Cost-Benefit Analysis’ (n 64) 950–952.

The infinite regress problem of regulatory interventions is a serious problem. Legal scholars and economists dedicating their lives to the reform of specific institutional domains of capitalism (e.g., corporate governance, competition law, and environmental regulation) do not consider how their recommended reforms *fit* the reforms recommended by other scholars. This institutional fit/consistency is impossible to achieve even if these scholars were to coordinate unless they agree to a clear common normative framework for the overall institutional network that encompasses their institutional domains, which meets the normative consistency requirement, otherwise, their recommended reforms will always result in inconsistent incentives structures and normative inconsistencies. To develop this normative framework for the institutional networks, the ultimate objectives should be made explicit and the instrumental objectives should be derived from these ultimate objectives to ensure their normative consistency and to ensure that we no longer lose sight of the ultimate objectives of economic regulations. This is one of the core insights of the systemic perspective over the normative framework for economic regulations that can allow us to mitigate the infinite regulatory regress problem. The following chapter shall develop these systemic insights over the normative theory of economic regulations.

6. Conclusion

In order to assess the consistency of the American, Japanese, and German institutional networks of product markets, we need a normative framework (i.e., assessment criteria) for conducting such assessment. However, we should not use the neoclassical normative theory for the assessment of the consistency of these networks because the neoclassical normative theory of economic regulations is among the shakiest regulatory insights of the neoclassical-new institutional perspective. Accordingly, we use the integrated and systemic approach in this and following chapter for developing an *integrated and systemic normative framework* for consistency assessment of the compared institutional networks. This chapter covers the first two steps of the process of application of the integrated and systemic approach: the literature review of the neoclassical normative theory of economic regulations and the internal, external, and systemic critiques of this theory. In other words, this chapter uses the integrated and systemic approach as *a critical* perspective over the neoclassical normative framework of assessment and design of economic regulations.

According to the neoclassical normative theory, economic regulations should have the primary objective of correcting market and organizational failures. Still, these regulations can

be justified economically if and only if two conditions are met: first, there is no alternative governance structure (e.g., private ordering or the firm) that can correct these market and organizational failures at a lower cost. Second, the (monetary) costs of these regulations do not exceed their efficiency benefits. The measurement of costs and benefits are made by using a simplified version of neoclassical cost-benefit analysis that is not based on the actual preferences of the individuals in the real-world initial state of the world and that excludes their preferences for non-monetary values (e.g., preferences for voice and fairness). This neoclassical normative theory finds its moral justification in *consequentialist* moral theory complemented by *the actual preference satisfaction* variant of the value theory of desire satisfaction.

The internal, external, and systemic critiques deconstruct this neoclassical normative theory of economic regulations. First, even if we accept the actual preference satisfaction account of well-being as a moral basis for economic regulations, economic regulations that correct market and organizational failures or produce net monetized benefits according to the neoclassical cost-benefit analysis do not necessarily maximize aggregate subjective welfare. More importantly, actual preference satisfaction is a shaky moral foundation for economic regulations in developing economies. Rather, economic regulations in developing economies should be based on an objective, and not subjective, account of well-being such as the capabilities approach. Further, these regulations should not be concerned with the maximization of the aggregate objective well-being that is the summation of individuals' capabilities; rather, they should aim at ensuring that every individual enjoys a minimum threshold of these capabilities. In other words, these regulations should focus on ensuring a fair distribution of the minimum threshold of these capabilities. Further, economic regulations should not be dominated with concerns for objective well-being, but they should also conform to other important moral principles such as Kantian deontological constraints and the protection of the weak. In the long term, these moral legal institutions would maximize objective well-being, although they may seem to decrease individuals' well-being in the short-run.

In addition, suppose that we accept (aggregate) actual preference satisfaction as a moral basis for economic regulations. Still, there is no justification for assessing the desirability of economic regulations based on the preferences of the individuals in their social role as economic agents (e.g., consumers or shareholders) rather than their preferences in their social role as citizens.

Moreover, economic regulations that focus primarily on the correction of market and organizational failures may not ensure high growth rate for developing economies because they may undermine or not contribute positive to some of the main drivers of economic growth such as market creation, formation and growth of firms' learning and innovative capabilities, and international competitiveness.

Finally, from a systemic perspective, the neoclassical normative framework of economic regulations may result in the design of institutional networks that suffer from *horizontal and vertical normative inconsistencies*. To overcome these inconsistencies, an inherently consistent system of (regulatory) objectives should be advanced; in other words, we should use the systemic approach to develop a systemic normative framework for economic regulations.

By following the remaining steps of the application process of the integrated and systemic approach, the following chapter develops an integrated and systemic normative framework for economic regulations of the product markets in developing economies, which overcomes the above-mentioned critiques of the neoclassical normative theory of economic regulations. The following chapter demonstrates therefore the *constructive* aspect of the integrated and systemic approach.

Chapter

10

An Integrated and Systemic Normative Framework of Product Markets Regulation in Developing Countries: From Efficiency Criteria to Multi-Assessment Criteria and A System of Regulatory Objectives

1. Introduction

The previous chapter has outlined the neoclassical-new institutional normative theory of economic regulations. Then, by using the integrated and systemic approach as a critical perspective, the previous chapter developed internal, external, and neoclassical critiques to the neoclassical normative theory. In this chapter, I continue the steps of the application of the integrated and systemic approach in order to develop an alternative integrated and systemic normative theory (i.e., integrated and systemic assessment criteria) of the economic regulations of the supply side of product markets in developing economies (i.e., the institutional network governing the supply side of these markets). As the previous chapter revealed the critical aspect of the integrated and systemic approach, this chapter would therefore reveal the constructive potential of the latter. This chapter will thus develop integrated and systemic assessment criteria for the compared institutional networks. More importantly, this chapter will provide us with the first self-contained application of the integrated and systemic approach to one of the vexing questions in legal scholarship that is what should be the normative theory of economic regulations based on which we evaluate and design these regulations?

The structure of this chapter will follow largely the remaining steps of the application of the integrated and systemic approach. To recall the remaining steps, after the internal, external, and systemic critiques of the neoclassical normative theory of economic regulations, we need to *reformulate the normative framework question systemically*. To develop an answer to this

systemically reformulated question, we need to answer the sub-questions whose answers are required for addressing this systemically reformulated question. To address these sub-questions, we use the insights of both systemic thinking and the insights of relevant paradigms and theories. By answering these sub-questions, we would be able to answer both our systemically reformulated question and our primary question. Fortunately, we have a *systemic guide* for answering our systemically reformulated question that is what a *systemic* normative theory for economic regulations that may overcome the systemic critiques of cost-benefit analysis would look like. The multiple-assessment criteria decision making in operational research and management studies is a very good *systemic approach* that we can rely on its insights for developing an answer to our systemically formulated question, i.e., for developing systemic normative framework for economic regulations. Given the insights of this systemic approach, along with the relevant insights of moral philosophy, development economics, and law and political economy developed in the previous chapter, we can formulate and address the sub-questions required for developing an integrated and systemic normative theory (i.e., the assessment criteria) for the institutional network of the supply side of the product markets of developing countries. The structure of this chapter reflects this process of combining the systemic insights of multi-criteria analysis with the insights of the relevant (neoclassical and non-neoclassical) schools of thought and theories to address the sub-questions required for developing the system of objectives for the regulation of product markets.

This chapter shall proceed as follows. Section 2 outlines the systemic normative theory of economic regulations based on the insights of multi-criteria analysis. This section shows that instead of a mono-criterion for assessment of economic regulations, we need to develop a system of objectives. These objectives are of two types: ultimate and instrumental. Section 3 thus discusses and conceptualizes both types of objectives. Given the distinction of ultimate and instrumental objectives, section 4 suggests a *process* for choosing both ultimate and instrumental (regulatory) objectives. Sections 2, 3 and 4 provides therefore a *systemic normative theory for economic regulations*, according to which economic regulations should be evaluated and designed based on a system of ultimate and instrumental objectives, which are chosen according to a specific political process. Still, we need to determine the ultimate and instrumental objectives of the institutional network of the supply side of product markets. For example, should economic growth be an instrumental or ultimate objective for this institutional network in developing countries? Should innovation be one of its instrumental objective? Section 5 uses the systemic insights of

multi-criteria analysis and the relevant neoclassical and non-neoclassical schools of thoughts and theories to develop the system of objectives (i.e., the integrated and systemic multi-assessment criteria) for the institutional network of the product markets in developing countries. This answers the challenging sub-question this chapter and the previous chapter were set up to address, which is the following, “what multi-criteria should we use for the assessment of the consistency of the compared institutional networks?” Section 6 then briefly demonstrates how the systemic normative theory of economic regulations avoids the internal, external, and systemic critiques of the neoclassical normative theory of economic regulations. Section 7 concludes this chapter.

Prior to engaging with this chapter, it is worthwhile to make one brief remark. Most of the discussions relevant to multi-criteria analysis have been included in the footnotes; this explains why the footnotes of this chapter tend to be rather long. These footnotes are of utmost importance because they show the relevant insights of multi-criteria analysis literature, which illuminate and provide the rationale for the proposed integrated and systemic normative framework of economic regulations. Indeed, these footnotes should have been included in the text, but they would have made the text quite technical. Further, some of the insights of the numerous methods of multi-criteria analysis (e.g., multi-objective programming, compromise programming, analytical hierarchy process, and multi-attribute utility models) attract some of the critiques addressed to cost-benefit analysis and the neoclassical normative theory of economic regulations outlined in the previous chapter. Hence, I have selected only the systemic insights of these methods, which allow us to develop a systemic normative framework for economic regulations that avoids these critiques.

2. Outline of the Systemic Approach to the Normative Theory of Economic Regulations: From Mono (aggregate)-Criterion to Multi-Assessment Criteria and From Maximization to Satisficing

2.1. The Systemic Normative Theory of Economic Regulations: From Mono (aggregate)-Criterion to Multi-Assessment Criteria

The systemic critiques of the neoclassical normative theory of economic regulations outlined in the previous chapter, particularly the inconsistent incentives structure, horizontal and vertical

normative inconsistencies, are clear implications of the application of the systemic approach to the normative objectives of socio-economic regulations. How can the systemic approach build on these critiques to develop *an alternative normative framework* for economic regulations that avoids these critiques? To address this question, we need to investigate whether the scholars outside mainstream economics have developed *any systemic approach* to the design of the normative framework for policy-making, which we can then use for developing a systemic normative framework for analysis and design of the regulation of product markets. Fortunately, the multiple-criteria decision-making paradigm in operational research and management studies¹ is a very good systemic approach that we can use some of its insights for developing a systemic normative framework for economic regulations of product markets, which can overcome the internal, external, and systemic critiques of the neoclassical normative theory of economic regulations. Our task is facilitated by the fact that multi-criteria analysis has also found its way to the area of environmental economics,² and has been proposed recently as a general approach to economic policies.³ The below discussion will rely on many insights from this literature. Still, I could not engage seriously with this stimulating and vast literature due to time and space constraints. Future research on economic regulations should take this literature seriously; the following analysis is a very modest starting point. Particularly, this analysis can be deepened and replicated in relation to non-economic legal institutions as well.

The systemic approach of multi-criteria analysis provides a clear and intuitive approach to the normative framework of economic regulations. Instead of one criterion for assessment (e.g., cost-benefit analysis or an aggregate social welfare function), the systemic approach develops a *system*

¹ For a short overview of this literature, see: Edmundas K Zavadskas and Zenonas Turskis, 'Multiple Criteria Decision Making (MCDM) Methods in Economics: An Overview' (2011) 17(2) *Technological and Economic Development of Economy*. See also: Liou, James J. H. and Gwo-Hshiung Tzeng, 'Comments on "Multiple Criteria Decision Making (MCDM) Methods in Economics: An Overview"' (2012) 18(4) *Technological and Economic Development of Economy*. The authors define multi-criteria decision making methods as the 'methods for decision making in realistic and common scenarios in which multiple, often conflicting criteria (i.e., multiple attributes or objectives) must be taken into consideration.' *ibid* 674.

² For an overview of multi-criteria analysis in environmental studies, see: Ivy B Huang, Jeffrey Keisler and Igor Linkov, 'Multi-criteria Decision Analysis in Environmental Sciences: Ten Years of Applications and Trends' (2011) 409(19) *The Science of the Total Environment*.

³ Francisco J Andre, M. A Cardenete and Carlos Romero, *Designing Public Policies: An Approach Based on Multi-Criteria Analysis and Computable General Equilibrium Modelling* (Springer-Verlag 2010) 3–5. See also: Giuseppe Munda, 'Beyond Welfare Economics: Some Methodological Issues' (2016) 23(2) *Journal of Economic Methodology* 193–197.

of objectives (i.e., a system of aims)⁴ that is referred to in multi-criteria analysis as “the value tree”,⁵ and referred to in system dynamics literature as a “system of indicators”.⁶ This is a hierarchical system of objectives of normally three levels: ultimate objectives (e.g. capabilities expansion or subjective well-being), first tier instrumental objectives required for the attainment of the ultimate objectives (e.g., economic growth), second tier instrumental objectives required for the attainment of the first tier instrumental objectives (e.g., capital accumulation and learning). In the terminology of multi-criteria analysis, the ultimate objectives are referred to as overall or top objective⁷ or the ultimate end,⁸ first-tier instrumental objectives are called *sub-objectives or intermediate objectives*,⁹ and second-tier instrumental objectives are termed *criteria*¹⁰ or *immediate objectives*.¹¹ Legal institutions normally affects directly the second tier instrumental

⁴ Eichhorn uses the term ‘system of aims’ in an economy to refer to the aims of the economic system. Wolfgang Eichhorn, ‘Uneasy Polygons: Environment and Security within the Systems of Aims in an Economy’ (1992) 43(1-2) *Metroeconomica*. For a short discussion of Eichhorn’s paper, see: Bertram Schefold, ‘Comment on ‘Eichhorn: Uneasy Polygons; Environment and Security within the System of Aims of an Economy’ (1992) 43(1-2) *Metroeconomica* 305–308. I use the term “system of objectives” more broadly to refer to the system of aims of the society, from which the system of aims of the economy is then derived.

⁵ Department for Communities and Local Government: London, ‘Multi-Criteria Analysis: A Manual’ (January 2009). London, Communities and Local Government Publications 58–59. I will stick to the term “system of objectives” instead of “value tree”. The reason is that the objectives in this system, as the below discussion will demonstrate, are causally and constitutively connected with each other so that it is more convenient to think of and model this system as *a network* where the nodes are the objectives and the links are the causal and constitutive relations that link them. Unlike the term “system of objectives”, the terminology of “value tree” captures the hierarchy of the objectives, but does not capture well the network structural property of these objectives. It is noteworthy that in regulatory theory, Adler has defended a movement from a one-criterion of evaluation in neoclassical normative theory (i.e., overall well-being) to include additional criteria (e.g., distribution). Matthew Adler, ‘Beyond Efficiency and Procedure: A Welfarist Theory of Regulation’ (2000) 28 *Florida State University Law Review* 288. Still, as already discussed in the previous chapter, his proposed social welfare function that accommodates these multiple moral concerns is functionally equivalent to a modified version of cost-benefit analysis; this modified version is distribution weighted and based on idealized instead of actual individuals’ preferences. In contrast, as we shall see, the multi-objectives proposal made in this chapter runs counter the aggregation and mono-criterion logic of mainstream cost-benefit analysis and social welfare functions.

⁶ Hartmut Bossel, *Systems and Models: Complexity, Dynamics, Evolution, Sustainability* (Books on Demand 2007) 252.

⁷ Department for Communities and Local Government: London (n 5) 58.

⁸ Bossel (n 6) 252.

⁹ Department for Communities and Local Government: London (n 5) 34.

¹⁰ *ibid* 59.

¹¹ *ibid* 152. I will stick to the more cumbersome terminology of “ultimate objectives” and “first and second tier instrumental objectives” and I will use the terminology “criteria” and “second tier instrumental objective” interchangeably. The reason for this choice of terminology is that the adjective (instrumental) indicates that the objective is not intrinsically valuable. The importance of this terminology cannot be

objectives (i.e., the criteria), but as will be argued in the next section, they also affect directly the ultimate *local* objectives. The network in Figure 10.1 below represents the *system of objectives*.

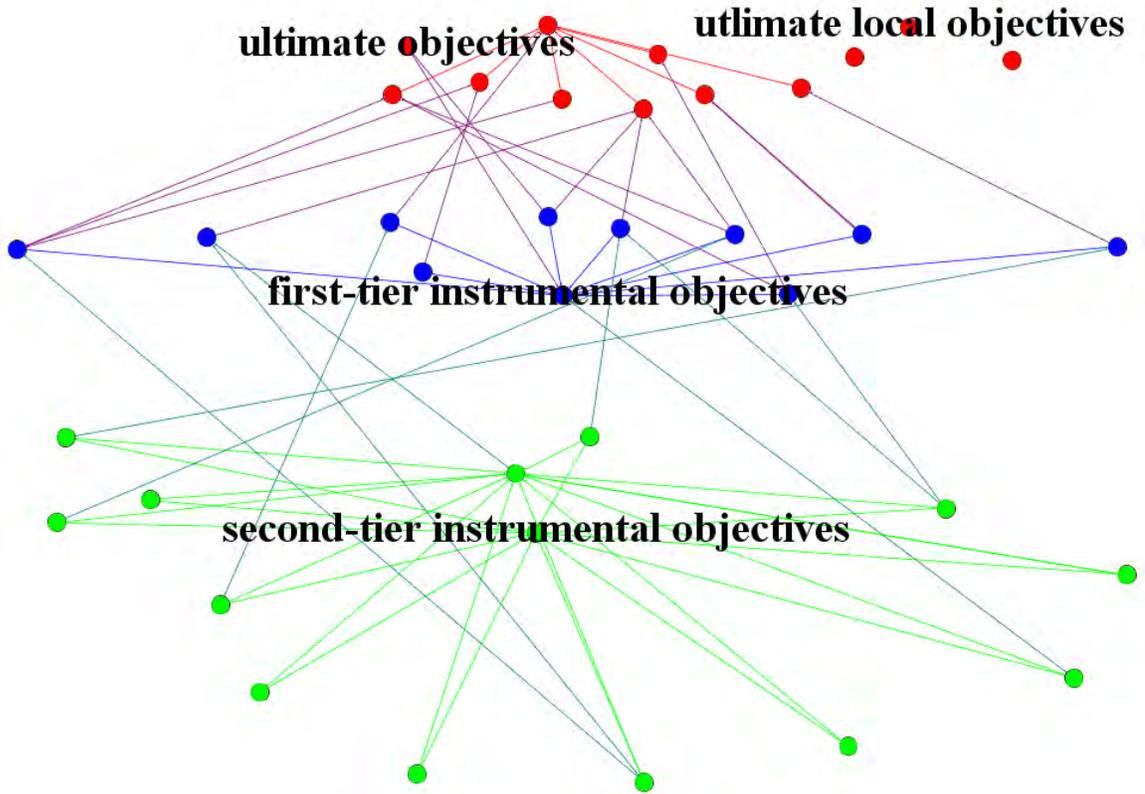


Figure 10.1: Society's System of Objectives (i.e., Society's Values Hierarchy). Red nodes represent ultimate systemic and local objectives. Blue nodes represent second-tier instrumental objectives, and green nodes represent second-tier instrumental objectives.

Accordingly, from the perspective of a systemic normative theory of economic regulations (i.e., a theory grounded in a system of objectives), the task of identifying the normative criteria for assessment of the compared institutional networks of product markets is nothing but identifying *the second-tier instrumental objectives and ultimate local objectives* of this network (Hereinafter referred to as the “multi-assessment criteria”). This is rather a difficult task. In order to identify the multi-assessment criteria for the compared regulations of the supply side of product markets,

exaggerated, given how law and economics scholars forget that economic growth and economic efficiency are just instrumental objectives that can be easily traded-off with other instrumental objectives, if this trade-off is necessary for the attainment of the ultimate objectives.

we need to determine the system of objectives for these regulations, i.e., their ultimate and first tier instrumental objectives. To do so, we need to determine the system of objectives for regulatory governance of the capitalist economic system (i.e., the system of objectives for the institutional network of capitalism), from which we can then assign some of the ultimate, first, and second tier instrumental objectives to the sub-institutional network governing the product markets. However, to do so, we need to determine the system of objectives for the society as a whole, and then derive the ultimate and instrumental objectives that shall be assigned to the governance of the capitalist sub-system of the society instead of assigning them to its political, social, educational, media, or religion sub-systems. This implies that we have two difficult tasks to undertake. First, we need to determine the societal system of objectives. Second, given this societal system of objectives, we need to assign a sub-system of objectives to the regulatory governance of capitalism, and given this assigned sub-system of objectives, we need to assign a sub-sub system of objectives to the regulation of the supply side of product markets. Indeed, we will need then to assign a sub-sub-sub system of objectives to the institutional domains of corporate governance, competition law, and industrial policy compromising the institutional network of the supply side of product markets. I call the derivation of the sub-system of objectives from the larger system of objectives, *the objectives assignment problem*, which will be discussed in quite detail in section 5.1 of this chapter. Each of these systems and sub-systems of objectives has a *hierarchical* structure of ultimate, first tier instrumental objectives and second tier instrumental objectives. Since we may prioritize the attainment of some objectives over others at the same level of objectives,¹² *each level of objectives has an internal hierarchy*. For example, *at the level of first tier instrumental objectives*, we may prioritize economic growth to income equality; this implies that economic growth will have a first priority level, while equality will have a second priority level. Similarly, *at the level of ultimate objectives*, the society may prioritize economic capabilities expansion over political capabilities expansion, for example.

Still, why should we bother adopting this sophisticated systemic normative theory of economic regulations suggested here? The answer is simple; it allows us to overcome the critiques of the neoclassical normative theory of economic regulations. First, this system of objectives approach to economic regulations avoids the simplistic aggregation such as that of cost-benefit

¹² Andre, Cardenete and Romero (n 3) 120–122.

analysis (or social welfare functions).¹³ By avoiding simplistic aggregation, we are aware of the objectives in our normative system and we can thus avoid the design of institutional network that suffers from incentives inconsistency, horizontal and vertical normative inconsistencies. Further, we no longer obscure the ultimate objectives of economic regulations; we bring them into light.

Moreover, the multiplicity of ultimate objectives enables us to assign *a minimum threshold* (i.e., *a lower bound*) for each ultimate objective that the institutional network should ensure its attainment.

The idea of a minimum threshold resolves a significant debate over cost-benefit analysis in law and economics and regulatory studies literature. The debate concerns whether we can attach a price to what may be considered priceless such as human life, the environment, human rights, or infringement of a Kantian moral obligation.¹⁴ The problem is that even if we give more weight to these concerns in cost-benefit analysis, we are still attaching a price to them. Threshold deontology provides imperfect, but pragmatic solution to this problem. According to threshold deontology, as long as the costs for protecting these values and observing Kantian obligations do not exceed a specific threshold, we stick to these values and the Kantian obligation; otherwise, we do not.¹⁵ The concept of minimum threshold of ultimate objectives is inspired by *the threshold deontology concept* in moral philosophy, but it diverges from it in some important aspects. First, regardless of the costs that may be incurred, these minimum thresholds of the ultimate objectives should be attained. Within these minimum thresholds, the ultimate objectives and Kantian obligations are *incommensurable, i.e., priceless*; they cannot be traded-off.¹⁶ Above this minimum threshold, they

¹³ Amartya Sen has criticized, convincingly, the simplistic insistence on aggregation:

To insist that there should be only one homogeneous magnitude that we value is to reduce drastically the range of our evaluative reasoning. It is not, for example, to the credit of classical utilitarianism that it values only pleasure, without taking direct interest in freedom, rights, creativity or actual living conditions. To insist on the mechanical comfort of having just one homogeneous “good thing” would be to deny our humanity as reasoning creatures. Amartya Sen, *Development as Freedom* (Oxford University Press 1999) 77.

¹⁴ For an overview of this debate and a defense of cost-benefit analysis, see: Matthew D Adler and Eric A Posner, *New Foundations of Cost-Benefit Analysis* (Harvard University Press 2006) 154–166.

¹⁵ See the discussion of threshold deontology and the reference cited therein in section 4.1 of the previous chapter.

¹⁶ In terminology of systems thinking, these minimum thresholds are normative constraints that the system should satisfy: these constraints cannot be compromised. Bossel (n 6) 158.

can be traded-off, i.e., they are commensurable. Doubtless, we can attach to some objectives more weight above this minimum threshold,¹⁷ or we can apply the concept of threshold deontology to these ultimate objectives above their minimum thresholds so that they cannot be traded off against other objectives as long as the cost of their attainment is below specific threshold. In short, the institutional network cannot be considered reasonable unless it achieves the minimum threshold of *each* of our ultimate objectives.

These minimum thresholds of the objectives are different from what is called *aspirational levels or targets* in multi-criteria analysis, which refer to the ‘acceptable levels of attainment for ... [each of the objectives].’¹⁸ Aspirational levels are not the maximum possible level that can be achieved for each objective; rather, they are strongly desirable levels of the ultimate objective that may well be below their possible maximum levels. Still, the society can tolerate its inability to achieve these strongly desirable levels, and may trade some of the objectives below their aspirational levels to achieve other objectives that have already exceeded their aspirational levels. Conversely, the minimum thresholds are the lower bound for each ultimate objective; the society cannot trade-off any of the objectives under its minimum threshold for the attainment of any objective that is already above this minimum threshold.

This leads us to the difficult problem that almost all developing countries confront. These countries are already *below the minimum threshold* of almost all of their ultimate objectives (e.g., economic, social, and political capabilities assuming these are their ultimate objectives). How can these countries make the trade-offs among these capabilities. For example, should they focus on the expansion of economic capabilities through *economic growth* on the promise that once these economic capabilities are largely expanded, the social and political capabilities can then be expanded; particularly, this was the successful developmental strategy of some countries such as South Korea? The answer is *qualified no*.¹⁹ One may accept a degree of flexibility if the

¹⁷ For example, with respect to the capabilities as the ultimate objectives of the socio-economic system, Amartya Sen suggests that some capabilities may be given higher weight than others. He suggests that a democratic process of deliberation is required for the social choice of the weights of these capabilities. Sen, *Development as Freedom* (n 13) 78–79. In the case where the ultimate (regulatory) objectives are given different weights, the evaluation of the economic regulations would therefore depend on the *relative weights of these objectives*. Bossel (n 6) 158.

¹⁸ Andre, Cardenete and Romero (n 3) 36.

¹⁹ This is also the answer provided by Amartya Sen, see: Sen, *Development as Freedom* (n 13) 19–20. However, his line of argument is quite different from the one developed here. He argues, rightly, that many of the social and political capabilities can be expanded despite low GDP per capita. In contrast, I argue that

governments of developing countries can commit to achieving a minimum threshold of an ultimate objective, and once achieved, they begin to focus on achieving the remaining objectives. However, since most of the governments of these countries cannot commit to this strategy, particularly in the cases where the indicators for the minimum thresholds of ultimate objectives are poor proxies for these minimum thresholds or fuzzy, one has to argue for attaching *equal weight* to the ultimate objectives as long as they are under their minimum threshold. Particularly, this is consistent with our argument that below their minimum threshold, these objectives are incommensurable and priceless. One can argue for attaching different weights to these ultimate objectives below their minimum threshold if one of two conditions holds. First, the people clearly attach different weights to them through the political process designed for the choice of these objectives (see below). Second, the indicators for these minimum thresholds are constitutionalized,²⁰ quite accurate, and transparent. To be transparent, the administrative agency that measures these indicators should be independent from the executive branch, its reports should be public, and some judicial review can be triggered in case of intentional misleading reporting. Once the minimum threshold of one of the ultimate objectives (or percentage of this minimum threshold²¹) is achieved, the focus should shift to other ultimate objectives, no sacrifice can be made from the below threshold objectives for achieving above threshold levels of other ultimate objectives.²²

regardless of whether Amartya Sen's argument is true or not, as long as the society is below the minimum threshold of its ultimate objectives, these objectives should be given equal weight.

²⁰ See below for some examples of constitutionalized economic indicators in the Egyptian constitution of 2014.

²¹ See below the proposal of the staged system of objectives.

²² Given that developing countries are already below the minimum threshold of their ultimate objectives, the most appropriate multi-criteria analysis method for guiding the design of their policies and legal institutions is *goal programming*. Goal programming does not aim to achieve the maximum possible level of each objective. Its purpose is rather to *minimize the distance* (called the deviation) between the *actual* level of the objective and its *aspirational* level that is the minimum threshold in the case of developing countries. By minimizing the difference between the actual level of the objective and its desired minimum threshold, we *achieve* or come very close from achieving the minimum threshold for each objective. For this reason, the objective function in goal programming is called *the achievement function*. For a brief overview of goal programming see: Andre, Cardenete and Romero (n 3) 44–47. Once we have good indicators for the objectives, we can use the insights of goal programming because its mathematical requirements are easier than that of multi-objective programming (see infra fn. 52 for a brief discussion of multi-objective programming). However, the informational requirements of goal programming are more demanding because it requires the construction of quantitative indicators for the objectives (we can use qualitative indicators and thus we will be using the method informally), the determination of the minimum threshold for each of these objectives, and giving weight to these objectives. See: *ibid* 48–49. Goal programming has two important features for our purposes. First, it can allow us to design legal institutions that achieve balanced achievements of the set of the desirable objectives, i.e., institutions that do not achieve

2.2. The Systemic Normative Theory of Economic Regulations: From Maximizing, Quantification, and Aggregation to Satisficing (Reasonableness), Qualitative Analysis, and Reasonable Normative Paths²³

The above analysis illuminates the significant advantages of the systemic approach to legal norms. This approach brings together *systemic intuitions and systemic analytical frameworks and concepts* from dispersed fields of knowledge to bear on analysis and design of legal institutions. As chapter 6 has illustrated, institutional complementarities in the comparative capitalism literature has been an important *systemic* analytical concept for impact analysis of institutions and their change. Similarly, multiple criteria decision-making paradigm in operational research, management, and environmental studies is another *systemic* approach to policy design. By bringing these systemic ideas, which have been advanced significantly in their relevant fields of knowledge, to bear on analysis and design of economic and non-economic legal institutions, the systemic approach to legal institutions promises no less than a revolution in the way we approach institutional analysis and design. Institutional complementarities opened for us the way to develop other systemic institutional analysis and design concepts outlined in chapter 6 (e.g., consistency analysis and institutional hierarchy). Similarly, the insights of multi-criteria analysis allow us to develop a systemic normative theory of economic regulations. Fortunately, legal scholars would

the minimum threshold of one objective at the cost of other objectives, but rather achieves balanced improvement in relation to all of the objectives toward their minimum threshold. See: *ibid* 119–120. More importantly, goal programming attempts to minimize the deviation of each objective from its minimum threshold, hence, we do not need to construct a uniform measure for all the objectives because we do not aim to maximize any of them or to aggregate them. See: *ibid* 119. This allows us to bypass the difficult issues of incommensurability of values, inter-personal comparisons of utility, and the choice of a metric that can accurately measure each objective despite its different nature from other objectives. By doing so, we avoid all the relevant critiques already levelled against cost-benefit analysis due to its use of a single market based monetary metric for the measurement of values. Because of these fascinating properties of goal programming, the systemic theory of economic regulations proposed in this section follows clearly the logic of this method of multi-criteria analysis.

²³ The arguments that shall be developed in this section should not be interpreted as an anti-quantification stance. The point that this section is set to make is that quantification of objectives is not necessary for developing reasonable institutional networks, but if accurate quantification of some objectives is possible, the systemic normative framework that can accommodate qualitative indicators for these objectives can surely accommodate quantified analysis. More importantly, this systemic framework will use these quantified information in a way that avoids the critiques of their usage in the neoclassical theory of economic regulations, particularly its aggregation of the costs and benefits of economic regulations.

be receptive of the systemic approach because it largely resonates with the way they have been thinking intuitively about legal institutions, but were unable to connect and flesh out their intuitions into a clear and coherent approach. As the below analysis shall demonstrate, this is particularly true in relation to the proposed systemic normative theory of law that allows the concept of balancing conflicting objectives and Kantian deontological morality to reclaim their place in the normative theory of economic regulations.

Unfortunately, neoclassical welfare economists spent too much time on cost-benefit analysis and social welfare functions instead of developing the more intuitive normative framework of multi-criteria assessment. Particularly, economic sub-fields such as institutional economics, organizational economics, law and economics, development economics need the multi-criteria normative framework because of the conflicting multi-objectives legal scholars and development economists desire to assign to legal institutions and developmental strategies. Indeed, pragmatic economic policy makers leading the development process of post-war Japan were largely thinking in this way when designing developmental economic policies and legal institutions.²⁴

Two main reasons explain why neoclassical economists are resistant to the move from one evaluative criterion to multi-criteria analysis. First, the single evaluative criterion of allocative efficiency enabled them to build around it a consistent economic theory; multi-evaluative criteria would undermine neoclassical theory.²⁵ Second, it is more difficult to *quantify or represent multi-objectives formally and thus to maximize social welfare*.²⁶

Neither of these reasons is convincing. With respect to the first reason, modern economics (and sciences in general) has been witnessing a shift from *high theory* to *modelling* and empirics.²⁷ The mathematically elegant and sophisticated general equilibrium theory has little relevance to policy making in comparison to some simple principal-agent models. Computational models, being algorithmic and not deductive and big-data based, have been also downplaying the role of theory in modern economics. This is not to say that theory does not matter, but to say that modelling,

²⁴ *ibid* 2. The authors argue that policy makers have multiple conflicting objectives rather than a single objective function.

²⁵ I owe this insight to Prof. Bertram Schefold, for which I wish to thank him a lot. Despite this neoclassical resistance, Prof. Schefold communicated to me that, in light of his work on environmental economics, he thinks that the move from a mono-criterion to multi-evaluative criteria in economics is inevitable.

²⁶ Eichhorn (n 4), 295.

²⁷ Mary S Morgan, *The World in the Model: How Economists Work and Think* (Cambridge University Press 2012) 2–3.

whether mathematical, computational or informal, is highly required for *contextual* regulatory analysis. Prior to regulatory intervention, we need to focus on modelling real systems instead of creating theoretical abstract systems and attempt to push *all* real systems to match the abstract theoretical system. Modelling can accommodate therefore normative objectives beyond allocative efficiency such as economic growth, income distribution, and transaction cost minimization. Since modelling informs theory building, we could even expect in the long-run theories built around numerous normative objectives. For example, both neoclassical and non-neoclassical economists have been investigating how to integrate growth theory with distribution theory²⁸ in order to come up a more comprehensive theory built around two normative criteria: growth and equitable distribution.

Regarding the second reason, formal functional representation or quantification of the normative objectives is not *necessary* for justifying *reasonable (satisficing)* regulatory interventions. To explain this claim, we must distinguish between three issues concerning the *representation of the values of each objective*. First, we can quantify the values attained of each objective or we can use qualitative indicators.²⁹ Qualitative criteria create a scale for qualitative measurement (e.g., low, medium, and high, or a five-point scale from 1 to 5).³⁰ Second, if we use quantitative measurement of the objectives, we will not be able to compare these objectives with each other because the quantitative metric used for each objective would be different. For example, we may have a quantitative measurement of the environmental impact of the regulation in units of gas emissions and we have a quantitative measurement of the impact of the same regulation on productivity in terms of the market-based monetary value of the gains in productivity. Here, both objectives are quantified, but the metric for quantification is different. In both multi-criteria analysis and cost-benefit analysis, these metrics are then *normalized* into a common metric for measurement. In cost-benefit analysis, this metric is a market-based monetary valuation, but in the case of multi-criteria analysis, a scoring scale (e.g., from 1 to 100) can be created according to which the effects of the policies on each of these objectives are measured.³¹ This is the process of

²⁸ See, e.g.: Allan H Meltzer and Scott F Richard, 'A Positive Theory of Economic Growth and the Distribution of Income' (2015) 69(3) *Research in Economics*. Thomas I Palley, 'Inequality and Growth in Neo-Kaleckian and Cambridge Growth Theory' (May 2016). IMK Working Paper no. 167.

²⁹ Bossel (n 6) 158. *ibid* 252. Department for Communities and Local Government: London (n 5) 21–22.

³⁰ *ibid*.

³¹ *ibid*.

normalization of the measurement of the objectives. Third, weighting refers to attaching different weights to the attainment of each objective.³² If we wish to attach very high weights to some objectives, we can even create a hierarchy of objectives, where we achieve first the desirable levels of these objectives, and given the achieved levels of them, we try to achieve as much as we can from the objectives that comes at the second level of the hierarchy of objectives.³³

As we have already seen in the previous chapter, cardinal social welfare functions and cost-benefit analysis requires functional representation of the objectives, their quantification, and their normalization.³⁴ Given all of this, attaching weights to some costs or benefits is straightforward; economists just need to choose a numerical value reflect their preferred weights for these costs and benefits or in the case of social welfare functions, they need to choose the aggregation rule (i.e., the distribution rule) of this function as already indicated in the previous chapter. The reason for the adoption of this scheme is that law and economics scholars attempt to *design* the *optimal* legal institutions that maximize *aggregate* social welfare, but no aggregation is possible without functional representation, quantification, normalization, and weighting.³⁵

However, if the goal of legal institutions is to achieve specific levels of each objective instead of achieving the maximization of aggregate social welfare, which is clearly *a satisficing instead of a maximizing logic* for governmental action,³⁶ then, quantification, normalization, and aggregation will not be necessary. The system of objectives underlying economic regulations in developing economies has the main goal of achieving the minimum threshold for the ultimate objectives; for doing so, a minimum threshold of the instrumental objectives will need to be achieved (see below). Good proxies and qualitative indicators for *the minimum threshold* for the ultimate and instrumental normative objectives need to be developed. These indicators may not reflect a

³² *ibid* 22. Andre, Cardenete and Romero (n 3) 39. Munda (n 3), 197.

³³ Andre, Cardenete and Romero (n 3) 120–122.

³⁴ For example, Kaplow and Shavell argue that ‘any logically consistent and complete system for evaluating legal rules is, in fact, equivalent to expressing everything, including factors sometimes viewed as incommensurable, in terms of a common denominator.’ Louis Kaplow and Steven Shavell, ‘Fairness versus Welfare’ (2001) 114(4) *Harvard Law Review* 992–993, fn. 61.

³⁵ Sen, *Development as Freedom* (n 13) 76–82.

³⁶ The *goal programming* method of multi-criteria analysis has been developed in order to design policies that reflect this satisficing logic, i.e., the attainment of the desirable, but not the maximum, possible level of each objective. Andre, Cardenete and Romero (n 3) 113–114. Obviously, the legal institutions designed by following the logic of goal programming are satisficing and reasonable, but not Pareto optimal, i.e., there may be other legal institutions that can achieve the same level of the objectives attained by the satisficing institutions, while achieving better results in relation to at least one of these objectives. See: *ibid* 117–119.

quantified or functionally accurate representation of the normative objective, but they can inform us whether we have reached the minimum threshold required for each objective in our system of objectives.^{37, 38} In other words, for the purposes of achieving the minimum threshold of each objective in our system of objectives, we do not even need to develop proxies/indicators for medium and high levels of each objective. This implies that given the conditions of developing countries, which are still striving to reach a minimum threshold of their ultimate objectives, and the necessary minimum threshold of the instrumental objectives required for the attainment of the minimum threshold of these ultimate objectives, we need only good indicators for these minimum thresholds. There is no need for quantification, normalization, or aggregation of different objectives.

Still, given the *trade-offs* that exist among these objectives although they are still below their minimum threshold, one may think that it is still necessary to quantify and normalize these objectives. This is not the case, however. Following the insights of goal hierarchy and goal programming in multi-criteria analysis, two solutions can be suggested here. The first is to develop a quantitative measurement of most of the objectives. This solution is feasible in the context of economic regulations where most objectives are amenable to quantification. The objectives that are not amenable to quantification (e.g., protection of the weak) can be measured using a qualitative scale (from 1 to 5). Given the insights of goal programming method of multi-criteria analysis, we do not need to normalize these quantitative and qualitative measures of the objectives. Intuitively, goal programming attempts to reduce the difference between the actual level of the

³⁷ Bossel, convincingly, argues that ‘in many applications it will therefore not be necessary to wait until representative indicators can be defined and an expensive and time-consuming data collection effort is completed. If *all* orienters [i.e., objectives] are in a satisfactory state, i.e., if all interests of the system are adequately cared for, then we can simply state that the system is “viable”, “healthy”, or “sustainable”.’ Bossel (n 6) 254–255 [emphasis in the original].

³⁸ The indicators for minimum threshold of the ultimate objective are generally indicators of the distribution, and not aggregation, of the ultimate objective. The minimum threshold indicator needs to capture the distribution of the ultimate objective (e.g., the capability) across the individuals in the society, i.e., it captures whether all of the individuals enjoy such minimum level of capability. Developing a minimum threshold indicator becomes more difficult when the indicator needs to reflect the aggregate level of the ultimate objective, i.e., the sum of expanded capabilities, for example. Aggregative indicators of ultimate objectives are particularly important in relation to their desirable above minimum threshold level because trade-offs take place at above the minimum threshold level. Indicators for the aggregate level of the ultimate objective need not be quantified. They can still be of a qualitative nature. In this chapter, I will not discuss how interdisciplinary legal scholars can construct distribution or aggregative indicators because this is well-beyond the scope of this chapter. For an informative discussion of the aggregation of capabilities, Sen, *Development as Freedom* (n 13) 74–85.

objective and its desired minimum threshold. If we already have the quantitative or qualitative scale measurement of both the actual level of the objective and its desired minimum threshold, we can calculate *the percentage* by which the actual objective deviates from the desired minimum threshold. Our goal then becomes to minimize this deviation *measured in percentages*. Therefore, we do not have to normalize the measurement of each objective to a common scale.³⁹ The objective is then to ensure that percentage deviations of each objective from its minimum threshold are close to each other.

This approach is not difficult to implement. However, for the purposes of the assessment of the compared institutional networks in the following chapter, we may develop an easier alternative that can be called ‘staged hierarchical system of objectives’. Given that developing countries are way below the minimum threshold for their ultimate objectives, targeting these minimum thresholds at once seems implausible. Instead, they can target specific percentage (e.g., half) of the minimum threshold of *some* of their ultimate objectives provided that the actual level of any ultimate objective that is already above this targeted percentage cannot be compromised. For example, for least developed economies, they may set the minimum thresholds for some of their ultimate objective, then, target at the first stage the achievement of 25% of the minimum threshold of each of these objectives. For low middle-income countries (e.g., Egypt), they may start with targeting 50% of the minimum threshold of some of their ultimate objectives. These would then represent their *new* minimum threshold. Once the minimum threshold is achieved for these ultimate objectives, they can then move to the *second stage* where they achieve for example 75% of the minimum threshold of these objectives. By the final stage, they should then reach the minimum threshold of all of their ultimate objectives. Generally, in each stage, the new minimum thresholds should not be too far from the actual level of the objectives.

Nonetheless, the minimum threshold of *some* ultimate objectives (mainly, the objectives that reflect core moral values) should be achieved from *stage one*. They should not be subject to this process of incrementalism and phasing. For example, legal institutions should always ensure that Kantian deontological obligations are not infringed. These obligations cannot be achieved incrementally; they are either satisfied or infringed. We can think of these forms of moral values as *binary* and not aggregative; if the legal institutions respect them, these institutions are moral; otherwise, they are not. Most ultimate local objectives (see below for a conceptualization of this

³⁹ For a detailed discussion of goal programming, see *supra* fn. 22.

type of ultimate objectives) are of this binary *non-monetary* nature. These values represent the core moral values underlying the design of legal institutions. As already argued in the previous chapter, a legal system that infringes moral principles for some stages of its development deconstructs the very meaning of morality, law, and human life itself.⁴⁰ Further, as already argued in the previous chapter, fair legal institutions of capitalism may ensure equivalently rapid, if not a more rapid process of economic development and desirable distribution of the expanded capabilities than unfair legal institutions.

Given the reasonable targets of the ultimate (material) objectives for each stage, we can use the insights of goal hierarchy in goal programming.⁴¹ Here, we rank the ultimate objectives according to their priority in stage one. As mentioned above, below the new minimum threshold of stage one, we can still rank the ultimate objectives as long as the qualitative or quantitative indicators for these objectives are transparent. Then, we determine the instrumental objectives necessary for achieving the minimum threshold of the prioritized ultimate objectives in stage one; here, we are also ranking the instrumental objectives against each other. The objective would then be to achieve the new minimum threshold of each of the prioritized instrumental objectives subject to the constraint that the less prioritized ultimate objectives do go below their *currently actual levels*. Once the prioritized ultimate objectives reach their new minimum threshold in stage one, the focus should then focus on the second level ultimate objectives to ensure they reach their new minimum threshold in stage one. Once all the ultimate objectives reach their new minimum threshold in stage one, we can then replicate the process in stage two, while observing that in stage two, other ultimate and instrumental objectives may get prioritized. To implement this framework, we only need *qualitative indicators* for the actual level of the ultimate and instrumental objectives and for their relevant minimum threshold in each stage. Indeed, quantitative measures for instrumental economic objectives are already available so that qualitative indicators are only needed for a subset of objectives.

⁴⁰ In a discussion with Dr. Mohamed Saafan, I communicated to him my ideas concerning the staged hierarchical system of objectives and that this concept would address some of the critiques of cost-benefit analysis. He criticized phasing the ultimate objectives that reflect core moral values because this idea deconstructs morality as much as cost-benefit analysis does. The above proposal of excluding the ultimate objectives that reflect core moral values from the phasing process is an attempt to accommodate this insightful critique.

⁴¹ Andre, Cardenete and Romero (n 3) 120–122.

Simple example can illuminate the idea of the *staged hierarchical system of objectives*. Suppose that a developing country sets its ultimate objective to be capabilities expansion, and sets its stage one minimum objectives to be the improvement of each of the ultimate capabilities by 10% (e.g., the increase in number of enrolled students by 10%). To do so, suppose that the country prioritize economic growth as an instrumental objective subject to the constraint that legal institutions and economic policies required for achieving the minimum threshold of growth do not infringe any of the actual levels of the existing capabilities (e.g., no environmental degradation below the existing level). For this prioritization to be justified, the institutional arrangements through which the fruits of growth shall be channeled to the achievement of the minimum threshold of the capabilities in stage one should have been already in place. Growth should not have been prioritized in the first place unless it is clear how it shall contribute to the achievement of stage one's minimum threshold of the ultimate objectives. Here, as far as first tier instrumental objectives are concerned, economic growth is prioritized and a specific growth rate is targeted. Then, the country has to investigate the second tier instrumental objectives required for achieving this level of growth; they need then to prioritize some of these second-tier instrumental objectives (e.g., organizational learning or capital accumulation).⁴²

What is important here for the purposes of this and the following chapter is the second tier instrumental objectives and how prioritization can be made among these objectives because these are generally the objectives that economic regulations affect directly, and thus they represent our multi-criteria for assessment of the compared institutional network. To develop these criteria, we identify the relevant first-tier objective (e.g., economic growth), then, we identify all the possible instrumental objectives (e.g., allocative efficiency, capital accumulation, and technical progress) that can contribute to the attainment of the required level of the first-tier instrumental objective. In multi-criteria analysis, grouping the criteria (second tier instrumental objectives) that contribute to the same first tier instrumental objective together is called "clustering or structuring the value tree"⁴³ (i.e., structuring the system of objectives).

⁴² The idea of creating stages for the system of objectives can be easily combined with the idea of minimizing the deviation of actual objectives from the desired minimum threshold of the objectives because we can still create stages in this case. For example, stage one's objective would be to minimize the deviation of the actual level of the objective from the stage one's minimum threshold of this objective.

⁴³ Department for Communities and Local Government: London (n 5) 34–35.

Given that the instrumental objectives are not intrinsically valuable (see below), we can prioritize some of them at the cost of other and we can attach different weights to each of them. Indeed, we may choose to maximize some objectives, while requiring moderate or low level of other objectives. Given the maximization of some of these objectives, we may even determine that other objectives are no longer necessary for the attainment of the required level of the first tier instrumental objectives.

Indeed, there may be different combination of the second-tier instrumental objectives that can reasonably achieve the first-tier instrumental objectives. For example, high level of knowledge accumulation along with moderate level of capital accumulation or a moderate level of the latter along with moderate level of the former may be sufficient for achieving the required rate of economic growth in the relevant stage of development.⁴⁴⁴⁵ This shows that *aggregation of the criteria (i.e., second tier instrumental objectives)* in this proposed system of objectives takes place, but it is a different type of aggregation. We seek to identify any combination of the second tier of instrumental objectives in the set of the plausible combinations of these objectives, which can achieve the required level of the first tier instrumental objective. To do so, we inquire whether the relevant combination produces the desirable level of *the aggregate* first tier instrumental objective. Similarly, we try to identify one combination in the set of the combinations of the first tier instrumental objectives that can reasonably achieve the aggregate ultimate objectives. In a sense, we can think of these questions as *questions of aggregation*, but they are very different from the aggregation we have already encountered in the neoclassical normative theory. In the latter, we quantify and normalize the measurement of second tier instrumental objectives and then *add* them together. Indeed, most methods of multi-criteria analysis involves a similar technique of aggregation where the effects of each policy option on the criteria are quantified, normalized and then added together so that the *aggregate* effect of each policy alternative on these criteria is calculated.⁴⁶ Aggregation acquires a different meaning, primarily *a functional causal meaning*, in

⁴⁴ As will be discussed below, the choice of a *reasonable* combination of second tier instrumental objectives shall be conceptualized as the problem of the choice of what I call *the reasonable normative path*.

⁴⁵ Indeed, this is particularly the type of multi-criteria we seek to develop in this chapter for the assessment of the compared institutional networks. Doubtless, most of these second-tier objectives can be quantified, but for the purposes of informal analysis, this would not be necessary; future research can undertake the quantification task.

⁴⁶ *ibid* 24–25. That is why in the process of developing the evaluative criteria (i.e., the second-tier instrumental objectives) and choosing the institutional network that achieves the chosen combination of

the proposed system of objectives, while it has, primarily, *a summation meaning* in cost-benefit analysis. The reason is that cost-benefit analysis and social welfare functions operate primarily *outside a sophisticated system of ultimate, first-tier and second-tier objectives*,⁴⁷ and they are concerned with maximization, and not attainment of a specific sufficient level of conflicting multi-objectives. Section 5 in this chapter on the causal structure of the system of objectives shall shed more light on the difficult question of choosing a reasonable combination of the assessment criteria (i.e., the second tier instrumental objectives).

criteria, I diverge from the standard process in multi-criteria decision making. According to this standard process, after the decision-maker identifies the criteria, she assesses the effects of each policy option (e.g., the institutional network in our case) on each of these criteria (e.g., organizational learning and international competitiveness). This assessment enables the decision-maker to come up with *a performance matrix* that includes each policy alternative and its relevant scores (i.e., effects) on each of these criteria measured by qualitative or quantitative measures that suit each of these criteria. Then, the decision-maker normalizes these effects by using a common qualitative scale (say, from 1 to 100) where she identifies the score each policy option achieves on this scale for each criterion. Then, the decision-maker attaches weights to each criterion that reflects the intensity of her preferences for each criterion, and then sums up the *weighted scores* that each option (i.e., each institutional network) achieves. The policy option that achieves the highest *aggregate* score is then the most desirable one. For an overview of this process See: *ibid* 30–45. *ibid* 49–72. For numerous applications of this process of multi-criteria decision analysis see: *ibid* 79–111. To avoid both aggregation and normalization of the scores according to one measurement scale, I have developed a modified version of this process. I share the first two steps of the process: the identification of the criteria (which are developed in this chapter), and the performance matrix (i.e., the assessment of the effects of each institutional network on each of these criteria in the next chapter). The developed performance matrix is somehow more sophisticated because it is not based solely on the assessment of the *non-embedded effects* of each institutional network on each of these criteria, but on the *consistency* assessment of their *embedded effects*. Then, instead of normalizing these effects into a common scale of measurement and aggregating them, I investigate whether *the combination of the effects of each institutional network* (particularly the Japanese network because this is the one that will be analyzed extensively) *achieve reasonably the desirable first tier instrumental objectives*. Moreover, I develop an approach for the choice of a reasonable combination of criteria (what I call reasonable normative path) that can achieve the desirable levels of the first tier instrumental objectives below. This combination will include the set of criteria to be pursued and the desirable level of each criteria, whether high, moderate or low level. One can think of these desirable levels as weights, but they will be derived from an *objective process* (see below) instead of trying to elicit them from the subjective preferences of the decision-maker or the stakeholders as it is the case in multi-criteria analysis process. This is because these criteria are not intrinsically valuable; they are instrumentally valuable, and thus their weights should be derived from their ability to achieve the ultimate (intrinsically valuable) objectives.

⁴⁷ Neoclassical law and economics scholars would claim that their aggregation procedure maximizes subjective well-being as the ultimate objective of the economic sphere of the society, but as the previous chapter has shown, nothing warrants this claim. First, nothing guarantees that their aggregation procedure ensures maximization of economic growth (see the development economics' external critiques in the previous chapter). Second, economic well-being conceptualized as the satisfaction of individuals' preferences in their social role as economic agents should not be the ultimate objective of the economic sub-system of the society (see the critiques advanced by moral philosophy, the democratic theory, and law and political economy in the previous chapter).

We can observe that the staged hierarchical system of objectives is *internally staged* as well. Once the prioritized ultimate objectives reach their stage one minimum threshold, we shift the focus to the second level ultimate objectives to ensure that they can reach their stage one minimum threshold. This internal sequencing needs to be *justified*. For example, why should we prioritize economic capabilities expansion, for example? Why this specific rate of economic growth is required? Cannot we achieve the stage one minimum threshold with lower rate of growth combined with higher rate of income or wealth distribution? The rhetoric used in most developing countries goes as follows. Similar to South Korea, post-war Japan, and China, we focus exclusively on economic growth and we pay all the high ethical prices necessary for this goal because only through growth, we can then achieve the ultimate objectives of the society. The staged hierarchical system of objectives debunks this rhetoric. Ultimate objectives should be well-specified; their stage one minimum thresholds should be determined and good indicators should be constructed for them. The process of achieving stage one minimum threshold would require the prioritization of some ultimate objectives over others, and the prioritization of some instrumental objectives over others; thus, it must be clear how this prioritization would ensure the attainment of the stage one minimum threshold of all the objectives. The process should not involve the infringement of the actual level of any of the ultimate objectives at the relevant society. Clear time-plans should be set, and the governments of developing countries should be held accountable for meeting these targets.⁴⁸

⁴⁸ Recently, the Egyptian government has prepared a sustainable development strategy that sets out the social, environmental, and economic goals that the Egyptian society seeks to attain by the year 2030. See: Ministry of Planning, Follow-up, and Administrative Reform, ‘Sustainable Development Strategy: Egypt Vision 2030’ <<http://sdsegypt2030.com/?lang=en>>. Although it is important to have long-term objectives, no government can be held accountable for the implementation of this vision unless the current government will stay in power until the end of 2030. Understandably, given the long-term perspective of the vision, no implementation strategies are included in the vision. For this reason, staged system of objectives with clear process and institutional framework for implementation and time-plan can ensure the accountability of the government. Succeeding governments can then plan for new stage’s thresholds and a well-designed process and institutional framework for attainment of these thresholds once the previous government has already succeeded in achieving its relevant staged objectives. Moreover, this sustainable development strategy does not identify clearly the second tier instrumental objectives that the socio-economic policies and regulations should target; rather, they identify a large number of indicators of the *desired objectives*. According to the system of objectives proposed in this chapter, some of these objectives in this sustainable development strategy can be classified as ultimate, others as first tier instrumental objectives, and others as second tier instrumental objectives. More importantly, some indicators give valuable information, but they may not be good proxies for any of the objectives in our system of objectives. In short, a large number of indicators (around 300) would give large amount of information that can hardly guide policy and institutional design because they do not reflect a systemically consistent system of objectives.

This is clearly a rough outline of the staged hierarchical system of objectives. As the remainder of this chapter will demonstrate, we can still use this rough outline to develop reasonable criteria for assessment and design of the economic regulations of capitalism. Much work should still be done for fine-tuning and exploring the details of the proposed staged hierarchical system of objectives.

As already mentioned, the systemic normative theory of economic regulations is based on the development of a staged hierarchical system of objectives for the society. The system of the objectives of economic regulations is *a sub-system* of this staged hierarchical system of societal objectives. Economic regulations would affect some of the second tier instrumental objectives required for the attainment of some the first tier instrumental objectives that are required for attainment of the ultimate objectives. Economic regulations can be only *morally justified* from within this societal system of objectives. Economic efficiency, cost-benefit analysis, social welfare functions, social planner's objective functions are the best second tier instrumental objectives, and to be morally justified, it must be clear how they are necessary for the attainment of first tier instrumental objectives required for the attainment of the ultimate objectives of the society. These moral requirements for the justification of economic regulations ensure that these regulations reflect the value system of the society; it reflects the society that the people desire.

In sum, the systemic normative theory of economic regulations is a multi-criteria assessment framework. These criteria for assessment are mainly second tier instrumental objectives (e.g., learning, allocative efficiency) that economic regulations affect directly. To derive these second-tier instrumental objectives, we need to determine the first-tier instrumental objectives (e.g., economic growth or income equality) that we seek to attain through the second-tier instrumental objectives. To determine these first-tier instrumental objectives, we need to determine the ultimate objectives (e.g., capabilities expansion) that we seek to achieve through them. The ultimate, first tier and second tier instrumental objectives are the system of objectives for economic regulations; they represent its systemic normative theory. Problematically, to determine this system of objectives for economic regulations, we need to have a clear understanding of the ultimate objectives of the society as a whole, its first-tier and second tier instrumental objectives because the systems of objectives of economic regulations is a sub-system of the systems of objectives of the society. Although this seems to be a very complex task to undertake, it is quiet tractable in the context of developing countries because they are far away below the minimum threshold of their

ultimate objectives. By focusing on the minimum threshold of ultimate objectives, there is no need for quantification, normalization, or aggregation of the ultimate objectives if we adopt the proposed staged hierarchical system of objectives for the society. Once we determine stage one minimum thresholds for the ultimate objectives of the society, we may then prioritize some of the ultimate objectives over others in stage one. Then, we can derive the first-tier and second-tier instrumental objectives required for the attainment of the prioritized ultimate objectives. We must also establish the *process* through which the attainment of these objectives shall ensure the attainment of stage one minimum threshold objectives. From this system of objectives, we can then derive the system of objectives of economic regulations; this derivation problem is called the objectives assignment problem. This problem refers to the problem of assigning some of the ultimate, first-tier and second-tier instrumental objectives to economic regulations. These assigned objectives would then represent the system of objectives for these economic regulations. As discussed below, I have significantly simplified the process of the objectives assignment for the purposes of the derivation of the multi-criteria (second-tier instrumental objectives) for the economic regulations of product markets; otherwise, it would not have been possible to undertake this task in one chapter. Finally, we have established that for each type of objectives (ultimate, first-tier instrumental, second-tier instrumental), we may prioritize some of the objectives over others or assign different weights to them. This hierarchy of goals insight from goal programming is particularly important because it implies that we can prioritize or attach high weight to some second-tier instrumental objectives at the cost of others.⁴⁹

⁴⁹ The above discussion has been predominantly concerned with developing countries. The system of objectives framework for economic regulations applies equivalently to developed economies, but its details would differ. First, with respect to developed economies that are still below the minimum thresholds for some of its ultimate objectives (e.g., education or health care in the US), these countries fix their legal institutions and socio-economic policies to attain these minimum thresholds. Second, as to other developed economies that are already at or above the minimum threshold of their ultimate objectives, ultimate objectives can be traded off against each other above their minimum thresholds. Although they can be traded off above their minimum thresholds, these countries may prefer to achieve high values of some ultimate objectives above their minimum threshold. They can give more weight to these strongly desirable ultimate objectives, apply the concept of threshold deontology to them, or even require their maximization subject to the minimum threshold of the other ultimate objectives. In the latter case, if the total number of ultimate objectives does not exceed three, one may think that this problem can be solved mathematically by the multi-criteria analysis method of *multi-objective programming*. We can use the constraint method of multi-objective programming, according to which we maximize these objectives subject to the constraint that other objectives are equal to their minimum threshold. For a very brief overview of multi-objective programming as a method of multiple-criteria decision making, see: Andre, Cardenete and Romero (n 3) 40–41. For examples where the constraint method of multi-objective programming is used in economics,

The systemic normative theory of economic regulation brings about a host of difficult questions that we need to address such as the conceptualization of ultimate and instrumental objectives and the political process for choosing the ultimate and instrumental objectives in the societal system of objectives. Once the staged hierarchical system of the objectives of the society is developed, a more difficult set of questions emerge, notable among these question is how to derive the system of objectives of economic regulations (of the supply side of product markets) from the societal system of objectives. This is the so-called *the objectives assignment problem*. We now turn to these three questions in their respective order in the following sections.

3. Conceptualization of Ultimate and Intermediate (Instrumental) Objectives in the Multi-Criteria Normative Framework of Economic Regulations

The system of objectives for economic regulations includes ultimate and instrumental objectives, which calls for a clear conceptualization of these two forms of the objectives. We can define ultimate objectives of the socio-economic system as follows. They are the *systemic and*

see: *ibid* 59–61. *ibid* 94–97. However, as will become clear from our discussion below, both ultimate and instrumental objectives normally far exceed three, which makes multi-objective optimization a difficult technique to use. More problematically, we do not have the functional form that links each of the plausible institutional networks (our independent variables or in the terminology of multi-criteria analysis, our policy or decision variables) with their respective effect on each of the objectives (our dependent variable), i.e., we are not able to construct the objective functions that we seek to be maximize. To illustrate this point, Let $f(y)$ be our objective function, where $f(y)$ is our instrumental objective of learning and y is the plausible institutional networks of the product markets. Learning however is a function of the behavioral equilibrium that the institutional network shall bring into existence: it is a function of *the response function* of the individuals to the policy variables that are the plausible institutional networks. Let $x(y)$ be the response function, then, our objective function will be $f(x(y))$. However, given the discrete nature of our policy variables (i.e., the institutional networks), their large number, and the unpredictable effects of each of them on the behavioral equilibrium, it is very difficult to construct the response function and the objective function, which are among the major informational requirements for multi-objective maximization. See: *ibid* 56–58. Both Eichhorn and Schefold, rightly, point to the difficulty of multi-objective optimization of multi-economic objectives, see: Eichhorn (n 4), 295. Schefold (n 4), 307. I will argue below that for the application of the systemic normative framework, we can bypass formalism whether in the form of constructing objective functions or quantification. Rather, qualitative and/or quantitative indicators for the objectives, the assignment rules and principles, and the insights of relevant models and empirical evidence that can inform the construction of the network of the system of the objectives would be sufficient for giving weights to the instrumental objectives (i.e., choosing the reasonable normative path) and for designing a reasonable institutional network that achieves the desirable level of these objectives.

local properties of the socio-economic system that are intrinsically valuable (i.e., intrinsically good as end goals); they do not derive their value from their capacity to contribute to other goals. This definition implies that ultimate objectives can be either *systemic or local* properties of the system. Whether systemic or local, to be an ultimate objective, they must be intrinsically valuable. However, ultimate objectives are relative; they are ultimate as far as their minimum threshold is concerned. Above this minimum threshold, ultimate objectives become instrumental and can be traded off against each other. To put it differently, below this minimum threshold, these ultimate values are incommensurable, but they are commensurable above this threshold.

This proposed definition distinguishes between two types of ultimate objectives: *systemic and local properties of the socio-economic system*. The level of income inequality is *a systemic property* of the socio-economic system because the factors that affect distribution include almost all legal institutions of capitalism as each of them affects how resources are distributed by imposing costs on some individuals and conferring benefits upon others. The distributional micro-effects of regulations contribute to inequality level. Similarly, macroeconomic fiscal and monetary policies have significant distributional effects that feed into inequality level as a systemic property of the economic system. In this sense, distributional effects are caused by both micro and macro policies, but the distributional effects take place at micro-level. These distributional effects accumulate through a complex aggregation process to constitute the systemic inequality level. This aggregation process of these effects is very complex to trace because it is not a simple addition of the direct distributional effects of each legal institution and economic policy.

The direct distributional effect of each legal institution or constellation of institutions is its *local* effect. Obviously, in most cases, we are concerned with the aggregate inequality level and not with achieving specific local distributional effects. Similarly, inequality in power and wealth, economic growth and stability of the economic system are systemic properties of the capitalist system. Overall, the local effects of each legal institution on distribution of power or wealth or on some of the variables that affect growth rate such as innovation or capital accumulation are *instrumental objectives* for attaining the systemic properties representing the ultimate objectives.

However, some of the objectives affected by the local effects of legal institutions are *intrinsically valuable*. This justifies considering them ultimate objectives of the socio-economic system. The intrinsic value test of a specific objective is whether the society requires a minimal level of this objective to be achieved or it can ignore this objective altogether. If the society,

through democratic process, attaches a minimum threshold to local effects, they become ultimate objectives of the system as long as this minimum threshold is concerned. Interestingly enough, modern societies are too complex to the extent that in most spheres of the economic system such as inter-firm relations, corporate governance, or labor markets, they assign an *intrinsic value* to many local objectives in these spheres. The majority of Germans might not accept, for example, the repeal of the co-determination rule in exchange of lower income inequality. In this case, they would be attaching intrinsic value to co-determination, may be due to the voice enjoyed by the workers in the corporate sphere of society, the sense of identity as partners that the co-determination principle may give to the workers, or its positive effects on the functioning of democratic institutions.

The local properties of the socio-economic system are mostly systemic properties of its sub-systems. For example, when we perceive the corporate sphere itself as *a system*, the local properties of the socio-economic system that relate to the corporate governance sphere are normally *systemic properties* of this corporate governance system. Still, many of the local objectives are of social nature, they relate to identity, respect, voice, cooperation, and justice. The systemic properties of the capitalist system tend to be of an economic nature as it is difficult to aggregate concepts such as justice or respect.

The proposed conceptualization of the ultimate and instrumental objectives, the distinction between ultimate systemic and local objectives, and the concept of the minimum threshold of the ultimate systemic objectives settles largely the never-ending debate among deontological and consequentialist moral theories in legal theory. According to the former, legal norms should be evaluated and designed only based on deontological moral theory, while according to the latter, legal norms should be evaluated and designed only on the basis of their consequences. By considering values local to each sphere to be part of the ultimate objectives of the governance of the society, I clearly adopt *a deontological* moral position. However, by emphasizing that the people would desire to have a minimum threshold of specific systemic outcomes (e.g., expansion of economic capabilities that can be achieved only through a minimum threshold of economic growth, for example) as ultimate objectives, I clearly adopt a consequentialist moral position. This seems to be a naïve reconciliation of the old and difficult debate. Still, it is difficult to dismiss; there is a space for *balance* where the people choose to live in a society that meets minimum threshold of a large array of values. The formation and sustainability of these societies is feasible

only if we sacrifice the maximization of each of these values. If we choose to maximize one value, we are in the meanwhile sacrificing other values. It is this *plausible space of balance* that the majority of the people in many societies aspire to reach.⁵⁰

Similarly, the proposed multi-dimensional and hierarchical normative framework with multiple ultimate and instrumental objectives provides a space for perfectionist and religious moral values. Given the perfectionist and religious moral theories, the people may favor some ultimate systemic or local values inspired by these theories. For example, the citizens of some countries may attach high weights to the protection of the environment, fairness in market transaction, distribution of power, protection of the weak, cultural identity, or communitarian and cooperative ethics in the economic sphere of the economy. As long as the people are well informed of their plausible alternatives, their choices will reflect also their religious and perfectionist moral codes. There is no need for a benevolent dictator, a man of religion, or a paternalist philosopher to design the normative framework for the governance of the socio-economic system. The people will choose the normative framework that reflects what they are as much as it reflects what they aspire to be.⁵¹

This last point is a good starting point for our discussion of the proposed process for the choice of the ultimate and instrumental objectives of the system of objectives of economic regulations, to which we now turn.

⁵⁰ In law and development literature, the term “policy or development space” is used to refer to the policies that developing countries can adopt given the constraints imposed upon these countries by economic globalization (e.g., the constraints imposed by the Agreement Establishing the World Trade Organization of 15th of April 1994). See, e.g.: Robert H Wade, ‘What Strategies are Viable for Developing Countries Today? The World Trade Organization and the Shrinking of ‘Development Space’’ (2003) 10(4) Review of International Political Economy. The term “policy or development space” is different from what I call “space of balance”. Space of balance refers to the set of policies and legal institutions that the developing countries can adopt in order to achieve a balance among their numerous societal ultimate objectives that are intrinsically valuable, but the term “policy or development space” refers to the set of policies that developing countries can adopt in order to achieve *economic growth*. Indeed, some developing countries may enjoy a limited development space, but a broad “space of balance” in case high rate of economic growth is unnecessary for achieving the minimum threshold of their ultimate objectives.

⁵¹ If some moral philosophers, theologians, and politicians consider the choices of the people *immoral*, they can engage in the public discourse trying to persuade the people that their choices are immoral. Here, I assume away the possibility that the people’s choices may be outright oppressive or immoral. Discussing this possibility and the very difficult problems it entails is better left to future research.

4. The Process of Choosing the Ultimate and Instrumental Objectives of the Normative System of Economic Regulations

Systemic thinking provides a clear method for design of the objectives of any system. According to this method, ultimate objectives of the system are specified. Given these ultimate objectives, the intermediate objectives of the system (normally referred to as requirements of the system, particularly in business management systems approaches and urban planning systems approaches) required for attaining the ultimate objectives are defined. Given the latter, the micro-objectives/micro-requirements of the system are determined.

This is a top-down approach to specification of the objectives of the system. Systems approaches in management and urban planning requires that the ultimate objectives of the system to be specified based on the needs of the stakeholders of the system.⁵² In business management studies, stakeholders include normally shareholders, management, employees, and the management system designer. In urban planning, stakeholders encompass city dwellers, relevant bureaucratic institutions, relevant non-governmental organizations (“NGOs”) and the urban planner. This stakeholder’s approach ensures that the system thinker does not impose his preferences upon the stakeholders and that the system meets the needs of its stakeholders. Systems thinkers, however, are assigned the task of determining the most efficient intermediate and micro-objectives required for attainment of the *desirable democratically determined ultimate objectives* of the system.

By analogy, the ultimate normative objectives of regulatory governance of the supply side of product markets should be specified first through a democratic process. More broadly, the ultimate objectives of governance of capitalism (and not only its product market sub-system) should be determined in a democratic process. However, which democratic process is sufficient in the context of determining the *normative basis* for the capitalist system? The traditional answer is parliamentary process; the parliament should be entrusted with determining the ultimate objectives

⁵² M. C Jackson, ‘Fifty Years of Systems Thinking for Management’ (2009) 60 *The Journal of the Operational Research Society* 29. See also: Mario Bunge, ‘Systemism: The Alternative to Individualism and Holism’ (2000) 29 *Journal of Socio-Economic* 153.

of the economic system in light of which it designs socio-economic legislations. This is indeed the status quo in liberal democracies.

Nonetheless, German school of Ordoliberalism, rightly, suspected that both the legislative and the executive branches would be captured or at least heavily influenced by powerful private economic interests.⁵³ To prevent the encroachment of the private economic power over parliamentary economic law-making process, an *economic constitution* reflecting the people's choice of their economic system should be set out in the political constitution.⁵⁴ This constitution shall constrain the parliamentary discretionary economic law-making powers, as the latter would be confined to establishing a legal framework that implements the constitutional principles enshrined in the constitution.⁵⁵ Ordoliberals had already a *blueprint* of the economic system that they *called upon* the people to constitutionalize. The main legal institutions and economic policies constitutive of the Ordoliberal economic system include contractual freedom, protection of property rights, liability rules, free trade, monetary policy focused on price stability, and strong competition law restricting the creation of private economic power.⁵⁶

The economic constitution would reduce the discretionary power of the parliament and ensure that the parliament, whose acts are subject to constitutional review, will enact the legislations necessary to the formation of the economic system set out in the constitution.⁵⁷ Bureaucratic agencies independent from the executive branch shall then be entrusted with the tasks of the enforcement of these legislations, particularly competition law.⁵⁸ Consequently, given the constitutional constraints on the design of economic legislations and the process of its independent enforcement, the legislative and executive branch's discretionary intervention in the economic system would be largely constrained in the Ordoliberal framework.⁵⁹

The economic constitution insight of Ordoliberalism had significant practical implications. For example, the European integration has been accomplished through incorporating *economic*

⁵³ David J Gerber, 'Constitutionalizing the Economy: German Neo-liberalism, Competition Law and the "New" Europe' (1994) 42 *The American Journal of Comparative Law* 35–37. Viktor J Vanberg, 'The Freiburg School: Walter Eucken and Ordoliberalism' (2004) 17 <<http://www.walter-eucken-institut.de/publikationen/diskussionspapiere.html>>.

⁵⁴ Gerber (n 53), 44–45. Vanberg (n 53) 7–8.

⁵⁵ Gerber (n 53), 46–48.

⁵⁶ *ibid* 47–48.

⁵⁷ *ibid* 46–48.

⁵⁸ *ibid* 54–55.

⁵⁹ *ibid* 48.

principles in the European agreements, which function as the *economic constitution* of the European Union.⁶⁰

Despite its success in constraining the discretionary powers of the legislative and the executive branches, the implementation of the economic constitution insight would require offering the people *clear alternative economic systems* and the one chosen by the people is then constitutionalized. Here, constitutionalizing a specific economic system would be similar to constitutionalizing *democracy* as a political system in liberal democracies. In this case, however, the people do not choose *the ultimate economic objectives*, but they choose an economic system among other alternatives. The people would need to choose a system among the offered alternatives although the effects of each of the alternative systems offered to them on the (hidden) ultimate objectives would be obscure. To understand how ambiguous the choice problem is, we can imagine that the German people in the 1920s are offered the choice among socialism, Ordoliberal capitalism, neoliberal capitalism, or social market economy. Not only the people, but also the economists at this time would vigorously disagree about the ultimate objectives that each of these economic systems seek to achieve, and whether it can achieve these objectives reasonably.

Despite this significant democratic deficit, similar to the political constitution, this economic constitution would succeed in constraining the discretionary powers of the legislative and executive branches and thus reduce the dangers of their political capture by private economic interests. This would significantly enhance the democratic process of economic law making, particularly in developing countries that are more susceptible to rent seeking. I will refer to the alternative of constitutionalizing specific economic system as “*economic system constitutionalization*” or “*system-based economic constitution*”.

To overcome the democratic deficits of constitutionalizing specific economic system, the alternative would be to constitutionalize the *ultimate objectives of the economic system*, while leaving broader discretionary powers to the parliament in choosing the economic system that achieves these objectives.⁶¹ To distinguish it from *economic order constitutionalization*, I will call

⁶⁰ Christian Joerges, ‘What is left of The European Economic Constitution? A Melancholic Eulogy’ (2005) 30(4) *European Law Review* 470. Gerber (n 53), 72.

⁶¹ I assume here that the parliament shall choose one model of capitalism instead of another. This implies that the constitution already protects private property rights, as it is the case in most political economies. If the parliament is to drift away from capitalism altogether, the people should not only choose the ultimate objectives, but also the economic system to which the shift shall take place. This shift from capitalism to a different economic system requires a stronger process of legitimation. Similarly, if the

this alternative, “*economic objectives constitutionalization*” or “*objective-based economic constitution*”.

Nonetheless, setting out the ultimate objectives of the economic system in the economic constitution is a difficult task. The ultimate objectives may be broad and vague such as capabilities expansion. To resolve this problem, these ultimate objectives (the capabilities in our example) can be specified in more detail in the economic constitution.⁶² For example, we can incorporate encompassing constitutional principles that the constitutional court can use to ensure the attainment of these ultimate objectives. For example, the capabilities approach of Amartya Sen could constitute the content of these general constitutional principles.⁶³ The trick here is to constitutionalize only *the minimum required threshold of the ultimate objectives*. In a sense, this minimum threshold could be conceptualized as economic or social rights,^{64, 65} but it could be also measured by indicators. For example, the Egyptian constitution of 2014 mandates that 4% of the GDP should be allocated to public education⁶⁶ and 3% to public health care.⁶⁷ This is a good example of the constitutionalization of minimum thresholds of some ultimate objectives such as the human capabilities of education and health care through the constitutionalization of some indicators of these minimum thresholds, namely, the required minimum thresholds of public expenditure on education and health care. Public expenditure on education and health care is not a perfect indicator to the attainment of the required minimum thresholds of education and health care, but *imperfect indicators are better than no indicators*.

country is already non-capitalist, the people should choose both the ultimate economic objectives and the capitalist system to which the country shall shift.

⁶² For example, Martha Nussbaum argues for considering some central capabilities as fundamental (constitutional) entitlements, see Martha C Nussbaum, ‘Capabilities as Fundamental Entitlements: Sen and Social Justice’ (2003) 9(2-3) *Feminist economics* 40–42.

⁶³ *ibid* 40.

⁶⁴ These rights are not limited to negative rights, which are the rights that protect the individuals against state’s interventions, but they are *primarily positive* rights, which are the rights that the state is obliged to secure to its citizens. *ibid* 38–39.

⁶⁵ Drawing some parallels to how democracy function; some constitutional political rights are needed to protect the minority from the tyranny of the majority. Similarly, some constitutional economic rights and principles seem to be necessary to ensure the protection of the weak in the economic sphere of the society such as the unemployed, the pensioners, the workers in oligopolistic markets, the working and homeless children in developing countries, the poor, and the women in many developing economies.

⁶⁶ Article 19 of the Egyptian Constitution enacted in 14th of January 2014.

⁶⁷ Article 18 of the Egyptian Constitution enacted in 14th of January 2014.

An alternative solution is that the economic constitutions mandates the attainment of some of the instrumental objectives (whether microeconomic objectives such as allocative efficiency or macroeconomic objectives such as price stability) required for the reasonable attainment of the ultimate objectives. For example, if it is clear that the macro-objective of equality reasonably contributes to the attainment of the ultimate objective of capabilities expansion, economic equality can be included as a macro-objective in the constitution if accepted as a normative objective by the majority of the voters. This may seem to be a reasonable solution; particularly, the tolerated level of inequality by the public differs across societies. For example, a study shows that Germans do not tolerate the forms of income inequality that involve *relative poverty* and *excessive wealth*.⁶⁸

Nevertheless, incorporating instrumental macro or micro-objectives in the economic constitution may create substantial problems, however. The electorate may opt for intermediate objectives that cannot be reasonably achieved. If they can be reasonably achieved, they cannot be sustained. Even if they can be reasonably achieved and sustained, they may not be appropriate for attaining the ultimate objectives. This is the vertical normative inconsistency problem discussed in the previous chapter. The intermediate objectives may even be inconsistent with each other: this is the horizontal normative inconsistency problem discussed in the previous chapter. Furthermore, assuming the objectives chosen by the public can be reasonably and sustainably achieved, and that they are appropriate for achieving the ultimate objectives, they may not be the most efficient intermediate objectives for achieving the ultimate objective. Assuming all these insurmountable problems have been overcome, these intermediate objectives would restrict the discretion of economic policy makers substantially. We need only to recall how the fiscally disciplined German government failed to comply with the First Stability and Growth Pact; this Pact was not flexible enough to accommodate the needs of economic policy makers to adjust to the peculiarities of individual cases⁶⁹ and to the changes in the economic environment. Similar arguments could be made with reference to the primary objective of low inflation rate of the ECB's monetary policy, which does not adjust adequately to the economic needs of the European countries at the periphery.

⁶⁸ Patrick Sachweh, 'The Moral Economy of Inequality: Popular Views on Income Differentiation, Poverty and Wealth' (2012) 10 *Socio-Economic Review* 427–436.

⁶⁹ This is the under-and over-inclusiveness problem of rules. Paul Libretta, 'The Economic and Monetary Union: A Standards or Rules-Based Institutions?' (2003) 29 *Brooklyn Journal of International Law* 429. Waltraud Schelkle, 'EU Fiscal Governance: Hard Law in the Shadow of Soft Law?' (2007) 13 *Columbia Journal of European Law* 725.

Reasonable objectives become insurmountable burdens when restricting needed adjustments to changes in economic conditions.

Given the problems arising from giving the people the choice over instrumental micro and macro objectives, systems approaches normally assign the task of specifying the intermediate objectives to the systems planner, given the ultimate objectives required by the stakeholders. However, these ultimate objectives must be clearly specified in order to guide the systems planner in his choice of the most efficient intermediate and micro-objectives for attaining these objectives, and to facilitate holding the planner accountable for the failures in attaining the ultimate objectives. By analogy, given the ultimate objectives democratically determined and set out in the constitution, the policy makers, based on the advice of technocrats,⁷⁰ should specify *the most efficient instrumental objectives* for attainment of the ultimate objectives.

⁷⁰ Technocrats here refer to legal scholars, economists, sociologists and political scientists specialized in economic regulations. They occupy both bureaucratic and academic positions. Democratically elected policy makers should approach them for advice on the design of the instrumental objectives. Indeed, Dibadj argues that the law-making process should be largely delegated to the administrative agencies (the bureaucracy) because bureaucrats are less susceptible to political capture than the legislators are. Further, administrative agencies have more technical expertise and proximity to the addressees of the legal rule; this enables these agencies to collect better information about their preferences and well-being so that the administrative agencies are better equipped to construct the social welfare function based on which legal norms can be designed. Finally, efficient bureaucracy has been a major force underlying the success and sustainability of democracy in Western countries. See: Reza Dibadj, 'Weasel Numbers' (2006) 27(3) *Cardozo Law Review* 1377–1380, and see also the references cited therein. Dibadj's argument relates to law making. This involves the choice of the ultimate objectives of the legal institutions, which are captured largely by the specific form of social welfare function that he advocates. I rather advocate the distinction between ultimate and instrumental objectives. Ultimate objectives should be determined by the voters according to the normal procedures of constitutional amendment in each legal jurisdiction. Normally, these procedures involve a special parliamentary majority and a referendum. Once the economic constitution is created, the delegation of law making to administrative agencies, if they have the sufficient technical expertise and independency of the political process, seem a plausible idea given Dibadj's arguments. However, from a systemic perspective, this delegation would be highly problematic because in absence of the coordination among administrative agencies, their enacted regulations may not ensure, in aggregate, the attainment of the ultimate objectives of the society. The design of a systemically consistent and reasonable institutional network for capitalism requires either centralization of the law-making process in the parliament subject to the advice of the administrative agencies, or the decentralization of the law-making process through delegation of the law-making power to the administrative agencies while ensuring their strong coordination *subject to the close oversight of the Parliament*. I would prefer the latter model in countries that enjoy efficient administrative agencies, but suffer from captured politicians such as the US, while the former model or a modified version that mediates between both models seem to be more adequate for some European countries such as Germany due to democratic legitimacy concerns. Most developing countries suffer from political capture of the parliaments and inefficient administrative agencies. This makes a choice of one of these models of law making more difficult. The choice should take into account which institution (i.e., the parliament or the bureaucracy) is relatively more efficient and independent, and

The proposed process for choice of the ultimate and instrumental objectives in the system of objectives largely mitigates the paternalism critique of the objective theories of well-being such as the capabilities approach of Amartya Sen. The welfarist moral position of the neoclassical normative theory of economic regulations respects the subjective preferences of the individuals because it considers the satisfaction of these preferences the basis for assessing individuals' well-being.⁷¹ However, welfarism, as advanced in neoclassical welfare economics, respects the preferences of the individuals in their social roles as consumers,⁷² but not in their social roles as citizens, hence, it may justify normative institutional networks that largely infringe the citizen's preferences over the ultimate objectives of their society. A more sensible welfarist position would be the one that respects the preferences of the individuals as expressed in their social roles *as citizens* regarding the *ultimate objectives* of the society in which they live. This provides a *welfarist moral* basis for the *economic constitution*. Given these subjective preferences over the ultimate objectives of the society, the government can pursue paternalistic institutions and policies for achieving these ultimate objectives. These paternalistic legal institutions and policies (e.g., legal institutions designed based on objective theory of well-being such as the needs theory or the capabilities approach) have their moral justification in the welfarist economic constitution. As long as the government is democratically elected, these paternalistic legal institutions are nothing but an *ex-ante commitment mechanism* that the citizens *accept ex-ante, through which they commit themselves as economic agents in the economic sphere ex-poste*. Still, these paternalistic legal institutions should not infringe any of the constitutional principles of property rights protection, or basic human rights.⁷³

which institution can be reformed more easily in the medium run, given the political economy constraints in the relevant developing country.

⁷¹ R. F Boadway and Bruce Niel, *Welfare Economics* (Wiley-Blackwell 1984) 8–9.

⁷² *ibid.*

⁷³ These human rights would be interpreted differently depending on the ultimate objectives that the society includes in its economic constitution. For example, if the citizens opt for a neoliberal economic system, property rights would be interpreted differently from the case where the society opts for a social market economy or a collaborative model of capitalism. Still, given these different interpretations, the paternalistic legal institutions should not infringe constitutional human rights and freedoms. Further, given the ultimate objectives of the society, one may even imagine that new constitutional economic rights would be created and others may be relinquished. The questions of the constitutional economic rights that may be created and those that may be abandoned and the resulting interpretations of existing constitutional rights are better left for future research projects. Here, I am trying to lay down the general normative framework while avoiding the engagement with these difficult details.

Not only the proposed process for the choice of ultimate and instrumental objectives mitigates largely the paternalistic critique of the objective theories of well-being, it also resolves largely the debate among the welfarist and procedural theories of regulation.⁷⁴ Procedural theories of regulation (e.g., civic republicanism or participatory governance) consider the democratic procedures and legitimacy of the law-making process *intrinsically valuable*.⁷⁵ Law-making process should follow these values of democratic legitimacy even if the regulatory outcome of the process does not maximize social welfare. On the other hand, the welfarist theory of regulation adopts the position that procedures are not intrinsically valuable; they are *instrumentally valuable*.⁷⁶ Suppose that a specific democratic theory of regulatory procedures would result in regulatory outcome (X) and another theory would result in regulatory outcome (Y). In addition, suppose that based on our adopted normative theory (normative theory is a combination of moral and value theories as has already shown in the previous chapter), the outcome (X) is normatively preferred, then, we should prefer regulatory procedures theory that would secure the regulatory outcome (X).⁷⁷ According to welfarist theories of regulation, *the choice of regulatory procedures should depend on the normative theory we adopt for economic regulations and not vice versa*.⁷⁸ In this sense, we should first articulate our normative theory of regulation and then choose the regulatory procedures that would secure, with the highest probability, the adoption of the regulations that have this normative basis. The proposed process differentiates between the ultimate and instrumental objectives; as for the ultimate objectives, this chapter clearly endorses a procedural theory of regulation, where the ultimate objectives of the regulation of the economic system are determined through a democratically legitimate process. One important ultimate objective of any socio-economic system is democratic participation as already argued in the above section concerning the law and political economy critique. If the society places higher weight on democratic participation as an ultimate objective, the process of the choice of the instrumental objectives should ensure the attainment of this value, while achieving the minimum threshold of other ultimate objectives. If the weight the society places on democratic participation as an ultimate objective is low, then, the process of the choice of instrumental objectives should reflect this lower

⁷⁴ For an overview of this debate see: Adler (n 5), 267–288.

⁷⁵ *ibid* 267–269.

⁷⁶ *ibid* 332–336.

⁷⁷ *ibid* 334–336.

⁷⁸ *ibid*.

weight, while emphasizing the choice of the procedural theory that ensures the choice of the most efficient instrumental objectives. We can think of the proposed process in these terms. The procedural theory of regulation determines the ultimate objectives of the regulatory governance of the society; these ultimate objectives would then represent the normative (welfarist) theory that would determine the procedural theories that would govern the process of the choice of the instrumental regulatory objectives. Hence, this proposed process would largely reconcile the debate among the procedural and welfarist theories of regulation as the debate is not one of (either or), but one that relates to the appropriate place for each of these theories in the process of choosing ultimate and instrumental objectives.⁷⁹⁸⁰

In short, the people should make the choice of the ultimate objectives of the economic system. This choice should be constitutionalized in an economic constitution. This economic constitution can take two forms. The first is a system-based economic constitution. In this case, the system chosen by the people (say, the proposed Ordoliberal model of capitalism) is constitutionalized (i.e., the Ordoliberal legal institutions such as property rights protection, price stability, independence of the monetary authority, principles of competition law are clearly stipulated in the constitution). System-based economic constitutions, however, would suffer from significant democratic deficit due to the obscurity of the ultimate objectives that the alternative systems seek to achieve and their capacity to achieve these objectives. The second is objectives-based economic constitution. In this case, the people choose the ultimate objectives that the economic system should achieve. In this case, the people choose only the ultimate objectives, but not the instrumental objectives required for reasonable attainment of these ultimate objectives because of the significant problems that would emerge if they were to choose these instrumental objectives. Further, there is no strong moral or democratic reason why they should choose these objectives. Alternatively, democratically

⁷⁹ It is worthwhile that the proposed process reconciles the debate without engaging into the difficult normative question of whether procedures are intrinsically or instrumentally valuable. The proposed process is based on a minimal normative position that the determination of the ultimate objectives of the society (i.e., the choice of the type of the society that the people desire to live in) should be given to the people. Still, legal scholars need to proceed with their normative discussion over whether procedures are intrinsically or instrumentally valuable to develop a critical perspective over people's choices.

⁸⁰ One can imagine a more sophisticated framework where we differentiate between first-tier and second-tier instrumental objectives and differentiate between the weights we may give to *democratic legitimacy* in the process of choosing each of these objectives.

elected policy makers (mainly, the parliament) should select the instrumental micro and macro objectives in light of the advice of relevant technocrats and the input of relevant stakeholders.⁸¹

Let us briefly recall what we have done so far prior to moving forward. Systemic thinking reformulates the regulatory objectives problem to become the choice of *a multi-evaluative hierarchical system of objectives instead of the choice of one evaluative criterion*. In order to develop *a system of regulatory questions*, we need to address the following *sub-questions*:

- a) What are *the types of these objectives* and what are their differences? In other words, how can we conceptualize ultimate and instrumental objectives?
- b) How are these objectives determined? In other words, what is the *process* for the determination of these objectives?
- c) Given the trade-offs among these objectives, how can we quantify or formalize these objectives to resolve their trade-offs?

The above sections have already provided succinct answer to these questions that we can sum them up here. These systemic multi-assessment criteria (i.e., a system of interrelated objectives) include ultimate objectives and instrumental objectives. The people determine the former and the outcome should be constitutionalized in an economic constitution according to the normal procedures for constitutional amendment in each jurisdiction. The parliament determines the instrumental objectives required for reasonable attainment of the constitutionalized ultimate objectives based on the advice of the technocrats on the most efficient structure of the instrumental objectives. We have suggested also that there is no need for quantification or formal functional representation of the objectives of this normative system. We only need to develop qualitative indicators for the minimum threshold for ultimate objectives. Above this threshold, these objectives are no longer ultimate objectives, trade-offs could be made freely as long as the

⁸¹ Here, I assume that the Parliament has a centralized power over law making, which is a reasonable assumption in many developing countries, where administrative agencies are vested primarily supervisory powers and weak regulatory powers. Conversely, in the US, administrative agencies have strong regulatory powers. Further, many economic policies (e.g., monetary policies) fall outside the powers of the Parliament in modern political economies. In these cases, we confront a difficult *problem of the coordination* of the law making and policies of these administrative agencies and monetary and fiscal authorities to ensure that they set and achieve the reasonable levels of the instrumental objectives required for the reasonable attainment of the ultimate objectives. Discussing the coordination problem is however well-beyond the scope of this chapter. For a discussion of the coordination of fiscal and monetary policies, see, e.g.: Christopher Doyle and Martin Weale, 'Do We Really Want an Independent Central Bank?' (1994) 10(3) Oxford Review of Economic Policy.

minimum threshold has been satisfied. Finally, we have suggested that law and economics scholars should play an academic role in developing this system of normative objectives so that politicians who are not satisfied with the neoclassical mono-dimensional evaluative perspective can invoke the multi-assessment criteria of the systemic normative framework to enrich the normatively poor political discourse on economic regulations. They can then initiate the democratic process of debating and constitutionalizing the numerous systems of normative objectives suggested by academics.

Consequently, we need now to develop the system of objectives (i.e., the multi-assessment criteria) for the regulation of the supply side of product markets.

5. The System of Objectives of the Regulation of the Supply Side of Product Markets, the Objectives Assignment Problem, and the Assignment Rules

5.1. Capabilities Expansion as the Ultimate Objective of the Society, the Objectives Assignment Problem, and the Objectives Assignment Rules

In each of the institutional domains of this institutional network (e.g., corporate governance sphere), there would be local objectives that are intrinsically valuable. These would be ultimate objectives of the society as long as their minimum threshold is concerned. We postpone the investigation of these local ultimate objectives to the end of sub-section 5.3. Here, we investigate the systemic ultimate objectives of the institutional network of product markets. Since, product markets consist a *sub-system* of the capitalist economic system, and the latter is a sub-system of the society, most of the objectives that we shall seek to achieve through the institutional network of the product markets are indeed *instrumental* to the reasonable achievement of the ultimate objectives of the society. Accordingly, we need to discuss briefly the ultimate objectives of the society to be able to determine the instrumental objectives to be assigned to the regulation of product markets.

To determine the ultimate objectives of the society, the researcher needs to develop a list of these ultimate objectives supported by moral reasoning, derived from the insights of relevant moral philosophy, economic and non-economic schools of thought, and theories. Second, the researcher conducts surveys to test whether the majority of his sample would pick the same ultimate

objectives she has chosen. The second step ensures that she has not imposed her own preferences on the choice of ultimate objectives and the minimum thresholds. However, the researcher may think that the choices of the majority are not morally grounded because she thinks that the moral reasoning that could support the choices of the public is too weak. The researcher should not recommend a normative system that she believes to be immoral. The best strategy for the researcher is then to engage again in normative reasoning to explain why she thinks that the choices of the majority in her sample lack solid normative reasoning. In this way, she communicates to the reader the normative system that the majority would prefer and the one she personally prefers. By doing so, she overcomes, partially, the subjectivity involved in the choice of ultimate objectives. Obviously, this thesis cannot follow this cumbersome process. Alternatively, I develop briefly the normative reasoning, drawing on relevant schools of thought and theories that support the ultimate objectives I have chosen, while leaving the survey and the second round of normative reasoning triggered by its results to further research projects.⁸²

Still, due to limits of space and time, this section cannot adequately use the integrated analysis to determine the *ultimate objectives of the society*. Hence, this section will briefly address this question, while leaving thorough discussions for further research. Overall, two obvious statements can be made. First, as already mentioned, law and economics scholars endorsing welfare criteria (e.g., Pareto allocative efficiency) that justify correction of market failures as well as correction of organizational failures defined in terms of transaction costs, and Kaldor-Hicks efficiency as implemented by cost-benefit analysis lose sight of the ultimate objectives of their proposed institutional design. Would their proposed legal institutions ensure economic growth, for example? This is not clear, given the micro-welfare normative criteria underlying economic analysis of legal institutions. Accordingly, endorsing cost-benefit analysis as the basis of our economic and social legal institutions and policies, without having a clear idea about the ultimate objectives of this society or the ultimate effects of the cost-benefit analysis, is a weak position. Second, despite the

⁸² Indeed, given that most researchers have no political power, the normative systems they develop, which may reflect partially their own preferences, would compete with other normative systems in the political sphere, and the system that wins the support of the majority of elected politicians would be implemented. In this sense, the subjective preferences of the researcher are ultimately subjected to the democratic process. As long as the normative position of the researcher is well argued, her contribution would enrich the political discussion regardless of the outcome of the political process.

importance of economic growth for developing economies, economic growth cannot be an ultimate objective of our society; it is clearly an instrumental objective.

Instead of neoclassical welfarist criteria or economic growth, the most adequately developed ultimate objective for the socio-economic system is *capabilities expansion* as conceptualized and developed by Amartya Sen.⁸³ According to Sen,

A person's "capability" refers to the alternative combinations of functionings that are feasible for her to achieve. Capability is thus a kind of freedom: the substantive freedom to achieve alternative functioning combinations. ... The concept of "functionings" ... reflects the various things a person may value doing or being.⁸⁴

Drawing on moral philosophy, Amartya Sen has developed a solid line of moral reasoning in defense of the capabilities approach, which we do not need to reiterate here.⁸⁵ What is relevant to our discussion here is that if the economic, social, and political capabilities expansion is the ultimate objective of our society, what should be *the objectives* that we *assign* to the regulatory governance of product markets to ensure its contribution to capabilities expansion? To address this question, we need first to ask another difficult question, what are the instrumental objectives that the economic system, as a whole, should achieve to contribute reasonably to the capabilities expansion? One we identify these instrumental objectives that the economic system should achieve, then, we can address the question of which instrumental objectives that we should assign to the regulatory governance of product markets to ensure reasonable achievement of the objectives assigned to the economic system and thus to reasonable expansion of the capabilities.

These are set of very difficult questions, which I will be referring to as the "*objectives/functions assignment problems*" or for brevity, "*the assignment problems*" and I will refer to their solution as the "*objectives/functions assignment rule(s)*" or for brevity, "*the assignment rule(s)*". In the course of the discussion of the systemic institutional design concepts in chapter 6, I have included

⁸³ Sen, *Development as Freedom* (n 13) 74–76.

⁸⁴ *ibid* 75 [emphasis in the original]. It is noteworthy that other economic schools of thought have also emphasized objectives of the economic system similar to capabilities expansion. For example, in old institutional economics, the ultimate purpose of the economic system is not 'material wealth and consumer satisfaction ... [Rather, it is] individual self-development and self-realization.' Bruce E Kaufman, 'Labor Markets and Employment Regulation: The View of the "Old" Institutionalists' in Bruce E Kaufman (ed), *Government Regulation of the Employment Relationship* (Cornell University Press 1997) 20.

⁸⁵ For an overview of this line of argument, see: Sen, *Development as Freedom* (n 13) 54–76.

the assignment rule as a major systemic institutional design concept, while referring to this chapter for its exposition. The reason for postponing the discussion of the assignment rule until this chapter is now clear; it can be discussed only after the above long excursion into the systemic analysis of the normative basis of economic regulations.

Hence, what is *the assignment problem*? We can conceptualize the assignment problem as follows. Given that there are numerous ultimate and intermediate objectives that the legal institutions and socio-economic policies aim to achieve, the problem is *which objective/function should we assign to each of these institutions or policies*. For example, should we assign income distribution objective/function to corporate governance or is it better left to labor regulation? Should we assign income distribution function to legal norms, or should we assign this function to tax law? Should we assign non-efficiency based functions to competition law, or should we assign only economic functions, particularly economic efficiency? The assignment does not only involve legal institutions, but it involves also the comparison between legal institutions and macroeconomic policies. For example, Should the function of price stability be shared among competition law and monetary policy or should this function be assigned solely to monetary policy? Should we assign the functions of stabilizing aggregate demand to fiscal policy only or should labor market institutions play a role as well in stabilizing demand through securing high wages to labor that would then stabilize demand? The assignment problem does not only relate to specific economic regulations and policies as these examples may indicate. These regulations are nothing but *institutional networks*, thus the assignment problem appears in relation to *any institutional network*. For example, what functions should we assign to the institutional network that governs the supply side of product market, which consists of competition law, corporate governance, industrial policies, and intellectual property laws, etc.? Should we assign the functions of countering recessions to this network or is it better to assign, as Keynesianism suggests, these functions to the demand side of product markets? Figure 10.2 below depicts the objectives assignment problem.

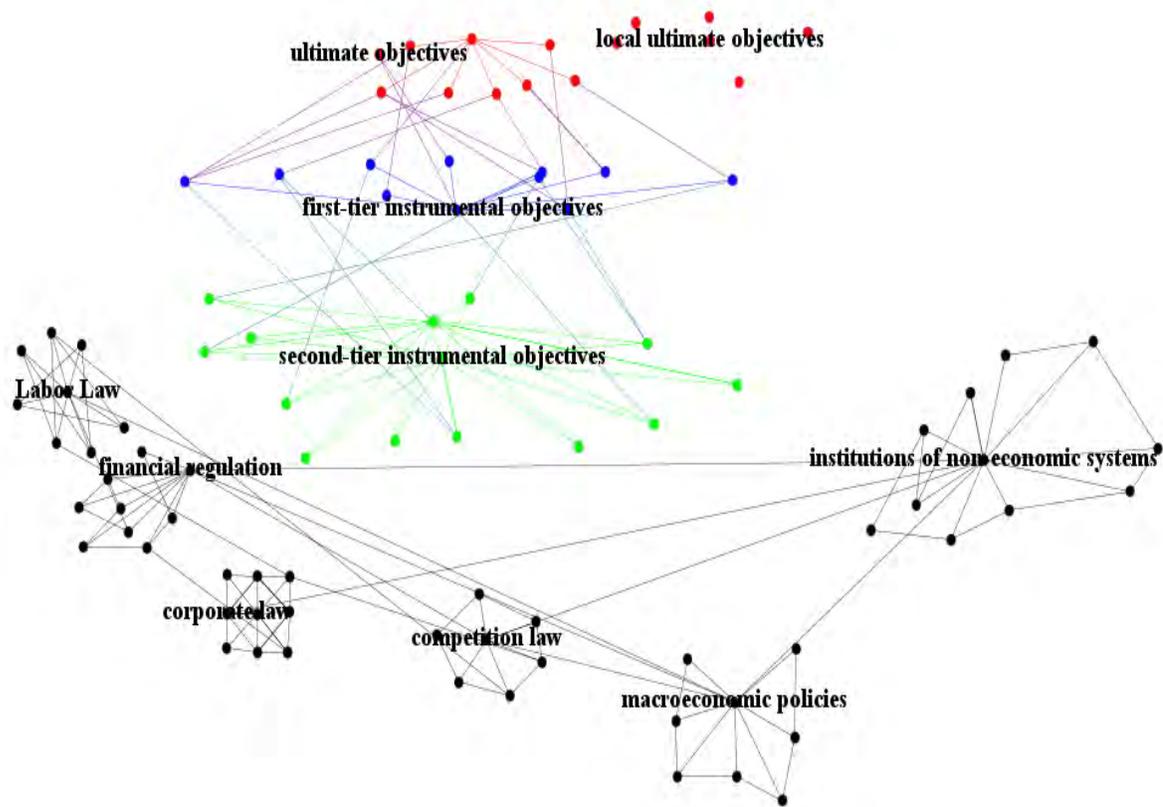


Figure 10.2: Objectives Assignment Problem. Red nodes represent the ultimate systemic and local objectives of the society. The blue nodes represent the first-tier instrumental objectives, while the green nodes represent the second-tier instrumental objectives. Therefore, the red, blue, and green nodes represent the system of objectives of the society. The black nodes represent the plausible economic and non-economic legal institutions and policies. Five institutional and policy domains represent the legal institutions and economic policies of the economic system. In their respective order from left to right, they include labor law, financial regulation, corporate governance, competition law, and macroeconomic policies. In fact, this is the institutional network of capitalism already represented and discussed in chapter 5. The final institutional network is a catchall network that captures all the non-economic institutions and policies of non-economic systems (e.g., family law). Given that each of these institutional networks can affect some of the second-tier instrumental objectives and ultimate local objectives directly, the assignment problem is the problem of identifying the objectives that should be assigned to each of these institutional domains. In other words, the assignment problem is the problem of how we can structure the links between these institutional domains and the objectives.

Neoclassical-new institutional law and economics scholars have already discussed most of the above example questions. For example, Kaplow and Shavell argue that assigning income distribution function to tax law is *more efficient* than assigning this function to legal norms.⁸⁶ Bork contends that competition law should focus only on maximization of total welfare (i.e., economic efficiency).⁸⁷ As already mentioned in the previous chapter, the exponents of shareholder value model of corporate governance reject the assignment of the objective of labor protection to corporate governance, arguing that it would be more efficient to assign this function to labor regulation because of the two masters problem.⁸⁸

In establishing the above claims, neoclassical law and economics scholars are typically centralized around two main arguments. The first is the one-instrument-one-objective rule, according to which, every policy instrument (legal institution in our case) should have only one objective.⁸⁹ For instance, Bork argues that if competition law is assigned more than one objective, it would fail to achieve properly any of its objectives, and would be susceptible to political

⁸⁶ Their argument is famously known as the “double distortion” argument. It runs as follows. Income taxation influences negatively the incentives to work and distorts the labor-leisure trade off because it results in less hours worked or less effort exerted on the job. This is the inefficiency cost of income taxation. Legal norms that attempt to distribute income would be perceived by relevant addressees as *implicit* taxation; thus, these norms would have similar effect on labor-leisure trade off resulting in inefficiency costs similar to that of explicit income taxation. In addition, since these legal norms deviate from the economically efficient design, they will cause a further inefficiency loss. See: Louis Kaplow and Steven Shavell, ‘Why the Legal System Is Less Efficient than the Income Tax in Redistributing Income’ (1994) 23(2) *The Journal of Legal Studies* 669–674. This important study has triggered a vast literature in law and economics on the assignment of income distribution function to legal rules. In support of the the “double distortion” argument, See, e.g., David A Weisbach, ‘Should Legal Rules Be Used to Redistribute Income?’ (2003) 70(1) *The University of Chicago Law Review* 446–453. For its critique, see, e.g., Chris W Sanchirico, ‘Taxes versus Legal Rules as Instruments for Equity: A More Equitable View’ (2000) 29(2) *The Journal of Legal Studies* 804–807.

⁸⁷ Robert H Bork, *The Antitrust Paradox: A Policy at War with Itself* (Basic Books 1978) 107–115. Although Bork referred to the objective of competition law as ‘consumer welfare’, he actually meant ‘total welfare standard/economic efficiency’. See: Kenneth Heyer, ‘Consumer Welfare and the Legacy of Robert Bork’ (2014) 57 *Journal of Law and Economics* S20. See also: John B Kirkwood and Robert H Lande, ‘The Chicago School’s Foundation Is Flawed: Antitrust Protects Consumers, Not Efficiency’ in Robert Pitofsky (ed), *How the Chicago School Overshot the Mark: The Effect of Conservative Economic Analysis on US Antitrust* (Oxford University Press 2008) 93.

⁸⁸ See section 2 on the neoclassical law and economics approach to corporate governance choice in chapter 8 and the references cited therein.

⁸⁹ Jan Tinbergen, *On the Theory of Economic Policy* (North-Holland 1952) 39–41.

capture.⁹⁰ Similarly, if corporate governance has more than one objective, then, the two masters problem will arise.

The second argument is grounded in the comparative organizational analysis of new institutional economics. According to the latter, governance structure (e.g. contracts/markets, hierarchy such as the firm, hybrids, bureaucracy, regulation) are compared according to their ability to achieve their *assigned function (primarily, adaptation) at the least possible transaction costs*.⁹¹ In this literature, however, transaction cost minimization itself sometimes become the assigned function so that the governance structures are compared based on their ability to minimize transaction costs. To compare governance structures based on their minimization of transaction costs, the scholar investigates whether the governance structure *fits the characteristics of the transaction* to be governed by the governance structure. Consequently, in comparison to hierarchies, contracts are ill suited to govern, for example, complex transactions replete with high degree of uncertainty or asset specificities.⁹²

We can also observe a third implicit assignment rule in some economic studies. For example, Stiglitz attempts to explain the underlying causes of inequality in the US by listing the various economic policies and legal institutions (e.g. the institutions relevant to executive compensation in US corporate governance system and tax exemptions for derivative transactions) that contribute to inequality.⁹³ To address inequality, Stiglitz then suggests the reform of these policies and institutions.⁹⁴ Similarly, Phelps argues that human flourishing should be the ultimate objective for the governance of the economy, then, he provides a list of institutions and policies that need to be reformed in order to maximize human flourishing.⁹⁵ This assignment rule starts with specific

⁹⁰ Bork (n 87) 69. See also: Richard Schmalensee, 'Thoughts on the Chicago Legacy in U.S. Antitrust' in Robert Pitofsky (ed), *How the Chicago School Overshot the Mark: The Effect of Conservative Economic Analysis on US Antitrust* (Oxford University Press 2008) 13.

⁹¹ Oliver E Williamson, 'Comparative Economic Organization: The Analysis of Discrete Structural Alternatives' (1991) 36(2) *Administrative Science Quarterly* 276–279. Oliver E Williamson, 'The Institutions of Governance' (1998) 88(2) *The American Economic Review* 75–76. Chapter 8 has already discussed how comparative organizational analysis (transaction cost theory of the firm) has been applied to the problem of corporate governance choice.

⁹² Williamson, 'Comparative Economic Organization: The Analysis of Discrete Structural Alternatives' (n 91) 285–286. Williamson, 'The Institutions of Governance' (n 91) 76.

⁹³ Joseph E Stiglitz, *The Price of Inequality: How Today's Divided Society Endangers Our Future* (W. W. Norton & Co. 2012) 1–51.

⁹⁴ *ibid.*

⁹⁵ Edmund S Phelps, 'What Is Wrong with the West's Economies?' *The New York Review of Books* (13 August 2015) <www.nybooks.com/articles/2015/08/13/what-wrong-wests-economies/>

objective, identifies the policies and institutions that have a considerable effect on this objective, and then assigns the function of enhancing this objective to these institutions. We can refer to this objectives assignment rule as *objective centered rule* because it starts from specific objective, then assigns the function of enhancing this objective to every policy and legal institution that may have considerable impact on this objective.

In short, although neoclassical law and economics scholars, to the best of my knowledge, have not conceptualized clearly the objectives assignment problem, they have already engaged with many questions that involve this difficult problem. To address these questions, and hence resolve the assignment problem underlying them, they have implicitly developed *three assignment rules*, i.e., one-instrument-one rule objective, comparative organizational analysis, and the objectives centered rule. In most cases, they use the former two rules as a twofold assignment rule.⁹⁶

Despite their usefulness, these three assignment rules, one instrument-one objective rule, comparative organizational analysis, and objectives centered rule, have their own problems. To understand these problems, we need to understand how these rules, particularly the first two rules, which are popular in law and economics thinking, would operate jointly. When applied, these rules would imply a high degree of *functional differentiation*⁹⁷ that is every legal institution would assume a specific function that it can implement at the least possible cost; most legal institutions would be assigned *distinct* functions; shared functions would be uncommon under these rules. Assigning the same function to more than one institution, most probably, would infringe the

⁹⁶ I faced the assignment problem in the course of the application of the systemic approach. It is one of the natural and complex systemic problems that scholars would normally confront in attempting to design any system. I could not find any concrete literature in law and economics scholarship on this specific problem. One reason is that this scholarship is largely concerned with fragmented institutional domains (e.g., corporate governance and competition law), without thinking systemically about the institutional networks in which these domains are embedded. The above assignment rules are *my interpretation* of how mainstream law and economics scholars approach the questions that involve the problem of objectives assignment. Doubtless, my interpretation may be mistaken and there may be other implicit assignment rules that I could not observe in the law and economics literature. In order to develop better assignment rules, future research on how law and economics scholars address the objectives assignment problem is of significant importance.

⁹⁷ Functional differentiation is a descriptive and analytical concept that I borrow from social systems theory. According to this theory, the society consists of social, economic, political, legal, art and science systems. Modernity is the process of *differentiating* these systems along *specific functions*. Not only each of these systems achieves specific functions distinct from those achieved by other systems, each system is also largely self-referential and autonomous from other systems and operates according to its own code (i.e., systemic logic). for a brief overview of functional differentiation, see: Niklas Luhmann, *Social Systems* (John Bednarz Jr. with Dirk Baecker trs., Stanford University Press 1995) 190–194.

comparative organizational analysis because at least one of these institutions can achieve the same function more efficiently. Further, the one instrument-one objective rule implies that, generally, no more than one function can be assigned to the same institution.⁹⁸ Hence, each institutional domain (e.g., corporate governance) would be assigned one function that is distinct from the function assigned to other institutional domains (e.g. labor regulation). Following the same logic, each institution of corporate governance would be assigned one function that is distinct from the function assigned to other institutions of corporate governance. In short, corporate governance would ignore labor concerns, and labor regulation would be detached from any concerns for corporate governance.

Systems operating under strong functional differentiation are efficient and productive, but highly fragile and non-resilient. These assignment rules by creating strong functional differentiation do not take into account *political economy* concerns, particularly the *resilience* of the legal institutions. Legal institutions reinforce the collective behavior of the beneficiaries of these institutions; they sustain the organizational capability of these groups. If an institutional domain has replaced another, it would bring into existence a new political equilibrium/new power structure.⁹⁹ Hence, for example, if labor markets are deregulated, while the social welfare system is amended to compensate for the lower protection of the labor (the so-called flexicurity), then, the deregulation of labor would involve disorganization of the labor; this weakly organized labor would not have the collective power required for sustaining the protective social welfare system.¹⁰⁰ This snowball of one legal change leading to another via the channel of the changes in the underlying power structures is a characteristic of strongly functional differentiated rules; if labor were protected only through labor regulation, labor would be organized around the institutions of labor solely. The collective power of labor would be much lower than if it is organized around

⁹⁸ In the cases where more than one function is assigned to an economic policy or a legal institution. One of these functions is considered the primary function, while other functions are considered secondary functions to be pursued only if they do not interfere with the primary function. The hierarchy of the objectives of the monetary policy of the ECB is a very good illustration of this point; the ECB's monetary policy is assigned a primary objective of maintaining price stability and secondary functions of supporting the other economic objectives of the European Union such as short-term stability of output and employment. See Article 127(1) of the Treaty on the Functioning of the European Union (TFEU) as Amended by the Treaty of Lisbon signed on 13 December 2007.

⁹⁹ Daron Acemoglu and James A Robinson, 'Economics versus Politics: Pitfalls of Policy Advice' (2013) 27(2) *Journal of Economic Perspectives* 175–179.

¹⁰⁰ Bruno Amable, 'Structural reforms in Europe and the (In)coherence of Institutions' (2009) 25(1) *Oxford Review of Economic Policy* 33–34. Acemoglu and Robinson (n 99), 177–178

additional set of protective institutions in corporate governance and social welfare system. If this is the case, the protective institutions in each of these spheres will be more resilient to change.¹⁰¹ More importantly, even if the labor failed to sustain its protection under one of these institutional domains, its failure would imply that the system would fail completely to protect labor, as other institutions would still compensate partially for the protective functions. Further, although the dissolution of a protective institution would weaken the collective power of labor, it may also signal the need for stronger resistance of changing any other remaining protective institutions and the call for re-introducing the old protective institutions. If there were only one protective institutional domain, its capture by the other stakeholders would imply the dissolution of the underlying beneficiary power structure and the loss of its protective functions for long time.

Resilience against political capture is not the only form of resilience. Institutional domains evolve, and over-time we may find that the institutional domain no longer achieves the assigned function. Nothing justifies the belief that institutions and the relevant socio-economic individuals operating over the institutional domain will reproduce themselves in every future point of time. For example, under the pressure of global capital, firms' management may focus on short-term shareholder value maximization instead of long-term value maximization and labor may *de facto* waive most of its rights under labor regulation. Due to this adaptive behavior of the management and labor, two critical functions of the functionally differentiated institutional network would be lost, namely, long term value maximization and labor protection. If these functions were shared among many institutional domains, the adaptive behavior of the management and labor may have worked differently, shifting the evolutionary path of the system toward a path that may largely approximate the assigned functions. For example, a stakeholder model of corporate governance would grant the labor the information and voice necessary to negotiate an adaptive path whose

¹⁰¹ In their defense of the assignment of the distribution function solely to taxation, Kaplow and Shavell have discussed the political economy concerns. They argue that if the legislature is captured politically so that it is unable to redistribute through taxation, it will be also unable to redistribute through other legal rules (e.g., tort rules). Kaplow and Shavell, 'Why the Legal System Is Less Efficient than the Income Tax in Redistributing Income' (n 86) 675. Their argument ignores the variation of the power structures and organizational forms underlying each institutional domain, and the way these power structures sustain these institutional domains. Once we consider these factors, their argument does not hold. The legislator may not be able to impose high taxation because the organizational power of those favoring high tax rates may be low; still, the legislator can impose or sustain existing distributive labor law or corporate governance institutions because those in support of the distributional effects of these legal institutions are able to organize efficiently themselves.

costs are shared between labor and capital. In contrast, the evolutionary path of a strongly differentiated system is highly unpredictable because the change in one institutional domain may involve a loss of a critical function of the system, along with a radical change in the power structure underlying legal institutions. In short, strongly functionally differentiated system lacks the resilience to loss of critical functions and does not ensure a more predictable evolutionary path or, at least, an evolutionary path operating largely along the logic of the current system.¹⁰²

In brief, the strongly differentiated institutional networks, created by the twofold assignment rule, lack resilience to political capture and to loss of critical functions, and fail to guide the evolution of the system along the systemic logic of the designed system.

More problematically, the above assigned rules ignore the *institutional embeddedness* of the institutional domains to which they assign function. If they consider the institutional network, it may turn out that the functions they assigned are horizontally or vertically inconsistent with each other. As the systemic critique of cost-benefit analysis in the previous chapter shows, although the legal institutions as a whole may be designed around the normative criterion of economic efficiency, the resulting legal institutions may be normatively inconsistent. Indeed, the normative basis of economic efficiency is normally combined with the above assigned rules so that the pertinent question normally is as follows: which institutional domain is *more efficient* in addressing *particular market or organizational failure*? Accordingly, a strongly functionally differentiated institutional network may not only lack complementarities; it may be also *highly inconsistent*. Particularly, although each institutional domain is assigned one function, it has a myriad of other distinctive effects that would interfere with the efficiency of other institutional domains in achieving their assigned function. Since these effects may be largely inconsistent or lack complementarities, the scope of designing inconsistent institutional network increases with the use of these assignment rules.

Particularly, in order to determine the most efficient institutional domain (governance structure) for achieving a specific function, the above assigned rules rely on the non-embedded

¹⁰² The above is an example of how a weakly functionally differentiated institutional network would provide a better guidance to the evolutionary process, although this network is necessarily less optimal and more costly. However, we may ignore the costs associated with weakly functionally differentiated institutional networks as long as these costs are below a reasonable threshold. This is a standard tension between reasonableness of regulatory design that takes into account the evolutionary character of the governed socio-economic system and the optimization of the regulatory design of the socio-economic system at one point of time, assuming away its evolution.

effects of these institutional domains. The embedded effects of these domains are not the basis of the application of these assignment rules, particularly the assignment rule of comparative organizational analysis. Neoclassical law and economics investigates whether corporate governance or labor regulation is more efficient in protecting labor. It does not investigate whether corporate governance when combined with Schumpeterian competition law and bank-based financial system is more efficient in protecting labor. Their unit of comparison is the *non-embedded effects* of both corporate governance and labor regulation, assuming away institutional embeddedness, but as already argued in chapter 6, consistency analysis of the institutional domains assesses whether their *embedded effects* are consistent. By reliance on non-embedded effects, we risk designing an institutional network in which each institutional domain is assigned the function that it achieves most efficiently based on their *non-embedded effects*, however, once these institutional domains are combined, their embedded effects may turn out to be highly inconsistent, assuming that their non-embedded effects were consistent.

In sum, the above assignment rules assign the functions to institutional domains based on the comparison of *the non-embedded effects* of alternative institutional domains. When these institutional domains are combined, it may turn out that their non-embedded effects, and hence their functions are highly inconsistent. This is the problem of normative horizontal and vertical inconsistency discussed above. More problematically, even if these non-embedded effects and the functions designed in light of them to the institutional domains were consistent, the embedded effects of these institutional domains, which emerge when they are combined together, may turn out to be inconsistent. This would be more pronounced in relation to the distinctive effects of the institutional domains ignored in the assignment of one function to each of these domains (e.g., corporate governance effects on labor behavior and labor regulation effects on corporate governance) due to the higher probability of the inconsistencies of these effects.

Finally, besides being the least popular and conceptualized in law and economics scholarship, *the objectives centered assignment rule* ignores that each of the policies and institutions assigned the function of enhancing the central objective may affect other important objectives. The reforms that reduce inequality may hamper economic growth, and those that enhance human flourishing may thwart both equality and economic growth.

These critiques do not suggest that these assignment rules are useless. They just suggest that we need a more sophisticated set of objectives assignment rules. To develop these assignment

rules, we can learn three important insights from the above discussion. First, based on the above critiques, it becomes clear that *weakly functionally differentiated* institutional network outperforms *a strongly functionally differentiated* institutional network. Weakly functionally differentiated institutional networks are networks where the same function/objective is assigned to more than one institutional domain; hence, each institutional domain would normally assume more than one function. This is the *antithesis* of one instrument-one objective rule. Further, by assigning the same function to more than one institution, we also infringe the dictums of comparative organizational analysis, as we assign functions to institutions that may be more costly in undertaking these functions. Four reasons justify weak functional differentiation as a guiding principle to functions assignment. First, weak functional differentiation ensures the resilience of the network to *political capture*. Second, it would ensure its *resilience to loss of critical functions* in the course of its evolutionary process. Third, weakly functionally differentiated institutional networks would *guide the evolutionary process* of the capitalist system (i.e., the two-layered network) to ensure that the system does not drift away from the systemic logic underlying the design of the present institutional network. This particular argument runs counter a deep-seated conviction of neoclassical law and economics. As already argued in chapter 6, neoclassical law and economics approach is focused on optimization of the institutional network in the present point of time, but it largely ignores the evolutionary character of the socio-economic system to be governed by this institutional network.¹⁰³ Strong functional differentiation is an obvious optimization technique: it assigns each function to the institutional domain that maximizes the function subject to the least possible cost. Conversely, the evolutionary perspective suggests that this optimal institutional network may drift in the medium or long run into an evolutionary path that results in a system that fails to achieve most of the functions of the initially optimally designed system. If we factor in evolution into the design of the institutional network, we opt for a more costly institutional network in the short run (e.g., a weakly functionally differentiated one) that increases the probability of evolution along a desirable evolutionary path in the long run. Hence, we should differentiate weakly the functions of the current institutional network to the point at which the costs may start to exceed a reasonable maximum threshold. This more costly institutional network is reasonable and adaptive but not necessarily optimal.

¹⁰³ See section 8.1 of chapter 6 and references cited therein.

Forth, assigning one function to the institutional domain does not prevent the domain from affecting other desirable objectives. As shown in chapter 8, the shareholder value model affects many desirable objectives (e.g., capital accumulation, cost and access to finance, firms' learning and innovation incentives and capabilities). Allocating the protection of labor to labor regulation may mitigate but will not prevent *the negative effects* that shareholder value model may have on knowledge accumulation within the firm; particularly, the management, due to the pressures of the shareholder value model, has strong incentives to infringe labor law to transfer value to the shareholders at the cost of labor. Similarly, environmental regulations do not prevent the management of a shareholder value firm from bending these regulations for the sake of short-term shareholder value maximization. By acknowledging this fact, weakly functionally differentiated institutional network creates streamlined incentive structures, and thus reduces the high costs of legal enforcement. This is a cost advantage highly ignored in the calculus underlying strongly functionally differentiated networks.

Consequently, weak functional differentiation subject to maximum threshold of inefficiency costs should replace strong functional differentiation as a principle guiding the assignment of functions to legal institutions.¹⁰⁴

Another important insight emerges from the above discussion of the assignment rules and their critiques. In comparative organizational analysis, the comparison of the efficiency of the institutional domains in their ability to achieve specific functions at the least possible cost should be based on their *embedded and not non-embedded effects*. This would complicate the comparative organizational analysis because the embedded effects of the same institutional domain differ across the networks in which it is embedded. Moreover, the comparative organizational analysis should also include the various plausible models of the same institutional domain. It is unconvincing to argue that a specific institutional domain is more efficient in achieving a specific function than another domain if the comparison is based on a specific model of the former and a specific one of the latter. The argument can be convincing only if a specific model of the former is more efficient in achieving a specific function than all the plausible models of the latter. To recall, there are

¹⁰⁴ It is more convenient to think about weak functional differentiation as an assignment principle, and not as an assignment rule, because it does not provide a clear procedure to be followed for assignment of functions to legal institutions.

hundreds, if not thousands, of the plausible models of the same institutional domain, particularly when we consider the potentials for institutional innovation.

Once we consider the embedded effects and the various models of the same institutional domain as basis for comparative organizational analysis, we would immediately recognize that it is not possible to compare all the plausible models of the institutional networks based on their embedded effects. We have to select specific models and specific networks. With relevant to these models and networks, the comparative analysis based on the embedded effects of these models can be conducted. This implies that the analysis is now *relative to* the selected models of the institutional domains and the institutional network. The conclusions of the analysis would suggest that a specific model of the institutional domain is more efficient in achieving a specific function than a specific model of another institutional domain based on their embedded effects in a specific institutional network. Hence, this comparative organizational analysis cannot establish that a specific institutional domain is the optimal mechanism for achieving the objective.

In short, weak functional differentiation can function as a guiding principle for objectives assignment to legal institutions. Similarly, comparative organizational analysis based on the *distinctive embedded effects* of the compared institutions can function as an assignment rule, while acknowledging that the insights of comparative organizational analysis in this case are solely relevant to the *selected models of the institutional domains and the network* in which these models are embedded.

In addition to the above assignment principle (i.e., weak functional differentiation) and the above assignment rule (i.e., embedded effects based comparative organizational analysis), I suggest complementing them with an important *test* that I call *institutional capacities test*. The above discussion demonstrates that the neoclassical law and economics assignment rules assign the functions to legal institutions based on their *non-embedded effects*, but these functions should be assigned in light of their *distinctive embedded effects*. However, the embedded effects are always relative to some selected models of the institutional domains and the institutional network in which these models are embedded. We can select specific models and institutional network as basis for comparison of embedded effects, but we may think about the problem differently. We can ask the following question. *Over which objectives has the institutional domain a moderate or significant positive embedded effect?* For example, given our knowledge of the institutional networks of German, American, Japanese, British, and French capitalism, can any of the corporate

governance models in any of these networks moderately or significantly influence equity agency problem? Can any of these corporate governance models moderately or significantly influence credit agency problem? Can any of these corporate governance models moderately or significantly influence learning capabilities and knowledge accumulation? Can any of these corporate governance models moderately or significantly influence income distribution? If the answer to one of these questions (e.g., the first one) is yes, then, the *institutional domain* of corporate governance has *the capacity to produce positive moderate or significant embedded effects* that influence the relevant objective in this question (i.e., equity agency cost). If the answer to one of these questions is no, then, the institutional domain does not have the capacity to produce significant or moderate embedded effects to affect this objective.

We can even check the institutional capacities of the corporate governance model by using a *more informative test*. This test reads as follows. Assume that the institutional domain of corporate governance is designed to maximize only one objective (e.g., learning capabilities), and that it shall be embedded in an institutional network that would not reverse its non-embedded effects on this objective (i.e., its embedded effects shall approximate its non-embedded effects). Given these assumptions, can this model of corporate governance moderately or significantly influence this objective (i.e., firm's learning capabilities in our example)? If the answer is yes, then, the institutional domain has the capacity to produce embedded effects that influence this objective. If not, then, it does not have such *institutional capacity*. If it has this positive institutional capacity, we then ask whether this model of corporate governance has a moderate or significant negative effect on other desirable objectives. We apply this institutional capacity test in relation to each normative objective; we replicate the above test with reference to equity agency costs, then, with reference to credit agency costs, then, with reference to income distribution, etc. The net result of this test is the list of positive institutional capacities of the institutional domain of corporate governance, which is the sum of the positive capacities of *each of the models* of this domain designed to maximize only one desirable normative objective. This list will also include the objectives, over which each of these models has a significant or moderate negative effects. Hence, we can call this list "positive capacities and associated negative capacities list". It would be good if this list includes also the degree of confidence with which we know that the institutional domain has this moderate or significant effect. In sum, this list will inform us what corporate governance *can do and at which cost*. We can then replicate the same test with other institutional domains to

identify their *institutional capacities*.¹⁰⁵ Figure 10.3 represents the institutional capacities of the institutional domains of the society, including those of capitalism.

¹⁰⁵ Indeed, the proposed Institutional capacities test is the informal equivalent of the concept of *ideal points* in multi-criteria analysis. Ideal points are the maximum value of an objective that the policy variables (i.e., the institutional networks in our case) can achieve regardless of the negative effects these policy variables may have on the other objectives. Andre, Cardenete and Romero (n 3) 38–39. For example, suppose that the fiscal authority has a set of *feasible* fiscal policies (combination of expenditures and average tax rates) that it can use for influencing both economic growth and inflation. To determine the ideal value of economic growth, we simply maximize growth as a function of the fiscal policy subject to no constraints regarding inflation. This would give us the maximum economic growth that the fiscal policy can achieve, but this policy would clearly have a high cost of inflation. Indeed, in this case, inflation would reach its anti-ideal point (anti-ideal value) that is its worst possible value. We can replicate the analysis with reference to inflation to determine the fiscal policies that can minimize inflation regardless of their effects on economic growth to identify both the ideal point of inflation and the anti-ideal point of economic growth. For the details of this example, See: *ibid* 59–61. The ideal points reveal the fiscal policies’ maximum capacities in influencing each objective. Similarly, the institutional capacities test attempts to reveal the maximum capacities of the legal rules in influencing each of the desirable instrumental objectives. The matrix that includes both the ideal and anti-ideal values of the objectives (e.g., economic growth and inflation in our example) is called the “payoff matrix”. The payoff matrix ‘reports how much conflict there is between the objectives under consideration.’ *ibid* 38. For example, suppose our objectives are economic growth and reduction of unemployment rate. Suppose that when we maximize each of them, while ignoring the other, we find that the other objectives comes close to its ideal value; for example, when economic growth is maximized, unemployment comes close to its anti-ideal value. In this case, payoff matrix including the ideal and anti-ideal values of both growth and unemployment will show that there is almost no trade-off among these objectives. For the details of this example, see: *ibid* 94–95. Given that we have now a clear idea of the payoff matrix, we can think of the “institutional capacities list” as the *informal equivalent* of the “payoff matrix”. This institutional capacities list includes the ideal values of specific objectives and the associated anti-ideal values of other objectives achieved by the selected models of the institutional domain subject to our analysis. It is noteworthy that in case of more than two objectives, the ideal value of one objective attained by one institutional domain may not produce the anti-ideal values of other objectives because other models of the institutional domain may have a larger negative effect on the latter objectives. Only by having the complete payoff matrix (i.e., the institutional capacities list), we can identify the ideal and anti-ideal values for each objective, which correspond to their highest and lowest possible values given the institutional networks subject to the institutional capacities test.

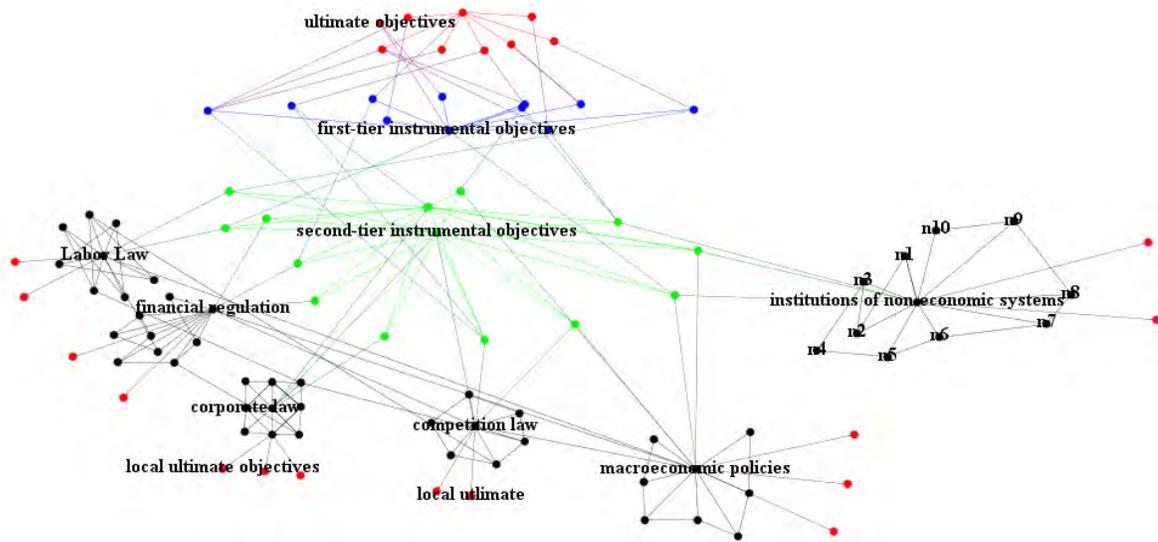


Figure 10.3: Institutional Capacities and Objectives Assignment. This figure captures the institutional capacities of each institutional domain by *linking* each institutional domain to the set of second tier instrumental objectives and ultimate local objectives that it can affect. Interestingly, the solution to the objectives assignment problem is to select some of the links that connect each of our institutional domains with the set of second tier instrumental objectives. In other words, this figure depicts also the assignment of the objectives, i.e., the solution to our assignment problem.

The institutional capacities test is not a sufficient assignment rule. Any model of the institutional domain (e.g. the stakeholder model of corporate governance) cannot have the complete list of the positive institutional capacities produced by the use of the institutional capacities test. Any model would only have some of these capacities. Still, the institutional capacities test provides us with a valuable piece of information that is what *the institutions of corporate governance can achieve*. It also provides us with a list of plausible models of corporate governance associated with a list of their positive institutional capacities and associated costs. In light of the institutional capacities of the institutions of corporate governance, we still need to assign *functions* to the corporate governance system. To do so, we need to complement institutional capacities test with the following: the weights given to our ultimate objectives in our systems of objectives, the systemic design concepts developed in chapter 6 (institutional hierarchy,

model supremacy, model dominance and model hierarchy), the weak functional differentiation principle, and the embedded effects based comparative organizational analysis.

In the following section, it will be clear how these rules can complement each other in assigning the functions to institutional domains because I will use some of them in assigning the functions to the institutional network of the supply side of product markets. Here, I will illustrate briefly this process of functions assignment. First, we may find that some of the institutional capacities of the corporate governance system are hierarchical to the institutional capacities of other institutional domains. This implies that only corporate governance can achieve this specific function adequately, and no other institutional domain can compensate for this function. In this case, we assign this function to corporate governance only if it is strongly desirable in light of its effects on the ultimate objectives of the economic system and the weights given to these objectives. Second, we may find that a specific institutional capacity of the corporate governance system affects significantly and positively a strongly desirable ultimate objective. To recall, the strongly desirable objectives are objectives that the society does not only desire to achieve its minimum threshold, but it also desires to achieve the maximum possible value of these them without compromising the minimum threshold of other objectives. If corporate governance system has a moderate or significant effect on a strongly desirable ultimate objective due to its moderate or significant effect on one of its instrumental objectives, this function should be assigned to corporate governance system, unless there is a strong reason not to do so. One strong reason is that the associated costs of achieving this objective through corporate governance system is pretty high as revealed by embedded effects comparative organizational analysis. Further, we may find that the institutional capacities of one model of corporate governance dominate those of other models, i.e., this model outperforms the other models in all of its distinctive embedded effects on desirable normative objectives. As already discussed in chapter 6, this model is then embeddedly dominant and should be adopted, unless there is a strong reasons for not doing so. In sum, once we have a clear idea of the institutional capacities of corporate governance, then, we can efficiently assign functions to the corporate governance system using one or more of the systemic institutional design concepts outlined in chapter 6, the weak functional differentiation assignment principle, and the assignment rule of the embedded effects based comparative organizational analysis.

In addition to these assignment rules, the objectives centered assignment rule can provide us with important insights in assigning the functions to institutional domains. If we take every central

instrumental objective in our assessment criteria (e.g., allocative efficiency, innovation, income equality) and then ask what are the legal institutions and economic policies that have a positive non-embedded effect on this objective. Then, we create a list of these institutions and policies. We may find an emerging set of the institutions and policies *common* across these lists. These overlapping institutional domains *would seem* to be better suited for the design of *a consistent* institutional network because of sharing positive non-embedded effects on most of the central instrumental objectives in our assessment criteria. Still, we need to test whether they would be consistent when combined together because their embedded effects may largely diverge from their non-embedded effects, although this seems to be a low probability because they already share most of the positive effects on the same set of objectives. This assignment rule can be called *overlapping functions/objectives rule*. It complements the objectives centered rule, while avoiding its critique. Interestingly, it does not only assign the functions to the institutional domains, it also suggests an institutional network that may turn out to be reasonable if passed the consistency assessment.

So far, we have developed an important assignment test complemented by the systemic design concepts developed in chapter 6 and four assignment principles and rules: the institutional capacities test complemented by weak functional differentiation, embedded effects based comparative organizational analysis, and objectives centered rule complemented by overlapping objectives rule.

In addition to these rules, the scholar must recognize the importance of intuition, pragmatism, experimentation, and imagination in assigning functions to institutional domains. Since the objective is not to design the optimal institutional network that maximizes our ultimate objectives (i.e., capabilities expansion in our case) at the least possible cost, but to design a network that reasonably achieves these ultimate objectives, the goal is to make a reasonable, not an optimal, assignment of these objectives. Due to the obsession with optimal assignment of functions reflected in the assignment rules of neoclassical law and economics scholarship, I have already shown that it is impossible to establish that a specific model of an institutional domain optimally achieves specific function. The most that we can establish is that it is more efficient than a specific model of another institutional domain with relevant to specific institutional network. Mathematically, the problem is even more complex. Assume that we have only five objectives (allocative efficiency, productive efficiency, innovation/dynamic efficiency, learning, capital accumulation). As already shown in chapter 6, we have thousands of plausible institutional

networks and the embedded effects of the institutional domains, particularly given their complementarities, vary across these plausible networks. This implies that for each institutional network, given the embedded effects of the institutional domains, there is a neoclassical *optimal assignment* of the above five functions. This assignment would result from following the embedded effects based comparative organizational analysis along with one-instrument-one-objective rule. This implies that we would have thousands of networks, each with its own optimal assignment of functions. The optimal assignment of functions for each institutional network may require some changes in the institutional domains to best suit their assigned functions. Still, although assigned according to optimal assignment rules, the functions would be assigned differently across these networks because of the difference in embedded effects of the domains in each network. Once we have the set of the institutional networks, in each of which the functions are assigned optimally, we have to compare the performance of these networks to identify the network that maximizes our five objectives at the least cost. Only this institutional network is the one where the functions have been assigned optimally! Ironically, after this extensive search for optimal assignment of the functions, we may end up with a strongly functionally differentiated institutional network that drifts into undesirable evolutionary path. Reasonableness is not only a design concept for the institutional networks; it is also a design concept that guides the assignment of objectives to legal institutions.

In short, we developed the assignment test of institutional capacities complemented with the systemic design concepts of chapter 6, the assignment principles of weak functional differentiation and reasonableness of functions assignment (that justifies the use of intuition, pragmatism and experimentation), and the assignment rules of embedded effects based comparative organizational analysis, objectives centered rule complemented by overlapping objectives rule. Given the institutional capacities test and the assignment principles and rules, we can now attempt to tackle our vexing problem that is which *instrumental objectives/functions* to assign to the institutional network governing the supply side of the product markets in order to contribute reasonably to the expansion of humans' capabilities. This is the subject of our following sub-section.

5.2. Assignment of Functions (Instrumental Objectives) to the Institutional Network of the Supply Side of Product Markets

As already mentioned, in order to assign functions to the institutional network of product markets, we need first to assign functions to the larger network of institutions and policies governing the capitalist economic system, which enable the economic system to contribute reasonably to the capabilities expansion of the individuals. Hence, we need to address two functions assignment problems. First, given the ultimate objective of the capabilities expansion, what should be the functions assigned to the governance of the economic system? Second, given the functions assigned to the governance of the economic system, what should be the functions assigned to the institutional network of the supply side of the product market so that the latter can contribute reasonably to the attainment of the functions assigned to the economic system? Each of these assignment problems are addressed in turn.

As suggested by the above assignment principles and rules, to address any functions assignment problem, we always start with *the institutional capacities test*. To apply this test to the problem of assigning functions to the economic (regulatory and non-regulatory) governance of the economic system functions assignment, we must start from the *main objectives* that the *economic system can moderately or significantly influence*, and which are required for the expansion of the political, social and economic capabilities. Clearly, economic growth comes at the top of this list of the objectives that are required for reasonable expansion of individuals' capabilities, and which can be significantly influenced by the governance of the economic system.

As an instrumental objective to capabilities expansion, growth is of particular significance in developing economies because the major *non-disputed economic problems* that developing countries are suffering, namely, poverty, unemployment, lack of infrastructure, and lack of high quality publicly provided education, health care and pensions cannot be addressed without sustained reasonable rates of economic growth. The development experiences of China, South Korea, and Japan demonstrate that the high rate of economic growth was the main instrument through which these countries were able to address many of these economic problems.

Nonetheless, the obsession with growth may be disastrous. Not only high rates of economic growth may be achieved at the cost of environment or the exploitation of domestic labor to attract

foreign direct investment. Obsession with growth may involve the choice of growth strategies that exacerbate or marginally address the economic problems it seeks to resolve. Developing countries, for example, may impose low capital taxation to attract foreign direct investment and prevent the flight of domestic capital; this growth strategy may reduce the tax revenues required for financing education, health care, and infrastructure. Further, obsession with growth may obscure the fact that non-economic growth based solutions can have significant positive effects on some major economic problems.¹⁰⁶ Amartya Sen, rightly, argues that the cost of education and health care in developing economies is significantly lower than its costs in developed economies; middle-income countries can therefore provide education and health care to a large portion of their citizens,¹⁰⁷ particularly when civil society initiatives assist the governments of these countries. In short, economic growth should be a major objective for the governance of the economic systems of developing countries, but it cannot be their ultimate objective.

Growth is useless if not combined with *reasonable distribution of the fruits of growth*; otherwise, the capabilities of few individuals shall be expanded, while the rest will be lagging behind.¹⁰⁸ Indeed, Amartya Sen forcibly argues that inequality is a form of poverty even if the poor have already exceeded what is considered the absolute levels of poverty.¹⁰⁹ More importantly, as long as the fruits of growth are distributed fairly, along with fair distribution of wealth, reasonable rates of economic growth would have stronger effects on capabilities expansion in comparison to higher rates of growth combined with weak mechanisms for income and wealth distribution. In addition to their importance for expansion of capabilities, the government can significantly influence, through economic policies and legal institutions, income and wealth distribution. Hence, the latter should be assigned as further functions of the institutional network governing the economic system.

In addition to economic growth, income and wealth distribution, the governments of developing countries should assume the functions of addressing the above mentioned major economic problems in these countries, namely, poverty, unemployment, inflation, lack of infrastructure, and lack of high quality publicly provided education, health care, and pensions. Doubtless, addressing each of these problems would significantly expand individuals' capabilities.

¹⁰⁶ Sen, *Development as Freedom* (n 13) 46–49.

¹⁰⁷ *ibid* 47–48.

¹⁰⁸ *ibid* 44.

¹⁰⁹ *ibid* 90–94. Amartya Sen, 'The Living Standard' (1984) 36 *Oxford Economic Papers* 78–79.

Further, both legal institutions and economic policies have the *institutional capacities* to influence significantly each of these problems.

In short, the list of the above functions that I suggest their assignment to the legal institutions and economic policies governing the economic system clearly meet the institutional capacities test. Governmental policies and regulations can significantly influence each of the above objectives. Therefore, each of them reasonably contributes to the expansion of individuals' capabilities.

It is worthwhile, however, to compare this suggested list of governmental economic functions to the standard list of the economic functions of the government in public economics. In the standard view of the latter, the government is assigned the functions of macroeconomic stabilization, provision of public goods and quasi-public goods (e.g., education and health care), ensuring economic efficiency through correction of market failure, and income distribution.¹¹⁰ One can observe that most of the functions suggested in my above list (e.g., poverty eradication, unemployment reduction, wealth distribution, environmental protection, and economic growth) are strangely absent from this standard list of modern public economics. The reason is that wealth distribution has almost never been a serious concern for neoclassical economists, protection of the environment and natural resources is assumed under correction of market failures function (namely, negative externalities correction) and economic growth and poverty eradication are thought to be achieved if the government assumes the listed functions. Unemployment is also perceived to be resolved if the government assumes these functions, particularly macroeconomic stabilization.

¹¹⁰ Richard A Musgrave and Peggy B Musgrave, *Public Finance in Theory and Practice* (4th edn, McGraw-Hill 1984) 6–16. According to Musgrave and Musgrave, these are the objectives that the fiscal policy can influence; still, these objectives have become the standard neoclassical account of the role of the government in the economy, see, e.g., Joaquim Silvestre, *Public Microeconomics: Efficiency and Equity in Public Policy* (Edward Elgar 2012) 4–5. Although Boadway agrees to this list of functions of the government in the economy, he argues that modern public economics places more weight on the distributional function of the government, particularly its functions in providing education and health care. Robin Boadway, 'Public Economics and the Theory of Public Policy' (1997) 4a(30) *The Canadian Journal of Economics* 758. Eichhorn, however, develops another list of eight objectives for the economy that includes reduction of unemployment, price stability, reducing the gap in the balance of payments, economic growth, environmental protection, security (i.e., reduction of technological risks such as the risks of nuclear power), international competitiveness, resilience of the economy, and income distribution. Eichhorn (n 4), 291–292. Although many of these objectives are already included in the standard list of objectives in mainstream public economics, some of them (e.g., international competitiveness, security, and resilience and adaptability of the economy) seem to be missing. As we will see below, both international competitiveness and adaptability will be included in the list of the second tier instrumental objectives assigned to the institutional network of product markets in developing economies.

Despite their utmost importance, I leave the discussion of the omission of wealth distribution and environmental protection to future research. Here, it is noteworthy that most of the main drivers of economic growth already discussed above are not listed in the functions of the government such as formation and growth of the static and dynamic capabilities of the firms, market creation, and capital accumulation. This implies that once we include economic growth as a central systemic objective, many other instrumental objectives should be included as well.

What is more problematic with the traditional list of governmental functions in public economics is that many important objectives (e.g. unemployment reduction and poverty eradication) are assumed to be achieved through these traditional functions. It is not clear-cut which economic policies and institutional domains are primarily in charge of addressing these problems. Even we can conjecture that unemployment is the macroeconomic problem that macro-stabilization policies intend to resolve, it is not clear why the function of addressing unemployment is assigned to macroeconomic policies. Similarly, it is not clear why maintaining price stability is also assigned to monetary macro-policy. This list of governmental functions makes *implicitly* important *assignment of functions*, which call for serious discussions. To uncover these significant assignment decisions, we need to have a broader list for the functions of the government in the economy. Once we have this list, the implicit assignment problems can be made explicit, well conceptualized, and then can be tackled adequately. Consequently, my suggested list for the economic functions to be assigned to the government would be broad and it would include economic growth, macroeconomic stabilization, provision of public good and quasi-public goods (e.g., education and health care), income and wealth distribution, Poverty eradication, unemployment reduction, and environmental protection.

This proposed list of functions does not include correction of market failure because, as already argued, correction of some market failures may have negative or neutral effects on economic growth. If we place economic growth at the top of the functions assigned to the governance of the economic system, allocative efficiency should be placed in its rightful place as an instrumental objective that may contribute to economic growth, but not as an instrumental variable required directly for capabilities expansion similar to economic growth. It is a second-order instrumental objective. Otherwise, we would also include innovation, learning, and productive efficiency as functions of the governance of the economy, although they are just instrumental objectives

required for achieving its first-order instrumental objectives, i.e., the objectives that directly contribute reasonably to the ultimate objective, i.e., capabilities expansion.

Doubtless, the proposed list can be disputed. Some may prefer to exclude some objectives such as income or wealth distribution and others may prefer to include others such as power distribution. I do not need to counter-argue these arguments because this list relies on the principles of reasonableness of objectives assignment: if the economic system achieves a reasonable minimum threshold of each of these objectives, along with the local ultimate objectives that constitute necessary capabilities, the society would reach the socially acceptable minimum threshold of capabilities expansion. Many other lists of functions may reasonably expand the capabilities. However, I do not have to develop the *optimal list*; I just need to develop a reasonable one. A list that includes high growth rates, low income, and wealth distribution may be also reasonable, or a list that includes other objectives such as power distribution may be also reasonable, and may even expand the capabilities beyond the one that I am suggesting. Future law and economics studies can debate these lists and try to improve them. For the purposes of this chapter, this list is clearly reasonable because it meets the institutional capacities test and can reasonably achieve the minimum threshold of capabilities expansion, and thus we can use it as our starting point.

Consequently, we have resolved the first difficult assignment problem that is which *functions to assign to the (regulatory and non-regulatory) governance of the economic system* (instead of the social, political, science or education systems, for example) in order for this system to contribute reasonably to capabilities expansion. We resolved this assignment problem by using the assignment principle of reasonableness. We have opted for a list of objectives that can reasonably expand the capabilities of the individuals. We have also distinguished between first-tier instrumental objectives (e.g., economic growth) that must be included in the list because they directly contribute to capabilities expansion and second-tier instrumental functions (e.g., correction of market failure) that must be excluded from the list because they contribute to the first-tier instrumental objectives, but they do not affect directly the ultimate objectives. Given this list of the assigned functions to the institutional network of the economic system, we now turn to our second assignment problem that is *which of these functions should be assigned to the institutional network of the supply side of product markets?*

To address this question, we start as usual with the *institutional capacities test*. According to this test, we seek to identify *the objectives* in the list of objectives assigned to the institutional

network of capitalism, which can be affected moderately or significantly by the institutional network of the supply side of product market? To answer this question, we differentiate between the objectives that the institutional network of the supply side of product markets can affect directly, the objectives the network affects indirectly through affecting other objectives in this list of objectives, and the objectives this network affects only indirectly by influencing the intermediate objectives (i.e., variables) needed for achieving each of these objectives. Income distribution is a good example of the objectives that this institutional network can affect directly since the institutional domains of this network such as corporate governance and competition law affect this objective directly (see below for a discussion).

Not only the institutional network of product markets can affect some objectives in the list of functions of the institutional network of capitalism directly, it can also affect some of them *indirectly* through affecting other objectives in this list. Some of the objectives in the proposed list affect positively or negatively other functions in the list. As already argued, high rates of economic growth contribute to the reduction of poverty and unemployment and enable the increase of the governmental expenditures on the provision of education and health care. Economic growth is therefore an instrumental objective for the attainment of these functions. Similarly, the expansion of high quality education contributes to economic growth; education is an instrumental variable for the objective of economic growth. This suggests the need for understanding *the causal structure* of these objectives, an issue that shall be discussed in the following sub-section. Here, suffice it to say that it is unreasonable to assign the function of provision of education to the institutional network of product markets based on the significant influence this network has on economic growth. The fact that economic growth may have positive effects on other functions in the list of objectives of the network of capitalism suggests *giving more weight* to growth. However, this does not suggest assigning these other functions to an institutional network that contributes to them only indirectly through other objectives at the same tier of objectives (namely, the first-tier of instrumental objectives in our example) such as economic growth.

Most importantly, the network of product market affects some of the objectives in the list of functions of the institutional network of capitalism indirectly through affecting the intermediate objectives (i.e., variables) that are crucial for attaining these objectives. In order to identify these intermediate objectives, we must investigate which of these intermediate objectives can be influenced significantly by the institutional network of the supply side of product markets. This

suggests that we need, for example, to visit the relevant theories of economic growth to identify the most important variables driving economic growth (e.g., learning and knowledge accumulation). Then, according to the institutional capacities test, we inquire whether the institutional network of the supply side of product market can influence knowledge accumulation moderately or significantly. To apply the institutional capacities test for determining the institutional capacities of the institutional network of the supply side of product markets, we assume that all the institutional domains in the institutional network of the supply side of the product market have the single objective of maximizing learning and knowledge accumulation and assume sensibly that these institutional domains would be consistent. If the scholar knows that the resulting institutional network would be inconsistent, then, it is better to modify some of the institutional domains to ensure that the resulting network would be most likely consistent. Given these assumptions, we examine whether the resulting institutional network has a low, considerable, or significant effect on learning and knowledge accumulation. If the resulting institutional network of the supply side of product markets affects all the intermediate variables that drive economic growth marginally, then, the function of enhancing economic growth should not be assigned to this network. If it affects at least some of these variables significantly, then, economic growth can be assigned to this network if other assignment rules and principles support this assignment.

Hence, by using the institutional capacities test, what are the objectives in the list of objectives of the institutional network of capitalism, which can be affected moderately or significantly by the institutional network of the supply side of product markets? Obviously, *economic growth* is among these significantly affected objectives because industrial policy, competition law, and corporate governance have considerable effects on some of the major drivers of economic growth such as capital accumulation, learning and knowledge accumulation, and technical progress.¹¹¹ As already mentioned, the institutional network of product markets also affects considerably *income distribution* because competition law affects the distribution of profits among producers and consumers and corporate governance institutions affects the distribution of corporate revenues among the firm's stakeholders (particularly labor, creditors, shareholders, and the management).

Further, the institutional network has also a considerable effect on *macroeconomic stability* and *unemployment*. Cartels in times of economic downturns may cause stagflation, but they may

¹¹¹ See chapter 11 for a discussion of the relation between these institutional domains and economic growth and the references cited therein.

also enable the firms to survive the economic downturns without loss of productive capacity.¹¹² Further, corporate governance model affects the firms' access to and cost of both equity and debt capital in times of economic downturns, and thus may mitigate or exacerbate these downturns.¹¹³ In addition, as mentioned in chapter 8, the shareholder value system when combined with dispersed ownership structure of the firms may result in macroeconomic instability.¹¹⁴ Further, competition law affects macroeconomic stability through its effects on price rigidity.¹¹⁵

Consequently, these institutions of the supply side of product markets affect indirectly unemployment through their effects on the macroeconomic stability. In addition, the institutions of the supply side of the product markets are, arguably, the reason that the Japanese economy only suffers low rate of unemployment in times of economic downturns because these institutions (e.g., stakeholder corporate governance and labor law) requires the firms to adapt without resorting to firing incumbent employees.¹¹⁶ Further, industrial policy, corporate governance, and competition law affect the incentive structure governing the choice of production technique and technology, which affects capital-labor ratio. For example, the stakeholder model of corporate governance gives the firms' management strong incentives for capital accumulation and technological upgrading and low incentives for hiring outside employees to accommodate the preferences of the incumbent workers for increasing their productivity and their resulting earnings.¹¹⁷ This may result in some important macroeconomic effects such as rapid capital accumulation, high productivity per workers, and *high rate of unemployment*. Further, industrial policies supporting labor-intensive industries may have considerable effects on unemployment, if successful.

In short, the institutional network of the supply side of product markets has considerable effects on *economic growth, income distribution, macroeconomic stability, and unemployment, particularly in economic downturns*. This institutional network may affect other systemic

¹¹² For a discussion of this issue, see section 2.2.2 on competition law in chapter 11 and the references cited therein.

¹¹³ Mark Kelman, 'Could Lawyers Stop Recessions? Speculations on Law and Macroeconomics' (1993) 45(5) *Stanford Law Review* 1269–1272.

¹¹⁴ See section 4.4 on the insights of the French regulation school of economics in relation to the choice of corporate governance system in chapter 8 and the references cited therein.

¹¹⁵ *ibid* 1261–1266.

¹¹⁶ See the analysis of the effects of the post-war Japanese institutional network on firms' adaptability in section 2.4 of chapter 11 and the references cited therein.

¹¹⁷ Masahiko Aoki, 'Toward an Economic Model of the Japanese Firm' (1990) 28(1) *Journal of Economic Literature* 21–22.

objectives (e.g. education and health care) through its effects on economic growth. However, this institutional network does not seem to have any considerable effects on the other functions in the suggested list either directly or through intermediate objectives other than the objectives that it considerably influences (i.e., economic growth, income distribution, macroeconomic stability and mitigation of unemployment). Accordingly, based on the institutional capacities test, it is reasonable to assign these functions to this institutional network unless there are reasons for not doing so in light of the insights of other principles and rules of functions assignment.

Therefore, the pertinent question is whether there are reasons for not assigning these four functions to the institutional network governing the supply side of product markets. One function among these four functions, economic growth, does not seem to be disputed. First, given the economic conditions of developing economies, it is reasonable to consider economic growth as a strongly desirable objective; particularly, economic growth has strong positive effects on the other first-tier instrumental objectives. Economic growth is almost a hub in the network of the normative objectives (see below). Given this high weight given to economic growth in the system of objectives, institutional networks that have the capacity to contribute considerably to economic growth should be assigned this function. More importantly, if the network of the supply side of the product markets is not conducive to economic growth, other institutional sub-networks of the institutional network of capitalism cannot *solely* achieve reasonable the desirable level of economic growth in developing economies. How can the institutional network governing financial markets or labor markets contribute significantly to economic growth if the firms in the economy are largely inefficient? How would demand-side policies affect economic growth if the firms were lacking adequate level of competences and capabilities, particularly learning capabilities? The institutional network of the supply side of product markets has a *hierarchy* over other institutional domains in relation to economic growth; other institutional domains cannot *compensate for* the embedded effects of the institutional network of the supply side on economic growth.

Although the assignment of the function of economic growth to the supply side of product markets can be hardly disputed in light of the above arguments, this is not the case in relation to the other functions. As to income distribution, from a neoclassical perspective, taxation seems to be a reasonable alternative that may distribute income *more efficiently* than the legal institutions

of product markets.¹¹⁸ Similarly, from neoclassical and Keynesian perspectives, both demand side policies and monetary policies seem to be reasonable alternatives for achieving macroeconomic stability and mitigating unemployment at lower cost.¹¹⁹ Therefore, to determine whether to assign income distribution and macro-stability functions to the institutional network of product market, we may make the following comparison. We may compare, on one hand, the costs of using a combination of *fiscal and monetary policies and the institutional network of product market* to achieve specific levels of these functions with, on the other hand, the costs of using solely fiscal and monetary policies to achieve the same functions. To undertake this comparison, we may use the embedded effects based comparative organizational analysis to determine, but this would not be necessary since other functions assignment rules and principles are sufficient for determining whether to assign income distribution and macro-stability functions to the institutional network of product market in addition to macroeconomic fiscal and monetary policies.

First, assigning the function of income distribution to taxation involves strong functional differentiation, where the income distribution function is allocated to a single institutional domain that is taxation. Weak functional differentiation suggests that we should assign this function to other institutional domains as well such as the institutional network governing the supply side of product markets.¹²⁰ Second, as regards macroeconomic stability and unemployment reduction, legal institutions such as competition law and corporate governance, as argued above, may have a considerable impact on macroeconomic stability.¹²¹ If unemployment is one of the acute problems that developing countries are suffering and thus should be given high weight in our systems of normative objective, then, the institutional network of the supply side of product market should complement demand side policies in the reasonable attainment of the objective of unemployment reduction. Particularly, demand side policies and monetary policies seek to regain the macro stability when disturbed, while the institutional network of product markets may cause this instability in the first place due to, inter alia, the high leverage in the private sector resulting from leverage buyouts and shareholder value corporate governance. Therefore, the institutional network

¹¹⁸ Kaplow and Shavell, 'Why the Legal System Is Less Efficient than the Income Tax in Redistributing Income' (n 86) 669–674.

¹¹⁹ For a brief outline of these positions, see: Kelman (n 113), 1235–1242.

¹²⁰ We still need to inquire whether other legal institutions such as labor or financial regulation, for example, may be more efficient in distributing income than the institutional network of the product markets. This question is left to future research projects.

¹²¹ *ibid* 1261–1266. *ibid* 1269–1272.

of the supply side of product markets should share with monetary and fiscal policies the function of sustaining macroeconomic stability.

Consequently, the institutional network of the supply side of product markets should be assigned the following four first-tier functions: economic growth, income distribution, macroeconomic stability, and unemployment reduction. Once we identify these first-order functions of the institutional network of the product markets, we need to investigate what are the instrumental second-tier objectives through which this institutional network affects the first-order functions. We need also to identify whether this institutional network directly affects any of these first-order functions. To do so adequately, we need to visit the relevant economic literature on economic growth, income distribution, macroeconomic stability (business cycle), and unemployment, and try to identify the channels through which this institutional network affects each of these first-tier objectives. We can also visit the literature that addressed how each of the institutional domains of this network affects each of these first-tier functions. Unfortunately, due to limits of space and time, I cannot undertake this fascinating task here. Instead, I will assume that the institutional network governing product market should be assigned only two functions: economic growth and income distribution. I will ignore the functions of macroeconomic stability and unemployment reduction for the purposes of this thesis. This simplifying assumption would significantly reduce the list of the second-tier functions assigned to this institutional network, while enabling us to focus on the most important undisputed function of this institutional network that is economic growth. Future research can include these additional functions and refine the below analysis.

5.3. The Multi-Assessment Criteria and The (Causal) Structure of the System of Objectives of the Regulation of Product Markets

5.3.1. The Multi-Assessment Criteria of the Compared Institutional Networks: the Second-Tier Instrumental Objectives and the Ultimate Local Objectives

The institutional network of the supply side of product markets affects its first tier objectives (e.g., economic growth) through affecting a set of second tier instrumental objectives (e.g. capital accumulation and firms' learning capabilities). In order to determine the institutional capacities of

the institutional network of product markets, we already had to answer the institutional capacities question of whether this network significantly or considerably influence economic growth. Although we have established that some institutional domains of this network may affect economic growth through one channel or another (i.e., through affecting specific second-tier instrumental objectives), we have not investigated all the possible second tier instrumental objectives affected by this institutional network. Depending on *the design* of the institutional network of product markets, this network shall affect different second-tier instrumental objectives. In order to assess the consistency of the compared institutional network with reference to economic growth, we need to identify the main factors that affect economic growth. Then, in the following chapter we can investigate whether the compared institutional network are consistent with reference to each of these factors (i.e., the second-tier instrumental objectives). Identifying the factors that drive economic growth is not an easy task due to the multiplicity of theories of economic growth across the numerous schools of economic growth. To identify these factors, we ignore whether the factor affects the rate or the level of economic growth because in either case, this factor has in the medium run important effects on aggregate GDP, and we can rely on the above-mentioned critiques of the neoclassical normative theory of economic regulation in light of development economics. Hence, we can list the following factors as important drivers of economic growth:¹²²

- a. Allocative (and reallocation) efficiency: refers to the allocation of the resources of the economy to its best uses in the economy;
- b. Productive efficiency: refers to minimization of unit production cost, i.e., the production of the same output at lowest possible costs subject to the constraint of holding technology and nominal wages of labor constant. The increase in labor productivity results in a decrease in their real wages;¹²³ this is still a desirable source of productive efficiency.

¹²² For a comprehensive list of the explanatory variables of economic growth, which includes also the variables that the institutional network of the product market does not affect such as geography, see: Aykut Kibritcioglu and Selahattin Dibooglu, ‘Long-Run Economic Growth: An Interdisciplinary Approach’ (2001) 13(4) Knowledge, Technology, & Policy 64–65.

¹²³ For example, over the period from 1999 to 2007, the average German labor’s productivity increased by roughly 8% resulting in a decline in Germany’s real unit-labor costs. Servaas Storm, ‘German Wage Moderation and the Eurozone Crisis: A Critical Analysis’ (8 January 2016). Institute for New Economic Thinking Blog <<https://www.ineteconomics.org/ideas-papers/blog/german-wage-moderation-and-the-eurozone-crisis-a-critical-analysis>>

- c. Dynamic efficiency/innovation: refers to process or product innovation such as development of new products, improvement of existing products, development of new technologies or improvement of existing ones;
- d. Firms' Learning Capabilities and Technical Catch-Up: refers to skilling of labor (e.g., whether the firms have strong incentives to invest in increasing the skill of labor, whether the workers have incentives to invest in assets specific to the firm, whether the firms have strong incentives for technological upgrading, and for increasing the productivity of labor, etc.)
- e. Capital Accumulation: refers mainly to the savings rate of the economy.
- f. International competitiveness: refers to the competitive comparative advantage the national industry enjoys in the global markets. This may be a direct effect of product efficiency, i.e., reduction in unit product cost holding quality of the product constant, or dynamic efficiency, i.e., process or product innovation.
- g. Creation of markets: refers to the creation of new product markets, i.e, investments in new products which are not produced locally, or products that are not produced globally;¹²⁴
- h. Firms' Adaptability/Flexibility: refers to the ability of the firms (i.e., the supply side of product markets) to '*efficiently adjust their goals and resources to changes, constraints, and opportunities* [e.g., predictable as well as uncertain and unpredictable changes in aggregate and sectoral demand, terms of international trade, or technology, etc.].'¹²⁵

The different designs of the institutional network of product markets would have either no effect or marginal effects on some factors that may affect economic growth (e.g., geographical factors), for which reason, they are not included here. Regarding the above list of explanatory factors of economic growth, one of these factors, i.e., firms' adaptability requires further

¹²⁴ Ha-Joon Chang, 'The Economics and Politics of Regulation' (1997) 21(6) Cambridge Journal of Economics 717–718.

¹²⁵ Tony Killick, 'Relevance, Meaning and Determinants of Flexibility' in Tony Killick (ed), *The Flexible Economy. Causes and Consequences of the Adaptability of National Economies* (Routledge 1995) 18. The adaptability of the firms to economic changes and opportunities is one dimension of the flexibility of the economic system; the other two dimensions include the adaptability of the individuals and the policy makers to economic changes and opportunities. *ibid* 7–17.

explanation of its inclusion in the above list; particularly, it seems to mitigate both unemployment and destruction of productive capacity in economic downturns, but does not seem to enhance economic growth. However, without this adaptation capacity of the supply side of the economy, the economic downturns would be prolonged and the economic growth in the post-recession period would be negatively affected by the destruction of productive capacities of the firms in the downturns.¹²⁶ This explains why it makes sense to include adaptation capability among the factors underlying economic growth. Still, one may argue that adaptation through demand side policies may be more efficient than adaptation through supply side policies. This may be true, but developing countries lack both fiscal resources and fiscal discipline required for conducting reasonable fiscal expansionary policies. Overcoming the constraints in the adaptability of the demand side of the economy of developing countries by expanding the adaptability of the firms on the supply side of the economy seems to be a more reasonable strategy for these countries.

As to the channels through which the institutional network affects income distribution, the institutional domains of this network, namely, corporate governance and competition law seem to affect income distribution directly. Corporate governance affects income distribution by creating mechanisms for the distribution of firm's revenue among the firms' stakeholders (the shareholders, managers, workers, and creditors).¹²⁷ Competition law affects income distribution through its effects on the distribution of income among producers and consumers. Further, models of competition law that result in intense price competition similar to the competition taking place in modern quasi-globalized markets affect the distribution of firms' revenues among the shareholders and workers because shareholders may tend to preserve the competitiveness and rate of profits of their firms by cutting the costs of labor.

¹²⁶ For example, unlike the American and British models of capitalism, the institutions of the institutional network of the supply side of the German and Japanese such as the corporate governance system seem to be responsible for the low bankruptcies rate of Japanese and German firms during the Global Financial Crisis of 2007-2009 and the stability of the unemployment rate of these economies during this period. See: Pavlos E Masouros, 'Corporate Governance and the Great Recession: An Alternative Explanation for Germany's Success in the Post-2008 World' (January 2014). Hellenic Foundation for European and Foreign Policy (ELIAMEP), Crisis Observatory Research Paper no. 8/2014, 14 <<http://ssrn.com/abstract=2388611>>

¹²⁷ Stiglitz, for example, argues that from an income distribution perspective, the American model of corporate governance favors the management at the cost of labor. Stiglitz, *The Price of Inequality* (n 93) 66-67.

In addition to the above list of second tier instrumental objectives (i.e., second tier assessment criteria), we need to investigate whether some local objectives gain an intrinsic value in the institutional spheres of the institutional network because they are constitutive of some capabilities or because ignoring them would involve an infringement of Kantian morality. This implies that we need to investigate the sphere of industrial policy (government-business relations), competition law (inter-firm relations), and corporate governance (intra-firm relations-relations among the firm's stakeholders). The literature on corporate social responsibility is a good example of how this investigation looks like. Due to time and space limits, I cannot go into the difficult normative discussion over the intrinsically valuable objectives in each of these local spheres of the institutional network of product markets. Instead, I would emphasize one important local ultimate objective that legal scholars can hardly counter-argue that is *the protection of the weak* in each of these spheres.¹²⁸

To conceptualize the weak in these spheres, we need to conceptualize the intricate concept of *power* in the economic system.¹²⁹ Bardhan provides a broad and accurate definition of economic power according to which 'A has power over B if A has the capacity to alter the game (preferences, strategy sets or information sets) in such a way that B's equilibrium outcome changes.'¹³⁰ Samuels developed a somehow broader conceptualization of power as 'a mutual coercion'.¹³¹ Both conceptualizations of power imply that in any economic activity/transaction, *each* economic actor has some *resources of power* (e.g., information, pre-commitment mechanisms, holding out-time limits, set of strategies/opportunity sets, and relevant costs of each strategy); the outcome of the interaction of the economic actors reflects, inter alia, their power resources. For example, workers, in many cases, have lower economic power than that of their employers; still, they enjoy some power (e.g., their capacity to shirk).¹³² This conceptualization of power focuses on power in

¹²⁸ Future research is required to expand the suggested list of multi-assessment criteria by adding other intrinsically valuable local objectives.

¹²⁹ For a concise overview of the concept of power in economic theory, see: Pranab Bardhan, 'On the Concept of Power in Economics' (1991) 3(3) Economics and Politics 265–274.

¹³⁰ *ibid* 274.

¹³¹ Warren J Samuels, 'Welfare Economics, Power, and Property' in Warren J Samuels and A. A Schmid (eds), *Law and Economics: An Institutional Perspective* (Martinus Nijhoff 1981) 12–14.

¹³² Bardhan (n 129), 272.

strategic interaction situations, one important instance of which is the employer-employee hierarchical relation within the firm.¹³³

Samuels' conceptualization of power is somehow broader because it involves also situations of non-strategic interaction. According to his definition, the individuals' feasible alternatives (i.e., opportunity set) and the relevant costs depend on the power structure, income distribution, wealth distribution, and choices made in previous periods.¹³⁴ The vector of prices that every individual in the competitive economy takes as given is a function of the initial distribution of income, wealth and power,¹³⁵ and thus each individual through its own choices affect the opportunity set of other individuals in each period through the effect of these choices on prices, income and wealth distribution. This broad understanding of power has two significant implications that Samuels highlights. First, the *efficient* outcomes of competitive markets depend on the *initial distribution of income, wealth, and power*.¹³⁶ In the critique of Pareto optimality outlined in the previous chapter, we have already seen that efficiency is a *relevant* concept to these distributions. A simple example can be illuminating. Consider a market with low unemployment rate and high degree of wealth equality where most workers have some wealth and another market with high unemployment rate and low level of wealth equality, where workers have few, if any, wealth. Given the above conceptualizations of power, the strategic negotiations among the workers and the employers in the first situation would ensure better working and occupational safety conditions. In other words, workers would reap most of *the economic surplus/gains of trade* in the former situation because of the increase in their economic power because given their wealth, they can reject jobs with bad working conditions, and given low unemployment rate, employers do not have much outside options. The reason is that perfectly competitive markets generate large number of Pareto optimal allocations (the contract set of efficient allocations) that correspond to each initial

¹³³ In property rights theory of the firm, an important variant of the new institutional theories of the firm, power is normally referred to as *authority* and it is derived from ownership and control of physical assets (in the property rights theory of the firm, there is no conceptual distinction between ownership and control rights; property rights over an asset confers both ownership and control rights). Those who have control of physical assets (normally the shareholders) have authority over those who need access to the physical assets to be productive (normally the workers). See: John Moore, 'The Firm as a Collection of Assets' (1992) 36(2-3) *European Economic Review* 496–498. Oliver Hart and John Moore, 'Property Rights and the Nature of the Firm' (1990) 98(6) *Journal of Political Economy* 1120–1121.

¹³⁴ Samuels (n 131) 27–31.

¹³⁵ *ibid* 36–38, and see the references cited therein.

¹³⁶ *ibid* 22–23. *ibid* 32–35. A. A Schmid, 'Institutional Law and Economics' (1994) 1(1) *European Journal of Law and Economics* 37–38.

distribution of income, wealth, and power. Further, the equilibrium allocation of the market in the contract set, which reflects the distribution of the economic surplus, depends also on the initial distribution of income, wealth, and power. That is why correction of market failure cannot ensure the attainment of a desirable or a *fair* allocation, unless the initial distribution of income, wealth and power is fair, which makes the fair distribution of income, wealth, and power among the *primary functions* of legal institutions of capitalism.¹³⁷

The second major implication for this conceptualization of power is that the main effect of legal institutions is that they directly affect *power resources distribution among economic actors directly*. The reason is that, as we may recall the conceptualization and function of institutions in chapter 6, legal institutions have direct effect on the opportunity sets, and the relevant costs of each feasible choice for relevant individuals.

Based on this conceptualization of power, the weak can be defined to include *three classes*. The first class is any person who may enter into and accept the terms of a transaction because he lacks the complete freedom not to do so (e.g., he lacks outside options), even if he will gain from this transaction in comparison to his status quo.¹³⁸ The second class includes any person who may be *exploited* in the course of an ongoing economic transaction (e.g., by being denied fair compensation or by being forced to deliver more than he has contracted for).¹³⁹ The third class of the weak includes anyone who cannot achieve his potential due to the conditions of the system in which he operates. The latter seems to be a counterintuitive class of the weak because it seems that it does not seem to involve the exercise of power by someone (the strong) over another (the weak) as the above relational concept of power implies. Indeed, governmental policies and regulations, the most significant forms of uses of *political* power by the government that largely reflects the

¹³⁷ In old institutional economics, these functions of law are referred to as ‘raising the plane of competition’, Bruce E Kaufman, ‘Economic Analysis of Labor Markets and Labor Law: An Institutional/Industrial Relations Perspective’ in Cynthia Estlund and Michael L Wachter (eds), *Research Handbook on the Economics of Labour and Employment Law* (Edward Elgar 2012) 85–86, and see the reference cited therein. Doubtless, in imperfectly competitive markets, power becomes even more concentrated. In this case, legal institutions should play an essential role in protecting the weak.

¹³⁸ Bardhan (n 129), 266–267. Bardhan captures well this class of the weak in his explanation of power, ‘the concept of power goes beyond the outcome of a given exchange and points to the fact that power may be centrally involved in causing the existing pattern (and in defining the existing parameters) of trade in the first place.’ *ibid* 267.

¹³⁹ This definition of the second class of the weak comes close from the conceptualization of power provided by Bowles and Gintis. Samuel Bowles and Herbert Gintis, ‘Power and Wealth in a Competitive Capitalist Economy’ (1992) 21(4) *Philosophy and Public Affairs* 338–341.

economic power of the private interests, shape the economic conditions and the economic actors' opportunity set (i.e., their feasible alternatives and their relevant costs).¹⁴⁰ Accordingly, the way the government exercises its regulatory power can be weakening or empowering to specific economic actors. This becomes clear once we recognize that many individuals who migrated from their developing economies to developed economies were able to gain highest prizes in their respective scientific fields or to establish highly successful businesses in technologically advanced sectors of the developed economies. One can immediately see that the socio-economic conditions of these developed economies were *empowering*. Many individuals in developing economies are *weak relative* to what they could have been become had they lived in different socio-economic conditions that reflect a more balanced power structures of the economy. If we use the capabilities framework of Amartya Sen, we can say that these individuals are denied the functionings required for achieving their potential capabilities. This is the most drastic form of weakness, particularly in case the person already understands his potentials and the constraining conditions of his environment. The person is denied his *future self*, while recognizing this form of deprivation that nobody except himself might be able to recognize. This is a severe form of unrecognized poverty resulting from structural forces of *weakening*. When this poverty is coupled with the individual's ignorance of his potential, the individual does not resist the existing power structures that produced these socio-economic conditions, but may work on reinforcing the conditions that has socially constructed his own deep deprivation and weakness.

Each class of the economic actors (e.g., workers, consumers, and minority shareholders) is not necessarily a *universal* category of the weak. Any claim that a specific class of economic actors (e.g., the labor) is a category of the weak in the economic system regardless of the economic context of this class of economic actors and the heterogeneity among its members is a very strong claim that is difficult to substantiate. For example, in perfectly competitive labor markets with low matching costs and excess demand for labor, labor in these (rarely existing) markets does not seem to be a valid category of the weak. To claim that a specific class of economic actors is among the weak, the claim should be always made with reference to *specific categories of this class of actors* (e.g., unskilled labor) and with reference to *specific context* (e.g., monopsony labor market) where both the sources and forms of weaknesses are clearly identified.

¹⁴⁰ Samuels (n 131) 67–69. See also: Douglass C North, *Institutions, Institutional Change and Economic Performance* (Cambridge University Press 1990) 48–51.

Given the above conceptualization of the three classes of the weak in the economic system, we can argue that *in specific situations*, shareholders, labor, and local communities of the firm in the corporate governance sphere might belong to one of the three classes of the weak. Similarly, some subsets of the consumers in the product market sphere belong to the weak, and the SMEs and small entrepreneurs belong to the weak in the sphere of influence of industrial policy. We now turn to explain why these economic actors in specific economic conditions belong to one of the three classes of the weak in the capitalist economic system.

In dispersed ownership firms, shareholders are susceptible to expropriation by the management; they are obviously weak in this sense. In absence of legal protection, diversification would protect them, but given the riskiness of equity, they would invest most of their portfolios in debt with its lower returns. In other words, they would be denied from the potential to invest in higher returns assets, and in case they decided to make the investment, the management may expropriate them. They are clearly weak according to the above definition. In the case of concentrated ownership, the blockholders are no longer weak, but the minority shareholders are weak only if the law does not provide them with any mechanism against *outright excessive expropriation* by the controlling shareholders. Both shareholder and stakeholder models of corporate governance in some developed economies (e.g., Japan and Germany) provide this minimum protection,¹⁴¹ and thus we can exclude them from the category of the weak. Doubtless, they may receive lower returns on their investment under one model of corporate governance in comparison to the other, but this does not justify considering them weak, unless this lower return is due to *outright expropriation* and not due to the difference in the objectives of corporate governance implicated by the governance model.

¹⁴¹ For example, the private benefits of control of majority shareholders in the Japanese and German stakeholder models of corporate governance are *not excessive* in comparison to the corporate governance system of other jurisdictions such as France and Italy. Reinier Kraakman and others, *The Anatomy of Corporate Law: A Comparative and Functional Approach* (2nd edn, Oxford University Press 2009) 107–110, and see also the references cited therein. The authors suggest that pyramids and corporate groups, and not concentrated ownership and employees' participation, are the main reasons for high private benefits of control. This suggests that in *some* capitalist economic systems, *some* models of stakeholder corporate governance can provide a reasonable protection of minority shareholders against outright excessive expropriation.

The workers in situations of hold-up resulting from their asset specific investments,¹⁴² in situations of excess supply of labor,¹⁴³ and in situations of imperfectly competitive labor markets,¹⁴⁴ are a salient category of the *weak* in developing economies.¹⁴⁵ In these economies, there is an excess supply of low-skilled labor and monopsonic labor markets where the firms have strong powers in setting wages and determining working conditions.¹⁴⁶ Further, in developing economies, some categories of high skilled labor, although highly paid, receive much lower returns on their labor in comparison to equivalent labor in developed economies.¹⁴⁷ Many reasons explain this issue such as developing countries' specialization in low-knowledge products¹⁴⁸ and lack of positive externalities of knowledge because the working environment has low number of high skilled labor. Further, high skilled workers in developed economies lack outside options because of the low number of the firms in developed economies that demand their skills. In other words, there may be excess supply of *some* categories of high skilled labor in developing economies, precisely because the demand is too low, and the firms that demand this type of labor enjoy a monopsony position in labor markets. Doubtless, this does not apply to all high skilled labor in developing economies; these economies, for example, suffer from low supply of high skilled managers; the latter are hence cannot be considered weak in the sphere of corporate governance in developing economies.

Among the weak category of labor are the females, ethnic and religious minorities, and children because they are subject to extensive forms of exploitation in the labor markets of developing economies. However, I will exclude their protection as a criterion for assessment of the institutional network because the few pages of the next two chapters cannot be accommodate such intricate analysis. Further, their protection should be shared among corporate governance and

¹⁴² Giulio Palermo, 'Misconceptions of Power: From Alchian and Demsetz to Bowles and Gintis' (2007) 31(2) *Capital & Class* 156–159.

¹⁴³ Bowles and Gintis (n 139) Palermo (n 142), 159–162

¹⁴⁴ Kaufman, 'Economic Analysis of Labor Markets and Labor Law: An Institutional/Industrial Relations Perspective' (n 137) 74–75. Kaufman, 'Labor Markets and Employment Regulation' (n 84) 26–27.

¹⁴⁵ In the old institutionalist perspective, the imbalance of power between the employers and employees is the main source of labor's problems (e.g., low wages and poor working conditions such as long working hours), see: *ibid* 30–31.

¹⁴⁶ *ibid* 26–27. Kaufman, 'Economic Analysis of Labor Markets and Labor Law: An Institutional/Industrial Relations Perspective' (n 137) 83–84.

¹⁴⁷ Joseph E Stiglitz, 'Markets, Market Failures, and Development' (1989) 79(2) *The American Economic Review* 197.

¹⁴⁸ *ibid* 198.

other laws (e.g., labor law, children labor regulation and anti-discrimination laws); this requires resolving the difficult question of how much of this objective should be assigned to each of these institutional domains.

Similarly, due to negative externalities that the firms may impose on its local communities who find it difficult to organize due to collective action problems, local communities are an important category of the weak; their human rights and environmental capabilities can be compromised due to firms' operations. I will not however include their protection into the criterion of protection of the weak because the next two chapters cannot adequately accommodate the analysis of the effects of the institutional networks on local communities. Particularly, the objective of protection of local communities should be *shared* among corporate governance, environmental regulation, and human rights laws, which would require engagement with the latter regulations as well in the compared jurisdictions. Future research can therefore extend the analysis by including the protection of local communities in the multi-assessment criteria.

Small entrepreneurs and SMEs are another salient category of the weak in developing economies in the sphere of the supply side of product markets. High skilled workers are a very poor pool for entrepreneurship in developing economies; due to non-compete clauses, they cannot establish their own businesses while working for their employers. Due to lack of risk capital, they lack access to finance. Suppose that they had access to capital and left their jobs for taking the risk of establishing a capital or knowledge intensive businesses, they would confront fierce competition from technologically advanced foreign firms, a risk that they rationally abstain from assuming. If they were to go bankrupt, they would not have the temporary protection of social safety nets that are absent in developing economies. The would-be entrepreneurs, who never become entrepreneurs due to the economic conditions of developing economies, are suffering from an unrecognized form of poverty and weakness. Similarly, the SMEs in export oriented sectors and tradeable sectors suffer from their limited capacities to compete with foreign firms; they are obviously an important category of the weak in developing economies because they cannot achieve their potential given the competitive advantage of technologically, managerially and organizationally advanced foreign firms.

In the context of competition law, consumers are clearly susceptible to potential expropriation by producers operating in monopolistic or concentrated oligopolistic markets. Indeed, consumer welfare, and not total welfare of producers and consumers, has been the normative principle

underlying modern US antitrust law.¹⁴⁹ Similarly, as we have already seen in the previous chapter, consumers' welfare has been the basis for the social welfare function used for the assessment of optimality of growth rate in growth economics. The underlying reason is that all economic agents in the economy, shareholders, creditors, workers, pensioners, and unemployed, are *consumers*. By maximizing the welfare of the consumers, we are maximizing the social welfare of every economic agent.

Although the neoclassical normative theory seems to provide adequate protection for consumers, its concern with consumers' welfare however does not emerge from their protection as *weak individuals in the economic system*. As we have already seen, the subjective welfarism of the neoclassical normative theory of regulations does not give space to normative concepts such as power and the protection of the weak. Once we replace the subjective welfarism with our system of objectives that emphasizes, inter alia, the protection of the weak, consumers' welfare cannot become a normative concern, but rather the protection of *the weak subset* of consumers. This is also consistent with the prioritization of moral immaterial values to material values; we should not be concerned with how to increase the material welfare of consumers so that they reach the highest possible levels of material satisfaction; rather, we should be concerned with how to protect the weak subset of consumers.

Nevertheless, who are the weak subsets of consumers? In addition, should the regulation of the supply side of product markets be assigned the function of protecting them? The clearest weak subset of consumers are the poor because they are high sensitive to any marginal increases in their basic needs goods (e.g., food prices, transportation, and building materials as their prices affect housing's rent). In some developing countries (e.g., Egypt), this subset of consumers are protected through public subsidies to ensure affordable prices of these basic needs goods along with provision of many of these goods by publicly owned enterprises at competitive or even below cost prices.¹⁵⁰ In short, the protection of poor consumers is assigned to the social welfare policies, and not the regulation of the supply side of product markets.

¹⁴⁹ Kirkwood and Lande (n 87) 93–96.

¹⁵⁰ However, these subsidies in a developing country such as Egypt strain the fiscal budget resulting in governmental incremental cuts of these subsidies. See: Doaa Farid, '70 Million Reliant on Food Subsidies in Peril Amid Government Austerity and Mismanagement' *Daily News Egypt* (2 March 2016) <<http://www.dailynewsegypt.com/2016/03/02/70-million-reliant-on-food-subsidies-in-peril-amid-government-austerity-and-mismanagement/>>

Alternatively, one may argue that strict enforcement of competition law in relation to the relevant product markets of these basic needs goods may complement the social welfare policies.¹⁵¹ However, the problem is that if competition law is enforced strictly in these markets, while being relaxed in other markets, the firms in former markets may reallocate their resources to the latter markets. It seems that uniform application of competition law combined with these social welfare policies is a more efficient institutional combination than the reliance on non-uniform enforcement of competition law across the markets; particularly, the latter would open the door for rent seeking. Still, if public budgets cannot accommodate the financial support to the basic needs goods for the poor, strict enforcement of competition law in the markets of these basic goods can play a complementary role.

The second category of weak consumers includes middle-income workers, middle-income pensioners, and middle-income creditors who invest their savings in bank deposits. This category of consumers is vulnerable to *sharp, but not to moderate or low*, increases in prices. Competition law seems to be the main regulatory instrument for protecting this category of consumers against sharp increases in product prices.

In sum, the weak subset of consumers include the poor regardless of their economic role (e.g., the unemployed and the low income workers and pensioners) and it is more efficient to assign their protection to social welfare policies, while complementing it with strict enforcement of competition law in the product markets of basic needs goods when needed. The second category of the weak consumers includes middle-income workers, pensioners, and the subset of consumers who derive most of their income from investment in bank deposits; this category becomes vulnerable only when the price markups over the competitive price level increases beyond a reasonable threshold. Competition law seems to be the only adequate regulation for ensuring that price markups do exceed reasonable maximum threshold.¹⁵²

¹⁵¹ A similar argument is to give higher weight to consumers' surplus as an objective of competition law in comparison to producers' surplus in relation to basic needs goods, while giving higher weight to producers' surplus in relation to luxury goods. For a very short discussion of the weighted welfare standard as a normative basis for competition law, see: Wolfgang Kerber, 'Should Competition Law Promote Efficiency? Some Reflections of An Economist on the Normative Foundations of Competition Law' in Josef Drexler, Laurence Idot and Joël Monéger (eds), *Economic Theory and Competition Law* (Edward Elgar 2009) 106, and see also the references cited therein. *ibid* 114.

¹⁵² This threshold should also ensure that the permissible price markups do not cause high inflation rate.

In short, the weak in the supply side of product markets include, mainly, labor, small entrepreneurs, SMEs, the weak subset of consumers, the shareholders in dispersed ownership firms, and minority shareholders in case legal institutions do not prevent outright expropriation by the blockholders. In our compared institutional networks, minority shareholders are well protected against outright expropriation. Further, in Germany and Japan, concentrated ownership ensures the protection of the blockholders, while the US, a shareholder value model, provides a clear protection to dispersed shareholding. We can therefore exclude protection of shareholders as a criterion for assessment because it seems that all of our models achieve adequate level of protection at least as far as the dis-embedded effects of corporate governance institutions are concerned. Accordingly, the assessment criterion of the protection of the weak will include mainly the protection of labor, the weak subset of consumers, the entrepreneurs, and the SMEs.¹⁵³ In short, in light of the first-tier objective of economic growth, we have been able to develop a list of multi-factors that affect economic growth; the institutional network of product markets seems to have at least considerable effects over these factors. In addition to these growth-based multi-criteria, we

¹⁵³ One can observe that many of the sources of weakness of the above categories coincide with market imperfections (e.g., transaction costs resulting from hold-up problem, negative externalities, collective action problem, excess supply, and informational asymmetry between the management and shareholders). Still, the conceptualization of weakness (and of power) that resides on market imperfections is constraining because it does not include other sources of weaknesses indicated by non-mainstream economics (e.g., Marxian or feminist economics). Further, the equivalence of power (and weakness) with market imperfection may be theoretically unsound. See: Palermo (n 142), 167–176. Although these concerns are valid, one can accommodate them in two ways. First, the fact that some weaknesses are result of market failures does not imply that correction of these failures will correct the weakness unless these market failures are measured according to the objective theory of well-being adopted in this chapter. For example, the social cost imposed on local communities should be measured with reference to its effects on their capabilities rather than their willingness to pay or to accept. Second, future research should extend the analysis of the category of the weak by including sources of weaknesses other than market distortions, but to do so, the integration dimension of the integrated and systemic approach needs to be employed to ensure that these non-neoclassical sources of weaknesses (e.g., labor exploitation in Marxian thought) pass the relevant neoclassical-new institutional critiques. Further research is needed to extend the above analysis; particularly, to the best of my knowledge, legal scholarship has not engaged adequately with the *operationalization* of the concept of “power” in the economic system in a way that enables us to identify the weak, their sources of weaknesses, and the reasonable institutions for their protection in the capitalist economy. The above discussion shows that we must go beyond the rhetoric of *universal* Marxian labor exploitation to engage seriously with *contextual* understanding of power and the sources of weaknesses in the economy. This discussion demonstrates also the heterogeneity of each class of economic agents (not all workers or all consumers are necessarily weak). In other words, the degree and sources of weakness vary significantly among the weak subset of each class of actors. Further, the legal institutions adequate for the protection of each subset of the weak among the same class of actors are different: social welfare policies are suited to the protection of a subset of weak consumers, while competition law is more suitable for protection of another subset of weak consumers.

have included two other assessment criteria: income distribution and protection of the weak. The former is based on the first-tier function of income distribution of the institutional network, and the latter is an ultimate objective of the socio-economic system that is local to the spheres of the product markets.

5.3.2. The Causal Structure of the System of Objectives of the Regulation of Product Markets: Reasonable Normative Paths and the Weighting of the Instrumental Objectives

Still, the list of the first-order instrumental objectives (i.e., economic growth and income distribution) required for reasonable attainment of our ultimate objectives (i.e., capabilities expansion) and the above-listed second tier instrumental objectives required for reasonable attainment of our first-order instrumental objectives are *not sufficient* for guiding a reasonable design of the institutional network of product markets. The reason is that for guiding the design of reasonable institutional network, we need also to know the *weights* given to each of the first and second tier instrumental objectives; otherwise, we will design an institutional network that may positively affect these instrumental objectives, but fail to achieve the desirable level of the ultimate objectives. Prior to illustrating how the systemic approach can guide us in giving weights to the instrumental objectives of the institutional network, we demonstrate how neoclassical law and economics avoided the issue of weighting altogether.

Consider the case of trade-off among the second-tier instrumental objectives; this is an example where the *weights* of the second-tier instrumental objectives are crucial. How neoclassical law and economics resolve this trade-off? For instance, if a model of an institutional domain (e.g., the shareholder value model of corporate governance) reduces the cost of finance and enhances capital accumulation, but reduces firm's learning capabilities in comparison to an alternative model of the same institutional domain (e.g., the stakeholder model), should we adopt this model? Shareholder value model affects positively one of the explanatory factors of economic growth, but affects negatively another channel for economic growth. One may argue that since economic growth is the common first-order objective, we may assess whether the positive effects of this model of the institutional domain (the shareholder value model in our example) dominates its negative effects on economic growth. In other words, we assess the *net effect* of this model of the institutional

domain (i.e., shareholder value model in our example) on economic growth. Then, we assess the net effects of the alternative model of the institutional domain (i.e., the stakeholder model in our example) on economic growth. If the positive net effect of the former larger than the latter, then, a growth-based argument can be made in support of this model of the institutional domain. We can recall from chapter 8 that law and finance literature establishes that strong protection of public investors similar to their protection according to shareholder value model has a positive effect on economic growth;¹⁵⁴ the underlying mechanisms for this inconclusive empirical evidence are speculative. The empirically observed effect is the *net effect* of the legal institutions that protect public investors.

By focusing on the net effects of legal institutions on the desirable objectives (e.g., economic growth, and firm value), neoclassical law and economics avoids the issue of weighting the instrumental objectives/channels through which these legal institutions affect these desirable objectives. In other words, it avoids giving weight to the instrumental objectives underlying economic growth such as cost of equity finance and firms' learning capabilities, which are the channels through which corporate governance models affect economic growth. This traditional reductive way of thinking in neoclassical law and economics is problematic, however. It is just a form of cost-benefit analysis that attracts the same critiques of cost-benefit analysis already outlined in the previous chapter. Moreover, this neoclassical approach attracts further critiques; instead of developing a full-fledged critique of this neoclassical avoidance of giving weights to the instrumental objectives altogether, this section outlines the systemic answer to the weighting question. Then, this section and the following section, in light of this systemic approach to giving weights to the instrumental objectives in our system of objectives, outlines what will appear by then as a self-evident critique of the neoclassical avoidance to the weighting question.

First, according to the systemic perspective, we start the systemic analysis, as usual, by delineating the boundary and nature of the system to which the problem of weighting the instrumental objectives is embedded. This is the system of objectives of the institutional network of the supply side of product markets. This system of objectives includes the ultimate (systemic and local) objective of capabilities expansion and protection of the weak, the first-tier instrumental objectives (economic growth and income distribution) required for reasonable attainment of the

¹⁵⁴ See section 2 on the neoclassical-new institutional approach to the choice of corporate governance model and the references cited therein.

ultimate objective of capabilities expansion, and the second-tier instrumental objectives required for the reasonable attainment of the first-tier instrumental objectives (e.g., static allocative efficiency, productive efficiency, innovation, international competitiveness, and firms' adaptability). To have an initial understanding of the structure of this system, we can represent it by a network; figure 10.4 below illustrates how a network representation of the system of objectives of economic of the institutional network of the supply side of product markets would look like.

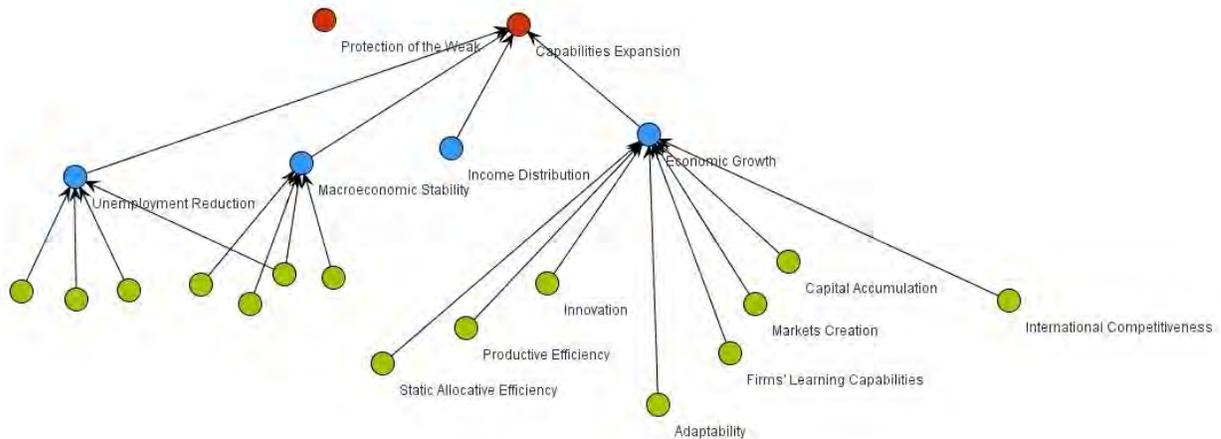


Figure 10.4: Network Representation of (the Structure of) the Proposed System of Objectives of the Institutional Network of the Supply Side of Product Markets. Red nodes represent the ultimate (local and systemic) objectives. Yellow nodes represent first-tier instrumental objectives (economic growth, income distribution, macroeconomic stability, and unemployment reduction). Green nodes represent second-tier instrumental objectives that have a moderate or significant effect on the first-tier instrumental objectives. This network graph is directed; the heads of the arrows represent the dependent variable/objective (e.g., economic growth) and the tail of the arrow represents the independent/explanatory variable/objective (e.g., innovation).

Given this network structure of the system of objectives of the institutional network of the product markets, we can conceptualize the problem of giving weights to the first and second instrumental objectives in this system of objectives to be a problem of determining a reasonable and efficient, but not optimal, *normative path* for the attainment of the ultimate objectives. In

network theory, a path is ‘a sequence of nodes with the property that each consecutive pair in the sequence is connected by an edge.’¹⁵⁵ For example, “innovation, economic growth, capabilities expansion” is a path in the above network of the system of objectives because it is a sequence of nodes (the nodes that represent innovation, economic growth, and capabilities) that are connected by links; innovation causes growth, which in turn contributes to capabilities expansion and thus they are interconnected. Since the paths in the network of the system of objectives are connecting *normative objectives*, I call them “*normative paths*”.

Each model of the same institutional domain (e.g., shareholder value and stakeholder models of corporate governance) may maximize one of the instrumental objectives at the cost of others. For example, the shareholder value corporate governance may maximize capital accumulation at the cost of innovation or learning capabilities, while the stakeholder model may maximize other instrumental variables such as the firms’ learning capabilities, technological upgrading, and distribution of income among the firms’ stakeholders. Accordingly, to compare these models of the institutional domain, we need to identify the *set of instrumental variables* that are *more crucial* to the reasonable attainment of the ultimate objective. The institutional domain model that positively affects this set of instrumental objectives shall be preferable. For example, if we know that given the economic conditions of a specific developing country, it suffers from strict financial constraints (take Greece as an example), capital accumulation, access to and cost of finance becomes *important instrumental objectives* in this country for enhancing economic growth. The desirable normative path for attaining the desirable level of economic growth in this country may therefore involve balancing capital accumulation, cost of and access to finance with learning capabilities. In another developing country where the firms, at least in the critical sectors of the economy, do not confront significant financial constraints in their access to finance, the desirable normative path may emphasize expanding firm’s learning capabilities. As the following chapter will demonstrate, post-war Japan seems to have opted for an institutional network that was almost entirely maximizing firm’s learning capabilities, while giving low weight to static allocative efficiency, and access and cost of (equity) finance. In sum, given the economic conditions of the country, its stage of economic growth, we need to choose an efficient, but not optimal, *normative*

¹⁵⁵ David Easley and Jon Kleinberg, *Networks, Crowds, and Markets: Reasoning about a Highly Connected World* (Cambridge University Press 2010) 26.

path for this country. Based on this reasonable normative path, we can attach *reasonable weights* to the first-order and second-order instrumental objectives.

This is an indicative example that informs us that the reasonable normative path for Greece may be different from the reasonable normative path for another developing country for achieving similar reasonable levels of economic growth and capabilities expansion. Still, *how exactly can we attach weights to first-order and second-order instrumental objectives; in other words, how exactly can we identify the reasonable normative paths?* This is a difficult question, but as long as we are concerned with identifying a reasonable, but not optimal, normative path, we can develop an answer as follows.

First, we investigate whether a minimum threshold of the instrumental objective is required. For example, even if the normative path will attach more weight to learning, a minimum level of access to finance and a maximum threshold for cost of equity financing should be identified. This implies that we need to identify the minimum thresholds of *some* of the second-order instrumental objectives, which are *necessary* for the attainment of the first-order instrumental objectives. Similarly, we must identify the minimum threshold of *some* of the first-order instrumental objectives required for achieving the desirable level of the ultimate objectives. We can call these sets of instrumental objectives, the *necessary instrumental objectives* because a minimum threshold of these objectives is indispensable for the attainment of the ultimate objectives in our system of objectives. Above these thresholds, these instrumental objectives can be traded off against each other according to their *relative weights*.

Second, for both necessary and unnecessary instrumental objectives, we can use a qualitative weighting scheme according to which we give the instrumental objective, low, medium, or high weight. If we can develop more sophisticated qualitative weighting schemes (e.g., low, medium, considerable, and large) or a quantitative weighting scheme, this would be better.

Third, as already mentioned and according to the diagnostic approach to economic development,¹⁵⁶ the economic conditions and stage of development of the country should be the

¹⁵⁶ The diagnostic approach to economic growth finds its theoretical foundation in the General Theory of the Second Best outlined in chapter 8. Ricardo Hausmann, Dani Rodrik and Andrés Velasco, 'Growth Diagnostics' in Narcís Serra and Joseph E Stiglitz (eds), *The Washington Consensus Reconsidered: Towards a New Global Governance* (Oxford University Press 2008) 327–330. Since the correction of all market failures in the economy is technically and politically unfeasible, each developing country should identify the factors of economic growth that represent binding constraints on their economic growth and then target the market failures associated with these binding constraints. *ibid* 332–333. For example, the

starting points for identifying the instrumental objectives that seem to be critical to the attainment of the objectives of the people of the country. This implies that developing countries should vary the weight of the instrumental objectives from one stage to another in their development process; in initial stages, they may put higher weight on economic growth, but in latter stages, they may increase the weight attached to environmental protection, for example.¹⁵⁷

Forth, the *significance* of the effect of the second-tier instrumental objectives on the first-tier objectives, and of the latter on the ultimate objectives should contribute to the weights attached to each of these instrumental objectives. For example, suppose that innovation have more significance effects on economic growth in comparison to static allocative efficiency; in this case, the former should be given higher weight than the latter. However, how can we know whether a second-order instrumental objective (e.g., innovation) has a stronger effect than another second-order objective (e.g., static efficiency) on a first-order instrumental objective (e.g., economic growth)? This question becomes more sophisticated when these second-order objectives (i.e., allocative efficiency and innovation in our example) have different effects on more than one first-order instrumental objective; for example, they may be affecting both economic growth and macroeconomic stability. The problem would be even more complicated if these compared second-tier instrumental objectives (i.e., static allocative efficiency and innovation) are interactive with each other (e.g., allocative efficiency increases innovation) and interactive with other instrumental objectives (e.g., innovation increases international competitiveness).¹⁵⁸ Interactions among the objectives in the system of objectives have important implications. For example, one of the second-tier objectives may have lower *direct* effects (e.g., innovation) than another second-tier instrumental objective (e.g., static allocative efficiency) on the first-tier instrumental objective (e.g., economic growth). However, In the case of interactions of second tier instrumental

binding constraint on growth in a developing country may be high cost of finance, while the binding constrain in another country may be its poor human capital. Since the binding constraint on economic growth differs from country to another due to their differences in the economic, social, political, and institutional conditions, the diagnostic approach to economic growth is context-specific in comparison to the universal neoliberal wholesale approach to socio-economic reforms.

¹⁵⁷ This was exactly the post-war Japanese developmental strategy, but it was not a result of a conscious design because environmental concerns were given higher weight after the rapid growth era due to societal pressure.

¹⁵⁸ To capture the interactions among the explanatory factors of economic growth, Kibritcioglu and Dibooglu develops a 'matrix of interactions' based on existing theoretical and empirical studies in growth economics. Kibritcioglu and Dibooglu (n 122), 64–65.

objectives, innovation may have stronger effects once we take into account its indirect effects on this first-tier instrumental objective (i.e., economic growth) through its effects on other second-tier instrumental objectives (e.g., its effects on international competitiveness, for example).

Given this complex picture, how can we determine whether a second-tier instrumental objective has a stronger effect on a first-tier instrumental objective than another second-tier objective? Two solutions may exist for this problem. First, we may rely on relevant economic theories and empirical evidence (e.g., economic growth theories) for identifying the relevant variables underlying each of our first-tier instrumental objectives (e.g. economic growth).¹⁵⁹ Still, this may not capture all the factors underlying economic growth. More problematically, these theories (i.e., economic growth theories in our example) will not capture how these variables (i.e., explanatory factors of economic growth) affect other first-tier instrumental variables (e.g., income distribution or environmental sustainability). Alternatively, some scholars have been developing comprehensive theories and models for explanation of more than one of our first tier objectives. They include, for example, models for equitable growth, where both economic growth and income distribution are dependent variables in these models,¹⁶⁰ and models for environmentally sustainable economic growth, where the dependent variables in these models are our first-tier objectives of economic growth and environmental protection.¹⁶¹ These more sophisticated models can provide us with important insights over the significance of some of the second-tier instrumental objectives as it may show that *some of these objectives considerably affect more than one of our first-tier instrumental variables*, which justify giving them more weight in our system of objectives. Still, developing a sophisticated model where all of our first-tier objectives (i.e., economic growth, income distribution, macroeconomic stability, and unemployment reduction) are included as dependent variables would be too complex.

Alternatively, we can use an important insight of the analytic network process; according to this insight, the weighting of the criteria (i.e., second-tier instrumental objectives in our system of objectives) should take into account their *interdependence*.¹⁶² To consider their

¹⁵⁹ *ibid.*

¹⁶⁰ see, e.g.: Mattias Lundberg and Lyn Squire, 'The Simultaneous Evolution of Growth and Inequality' (2003) 113(487) *The Economic Journal*.

¹⁶¹ See, e.g.: S. Smulders, M. Toman and C. Withagen, 'Growth Theory and 'Green Growth'' (2015) 30(3) *Oxford Review of Economic Policy*.

¹⁶² The analytic network process is one of the famous multi-criteria decision making methods, which was developed by Saaty. For an overview of this method, see: Thomas L Saaty, 'Fundamentals of the

interdependences/interactions, we can use the existing empirical studies as well as theories and models of economic growth, income distribution, allocative efficiency, innovation, environmental economics, and business cycles, which explain the factors underlying our first- and second-tier instrumental objectives. For example, we have already used economic growth theories to identify the relevant variables (second-tier instrumental objectives) driving economic growth, an important first tier instrumental objective in our system of objectives. Similarly, we identify the explaining variables of other first-tier instrumental objectives such as income distribution, macroeconomic stability in the short and medium runs, and environmental sustainability. Then, we will have a list of second-tier instrumental objectives underlying each of these first-tier instrumental objectives. Then, by using relevant theories, models, and empirical evidence, we determine the explanatory variables of each of our second-tier instrumental objectives, i.e., we identify third-tier instrumental objectives in the system of objectives. For example, we examine the factors explaining international competitiveness, an important second tier-instrumental objective in our system of objectives. We may find that productive efficiency, innovation, and firms' learning capabilities are crucial variables driving international competitiveness. This reveals important interactions among the second tier instrumental objectives, which the network structure of the system of objectives in figure 10.4 missed. Similarly, by using relevant empirical studies and models, we investigate the factors explaining innovation and add these variables as third-tier instrumental objectives in our system of objectives. In the process of identifying these factors, we would find out that, as already argued in chapter 8, firm's learning capabilities, an important second-tier instrumental objective, is a crucial determinant of firms' innovation capabilities. By replicating this process in relation to each of the second-tier instrumental objectives, we can then identify *the relations/interactions*

Analytic Network Process—Dependence and Feedback in Decision-Making with a Single Network' (2004) 13(2) *Journal of Systems Science and Systems Engineering*. The underlying logic of the technique of analytic network process is that 'In reality, the evaluation criteria are seldom independent, and the relationships between them are frequently characterized by a degree of interactivity, interdependence and feedback effects.' Liou, James J. H. and Tzeng (n 1), 677. Accordingly, these interdependence and feedback effects should be analyzed in order to derive realistic weights for each of the multi criteria. *ibid* 679. It is noteworthy, however, that the analytic network process is designed to help the decision-maker to attach consistent weights to the criteria, which reflect his *subjective* preferences, while the proposed network analysis of the system of objectives seeks to derive *objective* weights for the criteria based on their *capacity* to achieve higher objectives in the hierarchy of objectives.

among these second-tier objectives. We may find one of them has a low, considerable, or a significant positive or negative effect on other objective.¹⁶³

By using a similar process, we can also identify the interactions among the first-tier instrumental objectives. As already argued in the previous section, economic growth seems to affect positively most of the first-tier instrumental objectives of the institutional network of capitalism (e.g., provision of high quality education, health care, and reduction of unemployment and poverty). Moreover, some first-tier objectives may affect positively second-tier objectives; for example, equitable income distribution may give workers stronger incentives for hard working because they may perceive their wages to be fair; this would increase the productive efficiency of the economy. Productive efficiency is an important second-tier instrumental objective that positively affects economic growth.

Once we have identified the interactions among the first and second-tier instrumental objectives and the interactions among each of them, we can then construct a richer network of our system of normative objectives, which represents these interactions. See figure 10.5 below. The structure of this network can provide us with valuable information that we can use for determining the weights given to each objective. For example, the instrumental objectives that appear to be hubs in the network¹⁶⁴ should be given higher weight because enhancing these instrumental objectives would involve considerable indirect (second-order) positive effects within the network. Similarly, instrumental objectives that are connected in closed reinforcing feedback relations may be given low or medium weight because affecting one of them positively would trigger the positive feedback loop that would ensure an exponential growth of this objective. Instead, more weight should be given to isolated nodes in the network of the system of objectives because they can be enhanced only through direct regulatory interventions that target them. Income distribution seems a good example of these isolated nodes in our system of objectives because it is affected directly

¹⁶³ The relations among the instrumental variables are not necessarily causal; they may be constitutive relations, i.e., relations of aggregation. For example, the first-tier objective of macro-income equality may be equal to the sum of the distributional micro-effects of economic policies and institutions. To ensure conceptual clarity, we must therefore conceptualize the type of the relations among the instrumental variables.

¹⁶⁴ In directed networks, hubs are the nodes that have considerable number of inward and outward links. If all (or most of) the links are inward, then, targeting this hub would not result in any significant second-order effects. Further, we must distinguish between hubs whose most of their links refer to positive effects on other objectives and hubs whose most of their links refer to negative effects on other objectives. The former should be given high weight and the other should be given the least possible weight.

by the institutional domains; other instrumental objectives in the system of objectives do not seem to have moderate or significant effect on income distribution. This suggests that more weight should be given to income distribution in our system of objectives of the institutional network of the product markets, unless there is a strong reason not to do so.

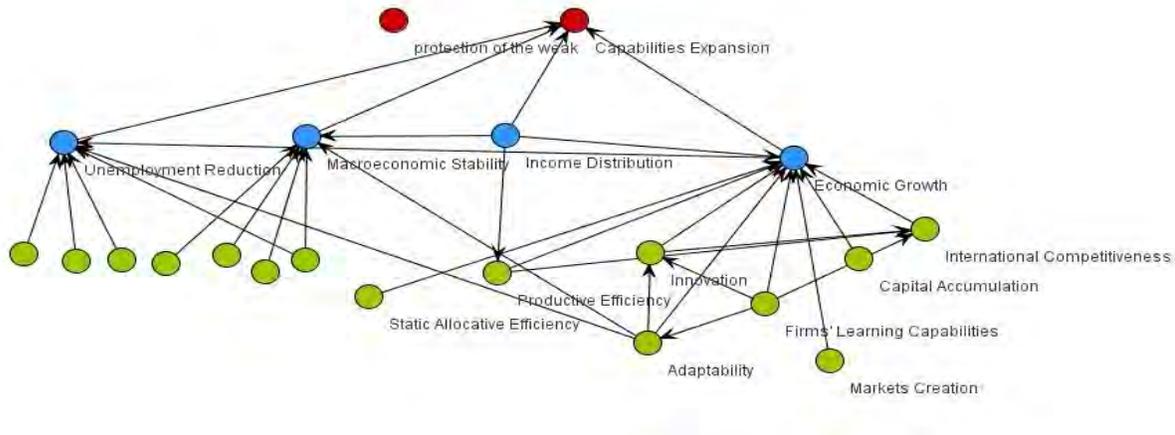


Figure 10.5: Network Structure of the System of Objectives of the Institutional Network of the Supply Side of Product Market and the Weighting of the (First and Second Tier) Instrumental Objectives (i.e., the Determination of Reasonable Normative Paths)

The network of our system of objectives in figure 10.5 is based on somehow thin and tentative informational basis because we have not investigate properly the relevant empirical studies and models; hence, some links in this network may not hold in reality and other links among the objectives of the system may be missing. Still, this network provides us with some important insights concerning the importance of some objectives, which justify giving them more weight. For example, learning capabilities of the firm seems to affect two first-tier instrumental objectives, namely, economic growth and income distribution. The increase in the knowledge assets of the firm would result in increasing the returns to the assets that embody this knowledge, i.e., labor. This in turn may enhance income distribution in the economy. Further, learning capabilities affects positively three second-tier instrumental objectives in our system of objectives, namely, innovation, international competitiveness, and firms' adaptability. Firms with strong learning capabilities will learn how to adapt well to changes in circumstances; in other words, these firms are more capable of putting into place, routinizing, and embedding the capability to adapt.

Consequently, firms' learning capabilities seem to be a central objective in our system of objectives; hence, it should be given *high weight*. Similarly, firms' adaptability seems to have positive effects on three first tier instrumental objectives, namely, economic growth, macro stability, and unemployment reduction. Unlike learning capabilities that seem to have moderate or significant effects on its dependent variables, it is not clear whether firms' adaptability would have strong or moderate effects on these first tier instrumental objectives. If it has only marginal effects, then, it should not be given high weight; otherwise, it should be given high weight in our system of objectives. Finally, if it is true that income distribution affects positively both economic growth and macroeconomic stability (e.g., through stabilizing aggregate demand), then, it should be also given moderate or high weight in our system of objectives because it affects the ultimate objective of capabilities expansion directly as well as indirectly through its effects on growth and macro-stability.

These tentative ideas about the weighting of the instrumental objectives in the system of objectives reveal the limitations of the neoclassical avoidance of the weighting issue. As already argued, the neoclassical approach is concerned with the net effects of the models of the institutional domains; for example, suppose that the net positive effects of the shareholder value on economic growth exceeds the net positive effects of a stakeholder model, then, the shareholder value model should be endorsed. This remains the case even if the stakeholder model may have higher positive effects on the learning capabilities of the firm has no implication. From a systemic perspective, we are not concerned with net effects of the models of institutional domains, but we are concerned about how they affect the different instrumental objectives in our system of objectives. Given that firms' learning capabilities has a high weight in our system of objectives, the stakeholder model seems to be a more reasonable model of corporate governance to include the institutional network of the product markets because it contributes to the attainment of the desirable weights of the instrumental objectives in our system of objectives. In other words, from a systemic perspective, we no longer think in terms of net effects on economic growth or firm's value; rather, we think in terms of the multiplicity of effects of the institutional domains on each of the instrumental and ultimate objectives in our system of objectives. Given the weights given to these objectives based on the network structure of the system of objectives, we choose the institutional domain that can achieve the desirable weights of these *numerous instrumental objectives*, when this institutional domain is combined with other institutional domains in the designed institutional network.

Although the above analysis is informative, it is still a tentative analysis based on a very thin informational basis. Future research is needed for expanding the informational basis regarding the first-tier and second-tier objectives and their relations; based on this informational basis, future research can develop more comprehensive networks for the structure of the systems of the objectives of the economic system. These networks can guide the choice of the weights we give to each of the instrumental objectives in these systems of objectives.

In short, in the previous section, we have developed the list of ultimate objectives, first and second tier instrumental objectives of the institutional network (i.e., the legal system) of the supply side of product markets. Ultimate local and systemic objectives include protection of the weak and capabilities expansion. First-tier instrumental objectives include economic growth, income distribution, macro stability, and unemployment reduction, but we have chosen to focus only on economic growth and income distribution for the sake of simplifying the analysis. Second-tier instrumental objectives required for attainment of economic growth include static allocative efficiency, productive efficiency, innovation, firms' learning capabilities, firms' adaptability, international competitiveness, markets creation, and capital accumulation. The institutional network of the product markets affects *directly* these second-tier instrumental objectives along with the ultimate objective of protection of the weak and the first-tier instrumental of income distribution. Hence, these instrumental objectives along with these ultimate and first-tier instrumental objectives (i.e., protection of the weak and income distribution) represent the multi-assessment criteria for the assessment of the consistency of the compared institutional networks of post-war Japan, post-war Germany, and the US. This section has established that firms' learning capabilities should be given high weight; hence, in conducting consistency analysis in the following chapter, we need to assess whether each of the compared networks is consistent in relation to attaining *high weight* of firms' learning capabilities.

In conclusion, by developing these multi-assessment criteria, we have developed *an integrated and systemic answer* to the normative criteria question this chapter was set up to address. By doing so, Steps 5 (neoclassical literature review and critique) and 6 (integration) concerning this sub-question have been completed in our 8 steps process concerning our primary regulatory question that is which model of corporate governance should developing countries adopt? We can therefore move to stage 7 of the application process of the integrated and systemic approach (i.e., the systemic thinking step). In this step, we follow the process of systemic design of reasonable and

consistent institutional networks developed in chapter 6 (see figure 6.2 in chapter 6). First, in the following chapter, we use the four-step consistency analysis of institutional networks developed in chapter 6 in order to assess the consistency of the compared institutional networks; we investigate whether the embedded effects of each of the institutional domains of the Japanese institutional network were consistent with respect to each of the above multi-assessment criteria. We replicate the same consistency analysis with reference to the institutional networks of product markets in post-war Germany and the US. Given the informational and knowledge basis resulting from the consistency analysis in chapter 11, in chapter 12, we complete the process of systemic design of institutional networks developed in chapter 6 by using the other systemic design concepts and principles developed in chapter 6. By doing so, in chapter 12, we will be able to address our primary question: which model of corporate governance should developing countries adopt? Moreover, we will be able to recommend models of competition and industrial policy to developing countries, which are consistent with the recommended model of corporate governance.

Labor

6. How the Integrated and Systemic Normative Theory of Economic Regulations Overcomes the Critiques of the Neoclassical Normative Theory of Regulation?

This chapter has developed an integrated and systemic normative framework of economic regulations; throughout this chapter, we can already observe how the various components of this suggested framework allow us to overcome the internal, external, and systemic critiques directed at the neoclassical-new institutional normative theory of economic regulations in the previous chapter. This section briefly illustrates how the proposed systemic normative theory avoids these critiques.

First, the systemic normative theory of regulation takes the general theory of the second best seriously. It does not claim that we are correcting market failures to push the system towards the ideal perfectly competitive general equilibrium model of the economy. Rather, it starts from the real economic systems, and given the economic conditions of this system, it sets reasonable targets over a reasonable period (e.g., the *staged* system of objectives, and the choice of the weights or priority of the instrumental objectives given the economic conditions of the country).

Second, in contrast to cost-benefit analysis, the systemic normative theory of regulation does not involve any claims for inter-personal comparisons of utility or the summation form of aggregation of costs and benefits. The neoclassical normative theory has been concerned with the aggregate effects of legal institutions; it focuses on whether these institutions produce net benefits or net costs. To do so, it had to calculate the benefits and costs across individuals; it had to engage with inter-personal comparisons of utility through market-based valuations of cost-benefit analysis, i.e., through the valuations of the individuals in their social role as economic agents. Conversely, the systemic theory of regulation is not concerned with the summation form of aggregation of the effects of economic regulations; instead, it is concerned with *the functional form of aggregation*. The question whether specific legal institutions produce net benefits or net costs is not a question this theory is concerned with. Rather, it is concerned with these legal institutions achieve *the required level of their assigned second tier objectives and ultimate local objectives*. To derive these objectives and their weights, the analytical frameworks of objectives assignment rules and the reasonable normative path have been developed.

The reason that the system of objectives approach is not concerned with the summation form of aggregation is the following. Welfare economists have been interested in *maximization* of one ultimate value (e.g., social welfare/subjective well-being or wealth) or *ranking* of alternative states of the world associated with alternative policies and legal institutions. To rank these alternative institutions, their *aggregate* effects on social welfare measured according to *the same metric* should be determined. Unlike welfare economics, the integrated and systemic approach is not concerned with the choice of the legal institutions that maximize social welfare or with ranking alternative legal institutions. Given the extraordinary complexity of the choice of a reasonable institutional network that satisfies the complex system of society's multi-objectives given the constraints of globalization and the initial institutional setup of the relevant country, the integrated and system approach has a much more humble, but realistic objective. It primarily aims to identify a *reasonable* institutional network that achieves the desirable levels of the multi-ultimate objectives at each stage of development. Given this objective (the identification of reasonable institutional network instead of maximization or ranking of alternative institutional networks), the systemic law and economics scholars do not need to *aggregate* the effects of any institutional network according to *one metric*, i.e., they do not need aggregation in the form of summation. They just need to check whether the relevant institutional network satisfies the desirable relevant

level of each objective in the system of objectives. In other words, multiplicity of objectives along with satisficing frees us from the need for maximization and aggregation in the form of summation according to one metric. In sum, aggregate welfare, well-being or capabilities are *not morally relevant* as long as the minimum threshold and desirable level of the multi-objectives are not met; in this case, the *distribution* of capabilities and other values is the relevant moral foundation.¹⁶⁵

Still, the endorsement of the functional form of aggregation reduces, but does not eliminate, the need for inter-personal comparisons of subjective well-being (utilities) or objective well-being (capabilities) because in most cases, economic regulations produce winners and losers. One may argue that if law-makers ensure that economic regulations achieves the required levels of the ultimate local objectives and the second tier instrumental objectives, these regulations may still be unfair because they might involve unjust distribution of costs and benefits. Indeed, this cannot be the case unless the ultimate local objectives do not include values such as fairness or protection of the weak. As long as the local ultimate objectives include these values, the distributional concerns are already built into the system of objectives. To satisfy these ultimate local objectives, law-makers must always identify the income, wealth and power distributional consequences of the legal institutions. Still, they do not need to compare the losses and gains across individuals because this comparison would not be needed, in many cases, for ensuring the design of legal institutions that meet their ultimate local objectives.

Third, by avoiding the simplistic aggregation of the neoclassical normative theory of economic regulations, the integrated and systemic normative theory of regulation avoids the systemic critiques of the neoclassical theory, namely, incentives inconsistencies, horizontal and vertical normative inconsistencies, and obscurity of the ultimate objectives of the economic regulations. In the proposed normative framework of economic regulations, we derive the second tier instrumental objectives that economic regulation affect directly from a clear set of first tier instrumental objectives derived from a clear set of ultimate objectives. Ultimate objectives are no longer obscured; in the proposed framework, the derivation of the second tier objectives and their weights is not possible without a clear perception about the staged required level of the ultimate objectives. Further, to derive these second-tier instrumental objectives and their weights, we construct a

¹⁶⁵ The requirement that a minimum threshold of capabilities and specific objectives are to be met is a distributional criterion. See: Adler (n 5), 317. Adler states that ‘a criterion that measures the extent to which persons are below a certain minimum level of welfare’ is by definition a distributive criterion.

network of the structure of the system of objectives; this network does not only enable us to choose the combination of the second tier instrumental objectives (the reasonable normative path) that ensures horizontal and vertical consistency of the objectives, or at least reduce these inconsistencies significantly. It also enables us to choose *complementary* objectives. For example, if two second tier instrumental objectives are *complementary* with each other in relation to a specific first tier instrumental objective, while each of them is not complementary with a third instrumental objective, we can assign the former instrumental objectives to regulations instead of a combination that includes one of them and third objective. To understand this point, you may think of the first tier objective function as a production function of this objective, while its inputs are the second tier instrumental objectives. We can structure the system of objectives in a way that ensures that we pick a reasonable, if not efficient, mix of inputs. Not only we can exploit complementarities among some of the second tier instrumental objectives in producing a first tier objective, we can also exploit the inward hubs in the network of the system of objectives. In short, the system of objectives approach to economic regulations does not only resolve the normative inconsistencies problems, it also allows us to choose reasonable set of objectives to target using legal institutions. The best example on this point that the analysis of in the following chapter shall demonstrate is the post-war Japanese network. This institutional network was focused significantly on *learning and skill formation*; these were not only major drivers of economic growth, but also major resource for increasing the productivity of labor, their job security, and their respective wages. The second tier instrumental objective is almost a hub that affects economic growth (first-tier instrumental objective) and *empowers* the labor as a major weak actor in the economic system (protection of the weak as an ultimate local objective). Not only this brings a higher degree of consistency into the normative objectives; it facilitates the attainment of multiple objectives through reasonable normative paths.

Forth, the previous chapter demonstrated that socio-economic regulations focused on correction of market and organizational failures do not ensure the attainment of sustainable economic growth. In particular, these regulations may not help domestic firms build and grow their static and dynamic capabilities, which are necessary for sustainable growth for developing countries. They de-emphasize learning, innovation, and technological adoption although human capital and technical progress are the main drivers of economic growth. In contrast, the proposed systemic theory of economic regulations accommodates this critique by placing economic growth

as an important first-tier instrumental objective in the system of objectives of economic regulations.

Fifth, the democratic critique and law and political economy critiques have demonstrated that preferences of the individuals in their social roles as citizens, and not as economic agents, should be the basis for the evaluation of economic regulations. The economic constitution proposal embraces the preferences of the individuals as citizens as the basis for the formation of the ultimate objectives of the economic system; in light of these ultimate objectives, the instrumental objectives assigned to economic regulations are derived and legitimized. Further, in case the individuals place value on participatory governance, the systemic normative framework accommodates these concerns; indeed, the systemic perspective necessitates such participatory governance for the design of legal institutions because relevant stakeholders bring necessary information for multi-criteria analysis of legal institutions.¹⁶⁶ For this framework to work properly, however, law-making processes across the regulatory agencies and the parliament is coordinated to ensure that the overall regulatory framework ensures the attainment of the ultimate objectives. Furthermore, mechanisms for resolving the conflicts that may arise between the legal institutions resulting from participatory governance and their ability to achieve the required levels of the assigned objectives must be established. One way to do so is that the Parliament assigned the objectives to the agencies, and around these set of objectives, participatory approaches can take place.

Finally, the systemic normative theory overcomes the valid moral critiques targeting subjective welfarism underlying the neoclassical normative theory of regulation by adopting an objective theory of well-being, the capabilities expansion, as the ultimate systemic objective for economic regulations, and by accommodating Kantian deontological concerns through the concept of ultimate local objectives. The systemic normative framework of regulations presumes that there is *a space of balance* where economic objectives, mainly economic capabilities, can be attained, while expanding other capabilities without infringement of deontological Kantian obligations. Doubtless, the set of regulations that achieves this balance may sacrifice some potential economic gains. However, these material losses are tolerated because the objective of the regulatory governance is not to maximize one type of values (e.g., economic/material values) at the cost of others, but to reach the desirable space where a balanced level of the desirable values of the society is attained. Within this framework, economic development cannot be detached from social,

¹⁶⁶ Department for Communities and Local Government: London (n 5) 51. Munda (n 3), 195–196.

political, or moral development of the society; the staged hierarchical system of objectives ensures that *a balanced moral path* is followed.

In short, the proposed integrated and systemic normative framework of economic regulations provides the needed normative guidance for the evaluation and design of economic laws in developing countries, while escaping the major internal, external, and systemic critiques of the neoclassical-new institutional normative theory of economic regulations.

7. Conclusion and Further Research

This chapter has used the integrated and systemic approach to develop an integrated and systemic normative framework for assessment and design of the economic regulations of the supply side of product markets in developing countries. Therefore, this chapter has completed the first full-fledged application of the integrated and systemic approach to this difficult regulatory problem. This integrated and systemic normative theory overcomes the significant internal, external, and systemic critiques of the neoclassical normative theory of economic regulations outlined in the previous chapter. This crux of the integrated and systemic normative theory of economic regulations is a *system of regulatory objectives* that consists of ultimate (systemic and local) objectives, first-tier instrumental objectives, and second-tier instrumental objectives that these economic regulations should seek to achieve. Since economic regulations tend to affect *directly* ultimate local objectives (e.g., protection of the weak) and second-tier instrumental objectives (e.g., firms' learning capabilities), these objectives consist the multi-assessment criteria for economic regulations. This chapter has suggested a list of multi-criteria for the assessment of the consistency of the American, Japanese, and German institutional networks of product markets. This multi-assessment criteria include allocative efficiency, productive efficiency, firms' learning capabilities and technological upgrading, innovation, international competitiveness, firms' adaptability, capital accumulation, markets creation, income distribution, and protection of the weak, namely, workers, weak consumers, the entrepreneurs, and the SMEs.

Once law and economics scholars endorse the proposed multi-criteria framework (or a modified version of it) for the assessment of institutional networks governing product markets, the evaluation of the *consistency and complementarity* of these institutional networks would differ significantly. A neoliberal institutional network may be found excessively inconsistent and lacks

complementarities with reference to many of these assessment criteria, while the institutions of the institutional networks of developmental states such as post-war Japan or South Korea may be found to be highly consistent and complementary. More importantly, some institutional arrangements that have received harsh critique from mainstream law and economics such as the German two-tier board system, the German co-determination principle, or Japanese sectoral industrial policy might be found to be *critical* institutional arrangements for attaining the intermediate and ultimate objectives of the proposed system of regulatory objectives. In particular, it is expected that the citizens of developing countries, most of them belong to the weak segment of the society, would prefer the proposed multi-criteria assessment framework, if they were appropriately informed about its merits. The proposed framework for assessment or a modified version of it would thus gain a political legitimacy that the neoclassical framework would be lacking. The intellectual burden now is shifted to mainstream law and economics to justify the reliance on a normative theory for socio-economic regulations that does not only attract a long list of internal, external, and systemic critiques. This neoclassical normative framework also seems to be lacking political legitimacy, if the people, after being appropriately informed, are given the choice between it and the proposed multi-criteria framework.

In short, this chapter has provided the reader with the first *full-fledged* application of the integrated and systemic approach to one of the most important and difficult questions in regulatory/institutional design that is *the normative objectives that economic regulations should pursue in developing economies*. This application of the integrated and systemic approach in answering this difficult question does not only result in a new answer distinct from the standard answer in neoclassical law and economics. The integrated and systemic approach fundamentally changes the way we have approached this question. In doing so, *new complex research questions* emerge and gain prominence. They include, inter alia, the trade-off between democratic sustainability effects of some legal institutions designs (e.g., co-determination principle) and their economically inefficiency costs, the trade-off between economic growth enhancing effects of some legal institutions and their (short-term) allocative inefficiency costs, the determination of a politically legitimate process for choice of the ultimate objectives of the governance of the economic system, and the constitutionalization of the economic system. These new research problems include also the objectives assignment problems and the development of objectives assignment principles and assignment rules, the need for creating quantitative or qualitative

indicators for ultimate and instrumental objectives and their minimum thresholds, and the identification and weighting of the first and second-tier instrumental objectives. This is a new research agenda for law and economics scholars that would *partially replace and partially complement* their current research agenda that is focused on the identification of market and organizational failures in distinct institutional domains (e.g., corporate governance), the development of social welfare functions, and the development of more sophisticated cost-benefit analysis techniques. According to this current research program of mainstream law and economics, based on these social welfare functions and/or methods of cost-benefit analysis, mainstream law and economics then determines whether the suggested legal institutions for correcting market and organizational failures would enhance social welfare.

Given the integrated and systemic normative theory (i.e., the multi-criteria for assessment) of socio-economic regulations governing the supply side of product markets, we can now move to the *final two steps* of the application of the integrated and systemic approach to our primary regulatory question concerning the choice of corporate governance system for developing countries. To recap, these final steps include the assessment of the consistency of the American, post-war German and Japanese institutional network governing the supply side of product markets in light of the proposed multi-criteria for assessment. Once assessed, we address the final question that is which institutional network should developing countries adopt, and what is the role of law in transplanting this institutional network in developing countries. By answering this question, we will also answer our primary question regarding the choice of corporate governance model.

Prior to doing so, I want to leave the reader with two final *critical* thoughts concerning the integrated and systemic multi-criteria for assessment (normative theory) of socio-economic regulations developed in this chapter. The reader would rightly think that I advocate the multi-criteria proposed in this chapter for design of socio-economic regulations governing the product market of developing countries. However, similar to all the conclusions that we might reach by using the integrated and systemic approach, this multi-criteria framework is *tentative*.

First, I must emphasize, however, that any institutional networks that might meet the domestic *legitimate* desires of the people of a given developing country cannot be considered moralistic, unless the structure of the global political economy would give sufficient policy space for *every* country to meet the legitimate desires of their peoples. For example, the institutional networks underlying the post-war German and post-war Japanese models of capitalism seem to be highly

moralistic because they responded largely to the legitimate desires of their peoples, but this is a *nationalistic* basis for morality. Successful development experiences inspired by the Japanese or German models would also have a comparable nationalistic, but not necessarily a *cosmopolitan* moral basis.¹⁶⁷ These institutional networks would have a moral basis if and only if the structure of global political economy can ensure that *every* country that would efficiently implement functionally equivalent policies and legal institutions would be able to meet the legitimate desires of their people. In other words, these institutional networks would be moralistic if and only if in a thought experiment where all the countries in the world are either Germany or Japan, each of these countries is able to meet the legitimate desires of their people.¹⁶⁸ Bearing in mind that I will be taking economic globalization as given in the following chapter, the institutional networks I will be proposing, unfortunately, might lack a de-nationalistic moral basis. Further research is required for investigating these moral concerns.

Second, I have *intentionally* refrained from integrating the insights of virtue ethics, Kantian ethics, religious theories of morality, and the critique of modernism and materialist philosophies in the process of developing the normative theory of socio-economic regulations. Doubtless, the protection of the weak and ultimate local objectives carry some traces of these streams of thought, however, if I were to take the insights of these streams of thought more seriously, the analysis would have been much more sophisticated to the extent that most law and economics scholars would find such analysis hard to engage with. So let me briefly demonstrate how a normative theory of socio-economic regulations might look like if we were to integrate the insights of these important value and moral theories.

The most significant change would be that the ultimate objective of socio-economic regulations would no longer be the material well-being of humans, but how to create a socio-economic system that is organized around a set of (moral) values that *guide* humans' actions and thus are *manifested* in their spaces of action. Values and virtues such as justice, fairness, cooperation, tolerance, and generosity would be the ultimate objective of the regulatory

¹⁶⁷ Some strands of Cosmopolitanism carry a number of biases with which I strongly disagree. To disassociate myself from these strands, in this context, I use "cosmopolitan moral basis" to refer to moral positions based on equal concern for every human being regardless of his or her nationality.

¹⁶⁸ Obviously, this analysis would bring into question the moral basis of the Euro Area, if not the whole idea of a common European market, as long as these integrationist projects fail to develop into a federal state.

governance of the socio-economic capitalist system. In their function of constituting the socio-economic systems and their underlying systemic forces, socio-economic regulations constitute our value system; it constitutes what we think to be good or bad, moral or immoral, what we consider to be hard working or laziness, and what we consider to be honest or dishonest behavior. In other words, socio-economic legal institutions constitute the socio-economic systems whose systemic logics shape us as human beings. This socio-economic system shapes the *value system that guides human actions and thus becomes manifested in these actions*. In this normative theory of regulation, the question of the ultimate objective of socio-economic regulations is a question about our *identity and nature* as human beings that determine our *ultimate goals* in life. These ultimate regulatory objectives should therefore reflect the *values* that we seek to achieve in our course of life even at significant material costs because only these values reflect the kind of human beings that we aspire to become, but these values can be only derived from answering the difficult question about the *purpose of our existence as human beings*. From the perspective of non-consequentialist moral theories, these (moral) values, and not the material wealth or objective or subjective accounts of (material) well-being, are indeed the only meaningful ultimate objective humans should seek, unless humans endorse a materialistic animalistic understanding of their human nature.

Values as an ultimate objective dematerializes the normative basis for socio-economic regulations; it is no longer material (subjective or objective) well-being. For most readers, this would seem at least too abstract and at most too naïve. Let me conclude by a simple example that might give the reader a better understanding of my argument. For anyone who had the opportunity to live in the poor countryside in one of developing countries, she would be amazed at the extent of satisfaction, generosity, hard work, cooperation, kindness, freedom from stress, and absence of fear from the future or regret about the past manifested in the lives of these poor farmers. With the rise of urbanization and migration of the children and grandchildren of these farmers to the capitalist cities, these new generations have undergone a *transformation process* so that they have come to reflect the opposite of the values of their ancestors, although they enjoy a much higher standard of *material* life than their ancestors did. Some of them struggle to follow the values that constituted once who their ancestors were all about, but the systemic forces of the socio-economic system as constituted by the socio-economic regulations do not give them the space to do so. Indeed, the economic discussion about cultural obstacles to development, and how to use legal

institutions to streamline the cultural norms to be conducive to economic growth¹⁶⁹ is nothing but a brutal, though implicit, use of (*economically efficient*) legal institutions for destroying the cultural identity that reflects a non-materialistic understanding of the nature and purpose of humans.

The above discussion raises a number of intriguing questions: how would a multi-criteria framework for assessment of socio-economic regulations and policies founded on a *dematerialized* normative basis look like? Would it be far removed from the multi-criteria framework proposed in this chapter, or would it come close to it? And what would the desirable socio-economic regulations founded on this dematerialized normative basis look like? Aided by the integrated and systemic approach that gave rise to these challenging and captivating questions, legal scholars (and hopefully economists) can and should explore these questions.

¹⁶⁹ For a discussion of how legal institutions, which were thought to be supportive of economic development, were used for penetrating social and cultural context, see: David Kennedy, 'Law and Development Economics: Toward a New Alliance' in David Kennedy and Joseph E Stiglitz (eds), *Law and Economics with Chinese Characteristics: Institutions for Promoting Development in the Twenty-First Century* (Oxford University Press 2013) 36–37. The modernization theory of law and development had top on its agenda the creation of the “modern man” to replace the “traditional man” of developing countries. For a discussion of this aspect of modernization theory, see: Ohnesorge, John K. M. 'Developing Development Theory: Law and Development Orthodoxies and the Northeast Asian Experience' [2007] *University of Pennsylvania Journal of International Economic Law*, 233–234.

Chapter

11

Assessment of the Consistency of the Institutional Networks of Product Markets in the US, Post-War Germany and Japan

1. Introduction

As already mentioned in chapter 6, in order to assess the consistency of the institutional networks (i.e., legal systems), we need to analyze theoretically and empirically *the embedded* effects of each institutional domain in this institutional network on each of our assessment criteria. The insights of the relevant schools of thoughts and theories (i.e., integrated law and economics approach) should guide the theoretical analysis of the economic effects of each institutional domain. As I cannot conduct a full-fledged integrated analysis of the non-embedded and embedded effects of the institutional domains of the compared networks in one chapter, I have relied mainly on the insights of neoclassical-new institutional microeconomics, while complementing them with some valid insights from other schools of thought (e.g., Schumpeterian economics, comparative capitalism, and neoclassical and non-neoclassical growth theories). Future research, which follows closely the suggested steps for undertaking integrated analysis in chapter 7, is needed for conducting a thorough integrated analysis of both non-embedded and embedded effects of these institutional domains.

According to the steps of conducting consistency analysis outlined in chapter 6, after assessing the embedded effects of each institutional domain, we investigate whether some of these institutional domains have moderate or strong *contradictory effects* on the same assessment criterion. If this is the case, these domains are inconsistent. If these institutional domains, however, have consistent but negative effects on the desired objective, then, the institutional network, though

consistent, *undermines systemically* the desired objective. In this case, consistency is normatively undesirable.

Unfortunately, one chapter cannot accommodate a thorough consistency analysis of the three complex institutional networks governing the supply side of product markets in US, post-war Japan, and post-Germany. Rather, this chapter provides a relatively thorough consistency analysis of the post-war Japanese institutional network, while conducting a very concise and sketchy consistency analysis of both American and postwar German institutional networks. The main differences between the analysis of the Japanese, American, and German networks are that this chapter does not follow explicitly the steps of consistency analysis in relation to the American and German networks. Further, in the consistency analysis of the Japanese network, this chapter does not assume that the law on books is the same as the law in action; for example, the post-war Japanese competition law was rarely enforced. Further, despite its de facto non-enforcement, the post-war Japanese interfirm relations cannot be easily described as collusive; a more thorough analysis of these relations is thus undertaken to uncover the economic organization of these relations. Conversely, this chapter analyzes solely the law on books when analyzing the consistency of the German and the American institutional networks; this chapter assumes that the US and the German competition laws are adequately enforced. Following the steps of the consistency analysis of the Japanese network, future research that provides an in-depth consistency analysis of the American and German networks is highly needed in order to guide the design of the institutional networks of product markets in developing countries.

Two reasons justify the choice of the Japanese network for a more detailed consistency analysis. First, the Japanese developmental state has been the quintessential model that inspired the developmental strategies of South Korea, Taiwan, and Singapore. The Japanese institutional network thus appears to be the most relevant model for developing countries. Second, , as the below discussion demonstrates, despite the extensive studies on Japanese capitalism, the role that the postwar Japanese legal institutions played in postwar Japanese rapid growth period (1955-1972) has been contentious due to the strong divergence of many of these institutions from the neoclassical-new institutional blueprint. Systemic consistency analysis, as complemented by the integrated approach, has thus the potential of contributing *new insights* for understanding the controversial role of legal institutions in post-war Japanese developmental process. Finally, almost all serious studies on postwar Japanese economy have been made by economists; law and

development scholars engaged rarely with the role of Japanese legal institutions in its postwar development.¹

The structure of this chapter is as follows. Sections 2, 3, and 4 analyze the consistency of Japanese, German, and American institutional networks governing the product markets of these economies, respectively. Section 5 concludes.

2. Assessment of the Consistency of the Institutional Network of Product Markets in Post-war Japan

The postwar Japanese model represents a quintessential model for developmental state due to the aggressive sectoral industrial policies of the postwar Japan. As argued in chapter 6, consistency analysis requires an assessment of the *embedded* effects of each institutional domain on the assessment criteria developed in the previous chapter. To evaluate these embedded effects, we need to assess the *non-embedded* effects of each institutional domain (e.g., corporate governance). Then, we examine whether and how the non-embedded economic effects of this institutional domain (corporate governance in our example) would change, given the neighboring institutional domains in the institutional network. Once we determine the embedded effects of each institutional domain, we can assess whether these domains are consistent. If they turn out to be consistent, then, we examine whether this consistency is normatively desirable.

Consequently, this section proceeds as follows. We start by using the valid insights of relevant schools of thought to evaluate the non-embedded effects of each of the institutional domains of the Japanese institutional network. Accordingly, sections 2.1, 2.2, and 2.3 examine, respectively, the non-embedded effects of the Japanese industrial policy, corporate governance, and competition law on our assessment criteria. Then, Section 2.4 examines the embedded effects of each of these institutional domains, while taking other domains as given. Based on these embedded effects of each institutional domain, section 2.4 then analyzes the consistency of these institutional domains with reference to our performance criteria, and discusses whether such consistency is normatively desirable.

¹ See the evolution of the law and development studies in section 2 of next chapter and the references cited therein.

2.1. Integrated Economic Analysis of the Non-embedded Effects of Post-war Japanese Industrial Policy on Our Assessment Criteria

As already mentioned in chapter 8, Japanese sectoral industrial policies were of two types: *promotion and adjustment assistance* policies. Promotion industrial policies targeted sunrise industries,² while adjustment assistance policies targeted sunset industries.³ This section analyzes briefly the non-embedded economic effects of these types of Japanese industrial policies.

With respect to industrial promotion policies, these policies had *two goals*. The first was to *create new domestic industries* in which Japan had almost no comparative advantage such as automotive industry and computer industry; this type of industrial promotion policies are normally called *infant industry policy* or *domestic market creation policy*.⁴ Once the industry was created, the second goal of industrial promotion policies then was to ensure the *international competitiveness* of the industry through increasing *its productive efficiency*, i.e., the unit cost of production; this type of industrial promotion policies was normally referred to as *industrial modernization policy* or *rationalization policy*.⁵

Throughout the post-war period until the 1970s, industries targeted by industrial promotion policies (“targeted industries or promoted industries”) were selected based on two main criteria: high-income elasticity of demand and rapid productivity growth (decreasing cost industries).⁶ The underlying rationale for these criteria was that these industries have strong growth potential; as the

² Motoshige Itoh and others, ‘Industry Promotion and Trade’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 257–258. Yutaka Kosai, ‘The Reconstruction Period’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 39–43.

³ For an overview of adjustment policies, see: Sueo Sekiguchi and Toshihiro Horiuchi, ‘Trade and Adjustment Assistance’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 372–386.

⁴ The automotive industry is a good example of an infant industry targeted by industrial promotion policies. Japan had almost zero output in the automotive sector after World War II. Since then, the output of the automotive industry has been growing in average of 20% per annum for over 36 years. Hiromichi Mutoh, ‘The Automotive Industry’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 307–308.

⁵ Toshimasa Tsuruta, ‘The Rapid Growth Era’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 60–61.

⁶ Masu Uekusa, ‘The Oil Crisis and After’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 103. Ryutaro Komiya, ‘Introduction’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 6.

income of both domestic and foreign consumers increase, the demand for the products of these industries would increase.⁷ With the increase of demand, the scale of the firms and these sectors would also increase, resulting in economies of scale that would strengthen the international competitiveness of these sectors. This increase in productive efficiency would then increase the real income of the consumers, spurring another round of increase in both domestic and foreign demand. Starting from the 1970s, *knowledge intensive industries* were targeted. These are high technology industries, defined as those industries in which ‘the share of knowledge-intensive labor inputs in total factor inputs is relatively great, and those of capital and energy relatively small.’⁸

In the process of creating the industry, the main industrial policy instruments that Japan used were *trade protectionism* of targeted industries in the form of import tariffs and non-tariff barriers and restrictions over foreign direct investment,⁹ and *financial support* for targeted industries, which took the form of low interest loans, subsidies, tax reductions, and tax exemptions.¹⁰ In the few cases where post-war Japan permitted foreign firms to enter the markets in which the targeted industries operate, they constrained the ability of foreign firms to grow by imposing capital exchange controls and requiring these firms to transfer technology to domestic firms.¹¹ In addition to these supply side policies, the Japanese government secured sufficient demand for targeted industries by giving incentives to the governmental institutions to procure only domestic products.¹²

⁷ Itoh and others, ‘Industry Promotion and Trade’ (n 2) 275.

⁸ Uekusa (n 6) 103.

⁹ For an overview of these protectionist measures, see: Motoshige Itoh and Kazuharu Kiyono, ‘Foreign Trade and Direct Investment’ in Ryutaro Komiya, Masahiro Okuno and Kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 158–169.

¹⁰ Kosai (n 2) 39.

¹¹ For example, Texas Instruments corporation was granted the permission to invest in the Japanese market provided that it agrees to “(1) a 50-50 joint venture with a Japanese company; (2) disclosure of all the patents held by Texas Instruments.” Itoh and Kiyono (n 9) 180, fn. 16. Similarly, “IBM held the basic patents for computer technology that were necessary for domestic manufacturers, and in 1960 the provision of patents was secured from IBM in a return for a guarantee of being able to produce locally and to remit foreign exchange.” Koji Shinjo, ‘The Computer Industry’ in Ryutaro Komiya, Masahiro Okuno and Kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 342.

¹² For the case of computer industry, see, *ibid* 337. Preferential governmental procurement was also in place for the products of the SMEs, see: Takashi Yokokura, ‘Small and Medium Enterprises’ in Ryutaro Komiya, Masahiro Okuno and Kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 522. Clearly, domestic markets and the governmental procurement should be sufficiently large to secure sufficient domestic demand. Consequently, these promotion industrial policies could be hardly implemented in small economies.

These industrial promotion policy instruments (i.e., trade protectionism, financial support, and public procurement) were sufficient for *creating new domestic industries (i.e., sufficient for market creation)*, but they were not sufficient for ensuring the international competitiveness of these created industries. To ensure their international competitiveness, the designated (decreasing cost) industries should increase their productive efficiency, i.e., decrease the unit cost of their production. The MITI thought that it could cause these industries to decrease their unit cost of production in three ways. It could use industrial policies to incentivize the firms of these industries to increase their scale to reap the benefits of increasing returns to scale,¹³ it could use industrial policies to increase the innovation capabilities of the firms of the targeted industries, and it could provide information to these firms about the economic conditions of foreign markets.

In order to increase the scale of the targeted industry and the firms of this industry, the MITI encouraged mergers, acquisitions, and formation of business groups by using primarily soft policy instruments such as administrative guidance; the MITI used also financial incentives and binding administrative decisions.¹⁴ In addition, the MITI required the firms to have a minimum size for entering specific markets in order to ensure a large scale of the firms of these markets.¹⁵ Further, financial assistance that took the form of low interest rate loans and preferential tax treatment were advanced to the SMEs to enable them to increase their scale.¹⁶ The Japanese government aimed also to reduce what was thought to be *excessive competition* among Japanese firms by exempting the promoted industries, the SMEs, and some export-oriented sectors (export cartels) from the Antimonopoly Law. The underlying economic rationale for constraining competition was that the Japanese firms were at a competitive disadvantage because they were of a scale lower than the scale of the competitive American firms; the competition among these low-scale Japanese firms prevented them from growing because it was pushing their profitability down, while causing investment duplications in new plants and R&D.¹⁷ The MITI, by constraining competition,

¹³ Learning by doing, R&D and Marshallian externalities are major resources for scale economies. For a brief discussion of them, see: Itoh and others, 'Industry Promotion and Trade' (n 2) 260–264.

¹⁴ Akira Iwasaki, 'Mergers and Reorganizations' in Ryutaro Komiya, Masahiro Okuno and Kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 504–505.

¹⁵ For a discussion of the high minimum scale required for entry into petrochemical markets, see: Tsuruta (n 5) 72–74.

¹⁶ Yokokura (n 12) 529.

¹⁷ Iwasaki (n 14) 499. For similar arguments made in defense of the restriction of excessive competition, see: Ajit Singh, 'Competition and Competition Policy in Emerging Markets: Institutional and Developmental Dimensions' in Philip Arestis, John McCombie and Roger Vickerman (eds), *Growth and*

facilitated therefore the increase in the scale of Japanese firms. These numerous industrial policies changed the market structure of the targeted industries as it changes the concentration of these markets due to changing the scale of the firms, in other words, they were *industrial organization policies*.

In addition to industrial organization policies that contributed to the increase in the scale of Japanese firms, the MITI used industrial policies to increase the technological and innovation capabilities of Japanese firms of the promoted industries in order to increase their international competitiveness. For example, depreciation tax allowances were granted to the promoted sectors in order to incentivize them to adopt new technologies.¹⁸ Further, the government and (some of) the firms of the same industry created and channeled funding to *R&D associations*; these associations included either some firms of the same industry or these firms along with the governmental research institutions.¹⁹

Furthermore, the MITI used industrial policies for the purpose of collecting and disseminating information to promoted industries in order to enhance their international competitiveness. The administrative councils of the MITI, which were in charge of supervising and supporting the sectors of the Japanese economy, functioned as a forum for *coordination and information exchange* between the between the firms of the same industry and between the government and the industry.²⁰ Moreover, the MITI issued vision reports for the Japanese economy; these visions included important information about the conditions of domestic and foreign supply, demand, and technology, and provided recommendations of future investments to the promoted sectors.²¹ These visions and the extensive information exchange that was taking place among the firms of the

Economic Development: Essays in the Honour of A.P. Thirlwall (Edward Elgar Publishing 2006) 217–218. *ibid* 230.

¹⁸ Akira Goto and Ryuhei Wakasugi, ‘Technology Policy’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 190–192. See also: Seiritsu Ogura and Naoyuki Yoshino, ‘The Tax System and the Fiscal Investment and Loan Program’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 127–128.

¹⁹ For the case of R&D associations in computer industries, see, Shinjo (n 11) 350.

²⁰ Motoshige Itoh and others, ‘Industrial Policy as a Corrective to Market Failures’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 240–241. Yoshiro Miwa, ‘Coordination within Industry: Output, Price, and Investment’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 490–492.

²¹ Itoh and others, ‘Industrial Policy as a Corrective to Market Failures’ (n 20) 240–241. Uekusa (n 6) 96–97.

promoted sectors reduced the uncertainty that firms' confront in making their investment decisions, enabled them to design more efficient investment strategies,²² and contributed to synergies in investment decisions that resulted in increasing the scale of the industry rapidly.²³

With respect to the effectiveness of these sectoral promotion industrial policies, the infant industries policies (i.e., market creation policies) seem to have been a success story; without these policies, strategic domestic industries such as automotive industries and computer industries could not have been created.²⁴ Without protecting infant industries from foreign competition, infant domestic firms could not have survived because foreign firms were far ahead in terms of their comparative advantage; they operated on their most efficient scale and their technological capabilities were far ahead of the capabilities of the domestic firms, resulting in higher quality and lower cost products.²⁵ The alternative to protectionism would be to extend large subsidies to the infant industries until they become comparably productively efficient, which would require large fiscal expenditures that the governments of developing countries cannot afford.²⁶ As to financial assistance policies, most of the financial assistance took the form of low interest rate loans and tax depreciation allowances; direct subsidies played a marginal role in financial assistance.²⁷ Governmental lending had a '*pump priming effect*'²⁸ as it incentivized private financial institutions to extend loans to these industries.²⁹ Similarly, public procurement secured a needed domestic demand for the low quality high cost products of the infant domestic industries; without this domestic demand, these infant industries could have sufficient demand that would support its growth. In short, the infant industry policies (i.e., trade protectionism, financial assistance, and public procurement) were successful in supporting the creation of important domestic industries in post-war Japan (e.g., the automotive and computer industries).

²² Itoh and others, 'Industrial Policy as a Corrective to Market Failures' (n 20) 242.

²³ Masao Baba and others, 'Conclusion' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 549–550.

²⁴ Itoh and others, 'Industry Promotion and Trade' (n 2) 274. Shinjo (n 11) 356–357. Baba and others (n 23) 553.

²⁵ Itoh and others, 'Industry Promotion and Trade' (n 2) 274. In other words, the set-up costs of creating new increasing returns to scale industries such as knowledge intensive industries are too high for domestic firms to incur. The support of the government is needed for overcoming the set-up costs that constitute a significant entry barrier to these sectors.

²⁶ *ibid* 262.

²⁷ Thomas A Pugel, 'Japan's Industrial Policy: Instruments, Trends, and Effects' (1984) 8 *Journal of Comparative Economics* 427.

²⁸ Itoh and others, 'Industrial Policy as a Corrective to Market Failures' (n 20) 242.

²⁹ *ibid*.

As to industrial policies that aimed at enhancing the international competitiveness of the promoted industries, the R&D policies were particularly important for ensuring the sustainability of the international competitiveness of the technologically dynamic industries such as the automotive and computer industries. Further, information exchange between the government and industry and between the firms of the same industry have played important role in reducing uncertainty; this reduction in uncertainty encouraged investment and helped the firms allocate their investments efficiently.³⁰

Further, the industrial policies supportive of SMEs touched upon above briefly, were comparable to that of Germany and US, and these policies have not been contentious; they have been justified with reference to market failures in labor, financial and product markets that the SMEs confront.³¹

In contrast, industrial organization policies that involved promoting mergers and formation of business groups and exemptions from the Antimonopoly Law (e.g., cartelization, and coordination of prices, outputs, and investments of the firms in similar industries) were the most contentious elements of the industrial promotion policies. Regarding mergers, the Japanese market economy witnessed a steady increase in the mergers over the 1960s with two large merger waves in 1963 and in the period from 1968 until 1973.³² These mergers took place among firms that belong to the same business group, among firms that do not belong to any business groups, or among firms that belong to a business group and firms that do not belong to any business group; mergers rarely took place among firms belonging to *different* business groups.³³ Mergers therefore contributed to the creation and expansion of *business groups*. Despite these merger activities, market concentration increased marginally due to vigorous new entries.³⁴

³⁰ Baba and others (n 23) 554.

³¹ For an overview of these imperfections see, Yokokura (n 12) 517–519. The author, however, criticizes indiscriminate support to the SMEs because this weakens the effectiveness of the support that targets each of the SMEs, and fails to target the SMEs of the sectors where the market failures are more pronounced. *ibid* 531–532. Similarly, Parker argues that governmental support should target high quality SMEs with strong potentials for innovation and employment generation. Rachel Parker, ‘From National Champions to Small and Medium Sized Enterprises: Changing Policy Emphasis in France, Germany and Sweden’ (1999) 19(1) *Journal of Public Policy* 85–86.

³² Iwasaki (n 14) 500.

³³ *ibid* 503.

³⁴ *ibid* 509–510.

Except for few instances, the MITI was not able to coerce the firms to merge.³⁵ Rather, the MITI have *facilitated and influenced, but was not able to impose*, these mergers through its merger recommendations using administrative guidance; these administrative guidance were combined with sticks and carrots,³⁶ provided informational signals to prospective firms to merge, and insulated these mergers from the Antimonopoly Law. These mergers were thus a result of non-structured dialectic cooperative process among the firms and the MITI. In this process, merger decisions remained with the firms' management, but were facilitated and influenced by MITI. Given this cooperative process, it is hard to argue that these mergers would have taken place any way, and it is even more unconvincing to argue that the MITI controlled the merger process. Rather, these mergers resulted from a *cooperative process of pooling the information and vision* of the MITI and the vision of the management of the relevant firms.

Given this cooperative process, its resulting rich informational basis, and the firms' ultimate control over merger decisions, these mergers were more likely to be *efficiency enhancing*. Further, these mergers increased the probability of forming and expanding the competitive advantage and intra-business group positive externalities and synergies. In short, although industrial organization policies did not have significant effects on the magnitude of mergers and acquisitions in post-war Japan, their *informational* role increased the probability that mergers and acquisitions would be efficiency enhancing.

However, one might argue that the informational signals of the MITI would be of little importance once the firms reach their efficient scale because these firms already have sufficient managerial and financial resources for securing most of the information provided by the MITI. Still, as the MITI's councils operate as forums for exchanging and pooling information across all sectors of the economy and foreign markets, it might have stocks of information that individual firms lack.³⁷ Further, industrial policies along with relaxed enforcement of the Antimonopoly law facilitated the important role played by the trade associations of each industrial sector as another forum for *information exchange*.³⁸

³⁵ *ibid* 511.

³⁶ Section 5 on industrial policy in the next chapter shall discuss these carrots and sticks.

³⁷ Baba and others (n 23) 554.

³⁸ Ulrike Schaede, *Cooperative Capitalism: Self-Regulation, Trade Associations, and the Antimonopoly Law in Japan* (Oxford University Press 2000) 43.

Mergers did not have a negative effect on competition; as already mentioned, mergers did not result in excessive concentrations due to vigorous new entries; most of the critical sectors of the post-war Japanese economy remained moderate oligopolies with at least three or four large competing firms.³⁹ New entries and the moderate oligopolistic structure ensured a domestically competitive market, for which reason, many (neoclassical) Japanese economists think that competition, and not industrial policy, was the main driver of the post-war Japanese miracle.⁴⁰ This position, however, ignores both the formal and informal coordination among Japanese firms and the large number of cartels that existed in post-war Japan. Further, this emphasis on competition seems to be ideologically driven: scholars had to take a clear stance on whether competition or industrial policy was the main driver of the post-war Japanese economic growth. The following section will discuss the relation between competition and industrial policy in the Japanese institutional network.

Overall, the *non-embedded* economic effects of the industrial promotion policies seem to be *positive*. For better understanding of these effects, we divide the targeted industries into two categories: the first category includes infant industries and industries that suffer from low productive efficiency and weak international competitive advantage, and the second category includes mature industries. For the first category of industries, industrial promotion policies were critical for creation of some new industries and the formation of the financial, technological, and organizational capabilities of other industries. In other words, post-war Japanese industrial policies have strong positive effect on the assessment criteria of market creation and firm's innovation capabilities, particularly *technological upgrading*. Second, these policies relaxed the financial constraints these firms confront due to the pump priming effect of the governmental financial support, and thus speeded up the process of capital accumulation. Third, tax depreciation allowances and R&D policies were critical for the formation of the technological and innovation capabilities of these firms, particularly because of their positive effects on *technological upgrading*. Forth, industrial organizational policies facilitated and speeded up the process of increasing the scale of the firms and the industry and the probability of efficiency enhancing merged firms, resulting in higher productive efficiency and international competitiveness. Fifth, the informational exchange aspect of industrial policy allowed the firms to reduce the uncertainty

³⁹ Baba and others (n 23) 554.

⁴⁰ See, e.g., *ibid* 553–554. Uekusa (n 6) 115.

of their environment and thus increase their investments and allocate these investments more efficiently.

With respect to mature industries that already enjoy an efficient scale and large financial, technological, and organizational capabilities, R&D policies were critical for ensuring the sustainability of their international competitiveness, whereas active information exchange was important for efficient allocation of their investments.

In short, post-war industrial promotion policies affected positively the assessment criteria of market creation, allocative efficiency (i.e., efficient allocation of investments), productive efficiency, international competitiveness, technical catch-up (technological upgrading), and innovation. Further, infant industries protection and promotion represents an important form of protecting an important category of the weak, namely, the SMEs and entrepreneurs in developing countries.⁴¹

On the cons side, the Japanese industrial policies, particularly trade protectionist policies, had a negative effect on efficient allocation of resources, but this negative effect does not seem to be strong for two reasons. First, almost all Japanese sectors in post-war Japan were protected factually and/or legally from foreign competition. Second, some distortionary industrial policies such as financial subsidies played a minor role as an industrial policy instruments, hence, they had minor distortive effects. Third, infant industries promotion policies tend to have significant distortionary effects because they give strong incentives for allocating resources to infant industries, but the strong positive effects these industries have on economic growth (consider the effects of the Japanese automotive industry on its economic growth, for example) outweighs any loss in allocative efficiency. Indeed, these significant positive effects on economic growth illustrate that these *ex-ante* distortionary policies turned out to be *ex-post* allocatively efficient. In other words, the distortionary effects of these industrial policies take place only if they fail to have positive economic growth effects. Due to this blanket broad-based trade protection and weak (direct) financial support, entrepreneurs were incentivized to allocate resources to the sectors with the highest *expected market returns* rather than to the sectors that received the highest protection because most sectors have relatively similar degree of protection. In other words, the distortions

⁴¹ As already argued in chapter 10, the main categories of the weak that should be protected by the institutional network of product markets include the workers, the weak subset of consumers, entrepreneurs and the SMEs.

created by trade protection of one sector mitigated the distortion created by the protection of the other sectors, and vice versa. The massive waves of new entries into the markets that had the highest expected growth point out that the Japanese sectoral industrial policies did not distort significantly the efficient allocation of resources. This would not have been the case if trade protectionist policies and financial subsidies were extended to some sectors at the cost of others because this would have reallocated higher resources to the protected sectors.

In short, Post-war Japanese industrial policies had a negative effect on efficient allocation of resources. However, these negative effects were not significant because of the ex-post success of infant industries promotion policies, the marginal distortionary effects of some post-war industrial policies such as financial subsidies due to their limited use, and the broad-based trade protections that tended to mitigate the distortionary effects of each other. In other words, one might argue that industrial policies have strong distortionary effects if they turn out to be a failure, but if they succeed, then, these industrial policies along with price signals of the market might achieve a better utilization of existing resources of the economy than their allocation exclusively through the price signals of the market. The distortionary effects of sectoral industrial policies are therefore *known ex-post*; that is why they are highly uncertain policies, as far as their effects on allocative efficiency are concerned.

As to post-war Japanese adjustment assistance policies, these policies targeted two types of declining industries: industries in decline because of structural reasons and industries in decline because of temporary exogenous shocks.⁴² The distinction between these types of industries is difficult because it involves an assessment of the reasons for the decline of the industry, and whether this decline is expected to be permanent. Overall, the adjustment assistance policies increase the adaptive capability of the Japanese firms that confront temporary decline because it enables these firms to go through the temporary period of decline without losing their productive capacity or skilled labor. The positive effects of these adjustment policies on structurally depressed industries are controversial, however, because these industries are not expected to grow again.

In short, post-war Japanese industrial policies had positive effects on the following assessment criteria: market creation, allocative efficiency (i.e., efficient allocation of investments), productive efficiency, international competitiveness, technical catch-up (technological upgrading),

⁴² Mitsuo Matsushita, 'The Legal Framework of Japanese Industrial Policy' [1987] Brigham Young University Law Review, 557–559.

innovation, adaptive capability, and protection of the SMEs and entrepreneurs. Due to their success, these industrial policies seem to have contributed to an efficient utilization of the limited resources of the post-war Japanese economy; therefore, they had, during this period, a marginal negative effect on allocative efficiency during the post-war period. Due to these positive effects of post-Japanese industrial policies on many of the drivers of economic growth, one can argue that these policies seem to have contributed positively to post-war Japanese rapid *economic growth*.

2.2. Integrated Economic Analysis of the Non-embedded Effects of Post-war Japanese Competition Law on Our Assessment Criteria

With respect to the non-embedded (and embedded) economic effects of post-war Japanese competition law (the so-called Antimonopoly Law), we need to assess how this law affected, partially, intra-industry inter-firm relations (i.e., horizontal inter-firm relations⁴³) in order to assess its non-embedded economic effects. Horizontal inter-firm relations may take one of three forms: competition, cooperation, and coopetition. Coopetition refers to ‘the phenomenon of [firms’] simultaneous competition and cooperation.’⁴⁴ Regarding competition as an inter-firm horizontal relation, it is not of one degree and type; competition varies in its intensity (intense or moderate competition) and its dimensions (price or non-price Schumpeterian competition). The objective of both Chicago and post-Chicago models of competition laws, for example, is to ensure intense and effective (particularly price) competition as an organizational structure for horizontal inter-firm relations. Subsequently, in order to evaluate the effects of Japanese Antimonopoly law, we need to evaluate its effects on horizontal inter-firm relations. These inter-firm horizontal relations,

⁴³ In addition to inter-firm horizontal relations, inter-firm vertical relations between upstream and downstream manufacturers, which are cross-industry relations, are critical to any discussion of the economic organization of inter-firm relations. These relations have been subject to regulation by the post-Chicago model of competition law in order to prevent incumbent or potential competitors from the anti-competitive practice of market foreclosure. Despite the importance of vertical relations in the Japanese product markets due to the economic importance of the Japanese sub-contracting system and Keiretsu, this section will not discuss the vertical relations among post-war Japanese firms because of time and space constraints. Hence, I leave such fascinating discussion to a future extension of this research project. It is sufficient here to note that because of the de facto absence of competition law, Japanese firms had an unfettered power in organizing their vertical relations.

⁴⁴ Keith Walley, ‘Coopetition: An Introduction to the Subject and an Agenda for Research’ (2007) 37(2) *International Studies of Management & Organization* 14.

affected partially by the Antimonopoly law, affect in turn our assessment criteria (e.g., allocative efficiency, innovation, and technical catch-up).

Consequently, what were the effects of Japanese Antimonopoly Law on Horizontal relations of Japanese firms? Given the watered down provisions of post-war Japanese Antimonopoly Law and the weak enforcement of these excessively relaxed provisions, post-war Japan had, de facto, no competition law. In reality, the Antimonopoly Law could hardly prevent any cartel that the ministries, the MITI, trade associations, or the firms wanted to establish, it could hardly block mergers that would result in high market concentrations, and it could rarely prevent abuses of dominant position.

Nonetheless, the de facto absence of competition law in post-war Japan does not necessarily implicate that firms' cooperation (particularly cooperation over prices, i.e., cartels) dominated their horizontal inter-firm relations. This is because other legal, economic, and cultural institutions (e.g., corporate governance, labor law, strategies of the firms' management, trade associations, and business groups such as Keiretsu) may have replaced de facto competition law in influencing these horizontal relations. Accordingly, we need to examine the form of inter-firm horizontal relations that dominated post-war Japanese product markets, i.e., we need to investigate whether the firms of the same industry tended to compete, cooperate, or use a mixture of competition and cooperation. .

Due to the de fact absence of competition law, the characterization of the inter-firm relations in post-war Japan is one of the most contentious questions about post-war Japanese economy; the students of post-war Japanese economic development diverged starkly on the form of horizontal inter-firm relations into three viewpoints: competition, cooperation, and coopetition (see below). They have also diverged on the intensity and dimensions of inter-firm competition (see below).

Once we identify the dominant form of inter-firm horizontal relations, we used the integrated approach in order to evaluate its non-embedded socio-economic effects on our assessment criteria. Since the insights of the neoclassical and Schumpeterian schools of thought are the most relevant for the characterization of inter-firm relations in post-war Japan and for the assessment of the non-embedded effects of these relations, we need to discuss the neoclassical and Schumpeterian theories of competition (and cooperation). In light of this discussion, we can develop an integrated understanding of the non-embedded effects of inter-firm relations on our assessment criteria. .

The structure of this section is as follows. Section 2.2.1 examines the form of horizontal relations that dominated post-war Japanese product markets (competition, cooperation, or coopetition). Section 2.2.2 investigates the neoclassical and Schumpeterian theories of inter-firm relations (competition, cooperation, and coopetition) and the implications of these theories on the choice of competition law model. In light of the valid insights of neoclassical and Schumpeterian schools of thought discussed in section 2.2.2, section 2.2.3 investigates the effects of post-Chicago and Schumpeterian competition laws, which are mediated through their effects on inter-firm relations, on our assessment criteria and then analyzes the non-embedded economic effects of the of post-war Japanese inter-firm horizontal relations on our assessment criteria.

Prior to engaging with the integrated analysis of the non-embedded effects of Japanese inter-firm economic organization, three remarks are in order. First, the law that regulates inter-firm horizontal relations has been termed in legal scholarship “competition, antitrust, or antimonopoly law”; this terminology presumes that competition is the most efficient and desirable inter-firm horizontal relation. Hence, neutral terminologies, which do not embody a bias towards competition as an inter-firm relation, such as “inter-firm relations law” or “regulation of inter-firm relations” are not used in legal scholarship. For overcoming this bias, the following exposition uses also the terminologies of “inter-firm relations law” and “regulation of inter-firm relations” to refer to the set of legal institutions (i.e., the institutional network) that governs inter-firm relations.

Second, the following sections use the integrated approach for assessing the non-embedded economic effects of horizontal relations among Japanese firms. The assessment of these non-embedded effects is informed mainly by the insights of Schumpeterian economics, neoclassical economics, modern (game theory-based) industrial organization theory underlying post-Chicago model of competition law, and strategic management. However, this assessment is not informed by the relevant insights of legal theory,⁴⁵ socio-economics (and sociology in general), behavioral economics, evolutionary economics (except for its Schumpeterian variant), Austrian economics,

⁴⁵ For a brief outline of a legal perspective over the normative theory of competition law, see: Roger Zäch, ‘Competition Law Should Promote Economic and Social Welfare by Ensuring Freedom to Compete - A Lawyer's View’ in Josef Drexl, Laurence Idot and Joël Monéger (eds), *Economic Theory and Competition Law* (Edward Elgar 2009) 121–125. Although Kerber uses a constitutional economics perspective, he ends up with a normative framework for competition law that shares important similarities with the one suggested by Zach’s legal perspective, see: Wolfgang Kerber, ‘Should Competition Law Promote Efficiency? Some Reflections of An Economist on the Normative Foundations of Competition Law’ in Josef Drexl, Laurence Idot and Joël Monéger (eds), *Economic Theory and Competition Law* (Edward Elgar 2009) 118–120.

and Ordoliberalism.⁴⁶ Future research should revise the conclusions of the integrated analysis of the non-embedded effects of post-war Japanese inter-firm horizontal relations in light of the critical insights of these schools of thought and theories. In light of their influence over modern American and European competition laws and their relevance to the assessment of the effects of post-war Japanese inter-firm, the choice of the insights of neoclassical economics and Schumpeterian economics seems a reasonable initial step for a future more comprehensive integrated analysis.

Third, the core five steps of integrated analysis outlined in table 7.2 in chapter 7 (i.e., neoclassical literature review, internal and external critiques of the neoclassical insights, the identification of relevant insights of non-neoclassical schools of thought and theories, the cross-criticism and refinement step, and the integration step) are followed in the below analysis. However, instead of following the exact order of these steps, the sections 2.2.2 and 2.2.3 simultaneously introduce, cross-criticize, and refine the insights of neoclassical and Schumpeterian perspectives over inter-firm relations and competition law, and then develops an integrated assessment of the non-embedded effects of post-Chicago and Schumpeterian models of competition law and post-war Japanese inter-firm horizontal relations. This parallel exposition and comparison of neoclassical and Schumpeterian theories of competition law has a dual advantage: it is succinct and engaging, while simultaneously satisfying the steps of the application of the integrated approach.

2.2.1. The Economic Organization of Horizontal Inter-firm Relations in Post-War Japanese Product Markets

The scholars of post-war Japanese economy diverged starkly on the form of horizontal relations that dominated post-war Japanese product markets into three viewpoints: *competition*, *cooperation*, and *coopetition*. Some scholars argue that despite the de facto absence of competition law, Japanese firms were aggressively competing with each other.⁴⁷ To support their viewpoint,

⁴⁶ For a brief and informative overview of the competition policy insights of most of these schools of thought, see: Oliver Budzinski, 'Monoculture versus Diversity in Competition Economics' (2008) 32(2) Cambridge Journal of Economics 296–313.

⁴⁷ Hiroyuki Odagiri, *Growth Through Competition, Competition Through Growth: Strategic Management and the Economy in Japan* (Clarendon Press 1994) 4–5. *ibid* 202–203. Baba and others (n 23) 553–554. Uekusa (n 6) 115.

these scholars argue that Japanese markets are moderately oligopolistic; almost none of the critical product markets in post-war Japanese economy were monopolized.⁴⁸ Further, intra-industry inter-firm coordination over prices and/or output guided by the MITI, which amounts to legalized cartels, was not successful; the prices most of the time diverged from the colluded price.⁴⁹ This is a further evidence on the intensive inter-firm competition that destabilized bureaucratically guided inter-firm coordination over price or output (i.e., destabilized cartels). Further, new entries into the product market were vigorous.⁵⁰

In contrast, Schaeede argues that the Japanese capitalism has been largely a *cooperative* system.⁵¹ Due to absence of competition law, trade associations played an active role in the creation and sustainability of cartels across the Japanese product markets.⁵² However, these cartels were more successful in economic downturns than in rapid growth periods because firms in the periods of rapid growth have more incentive not to commit to collusive prices.⁵³ In addition to price and output collusion, Japanese firms were embedded in large and dense network of horizontal and vertical inter-firm cooperative relations in research and development, product development, distribution, and marketing.⁵⁴ Cross-shareholdings have played a role in forming and sustaining inter-firm cooperation.⁵⁵ In relation to research and development in the case of automobile and mainframe computers, the government played an important industrial policy role in forming and sustaining these cooperative relations.⁵⁶

Given the contradicting evidences that suggest that Japanese firms were vigorously competing, but also vigorously cooperating, Japanese inter-firm relations were ‘complementary competitive’,⁵⁷ i.e., they were *cooperative*; Japanese firms engaged simultaneously in *competition*

⁴⁸ Baba and others (n 23) 554.

⁴⁹ This was the case for bureaucratically guided inter-firm coordination in steel industry, for example. Miwa (n 20) 483–484.

⁵⁰ Odagiri (n 47) 202–203.

⁵¹ Schaeede (n 38) 1–6.

⁵² *ibid* 54–56.

⁵³ *ibid* 152–154.

⁵⁴ Thomas M Jorde and David J Teece, ‘Innovation, Cooperation and Antitrust’ (1989) 4(1) High Technology Law Journal 28–30. The inter-firm cooperation among the firms of the computer industry is a case on the point, see: Shinjo (n 11) 352–354.

⁵⁵ Odagiri (n 47) 37–38.

⁵⁶ Hisatoshi Yamamoto, ‘Complementary Competition in Japan’ (1994) 37(2) Research-Technology Management 50–53.

⁵⁷ *ibid*. Jorde and Teece (n 54), 28–30.

and cooperation.⁵⁸ The Japanese firms' collusion over pricing or output in normal economic times was not as sustainable as their cooperation in other productive activities (e.g., R&D). As the institutions of labor and trade associations constrain the ability of the firms to compete aggressively over pricing in the short run, Japanese firms were largely competing over capacity and innovation. In other words, In addition to their competition over capacity, they were aggressively engaging in Schumpeterian competition (see the next section for a discussion of Schumpeterian competition).⁵⁹

Overall, the inter-firm relations in Japan were coepetitive in normal times; firms engaged in Schumpeterian competition rather than short-term price competition and were embedded in a dense network of vertical and horizontal cooperative relations. The government played an important role in forming and sustaining the cooperative aspect of inter-firm relations in the R&D activities. In economic downturns, cooperation dominates competition, and the economy transforms from its coepetitive mode into a cooperative one. In brief, post-war Japanese capitalism was neither competitive nor cooperative in normal economic times; it was *coepetitive*, and it was cooperative in economic downturns.

Surprisingly, this coepetitive inter-firm relations in normal times and cooperative relations in economic downturns represent the form of inter-firm horizontal relations that the Schumpeterian model of competition law (complemented with an inter-firm cooperation law as will be argued in the following chapter) aims to bring into existence. In other words, the horizontal relations of post-war Japanese firms conform largely to the form of inter-firm relations brought about by a Schumpeterian model of competition law. The following sections discuss therefore post-Chicago and Schumpeterian theories of competition and their respective models of competition law, and then assess the non-embedded effects of both Schumpeterian competition law (to which the inter-firm relations in Japan conform largely) and post-Chicago model of competition law, which underlies modern American and European competition laws, on our assessment criteria.

⁵⁸ Yamamoto (n 56), 50–53. Singh argues that Japan and East Asian economies have combined cooperation with an effective, but not a maximum, degree of competition. See: Singh (n 17) 218. *ibid* 233. Alice H Amsden and Ajit Singh, 'The Optimal Degree of Competition and Dynamic Efficiency in Japan and Korea' (1994) 38(3) *European Economic Review* 943–947.

⁵⁹ Odagiri (n 47) 97. *ibid* 101. Karl Wohlmuth, 'Global Competition and Asian Economic Development: Some Neo-Schumpeterian Approaches and Their Relevance' in Karl Wohlmuth and Toshihiko Hozumi (eds), *Schumpeter and the Dynamics of Asian Development* (LIT Verlag 2000) 39–40. Amsden and Singh (n 58), 950.

2.2.2. Post-Chicago and Schumpeterian Theories of Inter-Firm (Competitive, Cooperative, and Coopetitive) Relations and Their Implications for the Regulation of Inter-Firm Relations, particularly Competition Law Design

Regulating inter-firm horizontal relations requires an understanding of how these firms would interact in absence of this regulation, and whether the outcomes of their interactions would be desirable. If the effects of horizontal inter-firm relations in absence of regulation were undesirable, we should determine the form of desirable horizontal inter-firm relation, and then identify the legal institutions that bring this form of inter-firm relations into existence. In other words, we need a *positive theory of product markets* that, along with a *normative criterion*, would form the basis for regulating this market. Neoclassical perfect competition theory along with the normative criterion of allocative efficiency (along with some considerations for productive efficiency in the context of merger regulation) has been the basis for post-Chicago model of competition law, whereas the Schumpeterian theory of competition along with the normative criterion of *innovation* has laid the foundation for Schumpeterian competition law. We turn now to unpacking this general overview of the neoclassical and Schumpeterian perspectives over inter-firm relations (mainly, competition) and competition law.

Instead of starting from understanding how product markets operate in reality, neoclassical economics starts from an idealized unrealistic model of these markets: the neoclassical theory of perfect competition. Markets are perfectly competitive only if producers and consumers are price takers so that no one has a market power to influence the prices, products are homogeneous, information is perfect and symmetrically distributed, firms can enter and exit freely the market, and production technique and technology are constant.⁶⁰ These are the main conditions for sustaining perfect competition as an equilibrium state for (product) markets. By investigating the economic effects of these perfectly competitive markets, it has been established that in perfectly competitive markets, resources are allocated efficiently so that it is not possible to make any one better off without making another person worse off.⁶¹ Further, in perfectly competitive markets,

⁶⁰ Robert S Pindyck and Daniel L Rubinfeld, *Microeconomics* (7th edn, Prentice Hall 2009) 272–273. Kip W Viscusi, John M Vernon and Joseph E Harrington, *Economics of Regulation and Antitrust* (MIT Press 2001) 79.

⁶¹ John Vickers, ‘Concepts of Competition’ (1995) 47(1) *Oxford Economic Papers*, New Series 1.

prices will be equal to marginal cost, and this implies the maximization of output.⁶² Conversely, in oligopolistic or monopolistic markets, firms would not extend the output to the point where marginal cost is equal to prices because, given the non-competitive market structure, this would not be their profit-maximization strategy, thus the aggregate output of these markets would be less than that of perfectly competitive markets.⁶³

Therefore, perfect competition is considered the *ideal model* to which *real markets* should aspire because it ensures both *allocative and productive efficiency*, but it is not possible to design competition law norms that can push real markets to satisfy the conditions of perfect competition. Further, this is not even necessary because in many imperfectly competitive markets, firms' pricing and output decisions (e.g. Bertrand oligopolistic competition⁶⁴) resemble firms' pricing and output decisions in perfectly competitive markets, as long as these firms do not act cooperatively. Accordingly, from the neoclassical perspective, competition law should have the objective of maintaining what is called *effective competition* to ensure that firms do not collude, and do not abuse their market power.⁶⁵ To analyze whether the firms' practices, including mergers, are anti-competitive, competition law agencies assess *the short-term effects of these practices on price and output*. If they increase the prices or decrease the output, then, the market is moving further away from effective competition, and thus further away from the ideal of perfect competition. Hovenkamp summarizes this well:

[I]n antitrust economic analysis we tend to look at the price and output effects of practices. We evaluate them by asking whether they tend toward increased or decreased output, higher or lower prices [particularly, via their effects on market concentration], or whether they injure consumers over a testable time period, which is typically quite short. We do not try to show more, because for the most part we cannot answer second order questions about long run welfare implications. In the short run a practice may destroy a rival, produce monopoly, and may even appear to impair consumer welfare. But in the longer run it may be part of the very process of

⁶² Pindyck and Rubinfeld (n 60) 279

⁶³ Joseph A Schumpeter, *Capitalism, Socialism and Democracy* (5th edn, first published 1976, Routledge 2003) 77–78.

⁶⁴ In Bertrand model of oligopolistic markets, firms compete over prices; in the long-run, the equilibrium price would be equal to marginal cost pricing of the least cost firm. Pindyck and Rubinfeld (n 60) 457.

⁶⁵ Alison Jones and Brenda Sufrin, *EC Competition Law: Text, Cases, and Materials* (Oxford University Press 2008) 33–34.

creative destruction that Schumpeter believed to be the bedrock of economic progress.⁶⁶

The concept of effective competition, which underlies post-Chicago model of competition law, is therefore a *static* concept of competition because it is concerned with immediate or short-term effects of firms' practices,⁶⁷ while ignoring the analysis of the *long-term* effects of firms' practices. Further, by focusing on the price effects of firms' practices, post-Chicago competition law is concerned with the effects of firms' practices on allocative (static) efficiency in order to ensure an efficient allocation that moves in the direction of the efficient allocation resulting from the idealized perfectly competitive markets.

The American antitrust law is a major example of post-Chicago model of competition law as it endorses the above static concept of *effective competition*. We take therefore the American antitrust law as a reference point for explaining the post-Chicago model of competition law. The goal of the American post-Chicago model of competition law is to protect consumers, i.e., consumer welfare.⁶⁸ Instead of consumer welfare, the Chicago school of competition argued for overall welfare as a normative criterion for competition law.⁶⁹ According to the latter, if mergers would result in higher productive efficiency, but are more likely to harm consumers because of the resulting concentration of power, these mergers should be approved if the productive efficiency gains outweigh the consumers' welfare loss.⁷⁰ However, according to American post-Chicago model of competition law, mergers can be approved only if they would not most likely be harmful to consumers.⁷¹

To assess whether firms' behavior reduces consumers' welfare, American post-Chicago model of competition law uses the analytical concept of *effective competition*. As already mentioned, the assessment of the anti-competitive effects of firms' practices relies on the immediate or short-term effects of these practices on prices and output.

⁶⁶ Herbert Hovenkamp, 'Schumpeterian Competition and Antitrust' (October, 2008). University of Iowa Legal Studies Research Paper no. 08-43, 3.

⁶⁷ Harvard, Chicago, and post-Chicago theories of competition law share the focus on short-term price and output effects of firms' practices. Budzinski (n 46), 301.

⁶⁸ John B Kirkwood and Robert H Lande, 'The Chicago School's Foundation Is Flawed: Antitrust Protects Consumers, Not Efficiency' in Robert Pitofsky (ed), *How the Chicago School Overshot the Mark: The Effect of Conservative Economic Analysis on US Antitrust* (Oxford University Press 2008) 93–96.

⁶⁹ *ibid* 89–90.

⁷⁰ Jones and Sufrin (n 65) 23–24, and see the reference cited therein.

⁷¹ Kirkwood and Lande (n 68) 96.

Given the consumers' welfare as the normative basis for competition law, the American post-Chicago model of competition law consists of four major sets of legal institutions. The first is *per se illegality* of cartels; any written or oral agreement or concerted action among competitors that involve restraint of competition are legally prohibited regardless of the economic or social effects of these agreements or concerted actions.⁷² The second is the prohibition of abuse of dominant position. In this case, the dominant position (i.e., significant market power of an individual firm) is not *per se* illegal; only the abuse of this market power is illegal.⁷³ To determine whether a practice of a dominant firm is abusive, the American post-Chicago model of competition law does not rely on *per se prohibitions* of a range of practices. Instead, it relies mainly on *the rule of reason* that is the assessment of the effects of the dominant firm's practice on *effective competition* in the relevant market.⁷⁴ The third set of institutions is (horizontal and vertical) merger control regulation. In the American version of the post-Chicago model of competition law, mergers that would most likely result in a harm to consumers are not approved even if the productive efficiencies of these mergers (namely, producer's surplus) outweigh the loss in consumers' welfare (i.e., the loss in consumers' surplus).⁷⁵

The fourth pillar relates to inter-firm cooperation. Since inter-firm cooperative agreements in activities such as research and development, product development, distribution and marketing increase the likelihood that cooperating firms would cooperate also on pricing, the (American) post-Chicago model of competition law has been suspicious of inter-firm cooperative agreements.⁷⁶ For example, these agreements are not subject to explicit exemptions from the antitrust law, but they are subject to the rule of reason; this results in significant legal uncertainty regarding the treatment of these agreements under antitrust law.⁷⁷ As a result, American firms have been reluctant to enter into inter-firm cooperative agreements.⁷⁸

⁷² Viscusi, Vernon and Harrington (n 60) 135.

⁷³ *ibid* 293.

⁷⁴ *ibid* 294.

⁷⁵ This is the established case-law position on horizontal mergers, see: Kirkwood and Lande (n 68) 96. In contrast, the Federal Trade Commission and the Department of Justice, the agencies in charge of enforcement of Antitrust Law in the US, gives weight to post-merger productive efficiencies as a defense for mergers that may impose harm upon consumers, see: Richard Schmalensee, 'Thoughts on the Chicago Legacy in U.S. Antitrust' in Robert Pitofsky (ed), *How the Chicago School Overshot the Mark: The Effect of Conservative Economic Analysis on US Antitrust* (Oxford University Press 2008) 18.

⁷⁶ Jorde and Teece (n 54), 36–37.

⁷⁷ *ibid* 38–49.

⁷⁸ *ibid* 36–37.

Schumpeter's contributions challenge seriously the post-Chicago model of competition law. Schumpeter has challenged the idea that perfectly competitive markets, operating under the conditions of price taking firms and consumers with no market power, homogeneous goods, constant techniques and technology of production, and perfect and symmetric information, maximize output. By criticizing the output maximization property of the perfect competition ideal, the offspring of this ideal that is the static concept of effective competition underlying Post-Chicago model of competition law loses its rationale. The following statement summarizes Schumpeter's argument in this regard:

Economists are at long last emerging from the stage in which price competition was all they saw. As soon as quality competition and sales effort are admitted into the sacred precincts of theory, the price variable is ousted from its dominant position. However, it is still competition within a rigid pattern of invariant conditions, methods of production and forms of industrial organization in particular, that practically monopolizes attention. But in capitalist reality as distinguished from its textbook picture, it is not that kind of competition which counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organization (the largest-scale unit of control for instance)—competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives. This kind of competition is as much more effective than the other as a bombardment is in comparison with forcing a door, and so much more important that it becomes a matter of comparative indifference whether competition in the ordinary sense functions more or less promptly; the powerful lever that in the long run expands output and brings down prices is in any case made of other stuff.

It is hardly necessary to point out that competition of the kind we now have in mind acts not only when in being but also when it is merely an everpresent threat. It disciplines before it attacks. The businessman feels himself to be in a competitive situation even if he is alone in his field or if, though not alone, he holds a position such that investigating government experts fail to see any effective competition between him and any other firms in the same or a neighboring field and in consequence conclude that his talk, under examination, about his competitive sorrows is all make-believe. In many cases, though not in all, this will in the long run enforce behavior very similar to the perfectly competitive pattern.⁷⁹

⁷⁹ Schumpeter (n 63) 84–85.

In the context of Schumpeterian competition, firms' short-term pricing behavior is irrelevant; firms' competition over prices or output in the short run is not the focal point of analysis. Rather, as the above quote reveals, firms' *Schumpeterian competitive strategies* include competition over product quality, business and organizational models, production techniques, production technologies, and product innovation. Firms that succeed in this Schumpeterian competition would create new markets with completely new demand schedules.⁸⁰ These successful firms would gain a (temporary) monopolistic position in the market and reap high returns on their uncertain investments in these competitive strategies, whereas unsuccessful firms may go bankrupt.

Schumpeterian competition is therefore a *process of structural change* of capitalism where old products, old quality levels of existing products, old production techniques and technologies, old business and organizational models, and the firms producing these products and adopting these technologies and organizational models are destroyed. Simultaneously, new products, new quality levels of existing products, new production techniques and technologies, new business and organizational models, and the firms producing these products and adopting these new technologies and organizational models emerge and dominate. Schumpeter refers to this process as the perennial gale of 'creative destruction.'⁸¹ The primary factor leading the process of structural change is *new innovations*, which are not restricted to technological innovation, but encompass all types of innovations such as business model and organizational innovations that confer a competitive advantage upon the firm.⁸²

The delimitation of innovations that drive Schumpeterian competition into technological innovation or research and development spending is inaccurate; particularly, this reductive conceptualization of innovation results in considering Schumpeterian competition irrelevant to developing countries because they are already far below the technological frontier. Rather, as already argued in chapter 8, *organizational learning* is the major process underlying both innovation in developed economies and economic growth in developing economies; *organizational learning* is therefore the main driver of Schumpeterian competition in both developed and developing economies.

⁸⁰ J. G Sidak and David J Teece, 'Dynamic Competition in Antitrust Law' (2009) 5(4) *Journal of Competition Law and Economics* 600–601.

⁸¹ Schumpeter (n 63) 83.

⁸² Wohlmuth (n 59) 32, and see the reference cited therein.

In the short run, markets may become highly concentrated, and firms may employ anti-competitive practices that may result in short run increase in prices in order to increase the profits necessary for financing their Schumpeterian competitive strategies in the long run and to survive economic downturns.⁸³ In other words, many practices, which are deemed anti-competitive in the short run from the perspective of static competition, are indeed necessary for investing in the Schumpeterian competitive strategies. The latter accelerates the process of structural change (i.e., innovation), which is the core process underlying economic growth in a capitalist economy.

For Schumpeter, three implicit conditions, which we can be inferred from his captivating exposition, are required for sustaining effective Schumpeterian competition and the resulting process of creative destruction. First, firms should be *long-term profit maximizing*. Schumpeter emphasizes that firms invest in Schumpeterian competitive strategies because of their profit motive.⁸⁴ If firms cease to seek maximization of their long-term profits due to equity agency problem, a problem that Schumpeter referred to as the evaporation of private property, then, they would not invest in Schumpeterian competitive strategies.⁸⁵ Second, free entry into markets should be secured because it puts incumbent firms under the pressure of potential competition, giving them strong incentives for innovation, and it allows new entrepreneurs to have an access to these markets if they have potential innovations.⁸⁶ Third, governments should not introduce competition law based on the static neoclassical concept of competition because this law would impede the process of creative destruction since it would impede short-term anti-competitive practices and high market concentration, although the latter may be necessary for long-run investment in

⁸³ Schumpeter (n 63) 87–88.

⁸⁴ *ibid* 110.

⁸⁵ *ibid* 141–142.

⁸⁶ Schumpeter did not explicitly require free entry into markets as a condition for sustaining Schumpeterian competition. Rather, he argued that incumbent monopolists are operating in a *competitive* environment because they confront the continuous risk of new entrants enjoying higher competitive advantage. *ibid* 85. *ibid* 102. For Schumpeter, free entry, however, does not mean the neoclassical concept of likely, timely, and sufficient entry because the latter is incompatible with the process of creative destruction that involves product or process innovation. This process implies that firms winning in Schumpeterian competition would enjoy temporary monopoly positions until other firms are able to either catch-up or develop a better competitive advantage. *ibid* 105. That is why Sidak and Teece argue that ‘policymakers may need to examine barriers to entry over a longer time period and must do so at the firm level.’ Sidak and Teece (n 80), 611. In addition, the assessment of barriers to entry should ‘not focus on a particular market; [the] focus should be broader because some of the best candidates for new entry and radical innovation exist outside the market.’ *ibid* 610. Overall, most of the barriers to entry in Schumpeterian perspective refer to the artificial barriers created by incumbent firms, which are unrelated to the competitive advantage of these firms.

Schumpeterian competitive strategies.⁸⁷ In contrast to the above-mentioned conditions of perfect competition, we refer to these conditions as the “*conditions of effective Schumpeterian competition*.” As the below discussion demonstrates, these three conditions are not the sole conditions of effective Schumpeterian competition; further conditions shall be derived below.

Both Schumpeterian competition and neoclassical perfect competition can be thought of as *positive models* of real world competitive processes or as *ideal models* to which real markets should be pushed through legal institutions. As positive models of real markets, the Schumpeterian model of competition is clearly a much more realistic model of inter-firm competition in the long run. However, *in the short run*, firms in oligopolistic markets may have pricing strategies similar to the firms operating in perfectly competitive markets, and sometimes, the number of firms in the market may become too large and their products become marginally differentiated to the extent that the market may largely approximate the perfect competition model. After a process of rivalry, product markets may thus approximate *for a very short period* perfectly competitive markets. As Vickers, convincingly, argued, perfect competition involves also *a process of rivalry*, without which the market would not have approximated the perfect competition model.⁸⁸ The core difference between perfect competition and Schumpeterian competition as models of real markets is that Schumpeterian competition results in *no equilibrium*; the product market cannot settle into an equilibrium where prices are equal or close to marginal cost and resources are efficiently allocated and output is maximized given the existing techniques and technologies of production.⁸⁹

In light of the above interpretation of Schumpeterian competition as a positive model of product market evolution, it is not accurate to describe Schumpeter’s proposition to be that *monopolistic market structures and big corporations* are conducive to innovation, while perfectly competitive markets, the entrepreneurs, and the SMEs are not.⁹⁰ One reason for this popular and inaccurate characterization of Schumpeter’s thought is that Schumpeter himself reiterated this proposition.⁹¹ However, this should be understood within the overall perspective of Schumpeterian competition. Schumpeter’s analysis does not necessarily exclude the situations where markets may

⁸⁷ Schumpeter (n 63) 91.

⁸⁸ Vickers (n 61), 7.

⁸⁹ Schumpeter (n 63) 79–80.

⁹⁰ Sidak and Teece argue that this famous characterization of Schumpeter’s thought mistakenly reduces the richness of the Schumpeterian thought. Sidak and Teece (n 80), 586.

⁹¹ Schumpeter (n 63) 87–90.

approximate perfectly competitive markets or approximate monopolies, but both perfect competition and monopolistic market structures are just transient and temporary states of product markets because these markets are undergoing *a constant state of structural transformation*. Consequently, Schumpeter's thought is better described to be as follows: high market concentration and some short-term anti-competitive practices would have positive effects on innovation that exceed their negative short term effects on allocative efficiency as long as the above-mentioned *effective conditions of Schumpeterian competition* are satisfied. As already mentioned, for these requirements to be met, Firms should be long-term profit maximizing, there should not exist artificial barriers for market entry, or governmental interventions that impede the process of Schumpeterian competition such as the post-Chicago model of competition. In a sense, Schumpeter has made two contributions to positive economics. First, he described how markets evolve over time under the conditions of free entry and long-term profit maximizing firms. Second, he argued that *this path of evolution* is more conducive to innovation (and economic growth) in comparison to *a comparable path of evolution* where some short term highly concentrated markets, big corporations, or anti-competitive practices are not tolerated.

Consequently, simplistic propositions such as “monopolistic markets are better for innovation than perfectly competitive markets”, “large firms are better for innovation than small firms” misrepresent the Schumpeterian sophisticated comparison of the *long-term evolutionary paths of product markets*. In the Schumpeterian perspective, perfectly competitive markets, oligopolistic, and monopolistic market structures, anti-competitive practices, the size of the incumbent firms are just *transient* market structures, practices and sizes of the incumbent firms that change constantly during the long-term evolutionary process of product markets as long as the conditions of effective Schumpeterian competition are met. Suppose these conditions of effective Schumpeterian competition are met and thus the Schumpeterian description of product market long-term evolution is our benchmark for comparison. In this case, the counterpart of this comparison should not be a perfectly competitive market that is *a static state* of the market, but rather it should be a *comparable evolutionary process of the market* where the transient states of oligopolies and monopolies, formation of big business, and short term anti-competitive practices are not tolerated. Once we set correctly the relevant sides for comparison, we can ask the right questions such as “which evolutionary process (Schumpeterian or a non-Schumpeterian evolutionary process) is more conducive to innovation?” Answering this question requires us to compare two evolutionary

processes rather than comparing two structural states of the market or two different sizes of the firm. It is not a coincidence that the numerous empirical studies on the effects of market structure or firm size on innovation provided mixed evidence.⁹²

As Scherer, rightly, observed, Schumpeter has also emphasized the role of big firms in innovation.⁹³ Big corporations are perceived to have more incentives and capability to innovate than SMEs, regardless of the market structure (competitive, oligopolistic, or monopolistic) in which they operate. Here, two remarks are in order. First, Schumpeter emphasized that it is not size that really matters, but the *capabilities* of these large firms to use their financial resources to adapt to changes in the economic conditions, and to invest in both human capital and research and development;⁹⁴ these are the innovation capabilities of these firms, i.e., their capabilities to invest in *Schumpeterian competitive strategies*. Accordingly, for Schumpeter, size is just *a good proxy* for these capabilities. To capture the innovation capabilities of the firms, instead of size (or market share) as a proxy of these capabilities, Sidak and Teece argue that dynamic capabilities are better proxies for the competitiveness and innovation capabilities of the firm.⁹⁵ As already discussed in chapter 8, not only dynamic capabilities, but also firm's (knowledge) resources and competences constitute the knowledge assets of the firms (i.e., its learning capabilities) and thus they are clearly better proxies for learning and innovation capabilities of the firms. Incorporating firm's resources, competences, and dynamic capabilities (i.e., firm's knowledge system) into Schumpeterian perspective does not only overcome the simplistic focus on firm size, but also enables us to connect competition law with corporate governance through *firm's knowledge system*. Not only competition law and corporate governance have *significant effects* on this knowledge system. This knowledge system should be considered a *further condition for effective Schumpeterian competition*; if firms lack the capability to organize viable learning processes, they cannot use Schumpeterian competitive strategies centered on process or product improvement or innovation; these firms will be stuck into price or output based competition.

In short, as positive theories for product markets, perfect competition describes few realistic markets that *temporarily* meet the conditions of perfectly competitive markets. In contrast,

⁹² Sidak and Teece (n 80), 588.

⁹³ F. M Scherer, 'Schumpeter and Plausible Capitalism' (1992) 30 *Journal of Economic Literature* 1421–1422.

⁹⁴ Schumpeter (n 63) 101.

⁹⁵ Sidak and Teece (n 80), 614–615.

Schumpeterian competition argues that markets settle into an equilibrium for a very short period because they are in constant state of structural evolution. This Schumpeterian description of product markets is valid if and only if the four conditions of effective Schumpeterian competition are met. These conditions include long-term profit-maximizing firms, free market entry, firms' capability to organize viable learning processes (i.e., firms' capability to use Schumpeterian competitive strategies), and lack of governmental interventions that may impede the Schumpeterian competitive process. Obviously, product markets in developing economies do not fulfill these conditions, particularly the first three of them. Schumpeterian competition does not describe realistically the product markets of these economies, but it demonstrates why these markets fail to be Schumpeterian competitive. Since the product markets in developing economies are neither perfectly competitive nor Schumpeterian competitive, we need to examine whether they should seek to be perfectly or Schumpeterian competitive. This brings us to the comparison of Schumpeterian and perfect competition as *ideal (normative) models rather than realistic positive (descriptive) models* for product markets; the chosen ideal model should then guide the design of competition law to ensure that product markets approximate that ideal. As ideal models underlying the design of competition law, neoclassical perfect competition model gives legitimation of the static concept of effective competition as the analytical framework of modern Post-Chicago model of competition law. Conversely, according to Schumpeterian competition, we should not force the system into this imaginary stable equilibrium of effective competition; otherwise, we would be hampering the desirable process of creative destruction, which is the engine for economic growth. In the Schumpeterian perspective, perfect competition, oligopolies, and monopolies are *transient and not equilibrium* states of product markets. Although oligopolies and monopolistic markets are allocatively inefficient in the short run, they are necessary for to sustaining the firms' capabilities and incentives to organize viable learning processes, which are integral to innovation that is the primary engine for economic growth. Accordingly, these transient short-term allocatively inefficient market structures should be tolerated. Further, entrepreneurs that can introduce innovations into the markets and large firms should be given proper incentives for leading this process of creative destruction.

Since product markets may not fulfill the conditions of effective Schumpeterian competition, legal institutions that seek to ensure the fulfilment of these conditions can be enacted; these legal institutions constitute what can be considered a "Schumpeterian model of competition law". In

contrast to the post-Chicago model of competition law based on the neoclassical model of perfect competition, the Schumpeterian model of competition law finds its guiding principles and rationale in the Schumpeterian competition ideal.

The starting point for the design of any legal system such as the Schumpeterian competition law is to determine its objective. The objective of Schumpeterian competition law is to encourage *long-term innovation* rather than ensuring static allocative efficiency or consumer welfare.⁹⁶ To achieve this objective, Schumpeterian competition law should ensure that product markets fulfill the conditions of effective Schumpeterian competition. These conditions represent therefore the analytical framework for Schumpeterian competition law. Given the normative criterion of long-term innovation and the analytical framework of effective Schumpeterian competition, we can derive the main (four) pillars of Schumpeterian competition law.

As to abuse of dominant position, in contrast to post-Chicago model, Schumpeterian perspective tolerates the formation and existence of monopolistic positions⁹⁷ as long as the monopolistic firms do not create market entry barriers,⁹⁸ and do not earn monopolistic rents.⁹⁹ Further, from a Schumpeterian perspective, the practices that are considered monopolistic and

⁹⁶ In contrast, Sidak and Teece argue the *intermediate* objective of dynamic (Schumpeterian) competition law should be long-term innovation; still, they contend that similar to post-Chicago model of competition law, the *ultimate* objective of Schumpeterian competition law should be consumers' welfare maximization. Accordingly, the short-term negative effects on consumer welfare should be compared to the positive effects of long-term innovation on consumer welfare. *ibid* 600–601. *ibid* 620.

⁹⁷ This is because from a Schumpeterian perspective, these monopolistic positions are thought to be transitory. Mary Coleman and David J Teece, 'The Meaning of Monopoly: Antitrust Analysis in High-Technology Industries' (1998) 43(3/4) *Antitrust Bulletin* 808–809.

⁹⁸ Coleman and Teece provide a dynamic rather than a static conceptualization of monopoly; in this conceptualization, monopoly is 'not a situation of high market share; nor is it a situation where profits are high, or where prices are above marginal cost. Rather, a monopolist would be a firm shielded from entry, i.e., insulated from competition from other innovators and imitators.' *ibid* 825. Further, in the Schumpeterian perspective, the assessment of entry barriers should be made with reference to potential competitors from other (distant) markets and should have a long-term orientation. Sidak and Teece (n 80), 610–611.

⁹⁹ Coleman and Teece argue that 'a true monopolist is a firm that is earning monopoly rents and not Ricardian or Schumpeterian rents. Ricardian and Schumpeterian rents may be considerable, but they tend to be transitory unless renewed by continuous innovation.' Coleman and Teece (n 97), 833. Although the authors analyze monopolistic practices of high technology (knowledge-intensive) firms, their analysis extends to the firms in developing economies because the process of learning and imitation undertaken by these domestic firms while confronting intensive competition from foreign firms is similar to the process of innovation undertaken by the firms of advanced economies. For example, both processes are highly risky and the dominant positions gained by the firms are necessarily transitory.

abuses of dominant position in the post-Chicago competition law (e.g., predation) rarely takes place in real markets undergoing a Schumpeterian process of creative destruction.¹⁰⁰

With respect to cartels, Schumpeter explicitly considered cartels in times of economic downturn as *an adaptive mechanism* that enables the economy to preserve its productive capacity; otherwise, many efficient firms would go bankrupt in times of crisis.¹⁰¹ Interestingly, despite his evolutionary perspective, Schumpeter did not treat economic downturns as a Darwinian selection mechanism that separates efficient from inefficient firms; rather, he viewed them as undesirable source of uncertainty for the capitalist firms that they need to cope with efficiently to ensure their long-term survival.¹⁰² This high probability of survival in face of uncertain economic conditions such as economic downturns is a *pre-condition* for firms' investment in innovation in the first place;¹⁰³ in other words, it is a further condition for effective Schumpeterian competition. If firms lack the adaptive mechanism necessary for survival, they would not have *the long-term perspective* required for investment in learning and innovation.

In contrast, in normal economic times, Schumpeter has not assessed the desirability of cartels. Here, by fixing the prices, cartels may give the firms strong incentives to compete on *quality and capacity*. As to the incentives to compete on capacity (i.e., market share), in the context of post-war Japanese economy, cartelization had *the negative effect* of incentivizing the firms to expand their productive capacity to gain higher share of the market, resulting in overcapacity problems.¹⁰⁴ Simultaneously, by fixing the minimum price of the product, firms may have strong incentives to compete by *increasing the quality* of the product. In other words, cartels may provide the firms with strong incentives for Schumpeterian instead of price competition if and only if these firms are long term profit maximizing; particularly, the future large profits of these firms would provide them with sufficient resources for investment in technological learning and innovation. However, in case the firms were long-term profit maximizing, but their shareholders and/or management

¹⁰⁰ *ibid* 839–843.

¹⁰¹ Schumpeter (n 63) 91.

¹⁰² *ibid* 87–90.

¹⁰³ *ibid* 89–90.

¹⁰⁴ Further, the low risk economic environment of the Japanese firms resulting from the supportive industrial policies and inter-firm cooperation has given the firms stronger incentive to expand capacity. Hideki Yamawaki, 'The Steel Industry' in Ryutaro Komiya, Masahiro Okuno and Kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 294. See contra: Itoh and others, 'Industrial Policy as a Corrective to Market Failures' (n 20) 249. The authors argue that a strong empirical evidence in support of the industry's over-capacity effects of industrial policy is lacking.

value the quiet life of cartels that operate as a large monopoly, then, they may have little incentives to disturb the cartel with innovations. Further, cartels have strong power in creating market entry barriers and in boycotting non-cooperating firms that may disturb the cartel through innovation. Accordingly, it seems that cartels in normal economic times have, on balance, a negative effect on innovation.

Consequently, from a Schumpeterian perspective, cartels in downturns should be subject to rule of reason (i.e., a case by case assessment of their effects on learning and innovation), while cartels in normal economic times should be subject to per se illegality similar to their legal treatment in post-Chicago model of competition law.

With respect to mergers, Schumpeterian perspective would transform the assessment of mergers in two ways. First, mergers to monopolies will be permissible as long as other firms enjoy the dynamic capabilities that would enable them to enter the monopolized market.¹⁰⁵ Here, market definition includes all the firms that enjoy these capabilities even if they are operating in markets neighboring to the one where the merger takes place.¹⁰⁶ Second, even if the merger would result in high market concentration after broadening the scope of the relevant market, these mergers should be permissible if their long-term positive gains in terms of innovation exceed their short term negative effects on allocative efficiency.¹⁰⁷ In all cases, horizontal or vertical mergers that are more likely to create barriers to entry post-merger are prohibited under Schumpeterian competition because elimination of barriers to entry is one of the main conditions for sustaining effective Schumpeterian competition.

Finally, the forth pillar of Schumpeterian competition relates to inter-firm cooperation. Teece has argued that firms' large size is no longer a necessary or a sufficient condition for the formation and sustainability of the innovative, technological, and learning capabilities of the firms: it is unnecessary because inter-firm cooperation can substitute for the size through pooling common or complementary resources of the firms.¹⁰⁸ Further, in the cases of complementary knowledge where firms do not enjoy well-defined property rights over the input or the output knowledge, inter-firm

¹⁰⁵ Sidak and Teece (n 80), 623–625.

¹⁰⁶ *ibid.*

¹⁰⁷ *ibid* 600–601.

¹⁰⁸ David J Teece, 'Competition, Cooperation, and Innovation: Organizational Arrangements for Regimes of Rapid Technological Progress' (1992) 18 *Journal of Economic Behavior and Organization* 3–6.

contractual cooperation among these firms can still substitute efficiently for their merger.¹⁰⁹ Large size is insufficient for ensuring the innovation capability of the firm because many large firms are lacking the complementary assets necessary for developing and commercializing its innovation due to geographical and organizational decentralization of technological knowledge.¹¹⁰ Still, a minimum size of the firm that reflects its static resources and learning related capabilities is necessary to establish cooperation because each firm has to own specific stocks of specialized knowledge that it can contribute to the cooperative relation. Since inter-firm cooperation is both necessary and sufficient for forming and sustaining the static and dynamic capabilities of the cooperating firms, long term innovation, the core concern of the Schumpeterian perspective on competition,¹¹¹ can now be best achieved through inter-firm cooperation. In sum, Schumpeterian competition law imposes no or few legal restrictions on inter-firm cooperation.¹¹²

Consequently, Schumpeterian model of competition law, if enforced effectively, would not result in a statically competitive economy in which prices are close to marginal costs, markets structures are of low concentration ratios, and firms are of moderate size. In addition, it would not result in cooperative economy where firms collude on prices and output and market entry is hampered. Instead, firms in a Schumpeterian economy would engage in *effective Schumpeterian competition*; they would invest in *organizational learning* that is the necessary condition for process and product innovation (i.e., Schumpeterian competitive strategies). However, if the *legal institutions necessary for sustaining inter-firm cooperation* are created,¹¹³ the firms in Schumpeterian economy will be *simultaneously competing and cooperating* with each other; in other words, these firms will be *coopetitive*. As argued in the previous section, inter-firm horizontal relations in post-war Japanese economy conform largely to the *coopetitive model* of inter-firm horizontal relations that may result from an institutional network that includes *Schumpeterian competition law* as well as legal and economic institutions supportive of *inter-firm cooperation*.

¹⁰⁹ Fabrizio Cafaggi, 'Introduction' in Fabrizio Cafaggi (ed), *Contractual Networks, Inter-Firm Cooperation and Economic Growth* (Edward Elgar 2011) 10.

¹¹⁰ Teece (n 108), 7–8.

¹¹¹ Wohlmuth (n 59) 31–34.

¹¹² Based on dynamic (Schumpeterian) competition, Jorde and Teece have proposed amendments to the US Antitrust Law and its judicial interpretations to give a space for inter-firm cooperation in a developed economy such the US economy, see: Jorde and Teece (n 54), 61–70.

¹¹³ Next chapter discusses this issue further.

In conclusion, this section examined the neoclassical and Schumpeterian theories of product markets (inter-firm horizontal relations); both the neoclassical perfect competition and effective Schumpeterian competition are unrealistic descriptions of product markets in developing countries because these markets fail to satisfy the conditions of either perfect competition or effective Schumpeterian competition. As an *ideal model* for product markets, the neoclassical perfect competition gives legitimization of post-Chicago model of competition law that assesses firms' practices with reference to their immediate or short-term effects on price and/or output. In contrast, as an ideal model for product markets, Schumpeterian competition law seeks to give the firms' strong incentives for long-term innovation (more broadly, long-term organizational learning) through ensuring that product markets fulfill the conditions of effective Schumpeterian competition. These conditions include long-term profit maximizing firms, free entry, lack of governmental interventions that hinder effective Schumpeterian competition, firm's capability to organize viable learning processes (which may require a minimum size of the firm, but necessarily a large size), adaptive mechanisms to uncertain economic conditions (e.g., cartels in economic downturns), and tolerance of transient monopolies and some anti-competitive practices. Given the normative focus on long-term innovation (long-term organizational learning) and the analytical framework of the conditions of effective Schumpeterian competition, this section has derived the pillars of Schumpeterian competition law. These pillars diverge starkly from the comparable pillars of the post-Chicago model of competition law. The fourth pillar of Schumpeterian competition law gives broad space and support for inter-firm cooperation. When inter-firm cooperation is encouraged and sustained through a myriad of economic, legal, and cultural institutions, Schumpeterian competition law would give rise to *coopetitive* inter-firm horizontal relations similar to the coopetitive inter-firm relations of the post-Japanese firms.

In the following section, we compare the non-embedded effects of both post-Chicago competition law and the (coopetitive) institutional network that includes Schumpeterian competition law and the institutions supportive of inter-firm cooperation on our assessment criteria. The analysis of the non-embedded effects of this institutional network allows us to understand the non-embedded effects of Japanese inter-firm coopetitive relations. As already argued, the institutional network that includes Schumpeterian competition law and institutions supportive of inter-firm cooperation would give rise to *coopetitive* inter-firm relations. Therefore, we can reasonably assume that the non-embedded effects of this institutional network on our

assessment criteria would be similar to the non-embedded effects of the cooperative inter-firm relations of post-war Japanese firms. Furthermore, the analysis of the non-embedded effects of post-Chicago competition law, which is the dominant model of competition law in law and economics literature, would enable us to understand the effects of the cooperative institutional network, particularly its sub-network that represents the Schumpeterian competition law. This analysis would also facilitate the choice of a model of competition law for developing countries in the next chapter.

2.2.3. Integrated Analysis of the Non-embedded Effects of Both Post-Chicago Competition Law and the Institutional Network Consisting of Schumpeterian Competition Law and the Institutions Supportive of Interfirm Cooperation on our Assessment Criteria

Given the four pillar of post-Chicago model of competition law, the strict enforcement of this model of competition law would have the two consequences. First, *inter-firm competition* would be *the dominant form of inter-firm relations in both normal economic times and economic downturns*. Inter-firm cooperation would be limited; it would be restricted to R&D cooperation because cartels in economic downturns are prohibited. The enforcement of post-Chicago competition law is not relaxed in economic downturns so that competition would be the governing structure of inter-firm horizontal relations in economic downturns. Second, the restrictions on mergers and abuse of dominant positions would prevent the market from undergoing the Schumpeterian structural evolution process, which is essential for giving the firms strong incentives to invest in organizational learning and innovation (see below). These restrictions result in a *strong degree of competition (i.e., intense competition)* in product markets, where firms' profit margins are reduced and the rates of both market entry and exit are high. In short, the post-Chicago model of competition law results in *intense or high degree of competition* that dominates inter-firm horizontal relations in both normal economic times and economic downturns. Accordingly, to assess the non-embedded effects of post-Chicago model of competition law on our assessment criteria, we need to evaluate the non-embedded effects of *high degree of (static) competition* on these criteria.

In the mainstream economics and the reports of the World Bank, competition is considered to have a significant positive effect on economic growth.¹¹⁴ In this view, competition has a positive effect on economic growth through four causal mechanisms: allocative efficiency, productive (technical) efficiency, technology adoption and innovation, and foreign direct investment.¹¹⁵ To recall, these causal mechanisms, except for foreign direct investment, are among our assessment criteria outlined in chapter 10. We therefore examine the effects of competition on each of these criteria and their resulting effect on economic growth.

As for static allocative efficiency, according to neoclassical first fundamental theorem of welfare, competition, under specific conditions, ensures efficient allocation of resources by allocating factors of production (e.g., land, capital, labor, and energy resources) to their most productive uses.¹¹⁶ Assuming away the general theory of the second best, competition therefore tends to increase the *productivity* of the economy because it achieves higher production (i.e., higher level of economic growth) out of the same inputs. The empirical evidence suggests that the welfare gains from static allocative efficiency are low, and thus the *positive* effect of allocative efficiency

¹¹⁴ See, e.g., World Bank, *World Development Report 2002: Building Institutions for Markets* (Oxford University Press 2002) 133–135. In general, the report supports some degree, and not necessarily a maximum degree, of competition, but the main proposal for implementing the desired level of competition is ensuring the exposure of domestic markets to *international competition* through, inter alia, eradicating the barriers to market entry. *ibid* 135. To implement these proposals, a post-Chicago model of competition law should be enacted because a Schumpeterian model that encourages domestic inter-firm cooperation or cartels in times of recessions may result in structural impediments to market entry by foreign firms. In the economic literature, see, e.g., Simon J Evenett, ‘Links between Development and Competition Law in Developing Countries’ (28 October 2003). Case Studies for the World Development Report 2005: Investment Climate, Growth and Poverty <file://cws1/Benutzer/aldegwy/Downloads/dfidpaper%20(3).pdf>. See also: Patrick Rey, ‘Competition Policy and Economic Development’ (September 1997) <<https://www.tse-fr.eu/publications/competition-policy-and-economic-development>>. For example, Rey argues for a competition law that is somehow stricter than Post-Chicago model of competition law for developing countries. For example, he argues for per se rules for vertical restraints and mergers instead of rules of reason. *ibid* 36–37. Further, although he seems to tolerate mergers to oligopolies, he argues that the mergers that result in moderately concentrated markets with *symmetric market shares* would facilitate post-merger cartel formation, and thus are most likely to result in anti-competitive effects. *ibid* 23–24. Amsden and Singh capture the mainstream economic perspective eloquently; they state that ‘the traditional economic theory’s answer to the question of optimal degree of competition was simple: maximum competition.’ Amsden and Singh (n 58), 942.

¹¹⁵ For a brief overview of the relation between competition policy and growth, see, e.g.: Stefan Voigt, ‘The Effects of Competition Policy on Development – Cross-Country Evidence Using Four New Indicators’ (2009) 45(8) *The Journal of Development Studies* 1226–1231.

¹¹⁶ R. F Boadway and Bruce Niel, *Welfare Economics* (Wiley-Blackwell 1984) 64. For a simple proof of the productive efficiency of perfectly competitive markets in general equilibrium, see: *ibid* 71–80.

on economic growth is insignificant.¹¹⁷ Given this empirical evidence, Chang and Rey argue that static efficiency is unimportant causal channel for the effect of competition on economic growth.¹¹⁸ This proposition assumes that allocative static efficiency is a one shot gain, but this is not correct. Static allocative efficiency ensures that at specific point of time, the *existing* resources of the economy are allocated to their highest value uses. In absence of such efficient allocation, some of these resources would be *wasted*. Empirical evidence reflects the fact that once competition law is introduced and enforced strictly, the *existing* waste of resources *at the time* of enactment and strict enforcement of competition law is eliminated. *At this specific point of time*, the elimination of this waste would not result in significant benefits because the benefits measured empirically reflect the one-shot gain from the elimination of *existing waste*. However, in case of absence of competition law, in *each point of time*, resources are allocated inefficiently and new resources are wasted; *new waste* is thus generated. Allocative efficiency not only eliminates existing waste of resources, but also prevents *future waste*. Empirical evidence captures the waste eliminated, but not the waste prevented in the future, and thus undermines significantly the effects of competition on economic growth through the causal channel of allocative efficiency.

Still, the positive effects of competition on economic growth *via allocative efficiency channel* in developed economies would be *weaker in developing countries*. In the context of liberalized trade and capital flows, resources would be allocated to its most efficient uses, which happen to be foreign firms in the open economies of developing countries. Domestic demand will shift from domestic products, if any, to imported goods, and the scarce skilled labor and capital will be allocated to the subsidiaries of foreign corporations, while rationing supply of capital and skilled labor to domestic firms. In developing countries, competition is an efficient mechanism for killing productively inefficient firms,¹¹⁹ which happen to be the domestic firms of developing countries. As profits made by foreign firms fly out of the domestic markets, the (temporary) growth in productivity would then be expropriated by capital exporting countries. Furthermore, as already

¹¹⁷ Rey (n 114) 10, fn. 5, and see also the reference cited therein. Ha-Joon Chang, 'The Economics and Politics of Regulation' (1997) 21(6) Cambridge Journal of Economics 720, and see also the reference cited therein.

¹¹⁸ For which reason, Rey focuses only on the effects of competition law on productive efficiency and innovation as the main channels for its effects on economic growth. See: Rey (n 114) 10.

¹¹⁹ This is because 'intensified product market competition increases the market share of low cost firms and reduces it for high-cost firms.' Philippe Aghion and Mark Schankerman, 'On the Welfare Effects and Political Economy of Competition-Enhancing Policies' (2004) 114(498) The Economic Journal 805.

argued in chapter 8, in absence of foreign firms in the domestic markets, existing factors of production will not be allocated to creation of new domestic markets, but to investment in existing markets because creation of new domestic markets is *highly uncertain*. It involves direct competition with foreign competitors, which are more efficient in terms of both quality and cost of their products. In short, competition would have moderate positive effects on economic growth via the causal channel of allocative efficiency in developed economies, but this causal channel of competition would result in a marginal positive effect, or maybe a negative effect, on economic growth in developing economies.

As to productive (technical) efficiency, competition has a positive effect on the alignment of the incentives of the management with that of the shareholders; competition functions as a disciplinary mechanism that reduces managerial slack.¹²⁰ Competitive markets reveal some information about the effort level of the firm's management by comparing the performance of the firm to the performance of competing firms. The shareholders of the firm can use this information in ensuring high efforts equilibrium of its management because they can structure the compensation scheme of the management in light of the performance of the management of competing firms.¹²¹ Moreover, Aghion and Schankerman argue that competition results in increase in productive efficiency of the industry through additional three channels: *market selection, cost reduction, and entry*.¹²² Market selection mechanism ensures the increase of market share of the low cost firms at the cost of high cost firms, resulting in a lower average cost of production equilibrium of the industry.¹²³ In addition, competition increases the incentives of the incumbent *low-cost* firms to adopt further cost-reducing strategies and increase their productive efficiency to sustain their high market shares; this is the cost reduction channel of competition.¹²⁴ Finally, given the high degree of competition, only the firms with low costs of production would have the incentives to enter competitive markets, resulting in even lower average production costs (i.e., higher productive efficiency) of these markets.¹²⁵

¹²⁰ Oliver Hart, 'The Market Mechanism as an Incentive Scheme' (1983) 14(2) *The Bell Journal of Economics* 376–377.

¹²¹ Vickers (n 61), 9–10.

¹²² Aghion and Schankerman (n 119), 801.

¹²³ *ibid* 801. *ibid* 805.

¹²⁴ *ibid* 809–810.

¹²⁵ *ibid* 801. *ibid* 814.

Moreover, in the neoclassical perspective, intense competition would increase the managerial efforts and align their incentives with the shareholders,¹²⁶ and thus provide the firms with strong incentives for technology adoption and innovation; otherwise, these firms would face the risk of market share loss and bankruptcy. However, from a Schumpeterian economic perspective, if the winning firms in the process of competition were not rewarded by above marginal cost prices (abnormal profits), they would not have embarked on risky investments or invested in risky R&D.¹²⁷ This Schumpeterian perspective calls for a relaxation of competition law to allow these firms to cash in their rewards to ensure proper incentives for making risky socially beneficial investments.¹²⁸ Further, these high profits provide the firms with sufficient cash flow and retained earnings for investment in technological upgrading. Giving the firms the proper incentives and financial capabilities to adopt new technologies and invest in innovation would enhance the process of *technical progress*, which is one of the major drivers of economic growth rate.¹²⁹ Aghion has shown that this Schumpeterian perspective is valid in two cases: the case of radical (leapfrog) innovation because intense competition would have negative effects on this form of innovation, and the case of unleveled product markets (i.e., product markets in which some firms are technologically lagging behind other firms) because high competition in these markets would have negative effects on the innovation incentives of technologically laggard firms.¹³⁰ However, intense competition has a positive effect on *incremental (step-by-step) innovation in neck-and-neck product markets* (i.e., product markets in which competing firms have similar technologies).¹³¹ This is because of two reasons: first, the investment in incremental innovation in this case is the sole competitive strategy that firms engaging in strong price competition afford to undertake because in these markets firms are making zero profits. Second, the difference between

¹²⁶ Hart (n 120), 376–377.

¹²⁷ Schumpeter (n 63) 89–90. For a short review of relevant theoretical and empirical literature on this Schumpeterian insight, see: Philippe Aghion and others, ‘Competition and Innovation: An Inverted-U Relationship’ (2005) 120(2) *The Quarterly Journal of Economics* 710–711.

¹²⁸ In other words, Schumpeterian rents are not monopoly rents. Coleman and Teece (n 97), 833.

¹²⁹ Paul Romer, *Advanced Macroeconomics* (4th edn, McGraw Hill 2012) 145. See also section 4.1 of chapter 9 on the “External Critiques of the Neoclassical Normative Theory of Economic Regulations: Insights from Development Economics” and the references cited therein.

¹³⁰ Aghion and others (n 127), 714.

¹³¹ *ibid.*

pre-innovation and post-innovation rents in this case is high, which gives strong incentives for the firms to invest in incremental innovation.¹³²

Finally, assume that foreign direct investment has a positive effect on economic growth. Competition law has both positive and negative effects on foreign direct investment; it is not clear which effect dominates the other, however.¹³³

In conclusion, in the context of developing economies, post-Chicago competition law has a marginal positive effect, or maybe a negative effect, on economic growth via its effects on allocative efficiency. Through its positive effects on incentives for productive (technical) efficiency, post-Chicago competition law has a positive effect on economic growth. As to its effects on technological adoption and innovation, post-Chicago competition law would have a negative effect on technological adoption and innovation. If it has any positive effects on innovation, then, it would have a positive effect on technological adoption and incremental innovation rather than radical innovation. These are the non-embedded effects of competition on our assessment criteria, namely, allocative efficiency, productive efficiency, technological adoption (technical catch-up), and innovation. Consequently, the standard account that developing countries should adopt the post-Chicago competition law for being an engine for economic growth is somehow problematic; indeed, the limitations of post-Chicago competition law are more evident in the context of catching-up development process.

In addition to the effects of (intense) competition resulting from the post-Chicago model of competition on the above assessment criteria, competition has distinct effects on other important assessment criteria, namely, income distribution and protection of the weak subset of consumers. Intense competition, as mentioned above, maximizes consumers' welfare by pushing product prices close to marginal cost pricing, and thus prevents the exploitation of the consumers by the producers and ensures a more just distribution of income. As already argued in chapter 10, we should be concerned with the protection of the weak subset of consumers rather than maximization

¹³² *ibid* 716.

¹³³ Some competition law norms may have negative effects on foreign direct investment inflows. For example, mandatory pre-notification merger review reduces cross-border mergers and acquisitions, which is a form foreign direct investment. Further, *per se* prohibition of cartels would reduce domestic prices and thus inhibit potential inflow of foreign direct investment. Other legal norms of competition law would enhance inflow of foreign direct investment. For example, the prohibition of anti-competitive vertical mergers and agreements that foreclose market entry may facilitate foreign direct investment inflow. For a discussion of these effects of competition law on foreign direct investment, see: Evenett (n 114) 7–10.

of consumers' welfare. Obviously, the post-Chicago model of competition provides the maximum protection of the weak subset of consumers, which include the poor and middle-income consumers who cannot afford sharp increases in prices.

In contrast to these non-embedded effects of the post-Chicago model of competition on the assessment criteria, the institutional network that includes a Schumpeterian competition law and institutions supportive of inter-firm cooperation would have different effects. As already argued, unlike the *intense competition* resulting from the post-Chicago competition law, this institutional network would give rise to a *coopetitive* form of inter-firm horizontal relations similar to the cooperative relations that dominated post-war Japanese inter-firm horizontal relations. We therefore refer to this institutional network as the “coopetition institutional network, or for sake of brevity, coopetition law”. As to the cooperative aspect of the coopetitive relations, cartels are permitted as an adaptive mechanism to economic downturns. Further, cooperative inter-firm agreements are not only permissible, but also encouraged. As to the competitive aspect of the coopetitive relations, we distinguish between normal economic times and economic downturns. In economic downturns, the enforcement of competition law is relaxed in economic downturns to provide a further space for firms to adapt to these harsh economic conditions. In normal economic times, mergers that may result in high concentration of markets are tolerated as long as they have (moderate) positive effects on innovation. Further, abuses of dominant positions that do not involve creation of barriers to market entry are also tolerated. The main form of anti-competitive practice that is targeted by Schumpeterian competition law in both good and bad states of the world is *entry barriers*. The rationale for this focus on entry barriers is that the lack of entry barriers is one of the most important conditions of effective Schumpeterian competition (see above). As a result, unlike the post-Chicago model of competition law, Schumpeterian competition law does not result in a strongly intense competition that pushes profits close to marginal cost. In other words, it results in a non-excessive *optimal* competition.¹³⁴

Given these cooperative and competitive aspects of the coopetitive relations resulting from the coopetition law, we can evaluate the non-embedded effects of this law on our assessment criteria. As to allocative efficiency,

¹³⁴ Amsden and Singh argue that intense unfettered competition is not the optimal level of competition because it may hinder long-term innovation and economic growth; rather, the Japanese experience shows that a moderate level of *guided* competition are more conducive to technological innovation, investment, and economic growth. Amsden and Singh (n 58), 942–947.

As to market creation and allocative efficiency, competition would ensure efficient allocation of resources to *plausible* investment opportunities. If some investment opportunities are not plausible because they involve creating new markets and thus involve excessive risks that domestic entrepreneurs are not willing to assume, competition does not seem to be a *sufficient* mechanism for market creation in developing countries.¹³⁵ Instead, it would allocate resources efficiently among plausible investment opportunities. For large firms with extensive financial, technological, and organizational capabilities, some of them may have the risk appetite for creating new markets; still, few domestic firms are of this sort in developing countries, and thus they are insufficient for creating markets. By reducing the intensity of competition and enabling collaboration among the firms, firms in developing countries may be more inclined to take the risks of creating new markets; still, Schumpeterian competition law seems to play marginal role in this regard. Rather, the legal institutions that may support inter-firm cooperation are the most crucial for market creation.

As to productive (technical efficiency), reduced competition, and absence of restrictive merger control regulation enable the firms and the industry to reach *the efficient scale* that is comparable to foreign firms in the same market. This would enhance productive efficiency and international competitiveness of domestic firms. Indeed, the MITI emphasized that excess competition is a problem because it prevents the firms from reaching the efficient scale of production and results in an over-expansion of capacity in booms that is difficult to adjust in downturns.¹³⁶ Further, instead of duplication of investments and R&D spending undertaken by competing firms in intensively competitive markets, the cooperative aspect of the cooperative relations along with the permissibility of large-scale mergers allow the firms to pool their resources and reach easily the efficient scale for investment in learning and innovation. Further, as long as market entry is secured, the management of the incumbent firms will have incentives to increase the *medium and long-term* productive efficiency of their firms; these incentives are not weaker than the managerial

¹³⁵ For example, Chang argues, convincingly, that markets do not emerge spontaneously in developing countries. Chang (n 117), 717.

¹³⁶ Komiya (n 6) 10. Tsuruta (n 5) 63–64. For critiques of the concept of “excess competition”, see: *ibid* 65–67. Komiya (n 6) 10–11. For a defense of this concept, see: Itoh and others, ‘Industrial Policy as a Corrective to Market Failures’ (n 20) 248–252. For a recent discussion of the concept of “excess competition”, see: Bruce E Kaufman, ‘The Optimal Level of Market Competition: Neoclassical and New Institutional Conclusions Critiqued and Reformulated’ (2013) 47(3) *Journal of Economic Issues*.

incentives of the firms operating under the intensive competition resulting from the post-Chicago competition law. However, since market entry needs some time, incumbent firms do not take a short-term perspective; they focus on improving their productive efficiency in medium or long-term rather than in the short term. Particularly, the cooperative aspect of the cooperative relations prevents the incumbent firms from engaging in intense price competition.

As to technological adoption and innovation, as already mentioned, Schumpeterian competition law gives strong incentives for investment in organizational learning and innovation. This is because the Schumpeterian competition law gives the firms the space to pool their resources through large-scale mergers and tolerating monopolistic positions and their abnormal profits. These practices enable the firms to invest in organizational learning and innovation, and due to expected high returns, give them strong incentives for undertaking these investments.

As to capital accumulation, non-excessive competition guarantees reasonable profit margins for the firms, which speed-up the process of capital accumulation, as it would increase the saving rate of the private sector. Moreover, these reasonable profit margins would give strong incentives to the entrepreneurs to invest and to incumbent firms to increase the scale of their investments, resulting in higher investment rates that further economic growth.¹³⁷ In addition, higher profits enable self-financing of domestic firms in developing countries, given the frictions of financial markets in developing countries.

As to adaptive capabilities of the firms, as already mentioned, Schumpeterian competition law provides the firms with strong adaptive mechanisms to economic downturns, namely, cartels and relaxed enforcement of competition law. Further, the firms can use the cooperative aspect of their relations to pool their resources and coordinate their investment decisions to minimize their losses in economic downturns. These adaptive mechanisms reduce the bankruptcy risk of the firms in economic downturns.¹³⁸ Particularly, the risk of bankruptcy increases in times of economic downturns because in absence of cooperation, markets witness excess competition in times of economic downturns as each firm undercuts the prices of other firms, in the hope of surviving bankruptcy, which increases in turn their bankruptcy risk.¹³⁹ Accordingly, without these adaptive mechanisms, many of the domestic firms would have gone bankrupt. In this case, when the

¹³⁷ Singh (n 17) 230.

¹³⁸ Schaede (n 38) 265–266.

¹³⁹ Itoh and others, 'Industrial Policy as a Corrective to Market Failures' (n 20) 252.

economy recovers again after these times of temporary declines in demand, the remaining domestic firms would not have sufficient capacity to meet the increase in demand, which would then be met by foreign producers.¹⁴⁰ Further, this long term stability of the firms enable them to invest more in skilling their workers, and thus enhance the human capital in the economy, driving up economic growth.

In short, coopetition law, i.e., the institutional network that consists of Schumpeterian competition law and inter-firm cooperation law, seems to have a positive non-embedded effects on productive efficiency (through scale economies), technological adoption (technical catch-up), radical and incremental innovation, adaptive capabilities, and capital accumulation. However, it seems to affect negative productive efficiency in the short-run, but not in the medium or long run. Further, it also affects allocative efficiency negative in the short run, but not necessarily in the long run as long as market entry is not restricted. In short, the positive effects of coopetition law on the assessment criteria that underlie economic growth seem to be strong. Hence, one may argue that unlike post-Chicago model of competition law, coopetition law has strong (or at least moderate) positive non-embedded effects on economic growth. The rapid growth of post-war Japanese economy provides an anecdotal evidence on this theoretical proposition.

Unfortunately, the empirical studies on the non-embedded effects of the enforcement and substance of competition law on economic growth do not settle the theoretical debate over the effects of post-Chicago and Schumpeterian competition law on economic growth. First, the above-mentioned consensus in mainstream economics and the reports of the World Bank on the importance of competition points out that the (post-Chicago) competition law is one of the necessary institutional arrangements for enhancing growth in developing countries; still, few empirical studies attempted to assess the effect of (post-Chicago) competition law on economic growth. Further, to the best of my knowledge, there is no empirical analysis of the effects of coopetition law on economic growth; one reason for this lacuna is that coopetition law conceptualized as the institutional network that consists of Schumpeterian competition law and inter-firm cooperation law is one of the major legal contributions of this thesis. As already mentioned, except for few studies that argue for Schumpeterian competition law, the competitive relations rather than the cooperative aspects of the firms' horizontal relations occupy law and economics literature on inter-firm horizontal relations. Further, as mentioned in the previous

¹⁴⁰ Schaede (n 38) 265.

section, the enormous empirical literature on the effects of Schumpeterian competition considers Schumpeterian competition mistakenly equivalent to monopolistic market structure or large sized-firms.¹⁴¹ The result is an enormous body of empirics with contradictory and inconclusive results.¹⁴²

With respect to the empirical studies on the effects of (post-Chicago) model of competition law on economic growth, these studies do not provide support to the view that competition law has a significant positive effect on economic growth; rather, these studies point to competition law's *positive marginal effects* on economic growth. For example, Voigt found that strong competition law institutions and their enforcement have marginally significant positive effect on total factor productivity growth (total factor productivity, called also Solow residual, refers to the factors that drive economic growth other than physical capital and labor).¹⁴³ Conversely, Buccirossi and his co-authors found that competition law, as measured by an aggregate index that captures both legal design and enforcement of competition laws, has a *statistically significant positive effect* on total factor productivity.¹⁴⁴ However, when disaggregating the competition law index, its sub-index of competition law enforcement has a statistically insignificant positive effect on total factor productivity growth,¹⁴⁵ a result consistent with Voigt's empirical findings. Given this weak effect of enforcing competition law on total factor productivity growth, the results of this paper imply that the design of competition law (competition law on books) is the major driver of total factor productivity growth. This is hardly convincing; particularly, this paper does not identify the causal channels through which competition law on books would affect total factor productivity growth. Moreover, these studies, however, by focusing on the effects of (post-Chicago) competition law on total factor productivity ignores its effects on economic growth through capital accumulation channel, which is likely to be negative in light of the above theoretical discussion.

Similarly, the studies that attempted to assess the effects of competition law on economic growth (and not only on total factor productivity) do not provide a support to positive significant effects of competition law on economic growth. Dutz and Hayri found a strong correlation between

¹⁴¹ For a short review of this empirical literature, see: Scherer (n 93), 1421–1425.

¹⁴² Sidak and Teece (n 80), 588.

¹⁴³ Voigt (n 115), 1239–1244.

¹⁴⁴ Paolo Buccirossi and others, 'Competition Policy and Productivity Growth: An Empirical Assessment' (2013) 95(4) *The Review of Economics and Statistics* 1330.

¹⁴⁵ *ibid* 1331.

the degree of competition intensity and economic growth.¹⁴⁶ However, the indicator of competition intensity for which they found this correlation is based on a qualitative survey of top business executives of their opinions regarding whether competition law promotes competition in their country.¹⁴⁷ Voigt has shown, convincingly, that this subjective indicator for intensity of competition is imperfect because it is weakly correlated with the objective indicators of competition.¹⁴⁸ Further, the correlation between intensity of competition and growth disappears in the Far East Asian countries subset of the data.¹⁴⁹

In the same vein, Clougherty demonstrates that the budget allocated to competition authorities, the proxy used in his paper for competition law, are associated with higher GDP growth.¹⁵⁰ This evidence is problematic, however. First, the budget allocated to competition authorities is a poor proxy for the content and enforcement of competition law; for instance, higher budgets can be allocated to non-independent competition authorities, although they might be subject to capture by businesses and interventions by the executive authority. Moreover, the study does not address the endogeneity (reverse causality) problem: it seems more plausible that the increase in GDP per capita would result in further increase in the budget allocated to competition authorities. This would be particularly the case when the authorities are confronted with a surge of mergers, as was the case in the time-period covered by this empirical study.

In addition to these critiques, the above empirical studies attract the critiques raised against indices-based econometrical analysis of macro-effects of legal institutions outlined in chapter 5, which makes their conclusions at best tentative. Finally, these studies do not differentiate between domestic and foreign firms, although most of the productivity growth generated by the latter flies out of the country, and thus is expropriated by the foreign owners of the capital. Host countries weakly share the benefits of this growth in productivity because its ability to tax capital under economic globalization is rather limited. Further, its ability to protect the workers, and thus

¹⁴⁶ Mark A Dutz and Aydin Hayri, 'Does More Intense Competition Lead to Higher Growth?' (April 2000). The World Bank Policy Research Working Paper no. 2320, 9–10 <http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2000/05/25/000094946_00050405325137/Rendered/PDF/multi_page.pdf>

¹⁴⁷ *ibid* 2–3.

¹⁴⁸ Voigt (n 115), 1230. *ibid* 1234–1235.

¹⁴⁹ Dutz and Hayri (n 146) 11.

¹⁵⁰ Joseph A Clougherty, 'Competition Policy Trends and Economic Growth: Cross-National Empirical Evidence' (2010) 17(1) *International Journal of the Economics of* 124–125.

increase the cost of its labor is equally limited because these protective labor market interventions, similar to taxation of capital, would impede inflows of foreign capital.

In sum, there is no consensus on the effects of competition and competition enhancing policies (particularly post-Chicago competition laws) on economic growth.¹⁵¹

Nonetheless, the above theoretical analysis and empirical studies of the effects of post-Chicago and Schumpeterian models of competition law can provide us with important insights. These empirical studies do not demonstrate that post-Chicago competition laws have significant positive effects on economic growth. They, however, tend to collectively support a common conclusion that is competition law has *a marginal positive effect* on economic growth; I could not find any study that found that post-Chicago competition law affects economic growth negatively. This shared conclusion of the empirical studies seems to be consistent with the insights of both sides of the theoretical debate over competition law. It seems that (post-Chicago) competition law has both positive and negative non-embedded effects on economic growth through the various causal mechanisms discussed above. For example, post-Chicago competition law affects growth positively by giving the firms stronger incentives for (incremental) innovation, otherwise, they risk loss in market share or bankruptcy, but competition simultaneously reduces their ability to investment in R&D because it reduces their profitability and thus affects economic growth negatively. Positive and negative effects mitigate each other, but it seems that *the positive effects weakly dominate the negative ones*, which then appear in the empirics. In contrast, the rapid growth of post-war Japan gives an anecdotal evidence on the *net strong* positive effects of competition law (that is Schumpeterian competition law combined with institutions supportive of inter-firm cooperation) on economic growth.

With respect to the effects of competition law on the assessment criteria of income distribution and protection of the weak subset of consumers (i.e., the poor and middle-income consumers), competition law is biased towards producers at the cost of consumers; however, due to elimination of barriers to market entry, increases in prices are transient. Further, competition law authorities can intervene in the markets with strict enforcement of competition law if increases in prices became sharp. This is exactly what was the reaction of JFTC to sharp increases in prices during the oil crisis of the 1970s.¹⁵² Still, it is not clear whether this discretionary enforcement of Schumpeterian

¹⁵¹ Voigt (n 115), 1227.

¹⁵² Schaede (n 38) 97–100.

competition law is sufficient for ensuring reasonable income distribution and protection of the weak subset of consumers. Further, the substantive provisions of Schumpeterian competition law itself seem to permit such sharp increases in prices, particularly in economic downturns.

In conclusion, this section has analyzed the non-embedded effects of both post-Chicago competition law and cooperation law (that is an institutional network consisting of Schumpeterian competition law and inter-firm cooperation law). Post-Chicago model of competition law results in an intense competition in product markets, while cooperation law results in cooperative horizontal relations similar to the cooperative relations that dominated the horizontal relations among post-war Japanese firms. The post-Chicago model of competition law has a marginal positive effect, and maybe a negative effect, on efficiency of resource allocation in developing economies. In addition, it affects positively productive efficiency. It seems to have a negative effect on innovation, particularly radical innovation, while its positive effects on technical catch-up (technological adoption) and incremental innovation are inconclusive. Further, it has a negative effect on firms' profit margins and therefore affects negatively their incentives to invest and to retain earnings, resulting in negative effect on savings rate and capital accumulation. In addition, the positive effects of post-Chicago model of competition law on foreign direct investment are also inconclusive. Further, the post-Chicago model has a negative effect on the adaptive capabilities of the firms to changes in economic conditions, particularly in economic downturns. Due to these mixed effects of post-Chicago competition law on the drivers of economic growth, it seems that its positive effects on some of the drivers of economic growth dominate weakly its negative effects, resulting in a weak positive effect on economic growth.

In contrast, cooperation law seems to have positive effects on productive efficiency, technological upgrading (technical catch-up), innovation, investment, savings rate and capital accumulation, adaptive capability of the firms, while having marginal negative effects on allocative efficiency and no effect on market creation. In theory, the positive effects of cooperation law on the drivers of economic growth seem to dominate strongly or moderately the negative effects. The rapid Japanese economic growth lends anecdotal support to this proposition. As shall be argued below, what really matters is the embedded rather than the non-embedded effects; for cooperation law to have these non-embedded strong positive effects on economic growth, many supportive legal institutions in other institutional domains (e.g., corporate governance and labor law) should be in place. In other words, only specific institutional networks can embed cooperation

law and ensures that its embedded effects correspond to its non-embedded effects. As to the other assessment criteria, namely, income distribution and protection of the weak subset of consumers, the post-Chicago model of competition law has stronger positive effects on these assessment criteria, while competition law is biased toward producers at the cost of consumers.

2.3. Integrated Economic Analysis of the Non-embedded Effects of Post-war Japanese Corporate Governance on Our Assessment Criteria

Similar to industrial policy and competition law, the post-war Japanese corporate governance model was quiet stable with minor changes until the 1980s.¹⁵³ It was a stakeholder model with inside control mechanisms.¹⁵⁴ The main economic and legal institutions of the Japanese corporate governance system could be divided into institutions related to *finance* and institutions related to *labor*. The finance related institutions included the main bank acting as a long-term creditor and equity investor as well as the cross-shareholding by related non-financial firms; Japanese firms had a concentrated ownership structure where the majority stake is shared among related non-financial firms and financial institutions led by the main bank.¹⁵⁵ The related firms holding shares in each other were centered around a main bank and they constituted a business group called “keiretsu”.¹⁵⁶ The main bank was the central economic institution in the financial sub-system of the Japanese firm. Due to the power of the main bank as the main long-term creditor and stockholder, Japanese firms tended to have high debt to equity ratio.¹⁵⁷

¹⁵³ Caslav Pejovic, ‘Japanese Corporate Governance: Behind Legal Norms’ (2011) 29 Penn State International Law Review 511. The Japanese corporate governance has been going through a transformation process since the 1980s. Still, my use of ‘the past tense’ in describing the postwar Japanese corporate governance does not imply that the current model of corporate governance deviates completely from the postwar model. Many of the features of the postwar model are still present in the modern Japanese system of corporate governance. *ibid* 515–517.

¹⁵⁴ *ibid* 489.

¹⁵⁵ Masahiko Aoki, ‘The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview’ (1989) 3(4) Journal of the Japanese and International Economies 353.

¹⁵⁶ Pejovic (n 153), 490.

¹⁵⁷ Aoki, ‘The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview’ (n 155) 353.

The labor related institutions included hierarchy ranking and job rotation,¹⁵⁸ long-term employment (famously known as lifetime employment), seniority system,¹⁵⁹ and intra-firm's system of labor competition.¹⁶⁰

To use the integrated approach for assessing the non-embedded effects of the Japanese corporate governance system, we can use the three-step integrated analytical framework developed in chapter 8, which is based on the integration of the insights of both knowledge and new institutional theories of the firm. To recall, this framework has three steps as follows: the identification of the conditions for viable learning process, the determination of the feasible corporate governance models that ensure the fulfillment of these conditions, then, the transaction-cost minimization (i.e., efficiency) comparison of these models. As chapter 8 has already outlined the conditions for viable learning processes, we need here to investigate whether the Japanese corporate governance provides the stakeholders of the firm the necessary incentives and intrinsic motivations required for meeting these conditions. In other words, we investigate whether the Japanese governance model satisfies the organizational conditions for a viable learning process that is necessary for sustaining its competitive advantage. Then, we assess whether the Japanese model is cost-effective. We do not inquire whether there are alternative governance systems that can satisfy the learning conditions while outperforming the Japanese model in terms of transaction cost effectiveness. Rather, we examine whether the relevant costs of the Japanese model are reasonable, i.e., whether the Japanese model of governance facilitates the stakeholders' transactions necessary for ensuring viable learning processes within the firm at *reasonable costs*.

The Japanese corporate governance satisfies the finance related organizational conditions for viable learning. First, it satisfies the patient capital requirement because the main bank secures

¹⁵⁸ Aoki explains hierarchy ranking and job rotation as follows, 'There are usually separate rank hierarchies for blue-collar workers, white-collar workers, and engineers, as well as one for the supervisory and managerial employees above them. Each rank carries a certain level of pay, but not a specific job. Therefore employees in the same rank may be doing different jobs ... [employees are rotated from one job to another in the same rank every few years].' Masahiko Aoki, 'Toward an Economic Model of the Japanese Firm' (1990) 28(1) *Journal of Economic Literature* 11.

¹⁵⁹ Seniority system means that 'wages and promotion are determined according to seniority [that is the] ... age or ... the length of service within the firm.' Odagiri (n 47) 48. Indeed, the white-collar employees in Western developed economies enjoy also the seniority system, but what distinguishes the Japanese seniority system is that unlike Western economies, this system applies also to blue-collar Japanese employees. *ibid* 53–54

¹⁶⁰ Internal labor competition means that workers' promotion is not based solely on their seniority, but also on their performance. For an overview of the internal system of competition among the Japanese firm's workers, see: *ibid* 72–76.

long-term debt financing for the firm and continuous financial support. Concentrated equity ownership functions as a further source of long-term patient capital, while acting as an anti-hostile takeover mechanism.¹⁶¹ Second, the main bank provides information to the firm regarding investment opportunities¹⁶² and facilitates information sharing among the firms in its portfolio.¹⁶³ Further, the main bank normally does not intervene in the management, unless the firm's profits fall drastically; accordingly, management enjoys strong autonomy and discretion over the management decision-making, while being subject to ex-post accountability by the main bank in case of its poor performance.¹⁶⁴ The Japanese corporate governance satisfies therefore the condition of the cooperative support of long-term capital providers. Still, despite the high debt to equity ratio in the Japanese firms, this financial structure does not impede uncertain investments in learning processes as long as the main bank has been informed and supportive of these investments; in the case of their failure, the main bank can intervene to protect the firm from bankruptcy. In this case, the main bank does not only ensure the employees against bankruptcy risk,¹⁶⁵ but it provides a similar insurance to the firm's management to make uncertain investments. Japanese firms that have moderate or low debt to equity ratio due to accumulation of retained profits do not however need this insurance function.

Further, the management of the Japanese firms has an autonomous control over the firm; the management team is clearly an insider to the firm. In the Japanese system of corporate governance, the management is hired from the long-term employees through internal promotion.¹⁶⁶ Further, insiders (mainly senior managers) dominate the board of directors; outside independent directors are rarely represented on the board of directors.¹⁶⁷ Accordingly, the Japanese corporate governance

¹⁶¹ Pejovic (n 153), 493.

¹⁶² Masahiko Aoki, 'The Japanese Firm as a System of Attributes: A Survey and Research Agenda' in Masahiko Aoki and Ronald Dore (eds), *The Japanese Firm: Sources of Competitive Strength* (Oxford University Press 1994) 20.

¹⁶³ Aoki, 'The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview' (n 155) 354.

¹⁶⁴ *ibid.* Aoki, 'Toward an Economic Model of the Japanese Firm' (n 158) 16. Odagiri (n 47) 34–36. The shareholders meetings and the board of director of the Japanese firms approve automatically the managerial decisions without exercising any serious monitoring over these decisions. Pejovic (n 153), 503–505.

¹⁶⁵ Aoki, 'The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview' (n 155) 358.

¹⁶⁶ *ibid.* 355. Odagiri (n 47) 39–42.

¹⁶⁷ Curtis J Milhaupt, 'A Relational Theory of Japanese Corporate Governance: Contract, Culture, and the Rule of Law' (1996) 37 *Harvard International Law Journal* 20. Odagiri (n 47) 39–40.

satisfies the organizational condition of inside control for viable learning process. One cannot imagine a more informed insider to control the firm than the long-term managerial team of the Japanese firms because of their deep knowledge of the firm's knowledge assets and learning paths due to their long-term affiliation with the firm; other insiders such as managers hired from other firms do not have such deep knowledge. Further, workers' knowledge would enrich the decision-making, but it is not so critical to the Japanese management team because the latter has been chosen from the best long-term workers of the firm through an internal promotion system that ensures intensive internal competition among the workers of the firm. Further, the horizontal decentralized mode of coordination characterizing the internal organization of the Japanese firms¹⁶⁸ as well as the managerial inside knowledge facilitates vertical communication of *information, tacit knowledge, and decision-making* between the managerial and operational levels of the firm.¹⁶⁹ This efficient communication constitutes an important knowledge resource of the Japanese firm.

The third organizational condition for a viable learning process relates to the learning related incentives and intrinsic motivations of the management and labor; these are the labor-related organizational conditions outlined in chapter 8. As to the managerial incentives, the management of the Japanese firm is subject to dual control by both the labor and the financial investors (mainly, the main bank).¹⁷⁰ The management incentives are aligned with the interests of the employees because of the risk of non-cooperation of the labor, a critical firm specific asset,¹⁷¹ and the previous long-term status of the management as employees of the firm.¹⁷² Further, due to the disciplinary intervention in the management of the firm by the main bank in case that the profitability of the firm declines, the management is also incentivized to sustain a moderate level of profits to prevent such intervention.¹⁷³ Accordingly, the management has the incentives to take the strategic decisions that balance the interests of the employees and the main bank. As for the interests of the employees, the management will be focus on *long-term* investment strategies that maximize *firm's growth*.¹⁷⁴ Further, the management tends to be more risk-averse than the management of a

¹⁶⁸ Aoki, 'Toward an Economic Model of the Japanese Firm' (n 158) 3–7.

¹⁶⁹ Aoki, 'The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview' (n 155) 357–358.

¹⁷⁰ Aoki, 'Toward an Economic Model of the Japanese Firm' (n 158) 20.

¹⁷¹ *ibid.* Aoki, 'The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview' (n 155) 360.

¹⁷² Aoki, 'Toward an Economic Model of the Japanese Firm' (n 158) 19.

¹⁷³ *ibid.* 20.

¹⁷⁴ *ibid.* 21. Milhaupt (n 167), 26–27.

shareholder value firm and thus focus on *the survival of the firm* in order to protect the significant human capital specific investments made by the management and the labor. Further, the management would avoid hiring new employees, while replacing, as much as possible, these needed employees with *machines* in order to increase the productivity per incumbent worker.¹⁷⁵ Hence, the Japanese management has a strong incentive for technological upgrading as long as it does not involve significant displacement of incumbent workers with machines.

Consequently, the management will tend to avoid learning paths that involve recruiting new employees, particularly the life-long employment contract impedes easy dismissal of these employees in case of the failure of the learning process. Further, the management will avoid the learning paths that involve high levels of uncertainty and risk. The highly uncertain and risky learning paths that require high flexibility in hiring and firing employees are normally science based or involve radical innovation; hence, the management shall opt for learning paths that involve *incremental product or process innovation*,¹⁷⁶ or radical innovations based on the knowledge internally produced by the firm.

In short, the Japanese corporate governance system gives strong incentives for the management for focusing on *stable moderate level of profits, firm's growth, firm's survival, technological upgrading instead of expansion of work force, incremental instead of radical innovation, learning processes based on internal knowledge generation instead of knowledge acquisition via hiring of new workers*. Japanese firms however can benefit from *outside knowledge through acquisitions and mergers, inter-firm cooperation and industrial policies*. Here, the institutional domains of competition law and industrial policy provide an important source for outside knowledge for Japanese firms.

As to the learning-related incentives and intrinsic motivations of Japanese workers, the labor contracts in Japan are of two types: fixed-term employment contracts and lifetime (more precisely, long-term) employment contracts.¹⁷⁷ The latter are concluded with the employees who are considered the core employees of the firm, while fixed-term employment is used for temporarily hired employees in the times of economic booms.¹⁷⁸ As to long-term employees, due to the internal

¹⁷⁵ Aoki, 'Toward an Economic Model of the Japanese Firm' (n 158) 21–22.

¹⁷⁶ *ibid* 22. Aoki, 'The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview' (n 155) 363, fn. 15.

¹⁷⁷ Odagiri (n 47) 56.

¹⁷⁸ *ibid*.

competition based system of promotion, the employees have strong incentives to learn; otherwise, they will not only lose promotion opportunities, but they may be also transferred to unimportant subsidiaries of the firm, relocated to some marginal works, or deprived from over-time working hours.¹⁷⁹ Further, the management has a broad discretion in the reassignment of existing workers to different tasks depending on the needs of the firm.¹⁸⁰ The possibility of the relocation of underperforming core employees, job reassignments, and the flexible fixed-term contracts give the Japanese firms a degree of flexibility in changing its labor pool,¹⁸¹ but this is still a limited degree of flexibility. The Japanese corporate governance (and labor regulation) does not therefore satisfy the labor flexibility condition for viable learning processes.

On the contrary, the Japanese corporate governance system gives strong incentives for the Japanese workers to invest in firm's specific assets. Both long-term employment contracts and the inside control of the firm by a managerial team chosen from the employees of the firm protects the workers human capital investments specific to the firm. The long-term employment contracts protect the workers against dismissal,¹⁸² while the management protects the workers from the expropriation of their fair share in the returns on their specialized investments.

As to the cooperation among the workers, the assessment of workers' performance is based on both their individual performance and their cooperation with their team members; this gives strong incentives for workers to cooperate, teach each other, and disseminate information and knowledge.¹⁸³ The strong cultural norms of collectivism in Japan,¹⁸⁴ the loyalty of the Japanese workers to their firm,¹⁸⁵ and the perception that one derives his self-worth from hard working and cooperation support further the incentives to work hard and to *cooperate*. In addition, the employees rotation system in Japanese firms in which the employees are allocated to a different

¹⁷⁹ *ibid* 72. Aoki, 'Toward an Economic Model of the Japanese Firm' (n 158) 12.

¹⁸⁰ Milhaupt (n 167), 45

¹⁸¹ Aoki, 'The Japanese Firm as a System of Attributes: A Survey and Research Agenda' (n 162) 23.

¹⁸² These long-term contracts are generally *implicit*, but they are strongly enforced through a myriad of enforcement mechanisms that include corporate reputational mechanisms, cultural norms, inside control of the firm by the management whose incentives are aligned with the employees and who perceive the employees to be the most crucial asset of the firm, and lack of hostile takeovers. Milhaupt (n 167), 26–28.

¹⁸³ Aoki, 'Toward an Economic Model of the Japanese Firm' (n 158) 11. Aoki, 'The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview' (n 155) 351.

¹⁸⁴ Indeed, this collectivist nature of the Japanese culture still persist in modern Japan, Takeshi Hamamura, 'Are Cultures Becoming Individualistic? A Cross-Temporal Comparison of Individualism–Collectivism in the United States and Japan' (2012) 16(1) *Personality and Social Psychology Review* 13–17.

¹⁸⁵ Pejovic (n 153), 496–497.

department every few years (normally three years) enable the workers to have broad skills that facilitate their horizontal communications and exchange of knowledge within the firm.¹⁸⁶ Job rotation also enables the workers to tackle efficiently and swiftly many problems that need the intervention of the employees of other departments without using such intervention.¹⁸⁷ Job rotation also creates a sense of equality among the workers in the firm, which strengthens the norm of cooperation. In short, the Japanese corporate governance system fulfills the conditions of *continuous cooperation and the establishment of coordination routines* among the workers of the firm. Indeed, due to the strong effects of the Japanese corporate governance and labor law on employees' cooperation and coordination, the behavior of Japanese firm's employees tends to be governed by may create team reasoning rather than individual rationality.¹⁸⁸

Furthermore, since both disciplinary and promotion decisions are made by a personnel department whose workers are also rotated and reallocated to other departments in their careers, their decisions are normally perceived as neutral and fair.¹⁸⁹ Accordingly, both the rotation system and the inside control by the management hired from the long-term workers of the firm help the employees to perceive the decisions of both personnel department and the management to be fair. The cultural norms of social hierarchy and acceptance of the power of those who fill in higher positions¹⁹⁰ reinforce the subjective perception of fairness of these decisions. The Japanese corporate governance system therefore satisfies the condition of employees' subjective perception of fairness of their share in revenues as well as of the disciplinary and promotion decisions and other managerial decisions.

In short, the Japanese corporate governance satisfies the labor-related organizational conditions of viable learning processes, except for labor flexibility condition. Further, this system

¹⁸⁶ Aoki, 'Toward an Economic Model of the Japanese Firm' (n 158) 9–11

¹⁸⁷ Aoki, 'The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview' (n 155) 349.

¹⁸⁸ Individuals who use team reasoning in their decision-making tend to cooperate with other team members and seek to maximize the payoff of their teams rather than their own payoffs. Andrew M Colman, Briony D Pulford and Jo Rose, 'Collective Rationality in Interactive Decisions: Evidence for Team Reasoning' (2008) 128(2) *Acta Psychologica* 395–396.

¹⁸⁹ Aoki, 'Toward an Economic Model of the Japanese Firm' (n 158) 13.

¹⁹⁰ These cultural norms reflect the vertical collectivist nature of the Japanese culture, T. M Singelis and others, 'Horizontal and Vertical Dimensions of Individualism and Collectivism: A Theoretical and Measurement Refinement' (1995) 29(3) *Cross-Cultural Research* 246.

of corporate governance fulfills the finance-related organizational conditions of viable learning processes as well as the inside control condition.

The third step of the integrated framework for assessment of corporate governance relates to the cost-effectiveness of the Japanese corporate governance system. As regards equity agency problem, many of the legal and economics institutions of Japanese corporate governance mitigate the equity agency costs. These institutions include the concentrated ownership of Japanese firms,¹⁹¹ the ex-post interventions of the main bank in firm's management in the case of poor performance of the management,¹⁹² and high leverage.¹⁹³ In addition, the incentives structure of firm's management that ensures managerial focus on long-term profit maximization reduces further the equity agency costs. This incentives structure results from the managerial specific human capital investments in the firm, the strong disciplinary power of managerial labor market that prevents the managers from finding comparable jobs in other firms because of the internal promotion system for hiring firm's management, and the corporate cultural norms of managerial hard work, and loyalty to the firm and the interests of the employees, which are reinforced by the long-term affiliation of the management with the firm.¹⁹⁴

¹⁹¹ The empirical evidence on the effect of non-managerial ownership concentration on equity agency costs is inconclusive. Singh and Davidson found that outside block ownership has no effect on the reduction of equity agency costs. Manohar Singh and Wallace N Davidson III, 'Agency Costs, Ownership Structure and Corporate Governance Mechanisms' (2003) 27(5) *Journal of Banking & Finance* 808. *ibid* 814. In contrast, Chen and Yur-Austin found that outside block ownership reduces significantly equity agency costs. Xiaoying C Chen and Jasmine Yur-Austin, 'Re-measuring Agency Costs: The Effectiveness of Blockholders' (2007) 47(5) *The Quarterly Review of Economics and Finance* 593–596. The latter finding is consistent with the theoretical prediction that blockholders tend to reduce equity costs because they have both the incentives and capabilities (e.g., inside information) to monitor the management.

¹⁹² In theory, the monitoring role of the banks reduces the equity agency costs of the borrowing firms; the longer the bank-firm relationship, the lower are the equity agency costs. James S Ang, Rebel A Cole and James W Lin, 'Agency Costs and Ownership Structure' (2000) 55(1) *The Journal of Finance* 87–88. The empirical evidence tends to support this theoretical proposition, but it is inconclusive. *ibid* 100–102.

¹⁹³ High leverage increases the risk of bankruptcy of the firm, particularly if the firm does not adopt long-term profit maximizing strategies such as technological upgrading. See: Philippe Aghion, Mathias Dewatripont and Patrick Rey, 'Competition, Financial Discipline and Growth' (1999) 66(4) *The Review of Economic Studies* 840–841. At the initial stages of economic development, the Japanese firms relied massively on debt financing, but they were able to accumulate earnings in the rapid growth era; these retained earnings reduced their leverage. This reduction in leverage may have increased the managerial slack, but the reduction in leverage, as chapter 8 has argued, enables the firms to invest in long-term organizational learning.

¹⁹⁴ Milhaupt argues, rightly, that the 'main banks, *keiretsu* corporate groups, enduring firm-specific employment patterns, and bureaucratic oversight [constitute] ... a complex system of multiple constraints that overcomes weak equity monitoring through strong bank, interfirm, employee, and administrative monitoring.' Milhaupt (n 167), 21–22.

Moreover, the main bank's equity stakes and its ex-post monitoring mitigate also the credit agency problem. Further, the above discussion demonstrates that the Japanese corporate governance system, Japanese labor law, and social norms give the Japanese workers strong incentives for hard working, cooperation, and learning; this mitigates the management-labor agency problem. Finally, the managerial focus on stable moderate profits and firm's survival does not ensure maximization of firm's short-term profits, but satisfy the demands of long-term minority shareholders. Short-term minority shareholders seem to lack therefore a strong protection of their interests, but as already argued, they do not belong to the category of the weak, and their investments are not essential for supporting organizational learning. In short, the Japanese corporate governance system seems to address adequately the agency problems; the agency costs associated with this system of governance seem to be reasonable.

Due to lack of labor flexibility, the Japanese corporate governance (and labor regulation) provides a protection of the workers, an important category of the weak, particularly the firm's focus on long-term survival and main bank's interventions in times of crisis provide further layer of protection of the firm's workers. The focus on long-term survival and main bank's support in times of crisis support the adaptive capability of Japanese firms to changes in economic conditions, but high leverage ratios tend to undermine this capability because high leveraged firms are less capable to adapt to negative shocks. However, lack of labor flexibility precludes the ability of the firms to invest in radical innovations and to adapt to changes in economic conditions, and undermines the ability of the economy to allocate labor resources efficiently to feasible investment projects. This means that the non-embedded effects of the Japanese corporate governance on our assessment criteria can be summarized as follows. The Japanese corporate governance had a negative effect on allocative efficiency of labor, a negative effect on incentives for radical innovation, a (somehow strong) positive effect on technological upgrading, a strong positive effect on organizational learning, a strong positive effect on incremental product and process innovation, a positive effect on international competitiveness, and a positive effect on protection of the weak (namely, the workers). As to the adaptive capabilities of the Japanese firms, some factors (e.g., high leverage ratio and lack of labor flexibility) undermine these adaptive capabilities, while other factors (e.g., strategic focus on firm's long-term survival and main bank's support) increase these capabilities. Accordingly, the net effect of corporate governance system on the adaptive capabilities of Japanese firm tends to be negative because the strengths of the factors that

undermine these capabilities; still, empirical studies that examine the effects of Japanese corporate governance on the adaptive capacity of Japanese firms are needed.

2.4. The Embedded Effects of the Institutional Domains of the Post-war Japanese Institutional Network on the Assessment Criteria and the Assessment of The Consistency of these Domains

The previous sections have used the insights of neoclassical and non-neoclassical schools of thought and theories (i.e., the integrated approach) for analysis of the non-embedded effects of the institutional domains of post-war Japanese institutional network (i.e., sectorial industrial policies, stakeholder corporate governance, and cooperation law) on our assessment criteria. Prior to evaluating the embedded effects of each of these institutional domains, we evaluate the consistency of the non-embedded effects of these institutional domains. Figure 11.1 below summarizes these non-embedded effects.

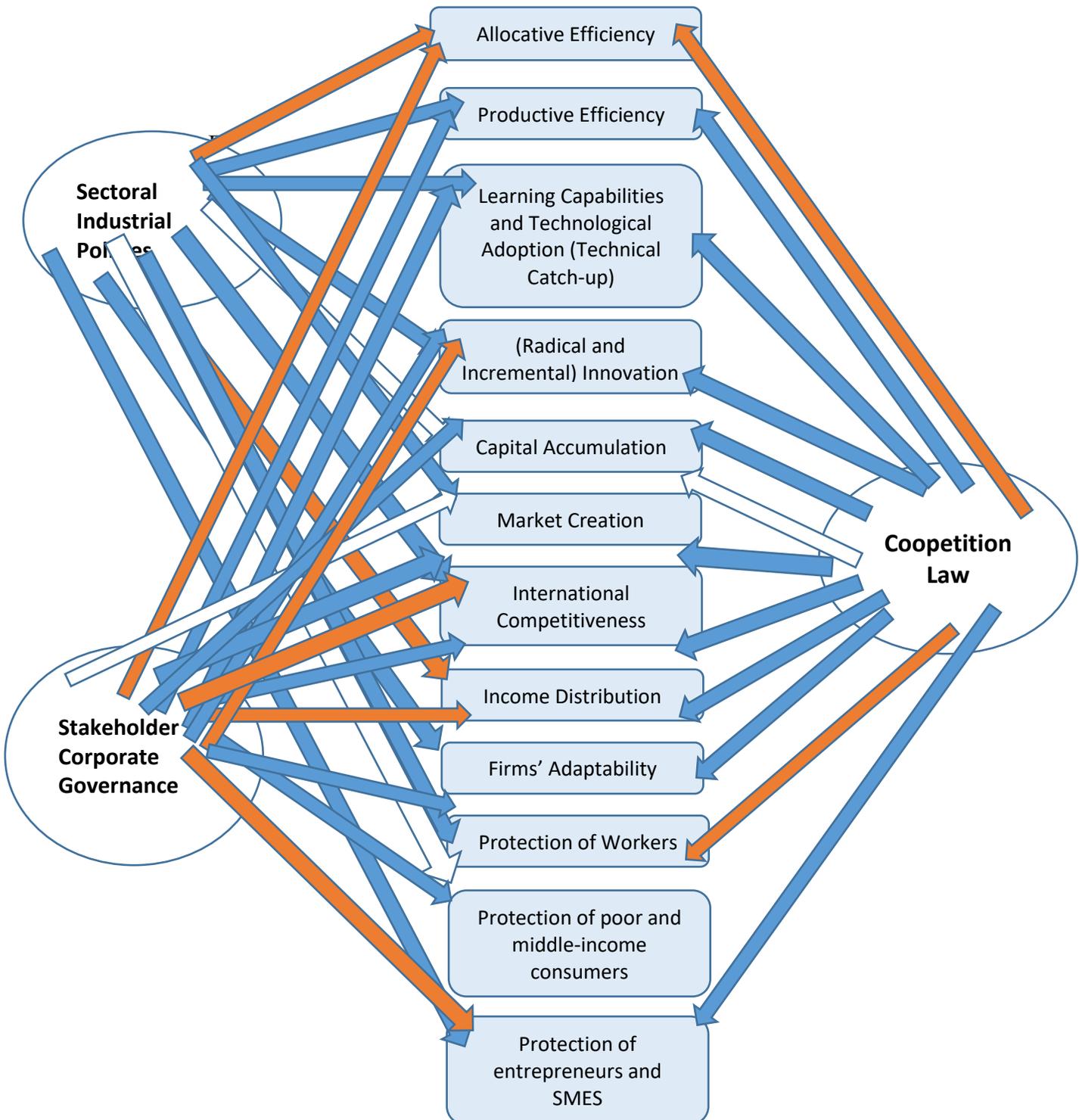


Figure 11.1: Non-embedded Effects of the Institutional Domains of post-war Japanese Institutional Network on the Assessment Criteria of Product Market Regulation in Developing Economies. Blue arrows refer to positive effects of the institutional domains on the

respective assessment criteria. For example, the blue arrow connecting sectoral industrial policies and firms' adaptability means that sectoral industrial policies have a positive effect on firms' adaptability. In contrast, orange arrows refer to negative effects of the institutional domains on the assessment criteria. White arrows refer to no effect or negligible (positive or negative) effects of the institutional domain on the respective assessment criterion. Sometimes, two arrows connect the institutional domain with an assessment criterion. For example, stakeholder corporate governance is connected to innovation with two arrows: blue and orange. The reason is that this model of corporate governance affects incremental innovation positively, while affecting radical innovation negatively.

Figure 11.1 reveals some interesting information about the non-embedded effects of the institutional domains of post-war Japanese institutional network. First, all of these institutional domains have negative (non-embedded) effects on allocative efficiency. These institutional domains are consistent regarding their non-embedded negative effects on allocative efficiency; this is an undesirable form of consistency. Second, all of these institutional domains have positive effects on the productive efficiency, learning capabilities, technological upgrading (technical catch-up), incremental innovation, international competitiveness, and protection of workers. They are therefore *consistent* with reference to *their non-embedded effects* on these assessment criteria. In addition, these institutional domains are also consistent with reference to their non-embedded effects on market creation and capital accumulation because some of them have positive effects on these assessment criteria, while other institutional domains have no or negligible (positive or negative) effects that we can therefore ignore. Still, it seems that as far as market creation is concerned, this institutional network supports creation of markets *weakly* because only sectoral industrial policies have positive effect on market creation, while other institutional have negligible effects. Finally, the institutional domains have *inconsistent non-embedded effects* on the remaining assessment, namely, radical innovation, income distribution, firms' adaptability, protection of poor and middle-income consumers as some of them have positive effects on these assessment criteria, while others have a negative effect on them. For example, the stakeholder model of corporate governance affects radical innovation negatively, while both cooperation law and sectoral industrial policies affect firms' incentives and capabilities for investing in radical innovation

positively. Similarly, the stakeholder model of corporate governance (and labor law) affects firms' adaptability negatively, while the other institutional domains affect this assessment criterion positively.

In this section, we need to reproduce a similar figure that captures the *embedded effects* of each of these institutional domains on each of these assessment criteria. As already argued in chapter 6, to capture these embedded effects, we assume that other institutional domains are exogenous, then, we ask what would be the effects of the institutional domain on a specific assessment criterion, given these exogenous institutional domains. For example, to assess the embedded effects of the post-war Japanese stakeholder model of corporate governance on radical innovation, we ask the following question, "Given the post-war Japanese sectoral industrial policies and cooperation law, what would be the effects the Japanese stakeholder model of corporate governance on radical innovation?" If the answer is that it has a negative effect, then, the embedded effect of the Japanese corporate governance is similar to its non-embedded effect on radical innovation (see figure 11.1). If the answer is that it has a positive effect, then, the embedded effect of the Japanese corporate governance is different from its non-embedded effect on radical innovation.

However, we cannot undertake a full-fledged analysis of the embedded effects of these institutional domains on each of the assessment criteria in this section for two reasons. First, one section cannot accommodate such analysis; we need at least one or two chapters to undertake this complex analysis, but we cannot allocate one or two chapters for examining this question due to time and space constraints. Second, the few theoretical and empirical studies of the embedded effects of any of these institutional domains (see below) cannot provide us with sufficient informational basis for undertaking such analysis. Therefore, a full-fledged analysis of the embedded effects would require a complex analysis of the embedded effects of each of these institutional domains on many of these assessment criteria because the existing law and economics literature lacks such analysis. Accordingly, this section does not analyze the embedded effects of each of the institutional domains of each of the assessment criteria. Rather, this section uses a selective approach where the embedded effects of these institutional domains on some of these assessment criteria are analyzed, while the embedded effects on the remaining assessment criteria are *assumed* similar to the non-embedded effects. To ensure that this assumption is somehow realistic, we focus on the analysis of the embedded effects that we reasonably doubt that they may diverge from the non-embedded effects. In addition, we analyze the embedded effects for which

we have an informational basis that can guide such analysis. In addition to the studies already undertaken in the literature, the above analysis, as we shall see, allow us to discern the embedded effects of some of the institutional networks on some of the assessment criteria. Finally, we sometimes check the effects of an institutional domain (e.g., coopetition law), while assuming another institutional domain (e.g., stakeholder model of corporate governance) exogenous and the third domain (e.g., sectoral industrial policies) non-existent. Although this effect of the stakeholder model of corporate governance does not take into account the effects of sectoral industrial policies, it does take into account the effects of coopetition law; thus, it does not capture fully the embedded effect of the stakeholder model of corporate governance, but it captures such effect partially. Assuming that this partial embedded effect is similar to the fully embedded effect is more realistic than assuming that the non-embedded is the same as the fully embedded effects. Overall, future research is highly needed for undertaking a comprehensive analysis of the embedded effects of the institutional domains of the post-war Japanese institutional network on each of the assessment criteria because of the utmost importance of this institutional network for guiding the design of legal institutions of capitalism in developing economies.

A good starting point for checking the embedded effects of the institutional domains is to check the conditions that these institutional domains should satisfy in order to result in their non-embedded effects because if any of these conditions are not fulfilled, we can assume that the embedded effects of these institutional domains may diverge from their non-embedded effects. We start with coopetition law. As already argued, we assumed that a coopetition law that consists of a Schumpeterian competition law and inter-firm cooperation law is functionally equivalent to the legal, economic, and cultural institutions that gave rise and sustained the cooperative relations among post-war Japanese firms because coopetition law results in cooperative horizontal relations as well. With respect to Schumpeterian competition law, Schumpeterian competition law would result in its non-embedded effects on the assessment criteria if and only if the conditions of effective Schumpeterian competition are fulfilled. These conditions include long-term profit maximizing firms (i.e., the firms have proper incentive to invest in learning, medium and long-term productive efficiency, and incremental and radical innovation), lack of entry barriers, a minimum level of firm's capability to organize viable learning processes (which also requires a minimum size of the firms that is not necessarily large size), and lack of governmental

interventions that may impede Schumpeterian competition (e.g., lack of post-Chicago model of competition law that impedes large scale mergers).

Do the stakeholder model of corporate governance and sectoral industrial policies ensure the fulfilment of these conditions? The Japanese stakeholder model of corporate governance gives the firms strong incentives for investment in organizational learning, medium and long-term productive efficiency, and incremental innovation. In addition, this corporate governance model fulfils the conditions of organizing viable learning processes, but it does not provide the incentives for investment in radical innovation. Further, sectoral industrial policies support the *innovative capabilities* of the firms and give them further incentives for investment in technological upgrading, but they do not affect the firms' *incentives* to innovate. These models therefore insure the fulfillment of the conditions of effective Schumpeterian conditions except for the incentives for radical innovation. Accordingly, given the Japanese stakeholder model of corporate governance and sectoral industrial policies, Schumpeterian competition law would not have strong positive effect on radical innovation. The embedded effect of Schumpeterian competition law on radical innovation diverges from its non-embedded effect; it has a strong positive non-embedded effect on radical innovation, but a negligible positive embedded positive effect on it.

Further, due to the strong protection of labor ensured by both the stakeholder model of corporate governance, labor law, and the Japanese organizational cultural norms (e.g., life-time labor contracts), Japanese firms cannot increase their productive efficiency and international competitiveness through the competition strategy of *reducing labor costs*. To increase their productive efficiency and international competitiveness, they have to increase their learning capabilities and skilling of labor, upgrade continuously their technologies through technology adoption and incremental innovation, increase their scale of production, and enhance the efficiency of their internal managerial and organizational structure. However, Japanese firms, which are not exposed to intensive international competition, have lower incentives for increasing their productive efficiency and innovation.¹⁹⁵ Still, due to lack of entry barriers, these firms still have incentives for investment in learning, technological upgrading, and incremental innovation. In sum, by ruling out the competitive strategy of labor cost reduction, the Japanese stakeholder model of corporate governance and labor law strengthens the firms' incentives to use Schumpeterian competitive strategies, i.e., to invest in learning, technological upgrading, and incremental

¹⁹⁵ Schaede (n 38) 265.

innovation. The embedded effects of Schumpeterian competition on these assessment criteria are expected therefore to be larger than its non-embedded effects. Particularly, the export-oriented sectors of the Japanese economy cannot survive international competition without using these Schumpeterian competitive strategies.

Moreover, as already argued in section 5 of chapter 6, both the stakeholder model of corporate governance and coepetition law give the firms strong incentives to cooperate with each other, particularly in times of economic downturns. These institutional domains reinforce the effects of each other in a closed positive feedback loop, resulting in strong positive embedded effects of each of them on firms' incentives to cooperate with each other. These embedded effects on firms' cooperation incentives are expected to be higher than the positive non-embedded effect that each of these institutional domains has on firms' incentives to cooperate. Stronger inter-firm cooperation results in higher *productive efficiency*, faster *technological catch-up*, higher *learning and innovation capabilities*, and *adaptability* to economic downturns. In other words, the positive embedded effects of coepetition law on these assessment criteria would be stronger than its positive non-embedded effects. Due to pooling of resources, the risks associated with radical innovation are reduced, which would then enhance the *weak positive embedded* effects of Schumpeterian competition law on radical innovation.

As to the non-embedded effects of coepetition law (i.e., Schumpeterian competition and inter-firm cooperation laws) on protection of the poor and middle-income consumers, the other institutional domains do not seem to have any direct significant effect on the pricing decisions of the firms. Further, they do not provide any direct form of protection of consumers. The stakeholder model ensures the proportionality of wages to increases in firms' productivity; this provides an indirect protection of workers as consumers, but this has no effect on pushing the product prices close to marginal cost. In short, the non-embedded effects of the three institutional domains on protection of the weak subset of consumers are similar to their non-embedded effects.

As to the non-embedded effects of coepetition law on the protection of workers, coepetition law protects the workers indirectly by increasing the firms' adaptability to economic downturns. The stakeholder model of corporate governance and labor law and cultural organizational norms provide a further layer of protection for workers in economic downturns by giving the firms strong incentives to use the adaptive mechanisms (e.g., mergers, cartels, and inter-firm cooperation) which have been made available through coepetition law. In other words, the stakeholder corporate

governance and labor law gives the firms' the incentive to protect their workers, while adapting to economic downturns, while coopetition law gives (a restricted) space for such adaptation. The positive non-embedded effects of coopetition law on workers' protection are thus enhanced when this coopetition law is embedded in the institutional network that includes post-war Japanese corporate governance and labor law.

In short, when coopetition law is embedded into an institutional network that includes Japanese stakeholder model of corporate governance and sectoral industrial policies, its embedded positive effects on productive efficiency, learning capabilities, technical-catch-up, incremental innovation, firms' adaptability, protection of workers becomes stronger than its non-embedded positive effects on these assessment criteria. However, the strong positive non-embedded effect of Schumpeterian competition on radical innovation becomes *weaker*. However, it is not clear the extent to which the effect of Schumpeterian competition law becomes weaker; on one hand, the stakeholder model of corporate governance weakens the incentives for investment in radical innovation. However, this model of corporate governance and sectoral industrial policies give stronger incentives for inter-firm cooperation, which results in stronger incentives for investment in radical innovation because of risk-sharing effects of cooperation. Accordingly, the embedded positive effects of Schumpeterian competition law on radical innovation would depend on the scale of successful inter-firm cooperation in radical innovations. As to the embedded effects of coopetition law on protection of the weak subset of consumers, they seem to be similar to their non-embedded effects.

With respect to the embedded effects of the Japanese stakeholder model of corporate governance, we start by examining the conditions that this model of corporate governance should satisfy in order to produce their non-embedded effects. As shall be argued in next chapter, some important economic institutions (i.e., concentrated ownership and relationship banking) and cultural institutions (e.g., workers' cooperative behavior and loyalty to the firm) are required for the legal institutions of post-war Japanese corporate governance to produce its non-embedded effects. Both coopetition law and sectoral industrial policies do not seem to affect these economic or cultural institutions. One major implicit condition for the functioning of the Japanese corporate governance model is the *competitive structure of product markets*. Suppose that a Schumpeterian competition law, which ensures market entry, is not adopted; in this case, incumbent firms are shielded from competition from plausible entrants. In this case, cooperation among these firms

would transform into cartels and incumbent firms with monopolistic positions will hinder entries by other firms and sustain its monopolistic positions. In both cartelized and monopolistic markets, firms, regardless of the model of their governance, would not have incentives to invest in competition strategies such as short-term price reduction strategies (e.g., reduction of labor costs), or Schumpeterian competitive strategies (i.e., investment in learning, technological upgrading, and innovation). In short, Schumpeterian competition is a *necessary condition* for the Japanese stakeholder governance to produce its desirable positive non-embedded effects on our assessment criteria (e.g., productive efficiency, learning, technological upgrading, and incremental innovation).

However, Giroud and Mueller found that the firms that suffer from weak corporate governance (i.e., high equity agency costs) would have better stock market performance and higher firm value in markets that are *more competitive*.¹⁹⁶ Furthermore, Aghion and his co-authors have shown that the increase in intensity of competition would have a negative effect on technological adoption and innovation by profit maximizing firms (i.e., firms that do not suffer from significant equity agency problems), but intense competition would have positive effects on technological adoption and innovation by the firms that suffer from these equity agency problems.¹⁹⁷ This implies that *low equity agency problem (i.e., good corporate governance)* and *high intensity of competition* are substitutes.¹⁹⁸ This suggests that if the Japanese stakeholder firms suffer from high equity agency costs, then, Schumpeterian competition law, which does not ensure high intensity of competition, may not sustain the positive non-embedded effects of the Japanese stakeholder corporate governance on our assessment criteria, particularly productive efficiency, learning, technological upgrading, and incremental innovation. As already argued, the Japanese firms do not suffer from high equity agency costs because of the equity ownership concentration, cross-shareholding and Keiretsu business groups, the monitoring role of the banks, high leverage of Japanese firms, and the incentives structure of the Japanese firms' management.¹⁹⁹ This means that this model of corporate governance and high intensity of competition are substitutes; Schumpeterian

¹⁹⁶ Xavier Giroud and Holger M Mueller, 'Corporate Governance, Product Market Competition, and Equity Prices' (2011) 66(2) *The Journal of Finance* 573.

¹⁹⁷ Aghion, Dewatripont and Rey (n 193), 834–837.

¹⁹⁸ Giroud and Mueller (n 196), 573.

¹⁹⁹ See the discussion of the equity agency costs of post-war Japanese firms in section 2.3 of this chapter, and the references cited therein.

competition law therefore is *a sufficient condition* for sustaining the desirable positive non-embedded effects of the stakeholder corporate governance on our assessment criteria (e.g., learning, productive efficiency, technological upgrading, and incremental innovation). Indeed, the empirical evidence found by Aghion suggests that a high intensity of competition may undermine the positive effects of a stakeholder model of corporate governance that does not suffer from (significant) equity agency problem on learning and innovation such as the Japanese firms.

This suggests that Schumpeterian competition is both a necessary and sufficient a condition for the Japanese stakeholder model of corporate governance to produce its non-embedded positive effects on learning, technological upgrading, and incremental innovation. In other words, when the Japanese stakeholder model of corporate governance is combined with a Schumpeterian model of competition law, its embedded effects on these assessment criteria would approximate its non-embedded effects. In contrast, if this institutional network included a post-Chicago model of competition law, this stakeholder model of corporate governance would not result in these non-embedded effects; in other words, its embedded effects, given a post-Chicago model of competition law, would diverge from its non-embedded effects; particularly, the stakeholder model may have weaker positive effects on learning and incremental innovation.

When the government uses sectoral industrial policies, the role of Schumpeterian competition in sustaining the positive non-embedded effects of the stakeholder model of corporate governance on productive efficiency, learning, technological upgrading, and incremental innovation becomes more important. Sectoral industrial policies (such as financial subsidies and adjustment assistance policies) provide (some) Japanese firms with a further layer of protection against bankruptcy risk, and thus undermine their incentives to invest in learning, technological upgrading, and incremental innovation.²⁰⁰ Further, sectoral industrial policies that take the form of protective trade policies that shield domestic firms from foreign competition may weaken the firms' incentives to invest in learning, technological upgrading, and incremental innovation.²⁰¹ In contrast, the export-oriented sectors of the Japanese economy that are exposed to international competition would be strong incentives to invest in these Schumpeterian competitive strategies.²⁰² Still, if the demand in domestic markets can sustain more than one firm, Schumpeterian competition in domestic markets

²⁰⁰ See below the discussion of the embedded effects of sectoral industrial policies and the references cited therein.

²⁰¹ Schaede (n 38) 264–265.

²⁰² *ibid* 265.

may still mitigate the negative effects of protective trade policies because the incumbent firms are operating under the constant threat of entry by other firms.

In addition, coopetition law reinforces the incentives of a stakeholder governed firms to invest in learning and technological upgrading and incremental innovation because it gives space for the firms to pool their resources to make efficient investments in Schumpeterian competitive strategies.

As already mentioned above, the stakeholder model of corporate governance, coopetition law, and industrial promotion policies reinforce their positive effects on *inter-firm cooperation*, resulting in sustaining and enhancing their positive non-embedded effects on productive efficiency, learning, technological upgrading, and incremental innovation. These positive effects on inter-firm cooperation mitigate also the negative non-embedded effects of the stakeholder corporate governance (and labor law and cultural organizational norms) on radical innovation. Accordingly, the embedded positive effects of the stakeholder model of corporate governance on these assessment criteria are higher than their non-embedded positive effects. Further, the non-embedded negative effect of this corporate governance model on radical innovation is mitigated.

As to international competitiveness, as already mentioned, corporate governance and labor legal and cultural norms prevent the Japanese firms from using labor-cost reductions as a competitive strategy. This deprives the Japanese firms from one source of competitive advantage, but as already mentioned, it also intensifies the incentives of Japanese firms to invest in Schumpeterian competition strategies (i.e., to invest in learning, technological upgrading, and incremental innovation). As already mentioned, as to export-sectors of the Japanese economy, coopetition law and sectoral industrial policies enhance the stakeholder corporate governance's positive effects on investment in Schumpeterian competitive strategies, but as to domestic firms shielded from foreign competition, the incentives for investment in Schumpeterian competitive strategies are weakened. As a result, the embedded effects of the stakeholder model of corporate governance on international competitiveness of Japanese firms are similar to their non-embedded effects as long as labor-cost reduction strategies are concerned. However, as far as the export-sectors of the Japanese economy are concerned, these positive embedded effects are stronger than the positive non-embedded effects on learning, technological upgrading, and incremental innovation and these embedded effects are weaker, as far as the domestic sectors are concerned.

Further, as already mentioned, the stakeholder corporate governance, cooperation law and industrial promotion policies and adjustment assistance policies reinforce their protection of workers; their embedded labor protective effects are similar to their non-embedded effects.

Finally, as to the negative non-embedded effects of the Japanese corporate governance (and labor law and cultural norms) on efficient allocation of labor in the economy, industrial adjustment policies that target inefficient firms exacerbate this inefficiency in labor allocation. In contrast, Schumpeterian competition increases the competition that incumbent inefficient firms confront. When the firm is near bankruptcy, however, it will tend to renege on its commitment to labor, or labor would accept to adapt to these changes through wage cuts, for example. To survive in the medium term, these firms must increase their technological and learning capabilities. Still, the firms that cannot adapt to the increase in competition through reduction of labor costs will go bankrupt, if not supported by industrial policies. This mitigates the inefficiency of labor allocation in the economy. In other words, sectoral adjustment assistance policies exacerbate the inefficient allocation of labor, while Schumpeterian competition mitigates this inefficiency. It seems, however, that the negative effects on efficient allocation of labor dominates the positive effects of Schumpeterian competition because many firms may survive (domestic) competition, particularly protected domestic firms despite the inefficient allocation of labor in the economy because all the firms are suffering from this inefficiency cost. Every Japanese firm could have increased their productive efficiency or learning capabilities by changing the number and composition of their labor force.

In short, some of the embedded effects of the Japanese stakeholder model of corporate governance differ from their non-embedded effects. First, the embedded effects of Japanese corporate governance on learning, technological adoption, and incremental innovation are stronger than their non-embedded effects as far as the export-oriented sectors of the economy are concerned, but they are weaker than the non-embedded effects as far as the domestic (protected) sectors of the economy are concerned. Second, the embedded positive effect of Japanese corporate governance on labor's protection seems to be stronger than its non-embedded effects. Third, the negative non-embedded effect of the Japanese corporate governance (and labor law and organizational norms) on radical innovation are mitigated; they are weaker than the negative embedded effect of Japanese corporate governance on radical innovation. Still, other embedded

effects of Japanese corporate governance seem to close to its non-embedded effects such as its negative embedded effect on efficient allocation of labor.

With respect to the embedded effects of sectoral promotion industrial policies, Aghion convincingly argues that sectoral industrial policies would have positive effects on technological adoption and innovation if and only if *one* of the following conditions are met: the competitiveness of the product markets or the (long-term) profit-maximizing behavior of firms' managers (i.e., lack of significant equity agency costs).²⁰³ If both conditions are absent, then, sectoral industrial policies will give the firms strong incentives to delay technological adoption; hence, these industrial policies would be counter-productive.²⁰⁴ The rationale underlying this proposition is obvious; industrial policies are like "lending a hand" to the firms, but if this hand is weak; it cannot create or sustain the competitiveness of the firms if they do not push themselves up. Therefore, corporate governance that ensures the right incentives for investment in learning and technological upgrading and incremental innovation (e.g., Japanese corporate governance that suffers from low equity agency problem and give right incentives for organizational learning) would ensure that the firms have the right incentives to use the governmental industrial support in technological upgrading and innovation. Alternatively, suppose that the corporate governance system does not ensure these right incentives (i.e., the firm suffers from significant equity agency problem or it does not meet the conditions for viable organizational learning). In this case, competition law that ensures competitiveness of the market (e.g., e.g., Schumpeterian competition law or post-Chicago competition law) can substitute for the corporate governance because it forces the firms to use efficiently the governmental industrial support in learning, technological upgrading, and innovation, otherwise, these firms will not survive competitive pressures.²⁰⁵ In the Japanese institutional network, the Japanese stakeholder corporate governance model that involved low

²⁰³ Aghion, Dewatripont and Rey (n 193), 826–827. *ibid* 837. Ph. Aghion, M. Dewatripont and P. Rey, 'Corporate Governance, Competition Policy and Industrial Policy' (1997) 41(3-5) *European Economic Review* 802–804.

²⁰⁴ Aghion, Dewatripont and Rey (n 193), 826–827. *ibid* 837. Aghion, Dewatripont and Rey (n 203), 802–804.

²⁰⁵ In other words, competition and sectoral industrial policies are *complementary*; industrial policies that target competitive sectors result in higher economic performance of the firms of these sectors than the economic performance of the non-competitive sectors of the economy when targeted by similar industrial policies. Philippe Aghion and others, 'Industrial Policy and Competition' (2015) 7(4) *American Economic Journal: Macroeconomics* 5–6. For an empirical evidence on this complementarity of competition and sectoral industrial policies (particularly industrial policies that take the form of subsidies and tax exemptions), see: *ibid* 14–17.

equity agency costs (see above) and provided the right incentives for organizing viable learning process complemented the low intensity of competition resulting from Schumpeterian competition law; hence, the Japanese institutional network satisfied the conditions for the success of sectoral industrial policies. In addition to the stakeholder corporate governance and Schumpeterian competition law, the post-war Japanese industrial policies rarely relied on financial subsidies, which contributed to the higher probability of the success of these policies. In short, the embedded effects of the Japanese sectoral industrial policies approximated their positive non-embedded effects on organizational learning, technological adoption, and incremental innovation.

As to the negative non-embedded effects of sectoral promotion industrial policies on efficient allocation of resources, Schumpeterian competition seems to mitigate weakly these negative effects, while the stakeholder model (and labor law and cultural norms) exacerbate these effects in relation efficient allocation of labor. The non-embedded negative effects of sectoral industrial policies would be similar to their embedded effects, while aggregate allocative inefficiency of the institutional network seems to be high due to the negative effects of the stakeholder model of efficient allocation. These institutional domains seem to be consistent in their negative effects on allocative efficiency, but this is a normative undesirable form of consistency.

In light of the embedded effects of the institutional domains of Japanese institutional network, we can assess whether the effects of these domains on each of the assessment criteria are consistent; and if they are consistent, we evaluate whether this consistency is normatively desirable.

As to allocative efficiency, the embedded negative effects of the institutional domains of corporate governance and sectoral industrial policies are no different from their non-embedded negative effects. Schumpeterian competition law itself has a negative effect on allocative efficiency because it tolerates short-term allocative inefficiencies of monopolies and large-scale mergers, but it also mitigates marginally these inefficiencies in allocation because of pushing some inefficient firms into bankruptcies. Overall, these institutional domains seem consistent in their negative embedded effects on allocative efficiency; this is an undesirable form of consistency.

As to productive efficiency, learning (knowledge accumulation), technological upgrading, and incremental innovation, the post-war Japanese institutional network adopts all possible institutional domains that gives the firms strong incentives and support their capabilities for investing in increasing their productive efficiency, learning, technological upgrading, and

incremental innovation. As already mentioned, Schumpeterian competition, inter-firm cooperation, the Japanese stakeholder model of corporate governance, and sectoral industrial policies have strong positive non-embedded effects on these assessment criteria, as far as the export-oriented sectors of the economy are concerned. As already argued, when these institutional domains are combined together, their positive non-embedded effects become stronger. In short, the post-war Japanese institutional network is strongly consistent in relation to its effect on learning, technical catch-up, and incremental innovation. Indeed, the post-war Japanese institutional network seems to maximize these assessment criteria, particularly as far as the export-oriented sectors of the Japanese economy are concerned. However, as far as the domestic protected sectors are concerned, the positive embedded effects of the Japanese institutional domains on learning, technological upgrading, and incremental innovation are generally weaker; these effects are function of the degree of Schumpeterian completion in these sectors.

As to radical innovation, Schumpeterian competition law has a weak positive embedded effect on radical innovation, while the stakeholder corporate governance has a negative embedded effect. Industrial promotion policies provide the capabilities to invest in radical innovation, but not the incentives. These institutional domains seem to be consistent in their negative effects on the firms' incentives to invest in radical innovation; this is an undesirable form of consistency.

As regards international competitiveness, due to the consistency of the institutional domains in relation to the assessment criteria of learning, technological upgrading, and incremental innovation, which are important sources of competitive advantage, these institutional domains are consistent with reference to their positive effect on international competitiveness. As far as protected domestic firms are concerned, this consistency hinges on the degree of Schumpeterian competition in the relevant domestic market. Still, the Japanese firms are not able to use labor cost-reduction strategies due to Japanese corporate governance and labor law and cultural norms. However, sectoral industrial promotion policies as well as the stakeholder corporate governance results in reduction of the costs of other inputs (e.g., credit finance). Since most Japanese firms are committed by lifetime labor contracts, Schumpeterian competition does not force them to renege on their labor-related commitments. Further, the inter-firm cooperation ensures that firms do not engage in intense price competition, which would destabilize cooperative relations. Accordingly, as far as reduction of labor costs is concerned, these institutional domains are consistent; they tend to be protect labor and prevent reduction of labor's wages. As far as protection of labor is

concerned, this is a desirable form of consistency, but it is undesirable form of consistency, as far as international competitiveness is concerned. As to cost of other inputs (e.g., credit finance) is concerned, the institutional domains of Japanese corporate governance and industrial promotion policies are consistent in their positive effect on reduction of the cost of credit finance; this is a desirable form of consistency.

As to the firms' adaptability, the Japanese models of stakeholder corporate governance and labor law provide low adaptive capacity of the Japanese firms. The Japanese model has thus attempted to provide this adaptability through exemptions from competition law, where firms in a distressed industry can cooperate, form a cartel, or enter into industrial reorganizations plans such as mergers in order to survive volatility in demand.²⁰⁶ Although the Japanese institutional network seems to provide a low adaptability for Japanese firms, this network ensures that the firms are not destroyed in a face of a sudden crisis or shock; they enable the firms to survive demand shocks and thus to operate post-crisis at their full capacity.²⁰⁷ This increases the macroeconomic stability and resilience of the economy.

With respect to protection of the weak, as already mentioned, these institutional domains are consist in their protective effects of the workers. Further, as to protection of consumers, there is no reason suggests that their embedded effects would be different from their embedded effects; industrial policies seem to have no effect on consumers, while coopetition law affects them negatively. The stakeholder corporate governance (and labor law and cultural norms) protects workers; since workers are middle-income consumers, the protection of workers provides a protection of the middle-income consumers who happen to be employed. This mitigates the negative effects of coopetition law on consumers.

In short, these institutional domains of the Japanese institutional network are consistent with reference to their embedded positive effects on learning, technological upgrading, and incremental innovation. This is similar to the consistency of their non-embedded effects on these assessment

²⁰⁶ Schaede (n 38) 265–266. See also: Pavlos E Masouros, 'Corporate Governance and the Great Recession: An Alternative Explanation for Germany's Success in the Post-2008 World' (January 2014). Hellenic Foundation for European and Foreign Policy (ELIAMEP), Crisis Observatory Research Paper no. 8/2014, 16–17 <<http://ssrn.com/abstract=2388611>>

²⁰⁷ Pavlos Masouros argues that the German and Japanese corporate governance system as complemented by industrial relations institutions enhance the resilience capacity of German and Japanese capitalism to crises: both capitalist systems suffered low rises in the rates of firms' bankruptcies and unemployment during the financial crisis relative to the high increase in these rates in the Anglo-Saxon models of capitalism. *ibid* 12–17. See also: Schaede (n 38) 265–266.

criteria, but their embedded positive effects are stronger. Similar to the consistency of their non-embedded, the embedded effects of these institutional domains are consistent with reference to the protection of workers.

Unlike the inconsistency of these institutional domains in relation to their non-embedded effects on radical innovation, they have consistent embedded negative effects on radical innovation; the weak positive embedded effect of Schumpeterian competition on radical innovation is negligible and can be overlooked. Similar to the consistency of their non-embedded negative effects, the embedded negative effects of these institutional domains on allocative efficiency are consistent. Finally, these institutional domains are inconsistent with reference to their effects on protection of the weak subset of consumers, but this inconsistency is normatively desirable because the protective effects of the corporate governance mitigates the negative effects of competition law.

In short, except for protection of the weak consumers, the Japanese institutional domains are highly consistent with reference to their embedded effects on the assessment criteria. The consistency of these domains in relation to their embedded effects on learning, technological upgrading, incremental innovation, and protection of workers is normatively desirable, but their consistency in relation to their embedded effects on radical innovation and allocative efficiency is normatively undesirable. As to the normative desirability of the inconsistency of these domains in relation to their effects on protection of consumers, this is a difficult issue. From a normative perspective, the inconsistency of the institutional domains in relation to their effects on an assessment criterion is preferable to their consistency in their undesirable effects on this criterion, but inferior to their consistency in their desirable effects on this criterion. In other words, this network is inferior to an institutional network that is consistent in its protection of consumers, but more desirable than a network that is consistent in its negative effects on the weak consumers. To determine accurately whether this inconsistency is desirable, we need to have a clear indicator for the desired level of protection of the weak consumers (i.e., the regulatory objective) and then evaluate whether this inconsistent institutional network has succeeded in attaining this objective.

Given the above analysis of the consistency of the Japanese institutional domains, one might be tempted to argue that it is sufficient to assess the consistency of the institutional domains with reference to their *non-embedded effects* because the *embedded effects* of these domains do not seem to diverge largely from their non-embedded effects. Particularly, most of the differences

relate to the strength of the effect, i.e., whether the effect is strong, moderate, or weak, but they do not relate to the type and direction of the effect, i.e., whether the effect is a positive or negative. Indeed, the analysis of the embedded effects of institutional domains is of utmost importance for two reasons. First, the strength of the effects of the institutional domains is important because it gives us an indicator of performance of the institutional network; for example, the analysis of the embedded effects demonstrate that the Japanese institutional network seem to *maximize* learning, technological upgrading, and incremental innovation. More importantly, the high degree of (normatively desirable and undesirable) consistency of the Japanese institutional network results in reinforcing the non-embedded effects without reversing their direction. However, if this institutional network were not highly consistent, one would have expected the embedded effects of the institutional domains to diverge significantly from their non-embedded effects. For example, a shareholder value corporate governance of dispersedly owned firms would have destabilized the non-embedded effects of Schumpeterian competition law because this model undermines the incentives and capabilities of these firms to organize viable learning processes; these firms would not have been able to pursue Schumpeterian competition strategies.

As already mentioned in chapter 8, systemic analysis dictates that we consider also the effects of the environment of the system subject to analysis (i.e., the environment of our institutional network) on the consistency analysis of this institutional network. In other words, the analysis of the consistency of the Japanese institutional network of the supply side of product markets cannot be complete without an analysis of the effects of the neighboring institutional domains in the environment of the institutional network subject to analysis, i.e., labor law and financial regulation. To factor in the environment of the institutional network into the consistency of this network, we should ask the following question, “Do the environmental factors (labor law and financial regulation) change our conclusions regarding the assessment of the consistency of the Japanese institutional network of product markets?” Some of the institutions of labor law and financial regulation have been already integrated in the above analysis of the effects of industrial policy and corporate governance. Still, the economic effects of many important institutions of these institutional domains (i.e., labor law and financial regulation) have not been subject to analysis. Accordingly, we need to assess *whether the embedded effects of each of our institutional domains (i.e., coopetition law, stakeholder model of corporate governance, and sectoral industrial policies) would change significantly* once we take into account their embeddedness in the institutional

networks of post-war labor and financial regulations. Here, we are not analyzing the non-embedded or embedded effects of labor and financial regulations or their consistency with the institutional domains of corporate governance, industrial policy, and competition law. We would need to undertake such analysis if we included labor and financial regulation within the boundary of the institutional network subject to our analysis. Since we have chosen, in chapter 8, not include labor and financial regulations in the institutional network subject to analysis, we need only to understand whether the existence of these domains in the environment of the analyzed institutional network would change our conclusions regarding the consistency of this institutional network.

Methodologically speaking, this analysis would be similar to the analysis of the embedded effects of the institutional domains of corporate governance, competition law, and industrial policy in the previous section. We would ask the following question, for example, “would the embedded effects of competition law (stakeholder corporate governance, or industrial policy) change when it is embedded in an institutional network that includes post-war Japanese labor and financial regulations?” However, we do not need to examine the following question, “what would be the embedded effects of Japanese labor and financial regulations when they embedded in an institutional network that includes Japanese models of corporate governance, industrial policies, and competition law?” Unfortunately, due to limits of space and time, this analysis cannot be undertaken in this chapter. Future research is needed for undertaking this analysis; until then, the conclusions reached in relation to the consistency of the institutional network of product markets in post-war Japan remains tentative.

3. Assessment of the Consistency of the Institutional Network of Product Markets in Post-war Germany

In chapter 8, we have classified the institutional domains of the post-war German institutional network as follows. Competition law was a hybrid model that included some Ordoliberal and non-Ordoliberal elements. The corporate governance system has been a co-determined stakeholder model of corporate governance. Industrial policies were mainly horizontal (i.e., financial policies, labor market policies, and industrial support to the SMEs) with some cases of sectoral industrial policies, particularly innovation policies and sectoral industrial policies in times of economic

shocks (e.g., post-world war II, German reunification, and the global financial crisis of 2007-2009).

By comparing these institutional domains with the post-war Japanese domains, we can make some reasonable assumptions about the embedded effects of these institutional domains. First, the Ordoliberal elements of the German competition law includes the regulatory objective of the protection of freedom of both competitors and consumers, and the per se prohibition of cartels. The non-Ordoliberal elements include exemptions from per se prohibition of cartels (particularly rationalization cartels,²⁰⁸ export cartels, and cooperative agreements among the SMEs), and lack of merger control until 1973.²⁰⁹ Clearly, these non-Ordoliberal elements deviate also from the post-Chicago model of competition law. Indeed, they conform to *the Schumpeterian* model of competition law. The exemption of rationalization cartels gives the firms a space for adapting to economic downturns through cartelization. Similarly, the lack of merger control is akin to the lenient control of mergers in Schumpeterian model of competition law, while the per se permissibility of cooperative agreements among the SMEs comes close from the encouragement of Schumpeterian competition law to inter-firm cooperation. Furthermore, the Ordoliberal per se prohibition of cartels in normal economic times is also consistent with Schumpeterian competition law. This means that the only difference between the post-war German competition law and the Schumpeterian model of competition law relates to the regulatory objective of competition law. The Schumpeterian competition law seeks to maximize long-term innovation, while the Ordoliberal model seeks to maximize the freedom of both competitors and consumers. This difference in regulatory objectives translates into one main difference between both models of competition law: the Ordoliberal model does not tolerate monopolies and abnormal profits similar to the Schumpeterian model. In other words, the Ordoliberal model seems to interfere with the Schumpeterian evolutionary process of markets for the sake of protection of consumers.

Given these similarities and differences between the Schumpeterian competition law and post-war German competition law, we may assume that the German competition law would have similar, through weaker, positive non-embedded effects on productive efficiency, learning, technological upgrading, incremental and radical innovation. Similar to cooperation law, the

²⁰⁸ Rationalization cartels are cartels formed in the times of economic downturns to enable the firms to adapt to and survive these downturns.

²⁰⁹ For the classification of the post-war German competition law, see section 8 of chapter 8 and the references cited therein.

Ordoliberal competition law has a positive effect on the protection of SMEs. Unlike the Schumpeterian competition law, it would have a positive effect on the protection of consumers. See figure 11.1 above for a review of the non-embedded effects of competition law that consists of both Schumpeterian competition law and inter-firm cooperation law.

The German models of corporate governance and labor law are in a sense stronger in their stakeholder orientation from the Japanese model in terms of their *formal legal institutions*. For example, the Japanese employees do not have co-decision-making rights similar to the German employees, but they tend to derive their influence from other tacit channels (e.g., the inside management of Japanese firms, which is hired from the long-term senior employees of the firm). As far as their non-embedded effects on our assessment criteria, there is no reason to think that the German stakeholder model of corporate governance (and the protective German labor regulation) would differ significantly from the Japanese stakeholder model and labor institutions.²¹⁰ Hence, we can reasonably assume that the German stakeholder model and labor regulation would have a strong positive non-embedded effect on productive efficiency, learning, technological upgrading, incremental innovation, income distribution, protection of workers, and protection of (some) weak consumers. Similarly, the German model would have a negative non-embedded effect on efficient allocation of labor, and radical innovation. With respect to international competitiveness, it would have a positive effect on the competitiveness of German firms through its positive effect on productive efficiency, learning, technological upgrading, and incremental innovation. However, due to protection of workers, this model would prevent the German firms from using labor-cost reductions as a competitive strategy;²¹¹ this undermines the international competitiveness of the German firms, particularly in the market niche of low added value-low cost products.²¹²

With respect to adaptability, the model provides a limited space for adaptability as the German employees and management/shareholders may develop a cooperative relation in which they agree to adaptive reasonable responses to changes in economic conditions. Moreover, the stakeholder corporate governance and protective labor institutions ensure high wages for German workers,

²¹⁰ As already mentioned in section 8 of chapter 8, the causal mechanisms through which each stakeholder model of corporate governance produces these effects may be different. For example, the formal legal institutions play more important role in the German systems of corporate governance and labor law in comparison to the Japanese systems of corporate governance and industrial relations.

²¹¹ Wolfgang Streeck, 'German Capitalism: Does it Exist? Can it Survive?' in Colin Crouch and Wolfgang Streeck (eds), *Political Economy of Modern Capitalism* (SAGE Publications 1997) 40–41.

²¹² *ibid* 41–42.

which stabilize the aggregate demand in the German economy.²¹³ This stabilization function reduces the German firms' need for adaptability to changes in demand.²¹⁴ Still, given the reliance of the export-oriented German economy on foreign demand,²¹⁵ these positive effects of German corporate governance and labor institutions on firms' adaptability are limited. Overall, these institutional domains affect the adaptive capability of the German firms negatively.

As for the post-war German industrial policies, these policies seem to be largely different from the post-war Japanese policies. However, upon examination, one would discern some significant similarities. The German (sectoral) innovation policies are akin to the Japanese sectoral promotion policies that targeted infant industries. The difference between these policies is *in degree*, and not *in kind*. In both cases, the government has the objective of *creating new markets/sectors* in the economy that are globally competitive. In the case of innovation policies, the objective is to create these domestic industries prior to competing nations, but in the case of infant industries policies, the objective is to create domestic industries that can compete against well-established sectors of competing nations. As already argued in chapter 9, domestic firms of developing countries assume uncertainties in creating new domestic markets for competing with established sectors of developed economies, which are no less than the uncertainties assumed by the firms of developed economies in creating new markets. In other words, innovation policies are infant industries promotion policies, which fit the stage of development that German has already reached. As to horizontal industrial policies (i.e., energy policies, labor market policies, financial policies, and support for SMEs), some of them (namely, financial policies and protection of SMEs) are similar to the Japanese industrial policies as both of them targeted and succeeded in the establishment of relationship banking that is willing to monitor and extend long-term loans to the industry. They also extend strong support for SMEs. Particularly, the SMEs may not have sufficient resources to invest in new technologies and skilling their workers in comparison to large firms.²¹⁶ German horizontal industrial policy, particularly long-term financing, labor market policies and innovation

²¹³ The German consumers' preferences of high quality products contribute further to the stability of the domestic aggregate demand. *ibid* 40.

²¹⁴ This demand stabilizing role of protective labor law has been emphasized by Keynesian economics and then by the French regulation school of economics. See the brief discussion of the French regulation school of economics in section 4.4 of chapter 8 and the reference cited therein.

²¹⁵ *ibid* 42.

²¹⁶ Sigurt Vitols, 'German Industrial Policy: An Overview' (1997) 4(1) *Industry and Innovation* 21.

policies, enable the SMEs to undertake high levels of investment in R&D.²¹⁷ Without such horizontal industrial policies, the German SMEs cannot sustain their competitive advantage, given the restrictive labor regulation and the Ordoliberal model of competition law.²¹⁸ As to labor market and energy industrial policies, these policies seem to have been a great success; these policies result in highly skilled labor force and cheap energy costs for German firms. Unlike the Japanese industrial promotion policies to mature industries, except for innovation policies, German industrial policies rarely targeted specific sunrise industries. Similarly, unlike the Japanese industrial policies, the German industrial policies rarely engaged in adjustment assistance of troubled industries.

Given these similarities and differences between the German and Japanese industrial policies, we can reasonably assume that the post-war German industrial policies would have the following non-embedded effects on our assessment criteria. They would have negative effects on efficient allocation of resources; however, unlike the Japanese industrial policies, these effects would be marginal for two reasons. First, sectoral industrial policies are limited, primarily, to innovation policies. Second, most of other industrial policies take the form of horizontal industrial policies (e.g., energy policies, labor market policies, and financial policies). Doubtless, these horizontal policies would have negative effects on efficient allocation of resources as well (e.g., energy policies may result in larger allocation of resources to energy intensive industries, for example), but we can expect these negative non-embedded effects to be insignificant negative *embedded* effects. The reason is that the Ordoliberal/Schumpeterian model of competition law of the German institutional network ensures competitiveness of domestic markets. Further, the export-oriented German economy is exposed to intense international competition, which ensures that firms would only invest in the markets where they expect high net positive returns. This mitigates the negative allocative efficiency effects of horizontal industrial policies. In short, German industrial policies have marginal negative embedded effects on allocative efficiency of the German economy. Similar to Japanese industrial policies, we would expect the German industrial policies to have positive effects on productive efficiency, learning capabilities, technological upgrading, incremental and radical innovation, market creation, international competitiveness, firms' adaptability, and

²¹⁷ *ibid.* On the important role of long-term banking financing for the sustainability of the German SMEs, see: *ibid* 24–25.

²¹⁸ Streeck (n 211) 42.

protection of entrepreneurs and the SMEs. As to firms' adaptability, these policies, particularly labor market policies (e.g., early retirement plans and part-time wages complemented by governmental funds) ensure a limited degree of adaptability, particularly for SMEs. However, these policies mitigate, but do not overcome the low adaptability of German firms resulting from the German corporate governance and labor law models.

In short, as far as the non-embedded effects of the post-war German institutional domains on our assessment criteria, they seem to be largely similar to the Japanese institutional domains, but they differ in some aspects. First, the German competition law provides stronger protection to weak consumers. Second, this protection of consumers comes at a cost, however; the positive non-embedded effects of post-war German competition law on productive efficiency, learning, technological upgrading, and innovation seem to be weaker than the non-embedded positive effects of the Japanese competition law. Third, the Japanese industrial policies, at least in theory, have significant or moderate negative (non-embedded and embedded) effects on allocative efficiency, but the German policies seem to have *marginal* (embedded) negative effects.

Consequently, how would these non-embedded effects of the German institutional domains change when these domains are combined with each other to form the German institutional network of product markets? Similar to the Japanese institutional network, one would expect that the German competition law would have weak positive effect on radical innovation because the German corporate governance and labor law models undermine the firms' incentives to invest in radical innovation.²¹⁹ Furthermore, given the focus on protection of consumers, the German competition law mitigates the negative effects of industrial policies in allocative efficiency; the embedded negative effects of these industrial policies on allocative efficiency become marginal. Similar to the Japanese institutional network, the German institutional network seems to maximize learning, technological upgrading, and incremental innovation.

In short, similar to the Japanese institutional domains, the German institutional domains seem to be consistent with reference to their positive effects on productive efficiency, learning

²¹⁹ The weak capacity of the German capitalism to undertake radical innovation has been highlighted in comparative capitalism literature, see, e.g.: *ibid* 41. Peter A Hall and David W Soskice, 'An Introduction to Varieties of Capitalism' in Peter A Hall and David W Soskice (eds), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (Oxford University Press 2001) 41. Overall, Empirical evidence tends to support *partially* this theoretical claim, see: Matthew Allen, Lothar Funk and Heinz Tüselmann, 'Can Variation in Public Policies Account for Differences in Comparative Advantage?' (2006) 26(01) *Journal of Public Policy* 11–13.

capabilities, technological upgrading, incremental innovation,²²⁰ and protection of workers. Unlike the Japanese institutional network, the German institutional domains are inconsistent in relation to their embedded effects on allocative efficiency; corporate governance, labor law, and industrial policies have negative (embedded) effects on allocative efficiency, while the German competition law has a positive effect on allocative efficiency. This positive effect of German competition law mitigates the negative effects of industrial policies so that we can consider them to be negligible and ignore them. However, the inflexibility of labor allocation in post-war German economy cannot be mitigated through product market competition; similar to the Japanese economy, the German economy suffers from inefficient allocation of labor in the long-run.²²¹ With respect to protection of workers and consumers, the institutional domains are consistent with reference to these assessment criteria, and this is a normatively desirable form of consistency. As for radical innovation, similar to the Japanese institutional domains, the German domains are consistent in undermining radical innovation; this is a normatively undesirable form of consistency.

Regarding firms' adaptability, the German institutional domains are inconsistent; corporate governance and labor law undermines firms' adaptability, while industrial policies mitigate marginally the lack of adaptability. However, we must consider that German firms compete in distinct niches of market economy; high added value-high quality products and hence the demand for their products have been largely stable.²²² This lack of adaptability of these firms in the post-war periods did not have significant negative effects on the German economy. Given the volatility of demand for products of developing countries, firms' adaptability should be a crucial objective for the institutional network of product markets.

Finally, with respect to international competitiveness, the German institutional domains are consistent in their positive effects on some of the resources of international competitiveness, namely, learning, technological upgrading, and incremental innovation. However, they are inconsistent with reference to their effects on the reduction of input costs as source of international

²²⁰ The complementarity of the German institutions in their positive effects on incremental innovation has been highlighted in comparative capitalism literature. See, e.g.: Streeck (n 211) 41. Hall and Soskice (n 219) 39–40. Overall, empirical evidence tends to support this theoretical claim, see: Allen, Funk and Tüselmann (n 219), 9–11.

²²¹ This explains why persistent high unemployment and the danger of widespread labor-cost cuts that would shift large number of the German workers to low-wage (low-skill) segment of the workforce has been the major challenge of the German model of capitalism. Streeck (n 211) 43–47.

²²² Due to Japanese competition (and recently Chinese competition), the international demand for the German high quality products may not be as stable as it has used to be, however. *ibid* 42. *ibid* 46.

competitiveness; industrial policies and the stakeholder corporate governance reduces the cost of debt financing, and industrial policies reduces the cost of energy inputs, but the stakeholder corporate governance and protective labor law increase the cost of labor.

In short, except for allocative efficiency, firms' adaptability, and reduction in costs of inputs as a source for international competitiveness, the German institutional domains are highly consistent with reference to their embedded effects on the assessment criteria. As far as productive efficiency, learning, technological upgrading, incremental innovation, protection of workers and weak consumers are concerned, this is a desirable form of consistency. As far as radical innovation is concerned, this is an undesirable form of consistency. As to allocative efficiency, firms' adaptability, and costs of factors of production, the German institutional domains were inconsistent in their effects on these assessment criteria. As already mentioned, inconsistent domains are more normatively desirable than normatively undesirable consistent domains; in other words, these inconsistent domains are preferable to alternative institutional domains that are consistent in their negative effects on firms' adaptability or allocative efficiency, for example. Still, if these inconsistent domains cannot achieve the desirable level of the regulatory objectives (i.e., firms' adaptability and allocative efficiency), then, they are normatively undesirable. As already argued, the post-war German institutional network does not seem to succeed in achieving the desired level of firms' adaptability, allocative efficiency of labor, and international competitiveness in low added value-low cost products. Given their stage of development and the conditions of the quasi-globalized markets, the attainment of the desired levels of these objectives is crucial for the economies of developing countries.

4. Assessment of the Consistency of the Institutional Network of Product Markets in the US

Due to space and time constraints, this section will provide a very succinct analysis of the consistency of the American institutional network. Future research is needed for an in-depth consistency analysis of this network.

With respect to the non-embedded effects of the institutional domains of the American institutional network, the industrial (innovation) policies are *strong sectoral* policies that target the knowledge-intensive sectors of the American economy; thus, these policies are largely similar to

the German innovation policies and Japanese sectoral promotion policies. Accordingly, similar to the German and Japanese industrial policies, these American innovation policies have strong positive non-embedded effects on *learning, and incremental and radical innovation*.

With respect to corporate governance, over the last decade, the US corporate governance model has shifted closely toward the shareholder value model.^{223, 224} As Lazonick argues, this shareholder value model has been shifting recently toward a financialized form of corporate governance that focuses on short-term profit maximization and quarterly increase in stock price at the cost of long-term firms' strategies.²²⁵ Due to the excessive focus on short-term profits, this shareholder value model of corporate governance along with flexible labor markets gives strong incentives for the firms to adopt competitive strategies that involve reduction of the costs of labor through cutting wages or lay-offs.²²⁶ In addition, they result also in strong managerial incentives for using competitive strategies that involve technological upgrading (i.e., adoption of newly produced technologies) because the latter enhances firms' profits in the short and medium run. Particularly, technological upgrading is required for surviving the competitive structure of American markets, which results from the strict enforcement of the American post-Chicago model of competition law. However, the shareholder value governance of dispersedly owned firms, as already argued in chapter 8, fails to satisfy the conditions for viable learning processes and the conditions for ethical organization. This model of corporate governance prevents therefore the firms from becoming learning and ethical organizations.

In short, the American shareholder value corporate governance of dispersedly owned firms and flexible labor law undermine learning capabilities, incremental and radical innovations, and

²²³ On the classification of the US corporate governance system, see section 8 of chapter 8 and the references cited therein.

²²⁴ In this section, we analyze the effects of the shareholder value corporate governance of *dispersedly owned* American firms on our assessment criteria. These effects are not necessarily similar to the effects of the shareholder value corporate governance of the firms that have a concentrated ownership structure because the ownership structure plays a significant role in the functioning of the corporate governance systems. Future research is required for analysis of the effects of shareholder value corporate governance of the firms that have a concentrated ownership structure in order to develop a complete picture of the effects of the American shareholder value corporate governance.

²²⁵ For an account of the role of stock options based compensation of firms' executives and stock buybacks in the process of the financialization of the American listed corporations, see: William Lazonick, 'The Financialization of the US Corporation: What has been Lost, and How it can be Regained' (2013) 36 *Seattle University Law Review* 879–890.

²²⁶ Michel Aglietta, 'Shareholder Value and Corporate Governance: Some Tricky Questions' (2000) 29(1) *Economy and Society* 149–150.

learning-based sources for productive efficiency and international competitiveness, and fail to protect the workers. These institutional domains, however, enhance technological upgrading. Further, they enable the firms to minimize their labor costs, resulting in a reduction of a cost of a factor of production, which enhances the productive efficiency and international competitive advantage of American firms.

With respect to *firms' adaptability*, since the government does not give exemptions from competition law (e.g., recession cartels) and rarely use industrial policies to assist troubled industries,²²⁷ American firms adapt to shocks through layoffs, or declaration of bankruptcy, resulting in high destruction rates of American firms. This high destruction rate of firms results in harsher conditions for workers, which undermines further their protection. Further, although firms' adaptation through destruction of firms eliminates inefficient firms, it may also eliminate also efficient firms, particularly in the case of economic shocks. These efficient firms may not be able to survive the shock in the short run, although they can operate efficiently after the lapse of the shock. The destruction of these efficient firms results in deepening the effects of these economic shocks (e.g., the global financial crisis of 2007-2009).

As regards allocative efficiency, the *reallocation of resources* in the short run would be frequent because managers are seeking high return projects that would maximize shareholder value; particularly, the shareholder value corporate governance and flexible labor regulation would lower the cost of firms' exit from their markets and reallocating their resources to other markets. Accordingly, in comparison to the German and Japanese models, the American model has higher allocative efficiency and firms' adaptability. However, the adaptive mechanism of firms' destruction undermines further the workers protection, while exacerbating macroeconomic instability in case of economic shocks; it reduces the macro resilience of the economic system.

Finally, the American post-Chicago model of competition law that is focused on maximization of consumers' welfare provides high protection of weak consumers.

²²⁷ The bailout of the American banking sector and big automakers such as General Motors and Chrysler are notable exceptions. On the bailout of General Motors, see: Eric Beech, 'The U.S. Government Lost \$11.2 Billion Bailing Out GM' *Huffington Post* (30 June 2014) <http://www.huffingtonpost.com/2014/04/30/gm-bailout-cost_n_5240260.html>. Indeed, one may observe a pattern of US governmental interventions for assisting troubled *critical* sectors of the American economy. The American government, for example, intervened and imposed on the Japanese government what is called "voluntary restraint of exports", according to which the Japanese automotive industry restrained its exports to the US markets for three years to give a space for American automotive industry to regain its competitiveness. See: Mutoh (n 4) 320.

We can assume that the embedded effects of the institutional domains of the American institutional network are close to their non-embedded effects, as there seems to be no reason to suggest otherwise. Given these effects of the institutional domains, these domains seem to be consistent in their positive effects on technological upgrading, firms' adaptability, protection of consumers, short-term allocative efficiency, and cost of labor inputs as a source of productive efficiency and international competitiveness. These are desirable forms of consistency. These institutional domains are also consistent in their negative effects on learning, incremental innovation, protection of workers, and income distribution. These are normatively undesirable forms of consistency. Due to the high rate of destruction of productive capacity of firms in response to economic shocks (e.g., demand shocks), the high firms' adaptability and the resulting short-term allocative efficiency of the American economy may involve *long-term waste of resources*, i.e., long-term inefficient allocation of resources. In addition, the low protection of workers and their declining or stagnating wages destabilize aggregate demand. Further, the shareholder corporate governance tends to increase the private debt in the economy.²²⁸ The high rates of firms' destruction in economic downturns, unstable aggregate demand, and high private debt may result in the fragility and inadaptability of the American economic system to economic shocks. Recessions would tend to destroy many firms and to prolong, resulting in a negative feedback loop. In other words, this institutional network has a negative effect on the macroeconomic stability of the American economy.²²⁹

As to radical innovation, industrial (innovation) policies provide the firms with sufficient resources for radical innovation, but the short-termism of the shareholder value governance of dispersedly owned firms undermines the incentives for radical innovation. Still, the shareholder value corporate governance of the firms that have a concentrated ownership structure may have a positive effect on radical innovation. Accordingly, as far as the shareholder value governance of dispersedly owned firms is concerned, the institutional domains of the American network seem to be inconsistent in their effects on radical innovation, but they have consistent positive effects as far as the shareholder value governance of concentrated ownership firms is concerned.

²²⁸ Aglietta (n 226), 149–152.

²²⁹ Aglietta has already hinted to the macroeconomic instability implications of the shareholder value system of corporate governance that is one of the central institutional domains of the American institutional network of product markets, *ibid* 156.

Consequently, it seems that technological upgrading and radically innovative sectors are the main drivers of *economic growth* in the American economy, while organizational learning and incremental innovation play a marginal role in driving economic growth.

5. Conclusion

This chapter sought to conduct a *consistency analysis* of the American, post-war Japanese and German institutional networks (i.e., legal systems) of their product markets. As already argued in chapter 6, consistency analysis is an important form of systemic analysis of legal institutions, and it provides us with important systemic information regarding the performance of these institutions. The consistency analysis of the Japanese institutional network has revealed that the institutional domains of this network are highly consistent in their embedded positive effects on productive efficiency, organizational learning, technological upgrading, incremental innovation, organizational learning sources for international competitiveness and protection of workers. These consistencies are normatively desirable. These domains are also consistent in their embedded negative effects on allocative efficiency, radical innovation, and labor cost reduction as a source for international competitiveness. These are normatively undesirable consistencies. Finally, these institutional domains are inconsistent in their embedded effects on firms' adaptability and protection of weak consumers, but overall, it seems that this network fails to provide the desired level of firms' adaptability and protection of weak consumers. These strong consistencies establish a reasonable presumption for strong complementarities among these institutional domains. Accordingly, it seems that the Japanese institutional network, through strong consistencies and complementarities, *maximize organizational learning, technological upgrading, incremental innovation and protection of workers* while they it has a strong negative effect on *radical innovation, allocative efficiency, firms' adaptability, labor cost reduction as a source for international competitive advantage*.

Similar to the Japanese institutional network, the post-war German institutional network, its institutional domains are consistent in their positive embedded effects on productive efficiency, organizational learning, technological upgrading, incremental innovation, organizational learning sources for international competitiveness, and protection of workers. Further, the German institutional domains are consistent in their negative effects on the reduction of labor costs as

source of international competitive advantage. Moreover, the German domains are inconsistent in their effects on firms' adaptability; overall, the institutional network seems to fail to ensure the desired level of firms' adaptability that the firms in developing countries need. Unlike the Japanese institutional domains, the German institutional domains are inconsistent in their embedded effects on allocative efficiency. Accordingly, the German economy seems more allocatively efficient than the Japanese economy, similar to the Japanese economy, but similar to the Japanese economy, it seems that it suffers from inefficient allocation of labor in the long-run. Unlike the Japanese institutional domains, the German domains are consistent in the positive effects on the protection of weak consumers and income distribution. These strong consistencies can be reasonably perceived as complementarities among these institutional domains. Further, the inconsistencies can be considered also a deficient compensatory form of complementarities, but these complementarities fail to produce the desired level of the regulatory objectives (i.e., efficient allocation of labor and firms' adaptability). The performance of the German institutional network therefore seems to be almost identical to the Japanese network, but it outperforms the Japanese network in relation to its positive effects on *allocative efficiency, protection of consumers, and income distribution*. Still, the Japanese network seems to outperform the German network in the magnitude of its positive effects on organizational learning, technological upgrading, and incremental innovation. They share the downsides of low firms' adaptability, inefficient allocation of labor in the long-run, and lack of labor-cost reductions as source of international competitiveness.

Finally, the institutional domains of the American institutional network are consistent in their negative effects on organizational learning, incremental innovation, protection of the workers, income distribution, long-term allocative efficiency, and macroeconomic instability and in their positive effects on technological upgrading, firms' adaptability, short-term efficient allocation of resources, labor-cost reduction as a source of international competitiveness, and protection of consumers. These institutional domains are inconsistent in their effects on the radical innovation incentives and capabilities of dispersedly owned firms, but they are consistent in their effects on the *radical innovation* incentives and capabilities of the firms that have a concentrated ownership structure. Accordingly, technological upgrading and radical innovation seem to be the main drivers of American economic growth in recent decades, while organizational learning and incremental

innovation seem to have a marginal contribution to this growth. Further, the American institutional network seems to exploit workers systemically.

Given this assessment of the consistency (and presumptive complementarities) of the institutional domains of the above institutional networks, we can seek to answer our primary regulatory question that is “what model of corporate governance should developing countries adopt?” To address this regulatory question systemically, we need to choose *an institutional network* among the above institutional networks, which developing countries should adopt. Consequently, “given the above consistency analysis, what institutional network of product markets should developing adopt?” The next chapter seeks to address this difficult question.

Chapter

12

The Choice of an Institutional Network for Product Markets in Developing Countries and Some Legal Proposals for Effective Transplant of the Chosen Network

1. Introduction

The applied part of this thesis uses the integrated and systemic approach to address the issue of the choice of a model of corporate governance for developing countries. As chapter 8 argues, to address this regulatory issue systemically, we need to reformulate it into a systemically informed regulatory problem. This regulatory problem is the design of a consistent institutional network for governing the product market in developing countries. This institutional network should include consistent models of corporate governance, competition law, and industrial policies. As already mentioned in section 7 of chapter 8, the sub-questions required for answering our systemically formulated research question are the classification of the models of corporate governance, industrial policy, and competition law in the compared institutional networks, and the development of assessment criteria of these institutional networks, and the assessment of the consistency of these networks in light of these assessment criteria. Chapters 8, 9, 10, and 11 have already addressed these sub-questions. Given the assessment of consistency of the institutional networks (legal systems) governing the supply side of product markets in US, Germany and Japan, we can now attempt to design a consistent institutional network of product markets in developing countries. By designing this network, we develop an integrated and systemic answer to our primary regulatory question concerning the appropriate model of corporate governance for developing countries.

To address the vexing question of which institutional network should developing countries adopt for governing the supply side of their product markets, section 2 situates this question within the relevant literature on law and development. This section elaborates on the main four theories

of law and development: classical developmental state, neoliberalism, Asian developmental state and new developmental states, and tries to uncover the underlying institutional network (legal system) proposed under each of these theories for governing the supply side of product markets in developing countries. Based on the law and development literature, the consistency assessment of the American, Japanese, and German networks, and the systemic design toolkit developed in chapter 6, section 3 contends that developing countries should adopt an institutional network that includes sectoral industrial policy model, stakeholder system of corporate governance, and competition law that consists of Schumpeterian competition law and inter-firm cooperation law.. However, the Japanese legal framework of sectoral industrial policy or the German stakeholder model of corporate governance cannot be transplanted successfully in developing countries because of the (significant) cultural differences between post-war Germany, post-war Japan, and developing countries.¹ Sections 4, 5 and 6 briefly suggest some legal proposals for successful transplant of these models in developing countries. Section 7 concludes.

2. The Proposed Institutional Networks for Governing Product Markets in Law and Development Theories

Law and development scholarship is concerned with a central question: which legal institutions are supportive of economic development? Law and development scholars divides the intellectual evolution of law and development scholarship into three phases: import-substitution industrialization (modernization) or classical development state (1950s-1970s), the neoliberal theory of law and development (1980s-mid 1990s), and the current post-neoliberal era.² In each

¹ Indeed, the Japanese and German institutional networks, although close from each other, differ in their reliance on cultural norms; unlike the formal legal institutions that dominate the German institutional network, the social norms play a more important role in the Japanese institutional network. Wolfgang Streeck, 'German Capitalism: Does it Exist? Can it Survive?' in Colin Crouch and Wolfgang Streeck (eds), *Political Economy of Modern Capitalism* (SAGE Publications 1997) 36.

² David Kennedy, 'Law and Development Economics: Toward a New Alliance' in David Kennedy and Joseph E Stiglitz (eds), *Law and Economics with Chinese Characteristics: Institutions for Promoting Development in the Twenty-First Century* (Oxford University Press 2013) 22. For an overview of the classical developmentalism and neoliberalism, see: Ohnesorge, John K. M. 'Developing Development Theory: Law and Development Orthodoxies and the Northeast Asian Experience' [2007] *University of Pennsylvania Journal of International Economic Law*, 231–258. For an overview of the three phases of law and development, see: David M Trubek and Santos Alvaro, 'Introduction: the Third Movement in Law and Development Theory and the Emergence of the New Critical Practice' in David M Trubek and Santos Alvaro (eds), *The New Law and Economic Development: A Critical Appraisal* (2006) 5–18; and Newton

phase, economics developed a mainstream theory for economic development, and then law has been invoked as an *instrument* for implementing the economic objectives and policies dictated by this theory.³

The import-substitution or classical developmental state theory of development emphasized *industrialization* as the main policy goal; for achieving this goal, modernization, trade protectionism, and governmental control of the economy were the main policy instruments.⁴ Modernization is the process of replacing the local cultural and social norms that prevent developing countries from industrialization with modern culture.⁵ Trade protectionism delinks the domestic economy from the international markets through high tariffs and non-tariff barriers to trade.⁶ To ensure fast industrialization, the government pushed the industrialization process through direct support to domestic industries, state owned enterprises and governmental control over allocation of credit to targeted sectors of the economy.⁷ In this model, the state endorses a top-down model of industrial policy in which the government sets the industrial priorities for the economy, allocates public investments, and steers private investments to these priority sectors.

Scott, 'The Dialectics of Law and Development' in David M Trubek and Santos Alvaro (eds), *The New Law and Economic Development: A Critical Appraisal* (2006) 179–201. In parallel to the rise of the modernization theory of law and development (i.e., the classical developmental state theory) and the subsequent rise of the neoliberalism, several theories and research programs such as dependency theory, world-systems theory, and critical legal studies movement advanced critiques to these law and development orthodoxies. These critical theories, though insightful, were not crystallized into alternative law and development theories; for this reason, I do not discuss them in this section. Some critics of neoliberalism have attempted to move beyond critique to advocate a non-neoliberal developmental role of law inspired by Asian and/or new developmental states such as Brazil. These constructive efforts are discussed at the end of this section.

³ Kennedy (n 2) 23. As regards the classical developmental state phase, Newton, convincingly, argues that the *practicing lawyers* in the bureaucracies of developing countries in the 1950s and 1960s *instrumentalized* the legal institutions for *implementing* the classical developmental state. This instrumentalization of law linked legal institutions to the dominant theory of economic development at that time, i.e., import-substitution industrialization. However, the academic scholarship on “law and development” of this period did not engage with this bureaucratic practice of instrumentalizing the law to implement the classical developmental state and to achieve therefore the objective of economic development. Rather, this scholarship focused on strengthening legal education and profession and how the law can socially transform developing countries from traditional to modern societies; this has weakened the link between law and the economic theories of development in the law and development scholarship of the modernization phase. Scott (n 2) 178–181.

⁴ David M Trubek, 'Law, State, and the New Developmentalism: An Introduction' in David M Trubek and others (eds), *Law and the New Developmental State: The Brazilian Experience in Latin American Context* (Cambridge University Press 2014) 6

⁵ Ohnesorge, John K. M. (n 2), 233–234. Kennedy (n 2) 36–37.

⁶ Trubek (n 4) 6

⁷ *ibid.*

The network of legal institutions used for implementing the classical developmental state model of development involved formal and detailed legal rules imposing high tariff and non-tariff barriers to trade as well as harsh criminal sanctions for their infringement.⁸ Administrative law was used to establish the institutions in charge of allocating credit such as domestic development banks and economic planning agencies.⁹ These agencies were granted broad discretionary powers and insulated from judicial review.¹⁰ More importantly, the state used law instrumentally to intrude on what has been considered as private property rights in the subsequent neoliberal era.¹¹ In other words, law was the instrument that the classical developmental state used for implementing its developmental policies; as such, law was not perceived as being able to impose any constraints on state's action.¹² Further, in this model, the judiciary played minimal role in the political economy; its role is restricted to *automatic application* of the formal rules in relation trade protectionism related laws, while abstaining from intervention in the developmental policy-making.¹³

The institutional network governing the supply side of product markets in the classical development state did not include competition law.¹⁴ Further, corporate governance of domestic private firms were of little importance because state owned enterprises controlled the most important sectors of the economy, and thus corporate governance of public enterprises, as regulated by administrative law, and not corporate law, was central to the legal institutions supportive of classical developmental state. Finally, classical developmental states endorsed strong sectoral industrial policies exercised by the discretionary power of the government with no or minimal judicial review. In sum, public law, particularly imports regulation and public enterprise governance and administrative law along with bureaucratic informal industrial policies were the central legal institutions supportive of the classical developmental state,¹⁵ while competition law,

⁸ Kennedy (n 2) 24. For a discussion of the strict criminal penalties in the classical developmental model, see: *ibid* 35–36.

⁹ *ibid* 24.

¹⁰ *ibid* 26–27.

¹¹ *ibid* 27.

¹² *ibid*.

¹³ *ibid* 32.

¹⁴ Ioannis Lianos, Abel Mateus and Azza Raslan, 'Is There a Tension between Development Economics and Competition?' in D. D Sokol, Thomas K Cheng and Ioannis Lianos (eds), *Competition Law and Development* (Stanford University Press 2013) 42.

¹⁵ Trubek and Alvaro (n 2) 5.

corporate governance, and private law (contract and property rights laws) were marginal to this model of development.¹⁶

Neoliberalism advanced an opposite theory of economic development. Neoliberalism found its epistemological and rhetorical basis in the Chicago strand of law and economics, new institutional economics, and public choice theory,¹⁷ along with legal formalism in legal theory.¹⁸ According to neoliberalism, economic development can only be attained through *private* firms operating in *competitive* domestic markets that are *embedded* in the global markets. The neoliberal motto of *privatization, deregulation, (capital and trade) liberalization, and globalization* captures well this model of development. Obviously, the legal system (institutional network) needed for constituting the neoliberal model of development is very different from the institutional network supportive of the classical developmental state. Privatization involves the transfer of the ownership and management of the critical and strategic assets of the economy from the public to the private hands; contract law, protection of private property rights (including intellectual property rights), effective (post-Chicago) competition law, and (shareholder value) corporate governance¹⁹ become therefore central to the institutional network underlying the neoliberal model.²⁰ Strong and detailed rules-based competition and bankruptcy laws are also crucial for this model of development in order to ensure quick and efficient (re)allocation of resources and protection of creditors' property rights.²¹ Further, because of the critical developmental role ascribed to foreign direct investment in neoliberalism, developing countries should provide credible commitments to foreign investors against expropriation through, inter alia, constitutional protections of private property, domestic investment laws, and consummation of bilateral investment treaties with capital exporting countries.²² Moreover, protective trade laws and sectoral industrial policies, once central legal and economic institutions in the classical developmental state, should be abolished. Similarly, public administrative (regulatory) law and corporate governance of public enterprises, which were central

¹⁶ Kennedy (n 2) 26.

¹⁷ Scott (n 2) 188. *ibid* 192–193. Ohnesorge, John K. M. (n 2), 243–248.

¹⁸ Scott (n 2) 190–191.

¹⁹ Ohnesorge, John K. M. (n 2), 249. Seeraj Mohamed, 'The Effect of a Mainstream Approach to Economic and Corporate Governance on Development in South Africa' in Omano Edigheji (ed), *Constructing a Democratic Developmental State in South Africa: Potentials and Challenges* (HSRC Press 2010) 153.

²⁰ Ohnesorge, John K. M. (n 2), 247–249. Kennedy (n 2) 43–44.

²¹ Ohnesorge, John K. M. (n 2), 249.

²² Kennedy (n 2) 43–44.

legal institutions in the classical developmental states, have become marginalized in the neoliberal theory of development, while private law rose to prominence.²³

Further, to ensure transparency and prevention of rent seeking and corruption, the neoliberal theory of law advocated legal formalism; according to legal formalism, the neoliberal legal institutions should take the form of *detailed rules* instead of standards to eliminate any space for discretionary governmental action or judicial interpretation.²⁴ In the neoliberal model of law and development, the *Judiciary* replaced therefore the bureaucracy in the classical developmental state as *the central institution* in the legal framework of development: the judiciary is entrusted with the enforcement of the neoliberal rules-based legal institutions to ensure minimal governmental involvement in the functioning of the economy.²⁵ Instead of being the instrument of state's action, in the neoliberal model, law's function is to *constrain* governmental action.²⁶

Economic analysis of law has been invoked to provide the rationale for this complex network of legal institutions advocated by the neoliberal theory of law and development.²⁷ By invoking economics as the epistemological basis for the design of legal institutions that can support economic development, law and development as a field has become indistinguishable from law and economics.²⁸ This complex neoliberal institutional network has then been packaged and advocated under the attractive slogan: the "rule of law".²⁹ The above institutions constitutive of the so-called *rule of law* have then been advocated as *an end* in themselves; they are not only marketed as instruments for achieving economic growth, but they have also become constitutive of development itself that has been conceptualized broadly to include social and legal development.³⁰

The rule of law rhetoric has hindered the process of critical engagement with the economic rationalization of the neoliberal legal institutions by transforming the nature of the debates in the discourse of law and development. In the classical developmental state phase, the debates were exclusively conducted in political and economic arguments, but with the rise of rule of law

²³ *ibid* 45–46. Trubek and Alvaro (n 2) 5–6.

²⁴ Kennedy (n 2) 53–54.

²⁵ *ibid* 47–48.

²⁶ *ibid* 46. Trubek (n 4) 5.

²⁷ Scott (n 2) 192–193.

²⁸ *ibid*.

²⁹ Kennedy (n 2) 44.

³⁰ Ohnesorge, John K. M. (n 2), 256–257.

rhetoric, the discussion has largely become *legal*; the vocabulary of rights or legitimacy dominates the law and development discussions.³¹ The neoliberal legal institutions, now legitimate as intrinsically valuable, have been freed from serious and extensive critical scrutiny of their *economic rationale*. As a result, Kennedy, rightly, argues that

[Instead of] tight economic analysis, or ... careful empirical study, in fact neither is usually available or decisive enough to avoid the need for a policy vocabulary more open to sociological and ideological hunches and default positions, law, rather than economics, has become the rhetorical domain for identifying market failures and transaction costs, and attending to their elimination, for weighing and balancing institutional prerogatives, [and] for assessing the proportionality and necessity of regulatory initiatives.³²

In sum, the neoliberal legal institutions (i.e., contract law, private property rights protection, post-Chicago competition law, shareholder value corporate governance, the restriction of the discretionary powers of bureaucracy, and formalist judicial reasoning) have been legitimated as economically efficient and conducive to economic growth. This has resulted in transforming and reducing *law and development* into *law and economics*. Then, these neoliberal legal institutions have been packaged under the rubric of “rule of law”. Because of the transformative effects of the *neoliberal rule of law rhetoric*, these legal institutions has gained a further layer of legitimacy as *intrinsically valuable* because they have been claimed to be constitutive of development itself that is conceptualized broadly to include *legal* development. This rhetoric of “rule of law” has in turn impeded the serious critical engagement with the economic rationale of these neoliberal legal institutions in law and development literature.

The rule of law rhetoric has been a successful marketing device, but why the international financial institutions were vigorously promoting and forcing developing countries to adopt neoliberal legal institutions? As mentioned in chapter 5, one reason is the *standardization capacity of neoliberal blueprints*. Since non-standardization and thus non-convergence of legal systems around the world would impede the creation of a globalized market, international financial institutions were vigorous in pushing the neoliberal agenda that would involve the convergence of

³¹ Kennedy (n 2) 64–66.

³² *ibid* 65.

legal systems across the globe. Convergence of legal systems would result in symmetric institutionalization of globalized markets, which would enable the multi-national corporations to *expand* by operating under lower transaction costs and legal risks.

We can now distil the institutional network governing the supply side of product markets in the neoliberal theory of development from the above discussion. This network did not include industrial policy, or stakeholder model of corporate governance. Rather, it included a shareholder value model of corporate governance along with Chicago or post-Chicago model of competition law that should be enforced vigorously. This institutional network is clearly different from that governing the product markets in classical developmental state. The latter had no competition law and marginalized corporate governance, while consisted mainly from sectoral industrial policies and public enterprise governance. More importantly, by excluding sectoral and horizontal industrial policies, the neoliberal institutional network is also different from the American, Japanese, and German institutional networks analyzed in the previous chapter.

Nevertheless, the neoliberal model did not succeed in realizing its promises of economic growth; the market shock therapy has been proved disastrous for the Russian economy,³³ and most developing economies were achieving higher growth rates under the classical developmental model.³⁴ In addition, the Chinese developmental model with its outstanding performance in terms of economic growth has infringed most of the economic and correlated legal prescriptions of the neoliberal model. Accordingly, the support for the neoliberal waned, but a new consensus for the post-neoliberal era has not yet emerged to replace the neoliberal model.³⁵ Trubek, Alvaro, and Ohnesorge argue, convincingly, that the law and development practice of international institutions has changed from equating development with economic growth to broadening development conceptually to include social, political, and legal development.³⁶ Despite this conceptual broadening of development, the economic laws supportive of development in this supposedly new

³³ Trubek and Alvaro (n 2) 6.

³⁴ Dani Rodrik, 'Industrial Policy: Don't Ask Why, Ask How' (2009) 1(1) *Middle East Development Journal* 9–10, and see also the reference cited therein. Trubek (n 4) 7.

³⁵ Kennedy states that 'Development experts today do not share the kind of consensus, about either economics or law, which characterized the postwar and neoliberal periods. The situation now is far more chaotic.' Kennedy (n 2) 63.

³⁶ Ohnesorge, John K. M. (n 2), 255–257. Trubek and Alvaro (n 2) 6–7.

framework are no or only marginally different from the neoliberal legal institutions outlined above.³⁷

Instead of the *disguised* form of neoliberalism underlying the practice of international institutions in the post-neoliberal era, Kennedy suggests that law and development scholars should resort to heterodox schools of thought in economics and legal theory to advance a new theory of law and development.³⁸ In the same vein, Ohnesorge argues that a new legal theory that supports development should draw on the experience of Asian developmental states.³⁹ Similarly, Trubek argues that Brazil has been adopting a series of successful economic reforms supported by parallel legal reforms that suggest a rise of a “new developmental state” distinct from both classical and Asian developmental states,⁴⁰ which should attract the focus of developing countries.

Ohnesorge, rightly, argues that law and development scholarship has focused on the legal institutions underlying the classical developmental state and the neoliberal theories of development, but ignored the legal institutions (i.e., the institutional network) underlying the Asian developmental state of Japan, South Korea and Taiwan.⁴¹ As discussed in length by Ohnesorge, these legal institutions are different from both of the institutions supportive of classical developmental and neoliberal states.⁴² Except for Japan, state owned enterprises played important role in the economy in these economies. With limited protection of minority shareholders, the corporate governance in these jurisdictions tends to follow a stakeholder value model.⁴³ As to

³⁷ Ohnesorge, John K. M. (n 2)

³⁸ Kennedy (n 2) 66–69.

³⁹ Ohnesorge, John K. M. (n 2), 302–303.

⁴⁰ Trubek (n 4) 7–9. David M Trubek, Diogo R Coutinho and Mario G Schapiro, ‘New State Activism in Brazil and the Challenge for Law’ in David M Trubek and others (eds), *Law and the New Developmental State: The Brazilian Experience in Latin American Context* (Cambridge University Press 2014) 41–42. Ben Fine argues for taking the developmental state paradigm seriously as an approach to socio-economic development, see: Ben Fine, ‘Beyond the Developmental State: An Introduction’ in Ben Fine, Jyoti Saraswati and Daniela Tavasci (eds), *Beyond the Developmental State: Industrial Policy into the Twenty-First Century* (Pluto Press 2013) 23–27.

⁴¹ Ohnesorge, John K. M. (n 2), 223. See also: Scott (n 2) 187. Doubtless, the development economists have discussed extensively the economics underlying the key economic policies of Asian developmental states, but, to the best of my knowledge, they did not conduct a thorough analysis of the legal institutions supportive of this developmental model (e.g., property rights law, competition law, and corporate governance). For a brief economic analysis of Asian developmental states: see, e.g., Joseph E Stiglitz, ‘From Miracle to Crisis to Recovery: Lessons from Four Decades of East Asian Experience’ in Joseph E Stiglitz and Shahid Yusuf (eds), *Rethinking the East Asian Miracle* (Oxford University Press and the World Bank 2001) 509–525.

⁴² Ohnesorge, John K. M. (n 2), 258–276.

⁴³ *ibid* 277.

competition law, some of these countries did not have competition law at all during their high growth period,⁴⁴ and others encouraged cooperation instead of competition among the domestic firms.⁴⁵ Further, these countries endorsed strong sectoral industrial policies implemented through bureaucratic agencies entrusted with broad discretionary powers shielded from judicial review (see below for a discussion of the Japanese industrial policy).

Similarly, Trubek argues that Brazil has been endorsing a new model of development that is supported by a new legal theory. The new developmental state of Brazil complements economic policies with social policies oriented to eradication of poverty, provision of education, reduction of inequality, and protection of labor.⁴⁶ On the economic side, unlike classical developmental state, Brazil relies on the private sector, and not publicly owned enterprises, as an engine for economic growth.⁴⁷ Instead of *top-down* industrial policies of the classical developmental state that were oriented to building the capabilities of the domestic firms through, inter alia, the purchase of technology from developed economies,⁴⁸ Brazil uses a *collaborative* industrial policy oriented to increasing *the innovation* capabilities of domestic firms.⁴⁹ In addition, instead of trade protectionism and import substitution policies, Brazilian industrial policy supports the international competitiveness of its export sector and its domestic sectors with growth potentials (sunrise industries).⁵⁰

The legal framework used by Brazil to support this model of development attempts to create a *framework of collaboration* between the private sector and the government, while reducing the risks of political capture.⁵¹ This collaborative framework's purpose is to enable the government and the industries to share information, set out the rules of industrial support, and adapt these rules quickly to changes in the economic environment.⁵² This legal regime should be thus standards and not rules based, and should not be caught into the legal formalism advocated by the neoliberal model.⁵³ With their emphasis on sectoral industrial policies, the institutional network of the new

⁴⁴ *ibid* 267.

⁴⁵ *ibid* 297–298. See also the table in: *ibid* 300.

⁴⁶ Trubek, Coutinho and Schapiro (n 40) 39–40.

⁴⁷ *ibid* 41.

⁴⁸ *ibid*.

⁴⁹ *ibid* 36–37.

⁵⁰ *ibid* 37–38. *ibid* 49.

⁵¹ *ibid* 56–57.

⁵² *ibid*.

⁵³ *ibid* 54–56

developmental state seems to be close from the Asian developmental state. However, unlike the Asian developmental states, the new developmental state of Brazil is more receptive to competition, as well as trade and capital liberalization. Moreover, principles of democratic governance, transparency and judicial review, while somehow absent from legal system of the Asian developmental state (see below for a discussion of the Japanese case), they seem to be central in the legal governance of the new developmental state. The institutional network governing the supply side of product markets in new developmental state seems to include shareholder value corporate governance, post-Chicago model of competition law and sectoral industrial policies in comparison to stakeholder model of corporate governance, sectoral industrial policies in the Asian developmental states, and competition law that consists of Schumpeterian competition law and inter-firm cooperation law.

In conclusion, some prominent law and development scholars seem to suggest that developing countries should design their institutional networks by drawing on the institutional networks of Asian developmental states and new developmental states in Latin America, particularly Brazil. Given the high degree of consistency of the effects of the institutional domains of the Japanese institutional network on most of the assessment criteria, this increased focus on developmental state models in law and development studies is highly welcome. Still, law and development scholars seem to ignore the institutional network of post-war Germany, which suggests that they consider this network irrelevant for developing countries. Moreover, the legal institutions of Asian developmental states and new developmental states cannot guide developing countries in their design of context-specific and consistent institutional networks for their product markets. Developing countries need an analytical framework that can guide them in making a *theoretically informed* choice/design of consistent and reasonable institutional networks for governing their product markets. The systemic approach, as operationalized in chapter 6, fills in this lacuna. By using the systemic design toolkit developed in chapter 6 along with the findings of consistency analysis of the compared institutional networks in the previous chapter, the next section seeks to design systemically a consistent and reasonable institutional network for governing the product markets of developing countries.

3. Which Institutional Network of the Supply Side of Product Markets Should Developing Countries Adopt?

Given the above overview of the law and development literature and the consistency analysis of the American, Japanese, and German institutional networks, we can conclude that the American institutional network is inadequate for developing countries. The American institutional network enhances economic growth through mainly its support to radically innovative sectors, but it undermines organizational learning and incremental innovation. However, radically innovative (knowledge-intensive) sectors are absent from developing economies because the firms of these countries are far below the technological frontier. Accordingly, if developing countries were to adopt the American institutional network, they would gain the downsides of this network, namely, low learning capabilities, weak incremental innovation, lack of protection of workers, significant inequality in distribution of income, and macro instability, but they would not be able to gain its primary upside, namely, the formation of radically innovative firms. Still, developing countries can enjoy the other upsides of the American network, namely, short-term allocative efficiency, high firms' adaptability, and reduction in labor costs as a source of international competitiveness. These upsides, however, are not sufficient reasons for adopting the American institutional network because this network fails to achieve the desired level of organizational learning and incremental innovation, which are the main drivers of economic growth in developing countries. Further, the systematic exploitation of workers cannot be ethically accepted. As already argued in chapter 10, the workers are among the categories of the weak that should be protected.

Moreover, the American cultural norms that support the functioning of this institutional network (e.g., vertical individualism⁵⁴) are lacking from many developing countries (e.g., Egypt). For example, as far as work values are concerned, the Egyptian and American workers seem to be the antithesis of each other.⁵⁵ As shall be argued below, some developing countries such as Egypt share more cultural norms with other developed economies such as Japan; for example, both cultures tend to be vertically collectivist. Given these cultural similarities, the Japanese

⁵⁴ T. M Singelis and others, 'Horizontal and Vertical Dimensions of Individualism and Collectivism: A Theoretical and Measurement Refinement' (1995) 29(3) *Cross-Cultural Research* 269–270.

⁵⁵ Yusuf M Sidani and Dima Jamali, 'The Egyptian Worker: Work Beliefs and Attitudes' (2010) 92(3) *Journal of Business Ethics* 434, and see also the reference cited therein.

institutional networks should therefore be the focus of the legal scholars of developing economies. In short, developing countries should not adopt the American institutional network to govern their product markets.

Consequently, given the consistency analysis of the Japanese and German institutional networks, we need to examine how developing countries can *design systemically* a reasonable and consistent institutional network for governing their product markets. In order to design systemically a reasonable and consistent institutional network, we need to follow the process of systemic design of consistent institutional networks outlined in figure 6.2 in chapter 6 (figure 12.1 below reproduces figure 6.2). First, the regulatory objective of developing countries, as already argued in chapter 6, is to design *a reasonable and consistent, and not an optimal*, institutional network. The chosen institutional network may not be the best possible institutional network; many institutional networks may outperform the proposed one, but the reasonable network is the *most reasonable* institutional network given our *thin* informational basis. Further, as also argued in chapter 6, we should first choose a specific developing country and analyze its existing institutional network systemically, and then choose the most reasonable institutional network that would require the minimum legal changes in the institutional network of this country. Here, we simplify the analysis by assuming unrealistically that the legal transplant of the chosen institutional network in any developing country does not require many legal changes in their existing institutional networks. Hence, further research that analyzes the existing institutional network of a specific developing country and thus relaxes this unrealistic assumption is required.

Afterwards, according to steps 2 and 3 of the systemic design process (see figure 12.1 below), we need to identify the assessment criteria for the designed institutional network. Chapter 10 has already developed these assessment criteria. Then, according to step 4 of the systemic design process (see figure 12.1 below), we need to conduct a consistency analysis of real-world institutional networks; the previous chapter has already completed this step. In addition to this consistency analysis, we have also examined the relevant insights of the law and development literature on the choice of the institutional network of the supply side of product markets in developing countries. This enriches the informational basis that we can use for the design of consistent institutional networks of product markets in developing economies.

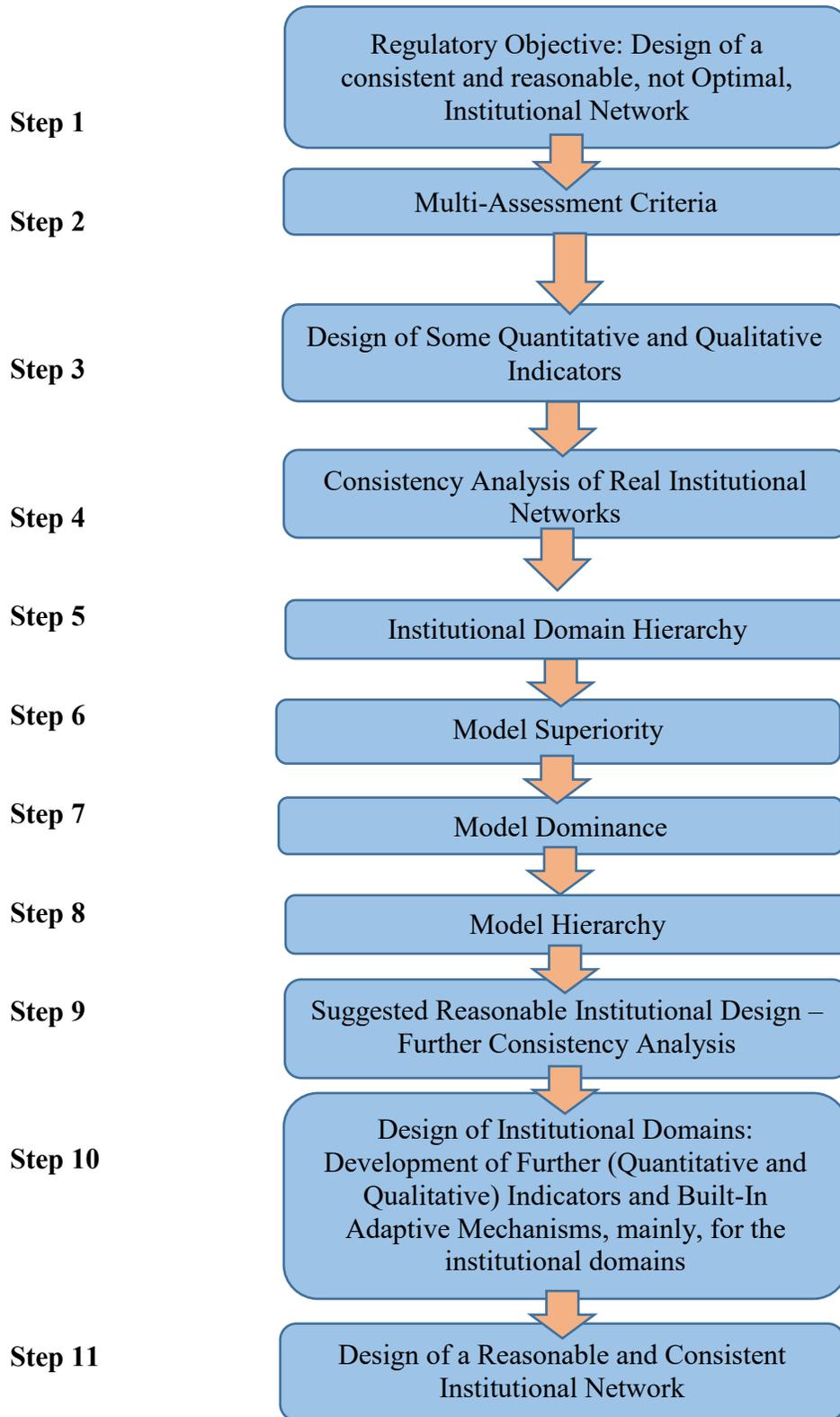


Figure 12.1: The Process of Systemic Design of Reasonable and Consistent Institutional Networks (i.e., Legal Systems). A Reproduction of Figure 6.1 in Chapter 6.

According to steps 5 and 6 of the systemic institutional design process, we use the design concept of *institutional domain hierarchy* to identify which *institutional domain* has a hierarchical position in the institutional network governing the supply side of product markets in developing countries. Not all models of the same institutional domain are hierarchical; some models of the institutional domain (e.g., sectoral industrial policy) may be hierarchical, while other models may not be hierarchical (e.g., horizontal industrial policy). Then, we use the design concept of embedded model superiority to determine whether a model of an institutional domain has a superiority over other plausible models of this domain. As defined in chapter 6, the embedded superior model of the plausible models of a specific institutional domain is the *model whose embedded effects across all the possible institutional networks (these are the three compared institutional networks in our case) outperforms the embedded effects of all the other models in relation to a specific assessment-criterion*. Further, we can also use the systemic design concepts of model dominance and model hierarchy in steps 7 and 8, if we have sufficient informational basis for using these legal design concepts.

As already argued in chapter 6, the concepts and principles of systemic legal design can guide us to design an institutional network that may not be reasonable and consistent. For example, many institutional networks may include the hierarchical institutional domains and the superior models of some institutional domains, but not all of these institutional networks are necessarily consistent. Further, Even if there are only one institutional network that can include all the hierarchical and the superior models of the institutional domains, this institutional network may be significantly inconsistent; these inconsistencies may undermine the performance of this network in comparison to an institutional network that is largely consistent, although it may include embeddedly inferior models of the institutional domains. Accordingly, in step 9 in the systemic design process, we assess whether the institutional networks that include the hierarchical and embedded superior institutional domains are consistent. To assess the consistency of these networks, we can use the thin informational basis gained from the consistency analysis of the compared institutional networks in the previous chapter.

Since the previous chapters have already undertaken the steps 1 to 4 of the systemic design process outlined in figure 12.1 above, this section shall undertake the steps from 5 to 9. The remaining three sections of this chapter shall complete step 10 of the systemic design process (see

figure 12.1 above). By following these steps, we will be able to design a reasonable and consistent institutional network for the supply side of product markets in developing countries.

According to step 5, we use the systemic design concept “institutional domain hierarchy” in order to determine whether a specific institutional domain is hierarchical. As already argued in chapter 6, for an institutional domain to be hierarchical, there must be *a systemic need* for this institutional domain. In other words, this model of the institutional domain is crucial for attainment of the *desirable weights of the instrumental objectives and minimum threshold of the ultimate local objectives (our assessment criteria)* in the system of objectives of the institutional network. The models of other institutional domains in the institutional network or its environment cannot *substitute* for the effects of the hierarchical institutional domain. Hence, we need to investigate whether there is a *systemic need* for each of the compared models of our three institutional domains. If there is no systemic need for the compared models of one institutional domain, then, this domain is not hierarchical. If one of these models is systemically needed, then, this (model of) the institutional domain enjoys a *hierarchical* position in the institutional network. Hierarchy as a design concept necessitates that any institutional network should include the hierarchical institutional domain.

The application of the institutional domain hierarchy to corporate governance is simple; we just need to answer the following question, “can we have an institutional network of the supply side of product market that does not include the institutional domain of corporate governance and still satisfy the assessment criteria?” The answer is simply no. The institutions of corporate governance determine how the firm is governed; without these institutions, firms cannot function. The distribution of decision-making rights is essential for functioning of any organization, regardless of how this distribution of power is made, i.e., regardless of the model of corporate governance. Competition law, industrial policy, or any other institutional domain in the institutional network of capitalism cannot substitute for these effects of corporate governance on the functioning of the firm. Our institutional network should have the institutional domain of corporate governance.

With respect industrial policy, can we have an institutional network of the supply side of product market that does not include the institutional domain of horizontal industrial policies and still satisfy the assessment criteria? The answer is no because the private sector does not invest in basic research because of its public goods nature. Accordingly, the institutional network that does

not include horizontal industrial policies would not fulfil an important assessment criterion that is *innovation*. Other institutional domains cannot substitute for this function of horizontal industrial policies. Similarly, as already argued in chapter 9, sectoral industrial/innovation policies are also crucial for the formation and sustainability of firms' financial and technological capabilities, which are necessary for creation of new domestic markets in developing countries.⁵⁶ Sectoral industrial and innovation policies are crucial for market creation in developing countries and sustaining innovation in developed economies.⁵⁷ Particularly in developing economies, other institutional domains cannot substitute for the risk sharing function of sectoral industrial policies, which is essential to creation of new domestic markets. This suggests that *sectoral* industrial policy is a hierarchical institutional domain.

Finally, with respect to competition law, our discussion so far reveals that a Schumpeterian competition law that focuses on ensuring free entry of *domestic*, but not necessarily foreign, firms to the market is rather essential for the attainment of the desirable level of some of the assessment criteria. Without this model of competition law, firms will lack proper capabilities and incentives for investment in process and product innovation or development of their learning capabilities. The Schumpeterian model of competition is thus essential for the attainment of the desirable level of learning capabilities and innovation. Still, can other institutional domains compensate for this model of competition law? In other words, assume that there is no Schumpeterian competition law and that the government does not intervene by creating barriers to entry. In this case, can existing firms collectively or solely create significant barriers of entry? We do not need to discuss this major question in industrial organization here.⁵⁸ Simply, if free entry can be only secured through some legal institutions, then, these legal institutions have an institutional hierarchy position in our institutional network. For the purposes of this thesis, we will assume that these institutions have hierarchical position because if they turn out not to be hierarchical (i.e., other legal institutions can substitute for them or deregulated markets do not result in barriers to entry), then, these institutions would cause no harm because they would be just redundant. In short, the institutional network should include *legal institutions* that ensure free entry into markets; these legal institutions enjoy

⁵⁶ See section 4.2 of chapter 9, and the references cited therein.

⁵⁷ See section 4.2 on the development economics critique of neoclassical normative theory of regulation in chapter 8 and the reference cited therein.

⁵⁸ For a brief discussion of barriers to entry, see: Harold Demsetz, 'Barriers to Entry' (1982) 72(1) *The American Economic Review* 47 47–57.

an institutional domain hierarchy. Still, both post-Chicago and Schumpeterian models of competition law, as already mentioned in the previous chapter,⁵⁹ differ on the conceptualization and the assessment of the existence of barriers to entry; therefore, both models of competition law ensure *a degree of free entry* into markets, but they do not substitute for each other perfectly in their effects on market entry. In other words, the legal institutions that ensure free entry into the market are (partially) common across both models of competition law. Accordingly, the institutional network should include any competition law model that includes this set of legal institutions that ensures market entry, i.e., it should include either a Schumpeterian or a post-Chicago model of competition law. .

In short, our institutional network should have any model of corporate governance, horizontal industrial policies that target basic research, sectoral industrial policies (particularly infant industries promotion policies), and legal institutions that ensure free entry of domestic firms to markets. Most of these institutions are already shared between Schumpeterian and post-Chicago models of competition law. As already mentioned, any country cannot support basic research in all scientific domains; it has to select some of them. Hence, horizontal industrial policies in the area of basic research are in essence sectoral.⁶⁰ In short, the design concept of institutional domain hierarchy provides us with one crucial piece of information that is our institutional network should include *sectoral industrial policies*.

Given *sectoral industrial policies*, we need to use other systemic institutional design concepts, namely, model superiority, model dominance, and model hierarchy in order to choose the models of corporate governance and regulatory model of inter-firm relations, which we should include in the institutional network.

We start by checking *model dominance*. As already outlined in chapter 6, model dominance is of two types: strict and weak model dominance. The model of an institutional domain strictly dominates another model of this domain if and only if the *embedded* effects of this model outperforms the embedded effects of the other model on *all* of the assessment criteria of the institutional network. A weakly dominant model outperforms another model if two conditions are met. First, the embedded effects of this model (the “outperforming model”) outperform the

⁵⁹ See the discussion of the differences between the neoclassical and Schumpeterian perspectives over barriers to entry in section 2.2.2 of chapter 11.

⁶⁰ See the classification of industrial policies into sectoral and horizontal policies in section 6 of chapter 8 and the references cited therein.

embedded effects of the other model (the “underperforming model”) on *some* of the assessment criteria. Second, the effects of the underperforming model outperform the effects of the outperforming model on the remaining assessment criteria, but the outperforming model achieves the desirable weights of these remaining assessment criteria.

We can now use the concept of “model dominance” in comparing models of the institutional domain of inter-firm relations (i.e., regulatory models of inter-firm relations). As for the institutional domain of inter-firm relations law, there are three main alternatives: Post-Chicago competition law, Schumpeterian competition law, and Coopetition law that consists of Schumpeterian competition law and inter-firm cooperation law. First, coopetition law outperforms Schumpeterian competition law because it undertakes its own functions in addition to the functions performed through the institutions supportive of inter-firm cooperation. In other words, coopetition law strictly dominates Schumpeterian competition law. Further, as already argued in the previous chapter, Schumpeterian competition outperforms post-Chicago model of competition in relation to its effects on productive efficiency, technological upgrading, learning, incremental innovation, radical innovation, capital accumulation, firms’ investment incentives, and firms’ adaptability. Finally, post-Chicago model outperforms Schumpeterian competition in its protection of weak consumers. Accordingly, if Schumpeterian competition law provides a sufficient level of protection of the weak consumers, we can assume this model of competition law to *dominate weakly* the post-Chicago model.

Suppose that the Schumpeterian competition law does not achieve the desired level of protection of weak consumers. In this case, according to step 8 of the systemic institutional design process (See figure 12.1 above), we test whether Schumpeterian competition law is *hierarchal* to post-Chicago competition law. A model of an institutional domain is hierarchical to another model, as already argued in chapter 6, if and only if the institutional network in which this model is embedded can compensate for the underperformance of this model and achieves the minimum threshold required for the assessment criterion (i.e., weak consumers’ protection in our case). Social welfare policies, as argued in chapter 10, can compensate for the Schumpeterian competition law’ low protection of the weak consumers.⁶¹ Accordingly, Schumpeterian competition law is hierarchical to post-Chicago model of competition law, and thus it should be included in the institutional network of product markets in developing economies. Since

⁶¹ See the discussion of the consumers as a category of the weak in section 5.3.1 of chapter 10.

coopetition law that consists of Schumpeterian competition law and inter-firm cooperation law strictly dominates Schumpeterian competition law, coopetition law, this coopetition law should be included in the designed institutional network.

So far, the proposed institutional network includes both sectoral industrial policies and coopetition law. Accordingly, we need to examine whether developing countries should adopt a shareholder value or a stakeholder model of corporate governance, given the institutional network that consists of sectoral industrial policies and coopetition law. We can assume that the ownership structure of large firms in developing countries is concentrated in order to simplify the analysis required for answering this question, which is a reasonable assumption.⁶² As argued in chapter 8, the stakeholder model seems to outperform the shareholder value model in organizing viable learning processes, incremental innovation and in transforming the firm into an ethical organization that protects its workers.⁶³ In this case, the shareholder value model seems to outperform the stakeholder model in securing access to cheap equity finance. However, as chapter 8 has argued, in case the legal institutions that protect minority shareholders from expropriation are in place, the stakeholder model would facilitate firms' access to the required long-term industrial equity capital, which is necessary for satisfying the finance-related organizational conditions of viable learning processes. In other words, the stakeholder model of corporate governance is hierarchical to the shareholder value model. This model outperforms the model in relation to its effects on some assessment criteria (i.e., organizational learning, incremental innovation, and protection of workers), while it underperforms the shareholder value model in relation to its effects on access to equity capital; still, it can achieve a level of access to equity finance that seems to be sufficient for sustaining organizational learning. As to radical innovation, the shareholder value model outperforms the stakeholder model, but as argued above, enhancement of radical innovation incentives and capabilities is irrelevant for the firms in developing countries because they are already far below the technological frontier.

In short, the first eight steps of the systemic legal design process guide us to design an institutional network that includes sectoral industrial policies, stakeholder corporate governance, and coopetition law that consists of Schumpeterian competition law and inter-firm cooperation

⁶² For example, in many Asian economies, firms tend to have concentrated ownership structures. See: Stijn Claessens and Joseph P H Fan, 'Corporate Governance in Asia: A Survey' (2002) 3(2) *International Review of Finance* 73.

⁶³ See section 4 of chapter 8.

law. According to the ninth step, we still need to examine whether this suggested institutional network is consistent. We use the findings of the consistency analysis of the German and Japanese institutional networks in the previous chapter to inform this consistency analysis. Obviously, this institutional network is close to both German and Japanese institutional networks as both networks include stakeholder corporate governance, sectoral industrial policies, and inter-firm regulation that is somehow, but not identical to, a cooperation law. We can therefore consider the Japanese and German institutional networks to be variants of the suggested institutional network. Therefore, which variant of this network should developing countries adopt? The findings of the previous chapter suggested that the Japanese network marginally outperforms the German network in its positive effects on organizational learning, and incremental innovation. However, the German network outperforms the Japanese network in income distribution, and protection of consumers. However, as argued above, social welfare policies can substitute for the Japanese network's low protection of consumers. Furthermore, although the German network seems to ensure high pre-tax equality because of the protection of consumers, the level of pre-tax equality ensured by the Japanese network seems to be reasonable because most consumers are already workers who are strongly protected in the Japanese institutional network. Still, both the Japanese and German institutional networks fail to achieve *the desired level of efficient allocation of labor and firms' adaptability and labor-cost reduction as a source for international competitiveness*.

Consequently, the difficult question is how developing countries can modify the proposed institutional network to overcome these downsides of the Japanese and German variants of this network. This is a difficult question, but we will argue below for modified models of stakeholder corporate governance and labor law that could ensure a higher degree of flexibility of labor. This labor flexibility would increase the firms' adaptability and reduces the inefficiency of allocation of labor in the economy in the long-run. The proposed institutional network that include these modified models of corporate governance and labor law would still produce the desired effects on the other assessment criteria such as organizational learning and incremental innovation.

Furthermore, the transplant of German or the Japanese institutional networks in developing countries may not be *successful* because the social norms that supported the proper functioning of these networks in post-war Germany and Japan may be absent in many developing countries. Further, globalization may impose constraints on the transplant of some of the legal institutions of these networks; for example, the co-determination principle may have a severe negative effect on

capital inflows into developing countries because of it may signal a strong bias to the interests of labor at the cost of the interests of capital. Therefore, step 10 of the process of systemic institutional design (see figure 12.1 above) suggests that developing countries need to modify some of the legal institutions of the German and/or Japanese institutional network to ensure its effective transplant. The following sections suggest briefly how the institutional domains of sectoral industrial policies, competition law, and stakeholder corporate governance can be transplanted successfully in a developing country such as Egypt. The following sections take Egypt as our point of reference because it is the developing country that I am most familiar with its culture and legal system.

4. Which Stakeholder Model of Corporate Governance Should Developing Countries Adopt?

As already mentioned, developing countries should adopt a stakeholder rather than a shareholder value model of corporate governance. There are many stakeholder models of corporate governance, however. As already mentioned in chapter 8, they include, inter alia, the German co-determination model, the post-war Japanese model, a non-mandatory co-determination principle, or co-determination rights granted to a sub-set of workers in the firm. Given that there are various stakeholder models of corporate governance, we need to examine which one of these models developing countries should adopt. As already argued in chapter 8, developing countries should adopt the form of stakeholder model that satisfy three conditions: it should satisfy the conditions of *learning and ethical organizations at reasonable transaction costs*, protect minority shareholders against outright expropriation, and fit the particular economic, social, and legal conditions of the relevant developing country.⁶⁴

Can the German model of mandatory co-determination satisfy these conditions? To answer this question, we need to identify the major economic and cultural conditions sustaining the performance of the German model. As already mentioned in chapter 8, the main economic institutions that sustain the post-war German model are concentrated ownership, cross-shareholdings, and relationship banking (sustained through, mainly, Hausbank's representation on the board of directors). The most important economic institutions seem to be *concentrated ownership and relationship banking*. These economics institutions, as already discussed, were also

⁶⁴ See the concluding paragraphs in section 4.3 on knowledge-based theories of the firm in chapter 8.

central to the Japanese model of corporate governance. Some developing countries (e.g., many Asian countries) tend to have concentrated ownership structure of their corporate sector.⁶⁵ However, although the firms in developing countries depend mainly on banks in their financing because of their underdeveloped equity markets, an effective relationship banking similar to the German or the Japanese in which either the bank or the borrowing firm is not captured by the other has not developed yet in some developing countries. For example, India has a lead-bank system somehow similar to the German and Japanese relationship banking system,⁶⁶ but many institutional factors has been impeding the effectiveness of this lead-bank system.⁶⁷ In short, the active role played by banks in the German and Japanese stakeholder models of corporate governance seem to be lacking in some developing countries, while concentrated ownership structure seems to exist in some developing countries. Still, the economic institution of relationship banking may be introduced to developing countries if they adopt the legal institutions that ensure the effectiveness of long-term relationship between the banks and the borrowing firms.⁶⁸ The discussion of the legal institutions necessary for reforming the banking sector in developing countries to transform it into an effective relationship banking is a complex issue that is difficult to be addressed in this short section. For the sake of simplifying the discussion, we assume the plausibility of introducing relationship-banking in (some) developing countries through legal reforms.

As to the cultural and social norms that sustain the German model of corporate governance, German prudence and caution, long-term rationality⁶⁹ of the governance coalition of the German firms (i.e., blockholders, the management, employees, and the Hausbank), and the derivation of self-worth from one's work⁷⁰ seem to be the most crucial cultural norms for the sustainability of the German stakeholder model. The Second World War has reinforced the social norms of prudence and high risk-avoidance in the German culture; this prudence has been essential for

⁶⁵ *ibid.*.

⁶⁶ V. V Bhatt, 'The Lead Bank Systems in India' in Masahiko Aoki and Hugh Patrick (eds), *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economies* (Oxford University Press 1995) 501

⁶⁷ *ibid* 516–518.

⁶⁸ *ibid* 520–522. Further, Milhaupt demonstrates that (regulatory and judge-made) law has played a significant role in establishing relationship banking (i.e., the main bank system) in post-war Japan. Curtis J Milhaupt, 'A Relational Theory of Japanese Corporate Governance: Contract, Culture, and the Rule of Law' (1996) 37 *Harvard International Law Journal* 36–39, and see the references cited therein. *ibid* 42–43.

⁶⁹ Streeck (n 1) 40.

⁷⁰ In other words, 'professional competence is highly regarded for its own sake.' *ibid.*.

sustaining the functioning of the co-determination because it prevents the shareholder and management on one hand and the workers on the other hand to escalate their differences into clashes that endanger the survival of the firm.⁷¹ Most importantly, long-term rationality of the members of the German coalition is crucial for the proper functioning of co-determination because co-determination requires frequent revision of employment agreements to ensure the adaptability of the firm to changes in economic conditions,⁷² and this cannot take place without long-term rational perspective of the parties to these frequent revisions. The collective focus on long-term firm's stability and the clear competitive advantage of German firms in their respective market niches in the quasi-globalized markets reduce the need for frequent adaptations; still, rationality and prudence of the members of the governing coalition is crucial for these infrequent adaptations. On the contrary, in other cultures such as the Egyptian culture, individuals tend to follow their emotions and their subjective concepts of fairness rather than long-term rational reasoning (see below), they have no severe war memories, and have no experience in effective collective decision-making. In these cultures, co-determination may result in frequent clashes among firm's stakeholders, which endanger the survival of the firm.

With respect to the derivation of self-worth from one's work, this Western cultural norm finds its strongest manifestation in the German culture. This cultural norm helps mitigate the management-labor agency problem and provide intrinsic motivations for workers to cooperate and learn. Other important cultural norms contribute to the performance of the German stakeholder model such as cooperation, subjective perception of working as a morally required contribution to society, and individuals' objective of long-term wealth maximization, but these cultural norms are generally less salient in the German culture than the cultural norms of prudence, long-term rationality, and derivation of self-worth from work.⁷³ Further, these cultural norms do not seem to be as crucial to the performance of the German model.

⁷¹ Trevor Buck and Azura Shahrim, 'The Translation of Corporate Governance Changes across National Cultures: The Case of Germany' (2005) 36(1) *Journal of International Business Studies* 44–45, and see the references cited therein. The authors argue that a culture of high risk-avoidance is supportive of a stakeholder model of corporate governance, while it is hostile to a shareholder value model of corporate governance.

⁷² Eirik G Furubotn, 'Codetermination and the Modern Theory of the Firm: A Property-Rights Analysis' (1988) 61(2) *The Journal of Business* 176.

⁷³ For example, unlike both Japan and Egypt, Germany tends to be a *moderately individualistic* culture. Abdel-Fattah E Darwish and Günter L Huber, 'Individualism vs Collectivism in Different Cultures: a Cross-Cultural Study' (2003) 14(1) *Intercultural Education* 52. However, other studies consider the German

In societies of developing countries such as Egypt, these cultural norms are largely absent. As to prudence and long-term rational reasoning, Posusney argues that Egyptian workers are ‘*irrational workers*’, as their behavior does not conform to selfish wealth maximizing workers.⁷⁴ Egyptian workers do not protest to gain increases in their wages or working conditions when their firms are making profits. Rather, they protest when their current entitlements (e.g., wages or job security) are reduced,⁷⁵ when their legitimate expectations of increase in their entitlements are unmet,⁷⁶ or when they perceive instances of unfair wage disparity among the workers of the firm.⁷⁷ In most cases, the management resort to reducing the workers’ entitlements in times of financial difficulties; hence, the ability of these financially distressed firms to respond to the demands of their employees becomes constrained. A rational wealth-maximizing worker would exercise pressure over the firm’s management to increase their benefits in the times of firm’s good performance, while accommodating reductions in his entitlements in economic downturns.⁷⁸ Indeed, one interpretation of the co-determination principle is that it enables both workers and the management/shareholders to adapt the agreed upon compromises with changes in economic conditions.

However, why Egyptian workers behave in this way, which would transform co-determination into a confrontational space rather than an adaptive mechanism in times of financial difficulties of the firm (e.g., time of macroeconomic downturns)? Many reasons underlie this behavior. First, in

culture to be *moderately collectivist*. See, e.g., Buck and Shahrim (n 71), 45–46, and the references cited therein. Overall, these studies are not inconsistent. The German culture is less individualistic than the British and American cultures, particularly in the work sphere of the society, but it is also clearly less collectivist than other cultures such as the Japanese culture. Strong collectivist cultures tend to be supportive of the stakeholder model of corporate governance. *ibid* 45. Accordingly, the moderate individualist (or moderate collectivist) nature of the German culture would tend to have neutral or marginal negative (or marginal positive) effects on the sustainability of the German stakeholder model of corporate governance.

⁷⁴ Marsha P Posusney, ‘Irrational Workers: The Moral Economy of Labor Protest in Egypt’ (1993) 46(01) *World Politics* 88–89. *ibid* 93–96. If one adopts a more sophisticated utility function for Egyptian workers that gives little weight to wealth maximization and self-interest and more weight to moral principles (e.g., altruism) and workers’ subjective perceptions of fairness, then, the Egyptian workers’ protest behavior might be explained in terms of rational choice theory. *ibid* 100. This is inaccurate, however. First, a theory that can rationalize *ex-post* any behavior *as rational* is not a theory at all; this has been now a well-established critique of rational choice theory. More importantly, from a long-term perspective, Egyptian workers’ protest behavior is still irrational because this behavior does not ensure long-run maximization of their sophisticated utility function, particularly when the firm faces financial difficulties.

⁷⁵ *ibid* 100–103.

⁷⁶ *ibid* 108–110.

⁷⁷ *ibid* 104–108.

⁷⁸ *ibid* 85–86. *ibid* 88–90.

the Egyptian culture, one should not aspire for accumulating wealth; rather, one should be content with the minimum level of wealth that satisfies her basic needs. Egyptians create a terminology for denoting this minimum level of wealth, which they call “Al-Satr - الساتر”, which is an Arabic word that means literally “cover” and points to the amount of money that *covers* one’s basic needs.⁷⁹ This minimum amount differs significantly across the individuals, but they tend to perceive their current job benefits as *a fair entitlement*.⁸⁰ Simultaneously, many workers may still perceive that they are entitled to more than their current compensation, but due to the strong cultural norms against “asking for more” and the strong cultural norm of hierarchy (see below), they tend to avoid protesting for having what they may perceive to be their fair share in firm’s revenues. Further, in return for their satisfaction with the status quo benefits, Egyptian workers think that they are entitled to these benefits throughout their careers. However, these are *irrational expectations* because in times of financial distress, shareholders and management have no incentives (and maybe have no financial resources as well) to satisfy these expectations, particularly if the employment-at-will doctrine is legally vindicated. This implies that from a long-term perspective, Egyptian workers are irrational because their protest behavior does not ensure the achievement of their long-term objectives that are the preservation of their work entitlements and job security.

Not only prudence and long-term rational reasoning are absent, but also the derivation of self-esteem from work is equally absent. Egyptians derive their self-worth from familial relations⁸¹ and religion that is interpreted culturally in a distorted way that does not emphasize mastering one’s

⁷⁹ This cultural norm finds its root in the dominant religions in Egypt, namely, Islam and Christianity (the Coptic Orthodox Church).

⁸⁰ *ibid* 100.

⁸¹ Parnell and Hatem, rightly, argue that ‘One’s primary obligations in Egypt are to parents and family, overriding those to friends and work. Identity is based on the attributes of families and other groups more than on those of individuals.’ John A Parnell and Tarek Hatem, ‘Cultural Antecedents of Behavioural Differences between American and Egyptian Managers’ (1999) 36(3) *Journal of Management Studies* 404.

work and lifelong learning.⁸²In addition, due to the cultural effects of globalization, Egyptians began to identify their self-worth with their *accumulated wealth*. Hard work, mastering one's work, and the social value of the work itself still are not a major source for self-worth. As a result, both Egyptian managers and workers do not have *strong intrinsic* motivations for *mastering their work or lifelong learning*. Further, as argued above, they cannot sustain the collective decision-making process established by co-determination. Given the absence of these cultural norms, co-determination would be a surrogate for unsustainability of the firm, and may even give incentives for weaker incentives for learning, hard work, and cooperation because it provides a layer of protection for workers.

Consequently, the difficult question is, "can law substitute for the lack of these cultural norms?" Most probably, law cannot substitute for these cultural norms, unless we use the legal norms *experimentally* to create a legal framework that contributes to a cultural change that contributes in turn to a better performance of this legal framework. This closed positive feedback loop of law and culture may have a transformative cultural effect over time, but this is *a highly uncertain and experimental process*. For example, one may argue that mandatory co-determination when combined with employment at will doctrine may be a legal framework that results in this cultural change because it gives the workers the power to participate in governance. Simultaneously, it gives a counter-power to the shareholders and management over the employees so that the management can discipline shirking and non-cooperating employees who are not

⁸² Parnell and Hatem seem to suggest a positive effect of religion on Egyptians' motivations for hard work because 'The Koran stresses the importance of work and teaches that hard work is an integral part of faith.' *ibid* 405. Obviously, the Noble Quran emphasizes the importance of *learning and mastering one's work* in numerous verses such as 'Read in the name of your Lord Who created; Created man, out of a (mere) clot of congealed blood. Read, And your Lord is the Most Generous, *who taught (the writing) by the pen, Taught man that which he knew not.*' Chapter 96, translation of the meaning of verses 1-5, [emphasis added]; 'Allah will exalt in degree those of you who believe, and *those who have been given knowledge.* And Allah is well aware of what you do.' Chapter 58, translation of the meaning of verse 11 [emphasis added]; and 'Whoever *works righteousness*, whether male or female, and is a believer, We will surely make him live a good life, and We will bestow on them their reward according to *the best of their actions.*' Chapter 16, translation of the meaning of verse 97 [emphasis added]. Despite the numerous explicit Quranic verses and Prophetic sayings that decree learning and hard work, the Egyptian culture has inherently inconsistent attitude towards learning and mastering one's work. Egyptians tend to respect the small minority of them who are keen to master their work and commit to continuous learning, but they tend to prefer to minimize the time and the effort they actually spend on enhancing their work and learning. Particularly, both hardworking and lazy Egyptian managers and workers tend to place little weight on *continuous learning*. Due to the rise of globalized ethics of consumerism, social respect for mastering one's work and continuous learning began to fade away from the Egyptian culture.

actively participating in the learning process. This would be highly uncertain legal experiment, but it might overcome the cultural impasse.

Even if co-determination and employment at-will doctrine overcome the cultural impediment to viable learning processes within the firm, the employment at-will doctrine undermines the minimum threshold of protection of workers as a prime category of the weak. This doctrine may involve the dismissal of some of the firm's employees when the firm undergoes a financial hardship for no just cause; in this case, shareholders tend to reap the upside risk of the investment, while the workers bear most of the downside risk. More problematically, replacing the workers with skilled workers that fit a new chosen learning path for the firm may be cheaper than establishing an internal learning system for the existing employees. Although labor's board representation may mitigate these instances of labor exploitation; still, the minimum threshold for labor protection would be hardly met. Particularly, collective decision-making processes in developing countries tend to break down due to the lack of the cultural norms supportive of these processes. Consequently, in developing countries, collective decision-making process may turn into a confrontational process in which each side seeks to impose its perspective over the other using its legal allocated power resources (e.g., board representation power vested upon labor and employment at-will power vested upon firm's shareholders).

Assuming that a developing country can overcome the lack of both the economic institution of relationship banking and cultural norms, mandatory co-determination would *signal* a high risk of expropriation of public equity investors even if legal institutions that provide protection against outright expropriation were in place. Overall, both foreign and domestic minority shareholders tend to be perceive their protection to be poor in (some) developing countries; co-determination would signal that this protection is almost non-existent. The issue here relates to the subjective perception of public investors, particularly long-term equity investors whose investments are essential to organizing viable learning processes within the firm. Still, these long-term investors, if rational, would perceive the proposed dual change in corporate governance and labor regulation to sustain learning processes that are crucial to long-term sustained competitiveness of these firms. Still, assuming this high degree of rationality of public investors in developing countries seems somehow unrealistic.

In short, given the lack of economic institution of relationship banking, the cultural norms supportive of the German co-determination, and negative signals of mandatory co-determination,

the transplant of German co-determination in developing countries seem to be a radically uncertain legal experiment. Introducing employment at-will along with co-determination as a one-package of legal reforms may mitigate partially this uncertainty, but would not eliminate it. To mitigate this uncertainty further, co-determination can be introduced as default non-mandatory principle, and then it can be transformed, if successful, into a mandatory rule. We will discuss non-mandatory co-determination below.

Consequently, we need to examine other forms of the stakeholder model of corporate governance. The Japanese stakeholder model is an alternative, but the difficult question is whether the Japanese model of corporate governance can be transplanted effectively in developing countries. The Japanese stakeholder model shares the economic institutions of the German model, but it relies on a distinct set of *cultural norms*. As already mentioned in the previous chapter, the main cultural norms underlying the relations among the Japanese firm's stakeholders include cooperation (collectivism), mutual trust, managerial and workers' loyalty to the firm, hardworking, and obedience of authority (hierarchy or vertical dimension of collectivism). The latter norm (i.e., hierarchy) facilitates the acceptance of the broad discretion of the management in rotating the employees across the jobs in the firm and facilitates reaching a subjective perception of fairness of managerial decisions and distribution of revenues.

However, are these cultural norms crucial to the proper functioning of the Japanese stakeholder model of corporate governance? We can distinguish between three main answers to this controversial question. The first position argues that the Japanese model of corporate governance is *economically efficient*; the behavior of each of the stakeholders of the Japanese firm can be explained in terms of rational self-interest utility maximizing terms; cultural norms play a supportive, but not a critical, role.⁸³ The economic efficiency explanation of the Japanese corporate governance is consistent with the conclusion of the previous chapter according to which the post-war Japanese system of corporate governance satisfies the conditions of viable learning processes at reasonable transaction costs. However, as already argued in chapter 5, the economic equilibriums observed in the agents' network is a function of the institutional network that consists of *formal legal norms and social/cultural norms*. Demonstrating that the (economic equilibriums of) the Japanese corporate governance is efficient does not explain how these equilibriums

⁸³ Masahiko Aoki, 'Toward an Economic Model of the Japanese Firm' (1990) 28(1) *Journal of Economic Literature* 23–24.

emerged as a result of the interactions of these stakeholders over the institutional network, and hence the role of formal legal institutions and cultural norms are highly downplayed in this *economic* explanation of the Japanese corporate governance system.

In contrast to the economic explanation of Japanese corporate governance, a cultural explanation posits that the Japanese corporate governance system is a cultural product of the above mentioned set of cultural norms; formal legal institutions in the institutional network of the Japanese corporate governance system play no role in the functioning of this system.⁸⁴ The main evidence in support of this position is that the formal legal norms that regulate public corporations in Japan have been transplanted from the US legal system,⁸⁵ but unlike the shareholder value model of American corporate governance, the Japanese system of corporate governance follows a stakeholder model. Accordingly, the social norms of cooperation and harmony explains the obvious cooperative and trust-based relations among the stakeholders of the Japanese firms, namely, shareholders-management relation, main bank-management relation, management-employees relation, and employees-employees relations.

Yet, this cultural explanation of the functioning of the Japanese corporate governance is problematic because it assumes that the legal norms constitutive of the institutional network of the Japanese corporate governance system play no role at all. Milhaupt challenges this cultural explanation and develops a third position in which law plays a significant role in the Japanese corporate governance. First, the law creates incentives for cooperation; for example, by making raising equity and debt capital from the capital markets costly, the law forces the firms to raise debt capital from banks, which gives strong incentives for the firms to cooperate with the banks in long-term relationship.⁸⁶ Second, it sustains cooperative relations by constraining exist options (e.g., constraining employment at-will doctrine),⁸⁷ and by filling in the gaps in the contractual relations by legal principles (e.g. good faith) that ensures the sustainability of cooperation.⁸⁸ Third, the law balances the costs of locking the parties into cooperation by giving them broad discretion in adapting the cooperative relation over time to changes in circumstances (e.g., giving broad

⁸⁴ For a short description of this position, see: Milhaupt (n 68), 4–5, and see the references cited therein.

⁸⁵ *ibid* 15–17.

⁸⁶ *ibid* 37.

⁸⁷ *ibid* 44.

⁸⁸ *ibid* 40–43.

discretion to the employer in assigning tasks to the employees, i.e., legal vindication of the job rotation system).⁸⁹

Obviously, the third position that suggests that law plays an important role in giving rise to the cooperative equilibrium of the Japanese corporate governance system is convincing, but it leaves open the most vexing issue that is can the law play this role in absence of the above cultural norms? In other words, is law *a sufficient* condition for the cooperative equilibriums in the stakeholders' relations of the Japanese corporate governance system? If the answer is yes, then, developing countries just need to transplant similar legal norms. Unfortunately, law is *not a sufficient* condition for giving rise to *cooperative trust-based* relations among the stakeholders of the firm in developing countries. At least, cultural norms facilitate the *successful implementation* of legal norms of the (Japanese) corporate governance.⁹⁰ More importantly, cultural norms in developing countries may not only play these facilitative functions, they may also undermine the effects of legal norms; for example, both legal and social norms may be *systemically inconsistent*. More importantly, they may give rise to *different* equilibrium. For example, legally vindicated job security when combined with social norms that do not give motivations for hardworking, cooperation, and life-long learning would result in stronger incentives for *shirking*. Hence, we need to examine whether the cultural norms of (some) developing countries when combined with the Japanese law of corporate governance would give rise to the cooperative trust-based cooperative equilibrium, and if not, what equilibrium is most likely to arise.

We can take Egypt as a point of reference because it is a developing country that I am most familiar with its culture. Some cultural norms are salient in Egyptian organizations, namely, the cultural norms of hierarchy, (hesitant) obedience to authority,⁹¹ and collectivism underpinning horizontal cooperation among the workers.⁹² Although these Egyptian cultural norms seem largely similar to the Japanese culture, they deviate in some important aspects. As to obedience to authority, Parnell and Hatem explain the Egyptian hierarchical cultural norm as follows:

The Egyptian culture is exemplified by high power distance ... In high power distance cultures, superior and subordinates consider

⁸⁹ *ibid* 45.

⁹⁰ Caslav Pejovic, 'Japanese Corporate Governance: Behind Legal Norms' (2011) 29 Penn State International Law Review 502.

⁹¹ Parnell and Hatem (n 81), 404.

⁹² *ibid* 403.

each other as unequal: indigenous organizations centralize power more and subordinates are expected to be told what to do ... employees are frequently afraid to disagree with their superiors, who are often seen as autocratic or paternalistic.⁹³

Overall, this explanation is correct, but it misses important cultural aspect. Unlike the Japanese obedient attitude towards authority, Egyptians resist authority indirectly by *silent and implicit disobedience*. Egyptians do not convey explicitly their intended disobedience, and in many cases, they do not even know beforehand that they will disobey the orders. This is the Egyptian way of revolt. This causes significant communication failures among superiors and subordinates in Egyptian organizations; unlike Germans, Egyptian subordinates do not express openly their opinions due to the high power distance culture. Further, unlike the Japanese, they do not obey the orders harmoniously because they have a strong cultural disposition of criticism of their superiors and they believe that they have to do what they think to be (contextually) correct.

As to the collectivist nature of the Egyptian culture, the Egyptian culture tend to be a collectivist rather than individualist culture,⁹⁴ which may support cooperation among Egyptian workers. An anecdotal evidence demonstrating that Egyptian firms have been using teamwork frequently might lend a support to the horizontal cooperative norm in Egyptian firms.⁹⁵ However, to the best of my knowledge, there is no conclusive evidence on the organizational norm of cooperation among Egyptian workers; more problematically, assuming that this cooperative behavior exists in Egyptian firms, there is no evidence on the effective institutionalization of cooperation in a way that ensures its *effectiveness and sustainability*. Particularly, the hierarchical nature of the Egyptian culture gives little space for learning effective horizontal cooperation because workers tend to follow the superiors' instructions regarding the well-defined tasks of their jobs set out in their labor contracts.⁹⁶ Particularly, the collective relations among family members and friends cannot be transformed into effective cooperation among workers in the Egyptian firms without an organizational learning process of the importance and the ways of effective cooperation and an institutional framework that supports this cooperation (e.g., a less precise job description

⁹³ *ibid* 404.

⁹⁴ *ibid* 403. Darwish and Huber (n 73), 52.

⁹⁵ Ghada El-Kot and Mike Leat, 'Investigating Team Work in the Egyptian Context' (2005) 34(2) *Personnel Review* 253–256.

⁹⁶ Mike Leat and Ghada El-Kot, 'HRM Practices in Egypt: the Influence of National Context?' (2007) 18(1) *International Journal of Human Resource Management* 154.

in employment contracts). In addition, Egyptians are hesitant to extend the enormous package of obligations that they owe to their families and friends to their co-workers. Furthermore, the rise of globalization has been weakening the collectivist nature of the Egyptian culture, giving more space for individualism.⁹⁷ In short, due to the collectivist nature of the Egyptian culture, Egyptian workers are (somehow) receptive to horizontal cooperation, but due to the rise of globalization, workers' hesitance to extend the collectivist culture into the workplace, the organizational norm of hierarchy, and the wide-spread practice of detailed job description in labor contracts, Egyptian workers have low incentives for horizontal cooperation. Further, due to lack of viable processes of learning how to cooperate effectively, Egyptian workers are not necessarily successful in sustaining effective cooperation.

As to job satisfaction and hard work, we distinguish between Egyptian managers and workers. As already mentioned, Egyptians do not perceive their identity or self-esteem to be derived from continuous learning, hard work, mastering one's work, or their careers, but they derive their self-worth mainly from their familiar relations and their culturally interpreted version of religion. The result is a hierarchical centralized work place that has constrained spaces for learning and vertical and horizontal cooperation.⁹⁸ The work place is also dominated by a deep-rooted feeling among the management and the workers that work is a source of hardship rather than enjoyment.⁹⁹

Surprisingly, this low degree of job satisfaction does not seem to have a negative effect on hard work among the firm's managers¹⁰⁰ and Egyptian workers. Indeed, Egyptian workers tend to work on average long hours; males work on average 55 hours per week and females work on average 57 hours per week.¹⁰¹ Egyptian worker works 20 hours more than the average weekly hours worked

⁹⁷ *ibid* 155, and see the references cited therein.

⁹⁸ Vertical cooperation between the management and the workers is particularly weak in Egyptian firms because the Egyptian managers perceive workers' participation as a sign of poor management. Parnell and Hatem (n 81), 412–413.

⁹⁹ For example, Egyptian managers tend to score low in job satisfaction, *ibid* 413. Similarly, white-collar Egyptian workers are barely satisfied with their jobs. Sidani and Jamali (n 55), 442.

¹⁰⁰ Parnell and Hatem (n 81), 413.

¹⁰¹ Jon C Messenger and Nikhil Ray, 'The Distribution of Hours of Work in Developed and Developing Countries: What are the Main Differences and Why?' (1 May 2013). ILO Policy Brief no. 5, 7 <http://www.ilo.org/travail/info/fs/WCMS_247974/lang--en/index.htm>. These statistics do not take into account the hours worked by Egyptian females in undertaking household and children care tasks. If these tasks were to be taken into account, the working hours of Egyptian females would be at least 70 hours on average per week.

by a German worker who works around 35 hours, on average, per week.¹⁰² Due to their Low productivity and low hourly wages, the workers in developing economies such as Egypt need to work long hours to earn reasonable wages.¹⁰³ However, due to low job satisfaction and subjective perception of being exploited by Firm's shareholders and their superiors,¹⁰⁴ Egyptian workers tend to shirk; they waste as much time as possible without working, while being at the workplace; their *work effort* is generally low. In addition, they generally do not exert a lot of effort in doing the task right; Egyptian workers tend to make many mistakes that consume a lot of time and resources to be corrected. The long hours spent at the place of work increases the probability of these mistakes because it reduces the workers' capacity to concentrate. Further, due to lack of incentives for (continuous) learning and low job satisfaction, Egyptian workers do not have incentives to improve the way they undertake their jobs; they work hard, but not smart. Finally, due to their thin skill base, lack of continuous learning inside or outside the firm, lack of effective vertical and horizontal cooperation that enhances communication of firm's knowledge, the small stock of firm's knowledge, Egyptian workers need much more time for undertaking efficiently job tasks that are similar to those undertaken by the workers in advanced economies. In short, Egyptian workers and managers tend to work for long hours, but their work effort, focus, continuous improvement the methods for undertaking their tasks, and their knowledge/skill base tend to be low. Further, their intrinsic motivations to increase their effort, concentration, work smart, their knowledge and skill base are weak.

As to *loyalty* to the firm, this is a difficult issue to measure, but some scholars argue that both Egyptian managers and workers exhibit strong loyalty to their firms.¹⁰⁵ This is consistent with a strong cultural tendency in Egypt of *attachment to places*; for example, Egyptians tend to be attached strongly to their country, their family, their friends, and their homes even when they believe that this attachment is irrational.¹⁰⁶ This strong cultural norm of attachment travels easily

¹⁰² OECD, 'Average Usual Weekly Hours Worked on the Main Job' (2016). OECD Statistics Database <<https://stats.oecd.org/Index.aspx?DataSetCode=ANHRS>>

¹⁰³ Messenger and Ray (n 101) 5.

¹⁰⁴ The (Marxist) belief that the employers are exploiting the employees is particularly dominant among young employees and lower level management. Sidani and Jamali (n 55), 441–442.

¹⁰⁵ Parnell and Hatem (n 81), 413. Similarly, Sidani and Jamali suggest that organizational work belief is salient among Egyptian workers. Sidani and Jamali (n 55), 440–441.

¹⁰⁶ For example, millions of Egyptians travel abroad, particularly to Gulf countries, for working. Most of them come back to settle down in Egypt after few years, although they have the option to continue to live abroad. The few Egyptians who choose to settle down abroad make the seemingly irrational choice of

to the workplace where Egyptians feel attached and loyal to their firms, but many cultural norms tend to undermine the culturally natural feeling of loyalty. The low degree of job satisfaction, the subjective perception of being exploited in the workplace, the lack of vertical and horizontal cooperation, the dominance of the hierarchical forms of relations, and lack of job security undermine significantly the Egyptian workers' loyalty to their firms. In addition, lack of participation in decision-making processes and labor's limited autonomy in undertaking their job tasks or managing teamwork¹⁰⁷ might undermine further the culturally natural attachment to the firm. However, the negative effect of the latter factors on Egyptian workers' loyalty to the firm might be marginal because the Egyptian culture does not place a large weight on participatory values;¹⁰⁸ in the Egyptian culture, a superior who treats his subordinates with dignity and gives space for listening carefully to their opinions is considered the Egyptian ideal superior. In contrast, the superiors who engage subordinates in *decision-making processes* are perceived culturally to be strange or weak.¹⁰⁹

Finally, Egyptian workers have very low intrinsic motivations and incentives for *learning* because of a myriad of factors. These factors include low job satisfaction, weak loyalty to the firm, the cultural norm of derivation of one's self-worth from familial relations and a cultural interpretation of religion that does not emphasize continuous learning or continuous improvement of the way of undertaking the job related tasks (i.e., working smart). These factors include also the lack of intrinsic motivations for increasing work effort or improving one's working methods and routines, the seniority rather than performance-based system for promotion,¹¹⁰ personal satisfaction with current job entitlements that achieve "Al-Satr", lack of strong internal

coming back to Egypt in their old age for the sole purpose of dying and being buried in Egypt. Recently, the Egyptian-American Noble laureate in Chemistry, Ahmed Zewail, asked his family to bury him in Egypt when he dies; hence, they had to transfer his body from the US, where he actually died, to Egypt to be buried. Egyptian cultural artefacts (e.g., songs and folk sayings) express clearly the paradox arise from the Egyptians' strong attachment to their country and the irrationality of this attachment due to, inter alia, the widespread poverty, and limited access to proper education and health care in Egypt.

¹⁰⁷ El-Kot and Leat suggest, however, that Egyptian managers have started to use self-managed (autonomous) teams in the Egyptian firms. El-Kot and Leat (n 95), 256–257. Over time, self-managed teamwork is expected to enhance the Egyptian employees' loyalty to their firms.

¹⁰⁸ *ibid* 249.

¹⁰⁹ Parnell and Hatem (n 81), 413.

¹¹⁰ Leat and El-Kot (n 96), 155.

organizational processes for on-job training,¹¹¹ lack of vertical and horizontal cooperation, and lack of educational system that encourages thinking and life-long learning.

In short, both Egyptian and Japanese cultures share the social norms of hierarchy, obedience of authority, collectivism, strong attachment, and loyalty to the homeland and distaste for mobility, and giving little weight to participatory governance. Despite this strong commonality among the Egyptian and Japanese cultures, these general cultural norms when transferred into the firm result in *stark differences* at the organizational level. As already discussed, unlike the Japanese workers, the Egyptian workers exert low effort in their work, do not work smartly, lack a solid skill base, lack intrinsic motivation for learning, have weak loyalty to their firms, lack intrinsic motivation and knowledge of effective horizontal cooperation, lack intrinsic motivation and incentives for horizontal cooperation, and have irrational long-term expectations from their relations with the management and the shareholders of the firm. Further, both the Japanese and Egyptian workers share the organizational norm of hierarchy and obedience to authority, but Egyptian workers tend to resist implicitly authority in situations where the costs of this resistance are not prohibitively high.

Why largely similar cultures such as the Japanese and Egyptian cultures result in these starkly different organizational cultures? The above discussion has already given some explanations. These explanations start from the cultural differences between the Egyptian and Japanese cultures, namely, the labor's subjective perception of employers' exploitation, labor's irrational expectations regarding long-term employment relation, the general tendency against exerting high and focused work effort and continuous life-long learning, lack of effective vertical communication and cooperation among the superiors and subordinates in the Egyptian culture. First, due to the harsh economic conditions that the youth confront in Egypt,¹¹² the socialist heritage of the Egyptian society, and the tendency of employers to exploit the employees because of globalization, Egyptian workers tend to perceive themselves to be exploited by their employers. Second, Egyptian workers tend to have irrational expectations regarding the decisions of the

¹¹¹ Leat and El-Kot suggest that the Egyptian employers tend to recruit the employees who have needed skills even if these employees do not fit the organizational culture; if those employees could not be employed, then, the Egyptian employers seek to develop the needed skill internally. *ibid* 154–155. Given the narrow skill base of the Egyptian labor, it seems that the Egyptian firms have failed, however, to establish strong internal processes for on-job training and skilling of their workers.

¹¹² Sidani and Jamali (n 55), 445.

management and shareholders of the firm in times of financial distress; since these expectations are generally unmet, their self-perception of exploitation becomes even stronger. The result is lower loyalty to the firm and lower job satisfaction. This low job satisfaction is reinforced by the lack of opportunities of learning and advancement opportunities in the job.¹¹³ Since the Egyptian workers tend culturally to minimize their work effort and learning, the low loyalty and low job satisfaction result in stronger minimization of work effort and learning.¹¹⁴ Further, due to strong cultural norm of hierarchy and obedience to authority along with weak skills in vertical communication and collaboration among superiors and subordinates in social relations, vertical relations in work place tend to be hierarchical, centralized, and lack vertical communication and cooperation. Finally, the collectivist nature of the Egyptian culture cannot automatically travel to the workplace without strong mechanisms for this transplant (e.g., learning how to cooperate effectively), but these mechanisms are largely absent at the organizational level and legal institutions do not lend support for bringing about these mechanisms. In short, the somehow few cultural differences between the Egyptian and Japanese cultures have been amplified into large differences at the organizational culture.

Legal institutions of corporate governance and labor law play important role in this amplification process. To understand the role of law in this process, suppose that we have the above-mentioned Egyptian cultural context. Then, we ask the following question, “What *are the social and organizational conditions* for transforming these cultural norms into desirable organizational cultural norms?” Once we identify these conditions, we can derive legal institutions that contribute to the fulfillment of these conditions, and thus contribute to the translation of the cultural norms into desirable organizational cultural norms. The major *social conditions* that can transform the Egyptian cultural norms into a desirable *organizational* culture supportive of the formation of ethical and learning organization include the following. First, the labor’s subjective perception of employers’ exploitation should change into a subjective perception of fair treatment.

¹¹³ *ibid* 442. Important impediments to job advancement include the lack of institutionalized internal learning processes, nepotism, and favoritism in Egyptian firms. Parnell and Hatem (n 81), 404–405

¹¹⁴ It is therefore interesting to observe this peculiar relation between lack of opportunities for learning and the employees’ tendency to minimize learning and work effort. The lack of learning opportunities results in low job advancement opportunities. The low probability of job advancement results in turn in weak incentives for learning and exerting high work effort. These weak incentives for learning results in thin skill base of most workers, which undermines further learning opportunities because the workers cannot learn effectively from each other because each of them has little to contribute to the organizational learning process.

Second, workers should have strong intrinsic motivations and incentives for high work effort and continuous learning. Third, the skill and knowledge base of Egyptian workers, particularly learning how to learn and learning how to cooperate effectively with superiors and equals in the workplace should be significantly enhanced.

The social and organizational conditions for achieving each of these conditions are quiet demanding. First, as to transforming the subjective perception of exploitation, Egyptian workers need to enjoy humane working conditions and a fair share of the revenues of the firm; if workers share the downside risks of firm's financial distress, they should share the upside risk in good times and they should be well-informed that they receive a fair share of the revenues. Their share of the revenues should depend on the extent they assume risks in times of financial distress; the larger the risks they assume (e.g., the risk of firings), the larger the share they should receive in the good times, and vice versa. Here, kicks in the role of the law. Law should not impose one-size-fits-all legal framework for firms; rather, it should give the firms alternative legal frameworks, and each of these alternative frameworks should achieve the balance between upside and downside risks that the workers assume. The first legal framework gives the workers a fair share in the firm's revenues, but they are entitled to no job security in the bad state of the world. One can envisage many forms of this legal framework; for example, a legally mandated share in the distributed profits should be given to the workers (e.g., 30% of the distributed profits) along with employment-at-will doctrine is one form of this legal framework. The second legal framework gives workers strong protection in the bad state of the world, but compensates the shareholders who assume most of the risks in the bad state of the world by giving them higher share in the revenue. In this legal framework, workers enjoy a mandatory legal protection for job security, but they do not receive a legally mandated share in the firm's profits. Both legal frameworks consist of mandatory legal norms, but the firm can be given the option to opt in one of these legal frameworks. Each of these frameworks transforms, partially, the subjective perception of exploitation into a subjective perception of fairness. The first framework makes the workers equal investors in the firm, but they make human capital investments and share equally the risks that equity investors assume. In the second framework, workers are given insurance against dismissal, but they pay an insurance premium for this insurance in terms of higher profits for the shareholders. In the employment contracts, the legal framework adopted by the firm should be mentioned explicitly and an

explanation of why this framework ensures a fair treatment of the worker should be included as well.

As to the conditions for giving the Egyptian workers strong intrinsic motivations and incentives for high work effort, and learning, the above legal frameworks that ensure a subjective perception of fair treatment will also contribute to higher working effort and learning incentives for Egyptian workers by affecting positively their subjective perception of fair treatment. Still, these legal frameworks may have negative effects on workers' work effort and incentives to learn. For example, legal frameworks that do not ensure job security may not give strong incentives for workers to learn firm's specific skills. Similarly, due to the general distaste of high work effort and life-long learning, the legal frameworks that give Egyptian workers job security tend to weaken their incentives to increase their work effort and to learn. More problematically, suppose that the relevant developing country lacks a social norm that requires the firms not to hire from outsiders and requires the workers to commit to their firms. In this case, firms will have weak incentives to establish internal learning processes (e.g., internal training systems) because it is easier for the firms to free ride on other firms that allocate resources for internal learning processes by employing their employees at higher salaries. This negative implication of this social norm would hold even if the legal framework ensures job security. In other words, given this social norm, the above alternative legal frameworks would not give either the workers or the firms strong incentives for investment in learning and skilling of labor.

To resolve this dilemma, we need a form of a *conditional mutual commitment system* for firm-workers relations. In this framework, both firms and employees commit to each other; workers receive fair share in the firm's revenues in both good and bad states of the world; this implies that their compensation increases proportionally to increases in firm's revenues in the good state, while decreases proportionally to decreases in firm's revenues in the bad state. In other words, they receive a variable compensation proportionate to the changes in the revenues of the firm. Further, workers commit to their firms; they cannot seek other jobs without reasonable justification; similarly, firms cannot dismiss the employees without just cause. When moving to other employers, employees must be required to pay some of the costs of their internal training incurred by their employers. Further, in times of economic downturns, firms cannot use layoff unless it is the last resort. Further, when the firm passes through the financial distress, it is required to hire its new workers from among the laid-off workers. The compensation of workers should be based on

their individual and team-based performance; hence, only employees who exhibit strong incentives for learning and high work effort can gain promotion and higher compensation. The firm should have the right to fire workers who exhibit long term poor performance because they fail to commit themselves to the firm, unless these workers can be relegated to lower ranks or rotated to other jobs where they can undertake their related tasks efficiently, or transferred to part-time jobs within the firm.

Obviously, this mutual commitment system is difficult to enforce. For example, in order to be hired with the firm, some firms in Egypt require the job applicants to sign a statement that indicates that they have received training and they are required to pay back the cost of this training in the case they choose to move to another firm, although the workers have not received such training.¹¹⁵ This gives a clear instance of how the mutual commitment system can be gamed; job applicants may be forced into labor contracts or written statements where they waive their rights, for example. Overall, sophisticated legal systems are more susceptible to regulatory arbitrage, but this should not suggest that legal systems should be simple and principles-based. Complex societies may need complex systems of governance, but the main objective of these systems should not be straightforward and costly enforcement of the complex rules of the system. Rather, the objective should be explaining and educating the addressees of the rules about the benefits of compliance with these rules; the system aims to create ethical and learning organizations that enjoy long-term sustained competitive advantage. This is mutually beneficial for both workers and employers. By using the legal framework as an educational instrument, the regulatory agency in charge of enforcing the law can help the firms internalize the law into organizational routines over time.

More importantly, this system might not seem to ensure *labor flexibility*, which is an important condition for viable learning processes within the firm. Indeed, this system provides a degree of labor flexibility because workers can easily move to other firms as long as they pay the cost of their training; mainly the firm to which these workers will move would incur this cost. Firms can also easily hire for workers whose knowledge assets are critical for the firm for limited period (e.g., three years), but if the firm continues to hire the same employee, his contract should transform into a lifetime contract because this indicates that his contributions are crucial for the firm in the long-term. If the knowledge-assets of some of the existing employees are no longer

¹¹⁵ I have been communicated this piece of information by an employee in the private sector in Egypt, but I do not know the extent to which this practice is widespread.

crucial to the firm, the firm can establish internal learning processes for these employees, can rotate them to other tasks within the firm, and can reduce their compensation and their share of the revenues, while increasing the share of other critical employees. If these employees fail to acquire the required knowledge in reasonable time-period, the firm can consider them to be poor performers and use the discretionary actions it has in this case (e.g., dismissal, transfer into part-time jobs, and significant cuts in compensation packages). Further, in bad states, this mutual commitment system provides important adaptive mechanisms for the firm as well.

As to the conditions for ensuring effective vertical and horizontal cooperation, both organizational/managerial practices and law can play an important role. Similar to the Japanese employment law, in the legal frameworks that impose job security, the firms should have the legal discretion to rotate workers. Further, the law can require labor non-voting representation on the board of directors in order to facilitate vertical communication and cooperation. Moreover, law can mandate the establishment of work councils and require both work councils and the management to have a periodical consultation over the managerial strategies of the firm. These legal institutions can facilitate vertical cooperation between the management and the workers. As to horizontal cooperation, the organizational practices of using the employee' cooperative behavior as well as the team-performance as factors to affect employees' compensation should be routinized in Egyptian firms. Law can play a role here by introducing the factors that should contribute to the calculation of employees' compensation as default rules in labor law. Further, the on-job training system, which is above-suggested to be mandated by the law, will contribute also to strong cooperative behavior among the workers because these systems put in place cooperative learning environment where workers are learning from each other.

The proposed legal institutions of corporate governance (labor's non-voting representation on the board, mandatory work councils, and periodical mandatory consultation process between the work council and the management) and labor law (the legal institutions that comprise the mutual commitment system such as labor's mandatory share in firm's revenues, and the adaptation of workers' compensation with firm's revenues, resulting in a variable rather than fixed income for workers) would transform the Egyptian cultural norms into desirable organizational norms. These organizational norms would include strong incentives for effective vertical and horizontal communication and cooperation, along with strong intrinsic motivations and incentives for learning and high work effort.

For this legal system to function, economic ownership must be concentrated, otherwise, the firm shall be captured by the interests of the inside management and the workers. Concentrated ownership is a major stabilizing economic institution for this proposed legal system. To ensure that blockholders prevent the insiders (e.g., management and workers) to capture the firm, the board of directors should be entrusted with primarily a monitoring function of the management on behalf of the blockholders; the board of directors should therefore consist of a *simple* majority of outside independent directors. This (somehow independent) board of directors may undermine the requirement of inside strategic control that is necessary for sustaining viable learning processes within the firm.¹¹⁶ However, the minority of insider directors and the strategic control of the firm by the management hired from the workers of the firm, and the inside information of the blockholders would counter the negative effects of the independent directors on the requirement of inside strategic control. Further, legal institutions that protect minority shareholders from outright expropriation are important, but we must recognize that private benefits of blockholdings are morally justified because blockholders are critical for the functioning of the proposed legal system of corporate governance and labor regulation. Accordingly, the strong legal protection of minority shareholders similar to that provided in the shareholder value model is unwarranted.

In short, the proposed institutions network consists of a stakeholder model of corporate governance and a protective labor regulation. The suggested form of stakeholder model includes blockholders, management (hired normally from the insiders), and labor's non-voting representation on the board, legally mandated work councils with legally mandated periodical consultation between the work councils and the management, while proposed labor law reforms involve mainly the legal institutions of the mutual commitment system. This institutional network would result in the formation of ethical and learning firms in the Egyptian context; it would substitute for the Japanese cultural norms that sustain the Japanese corporate governance model and results in a functionally equivalent model of corporate governance.

Doubtless, these legal reforms would be risky; hence, they may be introduced initially as *default rules* or in the form of *comply-or-explain rules*,¹¹⁷ then, they can be introduced as

¹¹⁶ See the discussion of the organizational conditions of viable learning processes in section 4.3 of chapter 8 and the references cited therein.

¹¹⁷ For an overview of the principle of “comply or explain”, see: Jan Andersson, ‘Evolution of Company Law, Corporate Governance Codes and the Principle of Comply or Explain: A Critical Review’ in Hanne

mandatory rules. Further, these reforms may be introduced initially as mandatory experimental rules for the firms located in one geographic area in Egypt prior to extending the experiment to the firms located in other geographic areas.¹¹⁸ Further research is required for investigating the best ways for gradual introduction of these rules in a way that minimizes the risks of their (possible) failure and takes into account the contextual political economy considerations.

Furubotn has suggested a form of stakeholder model of corporate governance, which he calls ‘joint investment firm’.¹¹⁹ In this model, employment contracts are for fixed period in which the employees are entitled for fixed wages equivalent to their market wages for their general skills and variable above market compensation that depends on firm’s profits; their share in these profits depend on their human capital investments specific to the firm.¹²⁰ The workers are given non-tradeable voting shares in the firm, which secure them the rights to share firm’s profits and co-decision making rights.¹²¹ During the duration of the employment contract, both the firm and the employees are mutually committed to each other; the firm cannot dismiss the worker except in exceptional cases of financial distress, and the worker loses his shares in the firm in case he chooses to move to another firm prior to the lapse of the employment duration.¹²² In the case of the dismissal of the worker, he still retains his shares in the firm that he can cash-in.¹²³ This ownership compensates the worker for the loss he incurs due to his inability to redeploy his firm specific assets in other firms.¹²⁴ Furubotn suggests that unlike the mandatory co-determination principle, the firm’s stakeholders can adopt his proposed model voluntarily due to its comparative efficiency.¹²⁵ First, the proposed gives workers incentives to use their co-decision rights in the interests of the firm because they have clear share in firm’s profits.¹²⁶ Second, it ensures labor

Birkmose, Mette Neville and Karsten E Sørensen (eds), *The European Financial Market in Transition* (Wolters Kluwer 2012).

¹¹⁸ This follows the experimental regulation process used in China. Sebastian Heilmann, ‘Policy Experimentation in China’s Economic Rise’ (2008) 43(1) *Studies in Comparative International Development* 9–10.

¹¹⁹ Furubotn (n 72), 170–171.

¹²⁰ *ibid* 172.

¹²¹ *ibid* 171.

¹²² *ibid* 172–173.

¹²³ *ibid* 173.

¹²⁴ *ibid*.

¹²⁵ *ibid* 174–178.

¹²⁶ *ibid* 177.

flexibility that enables the firm to adapt easily to changes in economic conditions and to ensure viable learning processes by modifying its knowledge assets.

In addition to the German and Japanese models and the above-proposed model of corporate governance associated with a mutual commitment system of labor regulation, the joint-investment model of the firm seems to be a forth alternative. As already mentioned, both German and Japanese models cannot be transplanted in a developing country such as Egypt, but the proposed institutional network that consists of a stakeholder model of corporate governance and a mutual commitment system of labor regulation can replicate functionally the Japanese model of corporate governance where legal norms substitute for the Japanese cultural norms. The pertinent question is therefore, “is the joint-investment model appropriate for a developing country such as Egypt?” Obviously, the co-decision rights granted to the workers are inconsistent with the cultural norms of hierarchy, obedience to authority, lack of long-term rationality, and the low weight that Egyptian workers give to participatory rights in managing the firm. More problematically, in the joint-investment firms, employers and the shareholders need to agree on the number of shares allocated to the employees in return to their specific investments in the firm, which necessitates the measurement of these investments, but it is very difficult to reach an agreement on this issue.¹²⁷ Not only the shareholders would claim the marginality of the workers’ investments, while workers would exaggerate their magnitude and importance; particularly, these investments are mainly of a tacit, decentralized, and cooperative nature. Further, changes in firm’s strategy and economic conditions may undermine the importance of these investments over time.¹²⁸

Still, the joint-investment model of corporate governance along with fixed term mutual commitment employment contracts seem to be an interesting legal reform if we modify it slightly. For example, the above-market wage compensation can be determined by mandatory legal rule (i.e., a mandatory profit-sharing scheme) to resolve the deadlock in bargaining over the measurement of the specialized investments of workers and the associated share in profits. Further, the mutual commitment labor agreements can be regulated to ensure that the term of this agreement cannot be less than five years, for example, to give both the firm and the employees strong incentives for investment in learning and specialized human capital investments. Finally, to

¹²⁷ *ibid* 180.

¹²⁸ O’Sullivan M. ‘The Innovative Enterprise and Corporate Governance’ (2000) 24(4) *Cambridge Journal of Economics* 404.

overcome the problematics of co-determination in a developing country such as Egypt, co-determination can be introduced as a default non-mandatory principle; this would also have the advantage of giving a space for some firms to experiment with this principle. Unlike the voluntary joint-investment model, this modified model of joint-investment is to be implemented therefore through a combination of mandatory and default legal reforms in corporate and labor laws.

In addition to the German and Japanese stakeholder models, the proposed institutional network of a stakeholder model and protective labor regulation (which is functionally equivalent to the Japanese model), and the modified joint-investment model, another model of stakeholder governance has been proposed in the literature. In this model, mandatory co-determination rights are allocated only to the employees who make human capital investments specific to the firm.¹²⁹ This is a difficult proposal to implement because the identification of this pool of workers and the magnitude of their specialized investments is difficult.¹³⁰ Further, the identity of these workers changes with changes in firm's strategy. Moreover, who will be given the authority to determine these workers? Finally, giving only some workers co-determination rights would create strong tensions among the workers of the firm who enjoy and those who do not enjoy co-determination rights, particularly the workers who enjoy these rights may be perceived to be exploiting the other workers for increasing their own benefits. In short, this form of the stakeholder model would not function properly in developing countries.

In conclusion, both the German and the Japanese models of corporate governance cannot be implemented successfully in a developing country such as Egypt because it lacks the cultural norms that support the proper functioning of these stakeholder models of corporate governance. Law cannot substitute for the cultural norms that support the functioning of the co-determination principle, thus, the German model cannot be transplanted in a developing country such as Egypt. Conversely, a developing country such as Egypt can implement a functionally equivalent model to the Japanese model of corporate governance. To implement such a model, Egypt should adopt a stakeholder model of corporate governance that consists of concentrated ownership structure (blockholdings), a simple majority of independent directors on the board of directors, labor's non-voting representation on the board, mandatory work councils, periodical mandatory consultation

¹²⁹ Margit Osterloh and Bruno S Frey, 'Corporate Governance for Knowledge Production: Theoretical Foundations and Practical Implications' (2006) 3(4) *Corporate Ownership and Control* 165–176.

¹³⁰ Furubotn (n 72), 180.

process between the work councils and the management, legal protection of minority shareholders against outright expropriation, and a management hired from the senior long-term workers of the firm. This model of corporate governance should be complemented with a mutual commitment based labor regulation. Another form of a stakeholder model that seems to fit the Egyptian cultural context is a modified joint-investment model. This model consists of the same institutions of the above-suggested model of corporate governance, but it includes also a default co-determination principle. Instead of the mutual commitment system of labor regulation, this modified joint-investment model should be complemented with a mutual commitment fixed term employment contracts, where a mandatory minimum duration of the employment contract is legally required and the employees are entitled to a mandatory profit-sharing scheme.

5. Toward a Rules-based Legal System for Sectoral Industrial Policy in Developing Countries

Corruption is one of the major problems of transplanting Japanese discretionary sectoral industrial policy in developing countries because the industries of the economy engage in rent-seeking behavior to capture the numerous forms of plausible governmental support. The second major problem is *informational asymmetry*; the industry tends to be more informed than the government about the conditions of domestic and global markets.

The Japanese experience shows that the Japanese model of industrial policy was conducted within a legal framework.¹³¹ This legal framework consisted of four legal instruments: legislations, MITI's administrative decisions, MITI's administrative guidance, and private agreements among the Japanese firms.¹³² These private agreements found their legal basis and legitimacy in the other legal instruments so that these instruments deserve closer examination. First, the Japanese legislative authority had a wide discretion in enacting legislations that implement sectoral industrial policies by interfering excessively and discriminatorily with the economic activity because the Japanese constitutional court abstained from evaluating the reasonableness of the

¹³¹ For an overview of the legal framework of the industrial policies of Post-war Japan, see: Mitsuo Matsushita, 'The Legal Framework of Japanese Industrial Policy' [1987] Brigham Young University Law Review, 545–570.

¹³² For an overview of these legal instruments, see: *ibid* 545–555.

economic objectives that these legislations seek to achieve.¹³³ These legislations, however, tend to establish general economic objectives and confer wide discretionary powers upon the MITI for their attainment.¹³⁴

To escape judicial review of its decisions, instead of issuing binding administrative decisions, the MITI relied mainly on informal negotiations with the industry. This process normally ends with issuing of what is called “administrative guidance” by the MITI.¹³⁵ Administrative guidance is a non-binding legal instrument¹³⁶ that may, but does not, need to have an explicit legal basis in legislative acts.¹³⁷ The judiciary did not counter the MITI’s excessive reliance on administrative guidance, and did not restrict its exercise of broad discretionary powers in the cases where the MITI issues binding administrative decisions.¹³⁸

As a result, in practice, the Japanese industrial policy has been conducted through *an informal political process of consultation and negotiations* between the MITI and the business community, which Upham characterizes as *‘bureaucratic informalism’*¹³⁹. The industry followed usually the administrative guidance; this reveals the *strong cooperative relation* between the MITI and the business. Various factors contributed to this success of MITI-business cooperation. These factors included, inter alia, the long-term relationship between the MITI and the industry, the negotiations

¹³³ *ibid* 548–550.

¹³⁴ Frank K Upham, *Law and Social Change in Postwar Japan* (Harvard University Press 1987) 169.

¹³⁵ *ibid* 167–168. See also: *ibid* 183. The author argues that informality was intended to escape judicial review, but not to harm the SMEs.

¹³⁶ Matsushita (n 131), 552. Steven M Spaeth, ‘Industrial Policy, Continuing Surveillance, and Raised Eyebrows: A Comparison of Informality in Administrative Procedure in Japan and the United States’ (1994) 20 *Ohio Northern University Law Review* 934.

¹³⁷ Michael Young, ‘Judicial Review of Administrative Guidance: Governmentally Encouraged Consensual Dispute Resolution in Japan’ (1984) 84 *Columbia Law Review* 935–936

¹³⁸ For an overview of the limited judicial review of the administrative decisions related to the implementation of industrial policy, see: Upham (n 134) 169–176. Upham illustrates that this judicial attitude was not restricted to the review of the administrative decisions related to industrial policy; rather, it was a general attitude of Japanese courts in their review of administrative discretionary decisions. He summarizes this point as follows, ‘in those exceptional cases where the plaintiff is determined enough to overcome the doctrinal and practical obstacles and succeeds in getting judicial scrutiny of discretionary acts, the courts almost invariably do two things: first, they reject the government’s claim that the decision is totally discretionary and assert the court’s right and obligation to review for abuse of discretion, no matter how broad; second, they determine that, in this case, the government’s decision was within its scope of discretion’ *ibid* 15.

¹³⁹ For a description of bureaucratic informality as a governance model of conflict resolution and social change in Japan, see: *ibid* 16–27. For a detailed discussion of bureaucratic informality in the context of industrial policy, see: *ibid* 166–204.

(consultation process) that normally preceded the issuance of the administrative guidance,¹⁴⁰ the Japanese culture of deference to public authority,¹⁴¹ and the reasonableness of the guidance from the industry's perspective (which results from the exclusion of the interests of labor, consumers, and environmentalists from the negotiation process).¹⁴² In addition, the stakeholder model of Japanese corporate governance that constrained stockholders' powers and gave the management the freedom to pursue objectives other than shareholder-value maximization facilitated further this cooperative relation.¹⁴³

Furthermore, in the cases of non-compliance, the MITI tended to threaten the non-compliant sector or firm.¹⁴⁴ Since the MITI controlled the grant and cancellation of import and export licenses and allocation of foreign exchange, the threats sometimes took the form of withholding or withdrawing these licenses.¹⁴⁵ These threats took sometimes the form of instructing the Japanese banks not to extend loans to a non-compliant firm.¹⁴⁶

This model of bureaucratic informalism was a result of the political economy of postwar Japan dominated by a tripartite coalition of Liberal Democratic Party (LDP), bureaucracy, and business, which had *interdependent and close interests*.¹⁴⁷ Subject to informal discussions and negotiations with the other parties of this governing coalition, the bureaucracy had the de facto dominance over *policy design and implementation*.¹⁴⁸

The bureaucratic informalism of governance of Japanese industrial policy was facilitated by the *legal system* of industrial policy. This legal system did not interfere or restrict the informal bureaucratic governance structure of industrial policy due to the standards-based legislations that conferred broad discretionary powers over the MITI, and the intentional passivity of the Japanese

¹⁴⁰ Young (n 137), 938–941.

¹⁴¹ Spaeth (n 136), 934–935.

¹⁴² The interests of non-business community were either excluded or rarely and marginally represented. Young (n 137), 939.

¹⁴³ Chalmers Johnson, *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975* (Stanford University Press 1982) 313–314.

¹⁴⁴ Takashi Wakiyama, 'The Nature and Tools of Japan's Industrial Policy' (1986) 27 *Harvard International Law Journal* 473. Young (n 137), 938. The author coins the term "collateral enforcement" to refer to these "informal carrots and sticks" method of enforcement.

¹⁴⁵ Wakiyama (n 144), 473. For a detailed description of the Sumitomo incidence that gave rise to a public threat by the MITI of using its import restrictions power to force Sumitomo Metals corporation to comply with its *informal non-binding* administrative guidance, see: Upham (n 134) 176–184.

¹⁴⁶ Spaeth (n 136), 936.

¹⁴⁷ Upham (n 134) 16.

¹⁴⁸ *ibid* 14–16.

judiciary that chose not to interfere with MITI's industrial policies. Abe Masaki illustrates eloquently this point:

The significance of judicial passivity for the informal Japanese industrial policy cannot be exaggerated. If courts actively intervened in industrial policy process by relaxing the administrative law doctrines of justiciability, standing, and scope of discretion, MITI's attempts to maintain informality and to exclude judicial intervention would be seriously obstructed. With a more active judiciary, both MITI's internal decisions and informal agreements with regulated industries could be objects of review. Lawsuits filed by interests that have neither been properly represented nor received due consideration in the industrial policy process, such as consumer groups and environmentalist groups, would increase dramatically. Those groups might even assume the role of a private attorney general, bringing lawsuits when regulated industries violate statutory requirements or MITI's policy decisions. In such a situation, MITI could no longer maintain its informal and consensual relationship with regulated industries. Various groups would be admitted into the industrial policy process, which then would be pervaded by conflict among mutually incompatible interests. In order to deal with the conflict, detailed rules covering both substantive and procedural matters would have to be enacted.¹⁴⁹

Developing countries cannot emulate the bureaucratic informalism model of governance due to *corruption, political capture, and the lack of efficient bureaucracy*. Still, developing countries may overcome these problems by adopting a legal system for industrial policy different from the Japanese legal system. The Japanese legal system of industrial policy is a standards-based legal system of industrial policy that gives wide discretion to the administrative agency. In addition, the substance of the agency's administrative decisions and administrative guidance rarely become subject to judicial scrutiny due to judicial passivity. Instead of this Japanese legal system of industrial policy, developing countries may adopt a *rules-based* legal system of sectoral industrial policy (that may include, for example, clear-cut economic indicators) subject to *active judicial review*. This system would thus narrow the discretion of the administrative agency. The proposed legal system of industrial policy may therefore overcome partially the problems of corruption and

¹⁴⁹ Masaki Abe, 'Review Essay: Japanese Industrial Policy in Perspective' (1990) 24 *Law and Society Review* 1085–1086.

political capture, which impede successful implementation of sectoral industrial policies in developing countries.

Nevertheless, the viability of the rules-based legal system depends on the political structure and constitutional design of the relevant developing country. Creating a rules-based legal system as a solution to the corruption and political capture problems associated with sectoral industrial policies seems to be a viable solution in developing countries such as Egypt whose judicial systems suffer from a low or moderate level of corruption, but its executive branch suffers from a high degree of corruption and political capture.¹⁵⁰

Accordingly, developing countries whose judicial system is corrupt and inefficient should shy away from the rules-based legal system proposal. If these countries have a moderately efficient and uncorrupt bureaucracy, then, these countries should adopt a standards-based legal system for industrial policy, which is advocated by law and development and regulation theory scholars (see below for the details of this model). As regards developing countries that suffer from both corrupted and inefficient judiciary and bureaucracy, these countries need to reform their bureaucracy and/or their judicial system prior to implementing sectoral industrial policy.

In short, there are two viable models of sectoral industrial policies: a rules-based system that is adequate for developing countries that have an efficient and uncorrupt judiciary and inefficient

¹⁵⁰ For example, the Egyptian public sector scores 36 points on the scale of the public sectors' corruption perception index in 2015. Zero point on this index refers to maximum corruption and 100 points refer to lack of corruption. Transparency International, 'Corruption Perceptions Index 2015' (2016) <<http://www.transparency.org/cpi2015#downloads>>. Scores below 50 on this index refers to serious corruption problems. *ibid*. This shows that the public perceives the Egyptian public sector to be highly corrupt. Further, from the business's perspective, the inefficient government *bureaucracy* is considered the second most serious problem (after price instability) that impedes doing business in Egypt. World Economic Forum, 'Global Competitiveness Report 2015-2016' (Geneva 2015) 160 <<http://reports.weforum.org/global-competitiveness-report-2015-2016/>>. Although the public perceives the Egyptian Judiciary to be corrupt as well, many indicators show that the Egyptian Judiciary tends to be moderately independent and uncorrupt. For example, on a scale from 1 (not independent at all) and 7 (very independent) of the Judicial independence index, the Egyptian judiciary scores 4.5, which is a moderate score. *ibid* 161. In addition, on a scale from 1 (very regular) and 7 (never occurs) of the index of "irregular payments and bribes: obtaining favorable judicial decisions", the Egyptian Judiciary scores 5.7, which is somehow a high score. World Economic Forum, 'Global Competitiveness Report 2015-2016: Competitiveness Rankings' (2015) <<http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/>>. However, the Egyptian judiciary, although not very inefficient, tends to be moderately inefficient. On a scale from 1 (extremely inefficient) and 7 (extremely efficient) of the index of the "efficiency in legal framework in settling disputes", Egypt scores 3.4. Still, in comparison to the difficult problem of high corruption of the bureaucracy, the efficiency of the Judiciary can be enhanced somehow easily to shift the Judiciary from its status of moderate inefficiency to become moderately efficient.

and/or uncorrupt bureaucracy, and standards-based legal system that is adequate for developing countries that have an efficient and uncorrupt bureaucracy, but suffers from inefficient or uncorrupt judiciary. We turn to the discussion of both rules-based and standards-based legal systems for industrial policies.

With respect to the rules-based system, the creation of a rules-based legal system for industrial policy is a very challenging task. The integrated and systemic approach can guide the design of *consistent and complementary* legal institutions that constitutes the network of this rules-based legal system of industrial policies. Due to time and space limits, this challenging and stimulating task is left for future research. Rather, this section will give some preliminary ideas and hints on how a rules-based legal system of sectoral industrial policy can be designed.

Globalization has brought an important structural change into the economies of developing countries. Foreign investors (the so-called, transnational or multinational corporations) dominate some sectors of the economies of developing countries. Most of these corporations have technological, financial, and organizational capabilities that far exceed that the capabilities of the domestic firms in developing countries. Accordingly, the support that government extends should discriminate between sectors dominated by foreign investors and those with local investors: the industrial policy for the former sectors should target *technology transfer* from the foreign investors to national or public enterprises operating in the same sector. The domestic firms of developing countries have lost the opportunity to gain access to technology through imitation and reverse engineering due to their obligations under the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS).¹⁵¹ Developing countries can still gain access to technology by implementing aggressive technology transfer policies; these technology transfer policies should therefore consist the *core* of their industrial policies for the sectors dominated by foreign firms. Particularly, these policies would also escape the prohibition of performance requirements imposed on foreign firms (e.g., export performance and local content requirements) under the Agreement on Trade-Related Investment Measures (TRIMS).¹⁵²

¹⁵¹ Article 28 of the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS), Annex 1C of the Agreement Establishing the World Trade Organization, 15 April, 1994. See also: Robert H Wade, 'What Strategies are Viable for Developing Countries Today? The World Trade Organization and the Shrinking of 'Development Space'' (2003) 10(4) Review of International Political Economy 626.

¹⁵² Article 2 and the Annex of the Agreement on Trade-Related Investment Measures (TRIMS), Annex 1A of the Agreement Establishing the World Trade Organization, 15 April, 1994. See also: *ibid* 627–628.

For the sectors that are not dominated by foreign investors, the legal system should enable these sectors to organize into *sector-specific trade associations* that can voice their legitimate demands to the industrial policy agency. These demands should focus on skilling labor, technological or financial support. The legal system of industrial policy should establish a rules-based system based on which industrial policy agency can decide whether and how to respond to these sectoral demands. In this regard, the decisions of the industrial policy agency should be subject to judicial review. Still, how can we transform *inherently discretionary* economic decisions into *legal* decisions that can be reviewed by the courts without requiring the court to review the economic rationale of these decisions?

If the problem with sectoral industrial policies is that government cannot pick winners (the asymmetry of information problem) and rent seeking, then, the creation of a rules-based legal framework for guiding the choice of the sector to be supported can be a solution. First, the governmental support to any industry is in fact an *economic subsidy*. Indeed, such subsidy normally takes the form of *outright financial subsidies* such as direct payment, tax exemptions or reductions, or subsidized cheap credit; these financial subsidies have been among the key instruments of industrial policy.¹⁵³

However, there is no justification that the government extends its support in a form of *subsidies*. In particular, the government can transform the government-industry *subsidy* relation implied by sectoral industrial policies into a *co-investment contractual* relation. In contractual relation, the government can extend support to the sector if and only if the sector incurs the cost of this support when the sector realizes the future gains. The contract through which this support can be extended can be called "industrial cooperation contract". For example, the government can calculate the cost of its response to the demands of the sector. The government can then extend its support in return of interest-bearing convertible bonds by the firms of the supported industry. The payment of both the principal and the interest rate by the firms of this sector should be deferred for a specific period (e.g., five years) until the supported sector realizes the gains resulting from this governmental support.¹⁵⁴ The government can convert its bonds into equity during or after the

¹⁵³ Georg Koopmann, Christoph Kreienbaum and Christine Borrmann, *Industrial and Trade Policy in Germany* (Nomos Verlagsgesellschaft 1997) 108.

¹⁵⁴ Alternatively, the government can be offered equity stakes in the supported firms. In this respect, it is noteworthy that in comparison to Germany, United Kingdom, and Italy, the Japanese government did not have large equity investments in the Japanese firms. See: Wakiyama (n 144), 489. This is because the

lapse of this period if and only if this conversion would result in a financial gain for the government higher than the deferred payments (i.e., the principal and interest) on the bonds.^{155, 156}

The industrial policy agency can conclude this industrial cooperation contract with either the trade association that represents any sector of the economy, or any group (consortium) of corporations (particularly the “SMEs”) in similar or different sectors. However, these contracts should not be concluded with single firms.¹⁵⁷ For this legal system of industrial policy to function properly, clear-cut rules-based verifiable criteria for allocation of industrial cooperation contracts should be enacted. These criteria may include high knowledge-intensity of the industry,¹⁵⁸ the industry’s large economies of scale, the industry’s low dependence on energy,¹⁵⁹ the industry’s

Japanese government preferred to extend its financial assistance to the Japanese industry in the form of *cheap loans and loan guarantees*.

¹⁵⁵ Trubek argues that ‘instead of traditional arms-length lending with well-defined goals set in advance, [successful industrial policies] call for substantial flexibility, risk sharing, and alliance; this requires legal innovation.’ Trubek, Coutinho and Schapiro (n 40) 56. The consummation of “industrial cooperation contracts”, as the crux of sectoral industrial policies law, is an endeavor to develop such legal innovation.

¹⁵⁶ Post-war Japanese sectoral industrial policy used an instrument called ‘business cooperative arrangements’. This arrangement functions as follows: the ‘MITI announces a master plan for reorganization of a designated industry, and the companies in the industry then develop a more elaborate program including provisions for measures such as: merger and acquisition, the establishment of a joint buying or selling agency, and technological cooperation. These arrangements must be approved by MITI.’ Matsushita (n 131), 560. The main differences between the “industrial cooperation contracts” proposed in this section and the Japanese “business cooperative arrangements” is that the industrial cooperation contracts are concluded between the *government* and the firms in *sunrise* industries to enable these industries to enhance their international competitiveness. In contrast, the Japanese business cooperative arrangements were concluded among the firms themselves in a *sunset* industry to enable these firms to survive economic downturns at the least possible costs.

¹⁵⁷ The reason that the government should conclude the industrial cooperation contracts with only a trade association representative of the sector or a consortium of firms is that requiring corporations to form a consortium facilitates the formation and the sustainability of cooperative relations among these firms. These cooperative relations would facilitate pooling the firms’ organizational and technological resources and thus enhance the technological capability of the sector as a whole. Indeed, at some stages of its industrial policy in the 1970s, The MITI required the corporations to form consortiums to be granted its financial assistance: Wakiyama (n 144), 472–473. Furthermore, due to the positive externalities resulting from the industrial support of the firms in a specific sector, these positive externalities can be internalized only if the support is extended to a large number of the firms operating in this sector.

¹⁵⁸ The standard rationale for targeting knowledge-intensive industries is that the firms in these industries are in a continuous process of learning by doing and thus enjoy increasing returns to the scale of their learning. Further, these industries have positive knowledge externalities on other industries in the economy. Motoshige Itoh and others, ‘Industrial Policy as a Corrective to Market Failures’ in Ryutaro Komiya, Masahiro Okuno and Kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 238–240. Bruce Greenwald and Joseph E Stiglitz, ‘Helping Infant Economies Grow: Foundations of Trade Policies for Developing Countries’ (2006) 96(2) *The American Economic Review* 141–145.

¹⁵⁹ This criterion is particularly important for the developing countries that suffer from shortage in domestic energy resources similar to post-war Japanese economy.

position in the structure of the network of the existing industries (industries that are *hubs* in the product space should be preferred),¹⁶⁰ and firms' size (young firms with growth potential should be preferred).^{161, 162} By relying on independent expert opinions, the court can review whether these criteria have been fulfilled; if not, the court can declare the relevant industrial cooperation agreement null and void.

The proposed legal system for sectoral industrial policies is based on three ideas. First, instead of developing a substantive legal regime of industrial policy that includes that the sectors to be supported, the proposed legal system regulates the *procedures* for making such choice; it is a procedural, and not a substantive, legal system for governing the government-business industrial cooperation relationships. The focus on procedures instead of substance gives the regime a degree of flexibility and adaptability to changes in the economic conditions.

Second, the governmental support for industry shifts in its economic nature from *subsidies*, traditionally the key industrial policy instrument, into *co-investment*. In relation to support of domestic enterprises that *create new domestic markets* by investing in products that are not

¹⁶⁰ The industries that were hubs in the network of the industries of the Japanese economy have been targeted by the post-war Japanese industrial policies; they were called the "broad-based industries" and included mainly steel and chemicals. See the discussion of the Japanese industrial policy in the previous chapter and the references cited therein. At the post-war era, the targeting of the so-called broad-based industries lacked a (neoclassical) economic rationale. However, Hidalgo and his co-authors suggest that the production of any product requires distinct conditions (e.g., geographical conditions, specific human capital, specific physical capital, and specific technology). The products that require somehow similar conditions for their production (e.g., apples and pears) are considered *proximate* to each other in the product space, but products that do not share the required conditions for their production (e.g., apples and computers) are *distant* from each other in the product space. César A Hidalgo and others, 'The Product Space Conditions the Development of Nations' (2007) 317(5837) *Science* 484. When the authors constructed a network representation of the product space where the products represent the nodes of the network and the links represent the degree of proximity of these products, they found out that this network has "a core-periphery" structure. The core is formed by metal products, machinery, and chemicals, whereas the periphery is formed by the rest of the product classes.' *ibid.* In other words, these core products (i.e., metal products, machinery, and chemicals) are proximate to most of the other products in the economy. Hence, if the domestic firms in an economy can produce these core products, this economy would be able to produce most of the other products as well. This gives a strong economic rationale for the post-war Japanese support of these core (broad-based) industries.

¹⁶¹ The rationale for extending sectoral support to the young firms in the sector is that these firms increase the competitiveness of this sector, resulting in higher economic performance of all of the firms in this sector. For an empirical evidence on the positive economic performance of the sectors in which young firms are targeted by sectoral industrial policies, see: Philippe Aghion and others, 'Industrial Policy and Competition' (2015) 7(4) *American Economic Journal: Macroeconomics* 18.

¹⁶² To be allocated industrial cooperation agreements, the relevant industries or firms should meet only *some* of these criteria; future research is required for identifying the *sufficient criteria* that the industry or the firms should fulfill to be eligible for industrial cooperation agreements.

produced domestically, these firms, whether SMEs or large corporations are confronting prohibitive risks in the developing countries context, and thus the government is highly needed to assume *a risk-sharing function*. Instead of risk sharing through subsidies, the government can share these risks associated with market creation by acting, in these cases, as *a venture capitalist*. Third, this transformation of the economic nature would bring in an important change in the legal form of the government-business relations. The legal regime would thus shift from an exercise of *discretionary administrative power* in allocating subsidies into an *arms-length contractual relation*.

Indeed, we can observe instances of co-investment and contractual relations in the industrial policies, particularly research and development (innovation or technology) policies in post-war Japan, US, China, and Germany. Co-investment appears indirectly in the post-war Japanese regime of industrial policy since ‘in many cases involving research and development, consortiums of companies jointly conducting the research receive the subsidy, but again *in many cases the recipients are obligated to repay the subsidy proceeds if the subsidized project is successful*. The subsidy for the coal mining industry is an exceptional case where individual companies receive an outright subsidy.’¹⁶³ Co-investment is more pronounced in the Chinese government intervention in venture capital markets for supporting innovation. China has been supporting vigorously private venture capital funds through establishing public venture capital funds called “venture capital guiding funds” whose objective is to support the private venture capital funds through, inter alia, making *equity investment* in these private funds.¹⁶⁴ Similarly, in its attempt to create venture capital market, the German government co-invested equity with venture capital funds in start-ups.¹⁶⁵ Due to high risks involved in the investment in technology-intensive start-ups, governmental co-investment was necessary for sharing these risks with venture capital funds in order to provide these funds with proper incentives for making such highly risky and uncertain investments. Both the Chinese and German governments have assumed the role of *creating venture capital markets*. Given the competitive comparative advantage of foreign firms, domestic investors who are no longer enjoying trade protectionism due to economic globalization, assumes excessive risks by

¹⁶³ Wakiyama (n 144), 491 [emphasis added].

¹⁶⁴ Jia Chen, ‘China’s Venture Capital Guiding Funds: Policies and Practice’ (2010) 2(3) Journal of Chinese Entrepreneurship 393–394.

¹⁶⁵ Karen E Adelberger, ‘Semi-Sovereign Leadership? The State’s Role in German Biotechnology and Venture Capital Growth’ (2000) 9(1) German Politics 114–115.

investing in competing products for which no domestic market has been created. These excessive risks are comparable to the risks that venture capital funds assume in developed countries in investing in technologically intensive start-ups. Similar to venture capital market creation function of the Chinese and German governments, governmental co-investment would share the risks of product markets creation and thus provide domestic investors with proper incentives for creating these markets. The proposed legal regime for industrial policy would enable the state to assume the function of *product market creation*. As argued in the previous chapter, the latter is a crucial intermediate objective for enhancing growth as growth process is best conceptualized as the *process of creating competitive domestic product markets in medium and high added-value products*.

In addition to equity co-investment, we can also observe the *contractual arms-length relation* in government-business relations regarding licensing the use of (some) intellectual property rights that are developed and held by the governmental research organizations in some developed economies (e.g., Germany) to the private sector, as some license agreements are consummated with the private sector against royalty fees.¹⁶⁶ Moreover, in addition to royalties, Mazzucato argues the governance structure of innovation policy should enable the governments of developed economies to secure fair returns on their excessively risky investments in innovation through, for example, income contingent loans and equity investments in high-tech firms.¹⁶⁷

In short, the proposed legal system of industrial policy may transform industrial policy from a discretionary economic policy taking the form of *governmental subsidy* into a transparent contractual relation governed by a legal framework, and thus it may overcome the informational and political capture constraints that hinder the transplant of the Japanese sectoral industrial policy in developing countries.¹⁶⁸ This envisaged legal system, however, may be suitable for developing

¹⁶⁶ OECD, 'Turning Science into Business: Patenting and Licensing at Public Research Organizations' (14 May 2003) 64–65 <<http://www.oecd.org/sti/sci-tech/turningscienceintobusinesspatentingandlicensingatpublicresearchorganisations.htm>>.

¹⁶⁷ Mariana Mazzucato, *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (Anthem Press 2013) 189–190.

¹⁶⁸ Further, by delimiting the legitimate forms of government-business collaboration, the proposed legal system for industrial policy may prevent the informal state-business alliance from externalizing the costs of economic growth to the labor class; this cost shifting was one of the characteristics of the North-East Asian developmental states (with the notable exception of the core labor in Japan). For a brief discussion of the history of labor in the developmental states of Japan, South Korea, and Taiwan, see: Dae-oup Chang, 'Labour and the 'Developmental State': A Critique of the Developmental State Theory of Labour' in Ben

countries whose judicial system is moderately efficient and uncorrupt, but their bureaucracy are inefficient and/or susceptible to political capture.

Third, the proposed legal systems for industrial policy overcome the legal constraints imposed by international economic law. This legal system does not involve direct financial subsidies from the government to the industry because they are in essence governmental investments in the industrial sector of the economy based on arms-length contractual relations and thus they escape the WTO's prohibition of export subsidies that are subsidies intended for supporting the export-oriented sectors of the economy.¹⁶⁹ Further, the industrial cooperation agreements concluded with the non-export oriented sectors are not covered by the prohibition. The industrial cooperation agreements in which the government assumes the obligations of training the workers escape also the prohibitions because they do not take the form of direct financial subsidies. Further, the envisaged legal system makes use of the opportunities of technology transfer offered by globalization by situating technology transfer at the core of industrial policy for sectors dominated by foreign investors. In sum, the envisaged legal system creates a space for developing countries' policies that partly relax the constraints of international trade law underpinning economic globalization.

With respect to developing countries that suffer from inefficient or corrupt judicial system, but enjoy a competent and uncorrupt bureaucracy, they may adopt a legal framework for sectoral industrial policy that comes close from the Japanese model, while benefitting from the modern scholarship of law and development and regulation theory in enhancing the Japanese regulatory model. This scholarship advocates a standards-based, and not rules-based, regulatory governance model of capitalism in developing countries.¹⁷⁰ In this standards-based model, a framework of public-private interactions is established where the relevant stakeholders are given adequate voice in the design and implementation of rules and decision-making.¹⁷¹ In addition, the regulatory (or supervisory) agency establishes a cooperative trust-based and persuasive relationship with the

Fine, Jyoti Saraswati and Daniela Tavasci (eds), *Beyond the Developmental State: Industrial Policy into the Twenty-First Century* (Pluto Press 2013) 97–107.

¹⁶⁹ Article 3 of the Agreement on Subsidies and Countervailing Measures (“SCM Agreement”), Annex 1A of the Agreement Establishing the World Trade Organization, 15 April, 1994. Paragraph 1(a) of this Article defines export subsidies as ‘subsidies contingent, in law or in fact, whether solely or as one of several other conditions, upon export performance.’

¹⁷⁰ Kennedy (n 2) 55.

¹⁷¹ *ibid* 40.

business; it should rely on persuasion rather than using deterrent penalties in response to first instances of non-compliance.¹⁷² For this responsive regulatory model to function efficiently, strong discretionary powers should be vested upon the regulatory (or supervisory) agency.¹⁷³ This agency should have wide discretion in its choice of the appropriate ways to respond to business's non-compliance and should have the power to escalate the non-compliance penalties to reach the maximum possible punishment of revoking the operating license of the business.¹⁷⁴ In responsive networked regulatory model, the regulator can also network with NGOs or other stakeholders to ensure the compliance of the regulated industry.¹⁷⁵

This model of governance shares some important aspects with the Japanese governance model of sectoral industrial policies. First, a *competent and responsive bureaucracy* (similar to the MITI) that Braithwaite refers to as '*regulatory capacity*' is one of the essential pre-requisites for the success of responsive regulatory governance.¹⁷⁶ Second, the MITI followed an informal consultation process for drafting administrative guidance and for persuading the business to comply with it. In case of non-compliance, the MITI did not use its formal power to impose penalties; rather, it used persuasion and negotiations, and in case of persistent non-compliance, the MITI escalated its response to informal threats that are escalated further to deterrent penalties in case of persistent non-compliance. Similarly, in case of non-compliance as Sumitomo incident shows, the MITI tried to force Sumitomo Metals to comply with its administrative by networking with the competition authority (the Japan Fair Trade Commission), the relevant industry trade association, and the Industrial bank of Japan; each of these actors have exerted influence over Sumitomo Metals to comply with MITI's administrative guidance.¹⁷⁷

Despite these commonalities, responsive networked regulatory model overcomes some of the major problems of the Japanese governance model of sectoral industrial policy, namely, its lack of

¹⁷² John Braithwaite, 'Responsive Regulation and Developing Economies' (2006) 24(5) World Development 886–887.

¹⁷³ *ibid.*

¹⁷⁴ *ibid.*

¹⁷⁵ *ibid* 889–894.

¹⁷⁶ Braithwaite recognizes clearly this point. *ibid* 889. However, he thinks that what he calls bounty hunting (Qui Tam) actions in addition to networking with powerful actors can *partially* resolve the limited regulatory capacity and political capture problems of developing countries. *ibid* 896. Although his proposals may mitigate these capacity and rent-seeking problems, they could do so only if there were clear rules or standards to be enforced. This would then beg the question of how to design such legal system for sectoral industrial policies.

¹⁷⁷ Upham (n 134) 176–184.

transparency, limitedness of democratic and participatory governance due to the exclusion of non-business interests from the consultation process, and lack of effective judicial review.

Inspired by the Brazilian industrial policies, Trubek suggests a standards-based regulatory governance for the policies of new developmental states, particularly sectoral industrial policies; the main functions of this regulatory framework are ‘safeguarding flexibility, stimulating orchestration, framing synergy, and ensuring legitimacy’,¹⁷⁸ which he explains as follows:

Safeguarding flexibility means using legal norms to allow room for experimentation, promote innovation, and facilitate feedback from experiments to policy. ... *Stimulating orchestration* means using law to structure state activities for effective new-style industrial and social policy. This means facilitating coordination and articulation within the state – both horizontally (i.e., between entities that belong to the same bureaucratic state level) and vertically (i.e., between entities that are subject to hierarchies or belong to different state levels). ... *Framing Synergy* involves using the law to frame public-private partnerships and ensure they are more effective than purely public or private solutions. Framing modalities include collaborative governance regimes that create incentives for public-private cooperation (through incentive alignment and/or the use of private contracts by public entities), risk sharing and hybrid instances in which public and private players regularly meet to interact and exchange opinions. ... *Ensuring legitimacy* means keeping government transparent and ensuring adequate participation.¹⁷⁹

Similarly, Kennedy criticizes legal formalism, which involves the creation of detailed rules-based legal systems applied mechanically by the Judiciary, endorsed by both classical developmental state and neoliberalism¹⁸⁰ and argues instead for a regulatory model for development that resembles largely the above-mentioned responsive and networked regulatory governance.¹⁸¹

In contrast, I endorse a more flexible position. This position perceives that the appropriate legal system for sectoral industrial policies in developing countries depends on the comparative

¹⁷⁸ Trubek, Coutinho and Schapiro (n 40) 55–56.

¹⁷⁹ *ibid.* [emphasis in the original].

¹⁸⁰ Kennedy (n 2) 54–57. For further critiques of legal formalism underpinning the neoliberal theory of law and development, see: Scott (n 2) 197–199.

¹⁸¹ Kennedy (n 2) 67–68.

efficiency and the probability of political capture of both the bureaucracy and the judiciary in the relevant developing country. Given this background, each developing country can then opt for either the proposed rules-based model with central role for the judiciary or the standards-based model with central role for bureaucracy and stakeholders or even an appropriate mixture of both models. Indeed, the design of context-specific legal systems for sectoral industrial policies is an important space for legal and economic scholarship where law and economics scholars, using the integrated and systemic approach, can make significant contributions.

This section is a first step in what should be a new stream of legal scholarship on sectoral industrial policies in developing economies. Legal scholars rarely engage with industrial policy; most of the legal scholarly works that engaged with industrial policy, written in the eighties, tackled the Japanese industrial policy. One of the major implications of the systemic perspective is that it does not make an *arbitrary* distinction between what belongs to the economic policy sphere and what belong to the legal sphere because the effects of policies such as industrial policy or monetary policy and legal institutions such as those of corporate governance and competition law are interdependent. The systemic perspective thus calls upon legal scholars to investigate what is normally considered a non-legal policy sphere such as industrial policy. Because of the examination of this sphere, the thesis, following the lead of Trubek who suggests a regulatory framework for new developmental state's policies such as sectoral industrial policies (see above), recommends the design of a legal system for sectoral industrial policies in developing countries.

This would give rise to a new sub-field of law called the "*industrial policy law*" similar to other established sub-fields of law such as corporate and competition laws. The epistemological objective of this suggested sub-field would be to design an internally and externally consistent and complementary legal system (i.e., a consistent and complementary institutional network) for sectoral industrial policies in developing countries. To achieve this objective, the content of industrial policy should be well defined so that it can be distinguished from financial, labor, and trade law. Indeed, the fact that the content of industrial policy cuts across other institutional domains is one of the major challenges for establishing a sub-field of industrial policy law. In particular, the wide scope of unconventional industrial interventions made by the MITI, which involved, inter alia, requiring the sector to use specific techniques or technologies for production¹⁸²

¹⁸² Spaeth (n 136), 933.

and encouraging or dissuading specific firms to produce specific products¹⁸³ complicates the task of delineating the content of industrial policy. In this section, the implicit conceptualization of industrial policy revolved around sectoral support that may take the form of technological support, skilling labor policies, and financial assistance. However, this is just an initial conceptualization of the primary industrial policies, which needs further extension and refinement. The legal area of industrial policy law should examine the legal and non-legal instruments through which these industrial policies are implemented.¹⁸⁴ Further, the proposed methodology that the scholars in this proposed field of legal scholarship (i.e., industrial policy law) can and should use is the integrated and systemic approach developed in this thesis. Given the systemic importance of sectoral industrial policies, law and economics scholars in developing economies should allocate significant cognitive resources for the examination of industrial policy law.

In conclusion, section 2 above has demonstrated that the regulatory neoliberal state has been the most prominent model of capitalism that developing countries have been recommended to follow. This model relies on formal non-interventionist regulations of markets (e.g., property rights law) subject to judicial review. The law and development literature has recommended recently that developing countries should draw inspiration from Asian and/or Brazilian developmental state model (see section 2 above); the developmental state model such as the Japanese model relies on informal bureaucratic procedures.¹⁸⁵ This bureaucratic informality was central to the success of the Japanese developmental state model because it enabled the bureaucracy to negotiate its industrial policies with the business and to adapt these policies to changes in economic conditions. The proposal of establishment of a rules-based and an economic indices-based legal system for industrial policy somehow transcends this duality of regulatory (neoliberal) vs. developmental state. This legal proposal allows for a third possibility that can be termed *regulatory developmental state* as a middle way between *regulatory and developmental states*. This third way shares the sectoral industrial policies of the developmental state and the formal legal system of the regulatory

¹⁸³ *ibid* 939–940.

¹⁸⁴ For a good overview of Japanese industrial policy instruments, see: Wakiyama (n 144), 471–496. These instruments include non-binding administrative guidance of MITI, legal powers of MITI, access to cheap loans (fiscal investment and loan program), tax incentives, subsidies, and direct execution of industrial policies by MITI. Private agreements can be added also to this list.

¹⁸⁵ For a very good overview of the elements of the Japanese developmental state model, see: Johnson (n 143) 305–323.

state. The analysis in this section is thus a preliminary and rough exploration of how a *consistent and complementary regulatory framework for a developmental state* may look like.¹⁸⁶

6. Coopetition Law: Schumpeterian Competition Law and Inter-Firm Cooperation Law

As already argued, developing countries should adopt an institutional network for regulating inter-firm relations (i.e., inter-firm relations law); this network should consist of a Schumpeterian competition law and inter-firm cooperation law. According to the Schumpeterian (dynamic) competition, the *long run* effects of these practices on *innovation* (understood broadly to include technological, managerial and organizational innovations), and not their short run effects on prices and output, should be the basis for determining whether firms' practices are anti-competitive.¹⁸⁷ This analysis would require a transformation of the analytical framework of anti-competitive effects from partial equilibrium analysis of the price effects of firms' practices to long run dynamic analysis of their effects on innovation; these analytical tools are, however, highly undeveloped in modern economics.¹⁸⁸

Moreover, the concept of Schumpeterian competition by adopting innovation as its intermediate objective can also transform the normative basis for competition law from consumer welfare to economic growth, but consumer welfare can still be chosen as the ultimate objective of Schumpeterian competition law.¹⁸⁹ In the context of developing countries, the focus on economic growth should replace consumer welfare standard, however. Singh argues that competition law

¹⁸⁶ Still, financial, labor, and environmental regulations and fiscal, monetary and trade policies are absent from this regulatory framework. Future research is required to integrate *systemically* these institutional domains into analysis.

¹⁸⁷ Mary Coleman and David J Teece, 'The Meaning of Monopoly: Antitrust Analysis in High-Technology Industries' (1998) 43(3/4) Antitrust Bulletin 838–839.

¹⁸⁸ Douglas H Ginsburg and Joshua D Wright, 'Dynamic Analysis and the Limits of Antitrust Institutions' (2012) 78(1) Antitrust Law Journal 11–12. Similarly, Hovenkamp argues that in most cases, dynamic analysis of the long-term effects of firms' behavior and market concentration on innovation would be speculative. Herbert Hovenkamp, 'Schumpeterian Competition and Antitrust' (October, 2008). University of Iowa Legal Studies Research Paper no. 08-43, 10. As already mentioned, Teece suggests that firms' capabilities can be used as a proxy of market power in order to undertake the difficult task of the analysis of the long-term effects of firms' practices on innovation. J. G Sidak and David J Teece, 'Dynamic Competition in Antitrust Law' (2009) 5(4) Journal of Competition Law and Economics 616–617.

¹⁸⁹ For example, despite their emphasis on the analysis of the firms' practices and mergers on innovation, Sidak and Teece prefer consumers' welfare to be the ultimate objective of competition law. *ibid* 600–601. *ibid* 620.

whose objective is economic development would be different from competition law model in developed economies.¹⁹⁰ Instead of focusing on maximizing competition, competition law in developing economies should be fostering economic growth.¹⁹¹ Singh suggests that the model of competition law in developing countries should therefore be based on the following:

- the need to emphasise dynamic rather than static efficiency as the main purpose of competition policy ...;
- the concept of “optimal degree of competition” (as opposed to maximum or perfect competition) to promote long term growth of productivity;
- the related concept of “optimal combination of competition and co-operation” to achieve fast long term economic growth;
- the critical significance of maintaining the private sector’s propensity to invest at high levels, and hence the need for a steady growth of profits; the latter in turn may necessitate government co-ordination of investment decisions so as to prevent over-capacity and falling profits;
- the concept of simulated competition, i.e., contests, for state support, which can be as powerful as real market competition.¹⁹²

Consequently, as already mentioned in the previous chapter, Schumpeterian competition law would transform the substantive law of competition; high market concentrations, some abuses of dominant position, mergers to oligopolies and monopolies, and recession cartels¹⁹³ might be tolerated as long as they do not create barriers to market entry and they would have positive effects on firm’s learning capabilities and innovation in the long-run.¹⁹⁴

As to the inter-firm cooperation law, given the positive effects of inter-firm cooperation on firms’ capabilities, the *legal institutions* that support the formation and sustainability of these

¹⁹⁰ Ajit Singh, ‘Competition and Competition Policy in Emerging Markets: Institutional and Developmental Dimensions’ in Philip Arestis, John McCombie and Roger Vickerman (eds), *Growth and Economic Development: Essays in the Honour of A.P. Thirlwall* (Edward Elgar Publishing 2006) 234.

¹⁹¹ *ibid* 229.

¹⁹² *ibid* 234.

¹⁹³ Joseph A Schumpeter, *Capitalism, Socialism and Democracy* (5th edn, first published 1976, Routledge 2003) 91.

¹⁹⁴ On legal reforms of antitrust law that can ensure a Schumpeterian (dynamic) assessment of the anti-competitive effects of mergers in order to take into account their long term effects on innovation, see: Sidak and Teece (n 188), 610–630.

cooperative relations are of utmost importance. By rendering inter-firm cooperation permissible, Schumpeterian competition law eliminates the post-Chicago model's impediments to cooperation, yet it does not create a legal system supportive of cooperation. Both Gunther Teubner and Cafaggi suggest that there is a need for a legal system to sustain firms' contractual networks.¹⁹⁵ Despite their focus on all types of contractual networks, including networks that are not built on the logic of cooperation, their legal proposals can be a starting point for the development of a legal system for horizontal (and also vertical) inter-firm cooperation, which can be called "inter-firm cooperation law". This inter-firm cooperation law should have the objective of *forming and sustaining the horizontal and vertical cooperative relations (networks)* among competitive firms as well as among upstream and downstream firms, respectively.

Two examples that come from Egyptian and Japanese laws can illustrate how inter-firm cooperation law would look like. Under Egyptian law, joint venture agreements, one of the major inter-firm cooperative agreements, are legally classified as *general partnership*, which is called in Egyptian Company Law, Al-Mahassa firm.¹⁹⁶ The imposition of the organizational form of partnership on joint ventures impedes the ability of the firms to structure their inter-firm relations in what they may consider to be the most efficient governance structure. This is one of the major legal impediments to inter-firm cooperation in Egypt that needs to be eliminated. In place of this impediment, a discussion over the need of joint venture law, as part of the inter-firm cooperation law, should then proceed.

The second example comes from post-war Japan. Post-war large Japanese firms were embedded in complex vertical network of sub-contracting SMEs that supplied these large firms with many components of their final products.¹⁹⁷ The sub-contractors were intensively competing

¹⁹⁵ Gunther Teubner, "And if I by Beelzebub cast out Devils, ...": An Essay on Diabolics of Network Failure' (2014) 10(4) German Law Journal 123. Cafaggi argues that "economic factors will increasingly push towards inter-firm collaboration across Europe and that the legal landscape, currently highly differentiated, should be redesigned in order to provide effective instruments for industrial policies." Fabrizio Cafaggi, 'Introduction' in Fabrizio Cafaggi (ed), *Contractual Networks, Inter-Firm Cooperation and Economic Growth* (Edward Elgar 2011) 18. See also: Fabrizio Cafaggi, 'Contractual Networks and Contract Theory: A Research Agenda for European Contract Law' in Fabrizio Cafaggi (ed), *Contractual Networks, Inter-Firm Cooperation and Economic Growth* (Edward Elgar 2011) 106–107.

¹⁹⁶ The legal system of "Al-Massa" firms is set out in Articles 59 to 64 of the Commercial Law enacted in 13th of November 1888. According to Article 1 of the Egyptian Commercial Law no. 17 of the year 1999, the articles 59 to 64 organizing "Al-Mahassa" firms are still effective.

¹⁹⁷ Takashi Yokokura, 'Small and Medium Enterprises' in Ryutaro Komiya, Masahiro Okuno and Kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988) 524–526.

with each other and they were subject to hold-up problem due to their investments in assets specific to the final product of the large firms; therefore, the large firms enjoyed significant bargaining power that they could use to lower or delay the payments owed to their sub-contractors.¹⁹⁸ To correct this situation, a special law was enacted in 1956 to prohibit the delay of payments to the SMEs, and sub-contracting firms.¹⁹⁹ This law may appear to be intended for the protection of the SMEs. Although this is correct, this law played a more important function. It maintained the sub-contracting market alive, and thus *sustained the vertical cooperative relations (i.e., the vertical cooperative networks)* between the sub-contracting system and the large firms of the Japanese economy. This law is surely a part of what I call “inter-firm cooperation law”.

Similar to industrial policy law, inter-firm cooperation law, though critical for developing countries, is overlooked, while cognitive resources are allocated exclusively for competition law as the law that governs inter-firm relations. Therefore, future research is urgently needed for developing a sophisticated legal system that sustains and enhances inter-firm cooperation in developing countries, while taking into account the peculiar cultural, economic, and political context of these countries. This inter-firm cooperation law should be also consistent with the adopted system of competition law in order to give rise to a consistent and complementary institutions that consist what can be called “competition law” that is the law that governs the simultaneous competitive and cooperative inter-firm relations in developing countries.

7. Conclusion

By drawing on the insights of law and development literature and following the steps of the systemic institutional design process, this chapter recommends a consistent institutional network for governing the supply side of product markets in developing countries. This network consists of a stakeholder model of corporate governance, sectoral industrial policies, and competition law that consists of Schumpeterian competition law and inter-firm cooperation law. Despite its positive *consistent* effects on most of our assessment criteria, particularly learning, incremental innovation, income distribution, and protection of the weak, this institutional network fails to achieve the desired level of *firms’ adaptability and allocative efficiency of labor resources*. Further, given the

¹⁹⁸ *ibid* 527.

¹⁹⁹ *ibid*.

significant differences of the cultural norms across developed and developing countries, the transplant of the Japanese or German models of stakeholder governance or sectoral industrial policies may not be successful in developing countries.

To overcome the poor performance of the proposed institutional network in terms of its effects on firms' adaptability and efficient allocation of labor and to transplant successfully the Japanese and German models of corporate governance, industrial policy, and competition law, this chapter suggests that a developing country such as Egypt should not copy the German or the Japanese models. First, the German co-determination principle does not fit the cultural norms of some developing countries (e.g., Egypt). Similarly, the Japanese model that relies on, inter alia, life-time employment does not also fit the organizational culture of Egyptian firms. Rather, Egypt should adopt a stakeholder model of corporate governance that consists of the following legal and economic institutions: concentrated ownership structure (blockholdings), a simple majority of independent directors on the board of directors, labor's non-voting representation on the board, mandatory work councils, periodical mandatory consultation process between the work councils and the management. Further, this corporate governance model should provide adequate legal protection of minority shareholders against outright expropriation, and the management should be hired from the senior long-term workers of the firm. This model of corporate governance should be complemented with a *mutual commitment* based labor regulation. Alternatively, Egypt may adopt a *modified joint-investment model* for corporate governance. This model consists of the same institutions of the above-suggested model of corporate governance, but it includes also a default co-determination principle. Instead of the mutual commitment system of labor regulation, this modified joint-investment model should be complemented with a *mutual commitment fixed term employment contracts* in which a mandatory minimum duration of the employment contract is legally required and the employees are entitled to a mandatory profit-sharing scheme. These alternative stakeholder models of corporate governance are *the systemic and integrated* answer to our primary regulatory question, "What model of corporate governance should developing countries adopt?"

With respect to sectoral industrial policies, instead of the Japanese bureaucratic informal governance of sectoral industrial policies, developing countries that enjoy a moderately efficient and uncorrupt judiciary such as Egypt should adopt a rules-based legal system for sectoral industrial policies. The crux of this system is the consummation of "industrial cooperation

contracts” between the industrial policy agency and a consortium of firms or the trade association representing the supported sector. The supported sectors or firms should be selected based on clear rules-based criteria; the choice of the supported sectors or firms can therefore be subject to a judicial review. With respect to developing countries that have a moderately efficient and uncorrupt bureaucracy, but suffer from inefficient and/or corrupt bureaucracy, these countries should adopt a responsive standard-based regulatory framework for sectoral industrial policy. This regulatory framework is similar to the Japanese governance model, but it ensures transparency, participation of relevant stakeholders (e.g., labor and environmentalists), and a (limited) degree of judicial review. These are, however, succinct and sketchy legal systems for sectoral industrial policies; a new sub-field of legal scholarship dedicated to the development of what can be called “industrial policy law” should be established.

Finally, regarding cooperation law, developing countries should adopt a Schumpeterian competition law; the pillars of this model of competition have been already spelled out in the previous chapter. In addition, they should adopt legal institutions supportive of inter-firm cooperation, i.e., they should adopt an *inter-firm cooperation law*. A new sub-field of legal scholarship that is dedicated to the design and analysis of the inter-firm cooperation law should be developed. This is a fertile area for future research.

Chapter

13

Conclusion and Further Research

1. A Personal Account of the Research Project

The starting point for this research project was a personal question: given that I am going to write a Doctorate thesis on economic regulations, I had to choose an area of economic regulations to investigate and to be my future *area of specialization* as an academic. I thought the specialization decision is one of the major decisions that I could make as a scholar because I will dedicate my life to the chosen area of specialization. It was clear that the main underlying criterion for choice was the *underlying values* that I would be serving by specializing in each area of scholarship. As a scholar coming from the developing world, I was particularly concerned with justice, socio-economic human development as conceptualized by Amartya Sen, the protection of the weak, and fair distribution of wealth and power.¹ However, in the mainstream law and economics scholarship on corporate governance, banking regulation, securities regulation and competition law, I was puzzled that *none of my concerns was present* in this scholarship. Restoring economic efficiency through the correction of market and organizational failures, and not even economic growth, was the normative framework for analysis and design of these economic regulations. This complicated the choice of specialization, as I was clearly unable to make a choice, but I still had to write a Doctorate dissertation on economic regulations.

As I had to write something, I started with writing a chapter that advances a prolonged critique of neoclassical-new institutional law and economics approach to socio-economic regulations.

¹ Indeed, by the end of this research project, I became also highly concerned with developing a more comprehensive *dematerialized* normative basis for socio-economic regulations, which I discussed briefly in the conclusion of chapter 9.

However, this did not resolve the specialization problem and did not enable me to develop a clear research question for the Doctorate dissertation. At this time, three main critiques of neoclassical-new institutional law and economics influenced my thought: neoclassical-new institutional law and economics lacks a *systemic perspective* over legal institutions, it ignores the *valid insights of non-neoclassical* schools of thought, and it has a one-dimensional normative framework for assessment and design of socio-economic regulations. Out of the first two of these critiques, the idea of *an integrated and systemic approach* to socio-economic regulations was born. By using the integrated and systemic approach, I was able to deepen the third critique and develop an alternative integrated and systemic normative framework for regulatory governance of capitalism.

When I presented the idea of integrated and systemic approach at the first time, I was confronted with the valid critique of my supervisors that it is an interesting approach, but it is too complex to be applied sensibly to any socio-economic legal problem. The operationalization of the approach and the attempt to apply it to socio-economic regulatory problems in the applied part grew out of my attempt to address this insightful and challenging critique.

Interestingly, by going through the above process, the problem of choosing a research question for my Doctorate thesis, and the problem of lack of focused analysis of economic growth, capabilities expansion, and protection of the weak in law and economics scholarship on economic regulations have been resolved. However, the issue of area of specialization choice is still unsettled. Given that the thesis demonstrates that the boundaries created between the institutional domains (i.e., economic regulations) are artificial due to their strong interdependencies, I found that I have spent most of my time reading relevant literature on what appears to be *unrelated or weakly related* economic regulations and policies such as corporate governance, competition law, and industrial policy. Further, I spent a lot of time reading on systems theory, philosophy of economics, institutional economics, moral philosophy, and normative economics for the theoretical part of the thesis and chapter 9. Unfortunately, my readings that are relevant to *a single* area of research are too limited to allow me to claim that I am a specialist in any of these areas of research.

This lack of specialization has been a natural result of the advocated systemic approach. Systemic thinking poses a tremendous challenge to the organization of research in social sciences. One researcher cannot address adequately any legal problem systemically, and since almost all economic and legal problems are systemic; one or two researchers cannot adequately address most

of these problems. For instance, for an adequate assessment of the consistency of the Japanese institutional network, a team of lawyers, economists, sociologists and political scientists who are specialized in organization theory, corporate governance, corporate law, competition economics (industrial organization), competition law, economic growth, law and development, labor law, labor economics, financial economics, financial law, economics of innovation, and political economy is needed. Ideally, this team should be acquainted with Japanese political, economic and social systems, or at least joined by a specialist in Japanese studies. For having a proper communication among these scholars, we need a sort of systemic thinkers who knows *a bit* about every part of the system and *a lot* about the way these parts *link and interact* with each other. This systemic thinker would act as *a coordinator* of this large group of specialists. Without such large teams of scholars, any systemic analysis (whether consistency or complementarity analysis), though highly insightful, would be too limited and tentative to form a proper basis for informing law and policy-making.

More importantly, in the process of writing this thesis, I have found that a large number of economic, sociological and legal schools of thoughts, theories and areas of scholarship (such as law and economics, law and society, the role of government in the economy in public economics, law and development and comparative capitalism) are addressing, inter alia, important aspects of a similar research question: the analysis and design of socio-economic legal institutions of capitalism. The integrated and systemic approach, as operationalized, enabled me to connect smoothly the insights of these schools of thought and theories and to have an enriched understanding of socio-economic legal institutions. Instead of the fragmentation of the research on socio-economic regulations, the integrated and systemic approach enabled me to create captivating conversations and dialogues among schools of thought and research areas. I am no longer interested in debunking neoclassical-new institutional economics as an approach to socio-economic regulations and policies; I am more interested in discovering how the *problem-specific* valid insights of neoclassicism and other approaches can allow us to comprehend the tremendous *complexity* of regulatory research questions and to provide *innovative and genuine solutions* to these complex problems.

This is briefly my personal story of how this project has come into existence and the main lessons that I learned and tried to communicate to the reader in the process of writing this thesis.

We can now turn to a more principled discussion of the intellectual contributions of this thesis and the recommendations for future research.

2. Contributions of the Research Project

We can divide the contributions of these thesis into two sets of contributions: the contributions of the theoretical part (parts I and II) and the applied part (part III).

2.1. The Contributions of the Theoretical Part: “Integrated and Systemic Approach” as a New Operationalized Law and Economics as well as Law and Development Approach to Economic Regulations

Legal scholarship has been concerned with the interpretation of existing legal norms and systematizing and commenting on judicial interpretation. This doctrinal form of scholarship enshrined in legal positivism has resulted in the creation of some legal theories and principles (e.g., freedom of contract, legal theory of the firm, and human rights) that legal scholars began to use for analysis and design of legal rules. Over the last fifty years, interdisciplinary legal studies (e.g., law and economics, law and society, law and politics, law and literature, law and anthropology, and law and philosophy) have been on the rise, primarily in the US, while some European legal scholars have been trying to catch-up the American interdisciplinary revolution. Interdisciplinary legal scholars use their favorite discipline (e.g., politics, economics, or sociology) for analysis of the real-world effects of legal institutions and recommending legal reforms. Interdisciplinarity has been liberating for legal scholars; the legal scholar no longer has to legitimize, through objective interpretation, the existing legal systems that are reflective of the existing power structure of the society; rather, she can challenge these legal institutions. In this respect, Chicago-neoliberal law and economics scholars are no less revolutionary than their critical legal studies colleagues; both are vigorously critical of some of the existing legal institutions. It was not long time until interdisciplinary legal scholars began to recognize that most of interdisciplinary legal studies are too superficial. How can a legal scholar say something meaningful about economic analysis of legal institutions if he is not a proper economist, and how can he engage into an in-depth analysis of legal institutions from law and society perspective if he has read only few sociological works?

Many interdisciplinary legal scholars ignored the problem; their superficial interdisciplinary studies already finds a place in top legal journals. Anyway, neither economists nor sociologists are going to read their precarious economic or sociological analysis of legal institutions. Most interdisciplinary legal scholars in elite US law schools, however, tended to get degrees in one neighboring discipline; they moved beyond superficial scholarship to an imperialistic mode of interdisciplinary legal scholarship. They are not only proper economists; they have become only economists. They have no distinct voice as interdisciplinary legal scholars. In short, interdisciplinary legal studies, particularly its law and economics variant, are in a deep state of crisis; these studies are either *superficial or imperialistic*. More problematically, interdisciplinary legal movement cannot retreat to old ages doctrinalism. They can no longer have the boldness of doctrinal legal scholars who could make unfounded claims about the effects of legal institutions or the necessity of their recommended legal reforms, or the objectivity of doctrinal interpretation. They have no incentives to do so either; interdisciplinary legal institutes, academic and policy-making advisory positions have been equivalently on the rise. Interdisciplinary legal studies are here to stay, but they are in a state of *a deep crisis*.

The main contribution of this thesis is to suggest *an approach* for analysis and design of legal institutions, particularly socio-economic regulations (and policies), which promises *unique voice* to interdisciplinary legal scholars, and an exit of the current impasse of interdisciplinary legal studies. Neoclassical-new institutional economists are not lacking a clear approach with replicable steps for approaching socio-economic regulations and policies because the neoclassical-new institutional school of thought provides them with an analytical framework whose analysis can be replicated. It is no coincidence that this approach has dominated economic law-making sphere in parliaments and regulatory agencies in both Europe and US.

On the contrary, legal scholars are lacking a comparable *operationalized* approach for analysis and design of socio-economic legal institutions. It is not a coincidence that unlike sociologists and economists, legal scholars find the “methodology section” to be the hardest to write in their scholarly research. When a legal scholar working on economic regulations is asked about the method, the analytical framework, or the approach he is using for analysis and design of socio-economic regulations, he might mention law and economics, comparative institutional analysis,

comparative law and economics, functional approach,² law and economics (the left strand),³ comparative law, or law and society. The first four are nothing but the application of neoclassical-new institutional economics to legal institutions. The left strand of law and economics approach is nothing but applying a heterodox school of economic thought to legal institutions. Further, comparative law is not really a method for analysis and design of economic legal institutions unless complemented with *a clear analytical framework* for guiding the comparison. For example, without the integrated and systemic perspective, the comparison of the consistency of the American, German and Japanese institutional networks of product markets would not have been possible. Without a clear analytical framework, comparative law is *an empty analytical framework* as far as analysis and design of socio-economic regulations are concerned. Finally, law and society or sociological jurisprudence of economic regulations such as social systems theoretical analysis provides important insights for analysis and design of socio-economic legal institutions, but is significantly insufficient because it does not engage in a serious economic analysis of these regulations.

Accordingly, neoclassical-new institutional law and economics seems to be the only well-developed approach that legal scholars can use for analysis and design of socio-economic regulations. The main contribution of this thesis is to provide legal scholars with a well-developed operationalized approach to economic regulations, which has a strong epistemological basis, and well-defined replicable steps for its application. Legal scholars should no longer shy away from writing the methodology section in their research on socio-economic regulations; they should now take this section as an opportunity to challenge neoclassical-new institutional law and economics approach by invoking and engaging with *the integrated and systemic approach*.

Legal scholars and some economists have already approached legal institutions of capitalism by integrating the insights of neoclassical with non-neoclassical schools of thought and theories. Their eclectic approach, though highly insightful, seems unprincipled. Further, some institutional economists have already endorsed a systemic perspective over legal institutions. Integrated and systemic approach uncovers the common methodological outlook underlying these studies that

² Reinier Kraakman and others, *The Anatomy of Corporate Law: A Comparative and Functional Approach* (2nd edn, Oxford University Press 2009) 3–4.

³ For example, Duncan Kennedy, an important critical legal scholar, mentions that one of his research areas is ‘Law and Economics: Left Wing Law and Economics’, see his website: <http://hls.harvard.edu/faculty/directory/10469/Kennedy> (last visited on 4.9.2016).

span across corporate governance, banking regulation, competition law, labor law, and regulatory compliance studies. This thesis provides a clear conceptualization of what is meant by “integration” and “systemic thinking”, and then establishes a solid epistemological basis for the integrated and systemic approach. In the course of doing so, this brings forcefully *philosophy of science* discussions into the center of interdisciplinary legal studies. Following interdisciplinary studies literature, this thesis also operationalizes the integrated approach to economic regulations into replicable steps.

Similarly, chapter 6 of this thesis also operationalizes the systemic approach to analysis and design of legal institutions. The starting point for operationalizing the systemic approach is to identify *the systemic unit* of legal analysis and design that is *institutional networks (i.e., legal systems) rather than distinct legal institutions*. In order to systemically analyze and design the institutional networks of capitalism, chapter 6 has developed a four-step analytical framework for the systemic analysis of the (*external*) *consistency* of these *institutional networks*. Further, chapter 6 has developed a *systemic toolkit and process* for design of *consistent* institutional networks; since consistent institutions are presumably complementary, the designed consistent networks can be presumed to be complementary. The proposed systemic toolkit and process allow us therefore to design a prima-facie complementary legal institutions. To the best of my knowledge, this is the first scholarly attempt to develop design concepts and toolkit for systemic design of legal institutions conceptualized as institutional networks. Hopefully, this would open the door for legal scholars to develop a theory for (systemic) legal design.

By drawing on interdisciplinary studies, chapter 7 operationalizes the integrated approach to legal institutions of capitalism. More importantly, by drawing on interdisciplinary studies and systems thinking literature, chapter 7 has shown how the integrated and systemic perspectives, though standalone perspectives, *complement each other in a virtuous circle*. Then, chapter 7 brings together both the operationalized systemic and integrated perspectives into a *unified process for the application of the integrated and systemic approach*, which reflects clearly the complementary virtuous circular relations between the systemic and integrated perspectives. Chapters 8-12 have developed two standalone applications of the integrated and systemic approach and demonstrated how the integrated and systemic approach can be put into action.

As the methodological foundation and the methodical steps for its application are laid down, the integrated and systemic approach is now a ripe analytical framework for analysis and design

of legal institutions of capitalism. The onus is now on neoclassical-new institutional law and economics to justify the epistemological foundations of their approach, a difficult task given the fragility of these foundations demonstrated by this thesis.

Moreover, proper application of the integrated and systemic approach necessitates organizational changes in the organizational structure of academic education and research on legal institutions; chapter 4 has suggested that research should be organized around legal problems. These organizational changes would have deeper implications for academic research and the power structures underlying both academia and policy-making sphere, which would make the installation of these organizational changes difficult to implement. In both democratic and authoritarian societies, education and research in social sciences has an indoctrination function; students of both law and economics are not taught to challenge the fundamentals of the existing systems of politics, law, or economics, but they are taught to accept and cherish these systems (e.g., existing political institutions and legal systems), while learning the research tools that can enable them to *improve* the existing systems and thus implicitly stabilize their underlying power structures. Education plays an important indoctrination function, but indoctrination can only take place by using an apparently rational, logic and consistent framework of reference, i.e., a cognitive perspective of a specific paradigm or theory, while claiming the non-existence or futility of other cognitive perspectives. Disciplining mechanisms such as the institutions of PhD supervision, academic promotion (tenure), academic publication, research excellence, and research funding are already strong mechanisms for *thought discipline* in academia, which ensure the adoption of a mainstream school of thought or theory.

Only through this process of transforming a cognitive perspective into unquestionable piece of knowledge, education functions as a powerful instrument of indoctrination and research becomes concerned with the problems posited by this perspective, regardless of the real-world problems. Scholars become imprisoned in this cognitive perspective; they indoctrinate generations of future scholars and spend their lives investigating the problems as formulated by this perspective, while truthfully believing that they seek *true and objective* knowledge. By stabilizing the production of knowledge in this way, the power structures of the existing economic and political systems are stabilized; academia does not pose a real irritation to these power structures. As long the mainstream cognitive perspective in academia does not engage in a radical critique of the fundamentals of existing systems and their power structures and does not propose feasible

alternatives, mainstream academic research, including its most critical strands (e.g., the market failures theory in mainstream law and economics as a critical voice of deregulation), legitimizes the existing systems and their underlying power structures.

Reorganization of education and research along the lines of integrated and systemic approach implies that indoctrination is replaced by truly free thought as a principle of education, and the cognitive perspectives of paradigms and theories become a source of empowerment and liberation. Academia would then become a disturbing irritant for the existing power structures underlying economic, political and social systems. Existing political institutions of developed economies (whether democratic or not) cannot tolerate a truly free academia; the latter would be uncovering the discourses and abuses of social, economic, and political power and involving in a restless process of deconstructing power and imagining new systems. The above-mentioned mechanisms of discipline of thought in academia have been enormously effective; how many legal scholars and economists believe that they do not think freely? *It is astonishing how we come to think that we are free, while we are deeply constrained.* The power structures underlying existing social, economic and political systems would not give up easily these *tacit, but powerful* disciplining mechanisms.

The integrated and systemic approach by requiring the scholars to investigate other parts of the system and other schools of thought and theories has an enormous *liberating force* of their way of thinking. This is among the major contributions of the integrated and systemic approach, but it is also among its most significant challenges; scholars who opt for using the integrated and systemic approach are indeed challenging the power structures of academia that reflect the power structures of the existing socio-economic-politico system. Integrated and systemic scholars must recognize that the struggle for creating a space for truly free thought has been the major struggle for humanity and we are far from winning this struggle; if this struggle is to be won, our socio-economic-politico institutions would be different. At least, these institutions will show true, and not rhetorical, concerns for global economic justice.

In short, this thesis has made an important theoretical contribution to the studies of economic regulations that is the development of a new operationalized approach to the analysis and design of these regulations called “the integrated and systemic approach”. Table 7.1 in chapter 7 summarizes the main theoretical differences between neoclassical and integrated and systemic law and economics. Not only the integrated and systemic approach overcomes the neoclassical-new

institutional dominance and provides a distinct voice for interdisciplinary legal scholars. It also overcomes the main critiques advanced to the neoclassical-new institutional approach to legal institutions such as its inherent biases and reductionist perspective. Scholars of law, economics, political economy and sociology, who are dissatisfied with neoclassical economics and heterodox economic paradigms, could identify themselves with the integrated and systemic approach and follow its well-defined processual steps in addressing various regulatory questions. Moreover, this approach fills in *the analytical lacuna* in law and development literature; the operationalized integrated and systemic approach is both a law and economics as well as law and development approach. The applied part shows that the integrated and systemic approach enables the developing economies to design institutional networks that are consistent and reasonable in their effects on the main drivers of economic growth.

2.2. Theoretical and Concrete Substantive Contributions of the Applied Part

In addition to the above theoretical contribution, the applied part of the thesis, though too tentative to form the basis for any legal reform, has provided us with some important theoretical insights and concrete substantive contributions in many legal areas such as corporate governance and competition law. As for the theoretical insights shown by the applied part, this part has demonstrated that a seemingly non-complex legal problem (e.g., the choice of corporate governance model for developing countries) that law and economics scholars tend to address in short journal articles is indeed a very complex research question; a lengthy discussion could only provide a tentative integrated and systemic answer to this question. . Indeed, the integrated and systemic approach reveals the inherent complexity of the socio-economic regulatory questions by engaging with the relevant insights of numerous schools of thoughts and theories and by situating the legal institutions subject to analysis within the legal system in which these institutions are embedded. In contrast, the neoclassical law and economics perspective simplifies the inherently complex regulatory problems by ignoring the institutional network (the reductive epistemological position) and ignoring the insights of other schools of thought and theories (the positivist epistemological position). This simplification lacks any methodological justification; *accurate* answers for *mistaken* simplifications of the research problems would be, in most cases, wrong answers to these problems. Recognizing the inherent complexity of the economic regulatory

problems is not a minor contribution; not only it brings us to a deeper understanding of the problem we are confronting, it establishes a strong case for humility, pragmatism, experimentation, and contextual legal analysis.

Indeed, due to the complexity of the application process of the integrated and systemic approach, the regulatory analysis and design developed by applying the approach are highly tentative. The process of application of integrated and systemic law and economics shows that the answer provided depend on the systemic reformulation of the question. There are many possible systemic reformulations, and thus there are also many possible answers depending on which formulation has been chosen. Due to the large number of the economic and non-economic cognitive perspectives that are relevant to each of the sub-research questions, the researcher has to choose what he considers to be the most relevant cognitive perspective. The answer to the regulatory question depends on the chosen cognitive perspectives. By including other cognitive perspectives, the answer would change. Assuming that different researchers would choose similar cognitive perspectives, they may come up with a different set of refined insights. This is because they may diverge on the set of insights that they think to be relevant, they may interpret similar insights differently, or they may disagree over the set of valid insights. Assuming further that the researchers would end up with the same set of refined insights, they may still integrate them differently. This implies that it is very difficult to reach a consensus over the answer to each of the sub-research questions required for tackling the systemically formulated question and primary research question. As a result, each of the processual steps for the application of the integrated and systemic approach illustrates that it is almost impossible to create a consensus over what would be the socio-economic impact of legal institutions in short, medium and long run and over best regulatory design, a consensus that emerges easily under neoclassical-new institutional law and economics approach.

In case there is a diversity in the views of neoclassical-new institutional law and economics scholars, their competing views on one regulatory issue are limited in number (normally two) and in most cases, their disagreements are not fundamental. The limited non-fundamental diversity strengthens the *scientific façade* of neoclassical law and economics approach. The integrated approach reveals that what seems to be a scientific nature of neoclassical law and economics is nothing but a sheer and problematic simplicity. It has been easy for neoclassical law and economics to appear as scientific because it has ignored the complexity of regulatory questions and endorsed

an analytical micro-perspective without complementing it with a systemic perspective. Further, it has overlooked the valid insights of other economic and non-economic cognitive perspectives. It operates according to the unfounded implicit assumption that the neoclassical school of thought is both necessary and sufficient for understanding and regulating the socio-economic system, and that other schools of thoughts in economics, sociology or law have nothing valid to offer. Neoclassical law and economics assumes implicitly that these insights of non-neoclassical perspectives are simply wrong.

Integrated and systemic law and economics reveals simple and intuitive facts that neoclassical law and economics has been ignoring. Regulatory questions are questions about design, social planning, social engineering or governance.⁴ Scholars across social sciences such as political scientists, sociologists, economists and lawyers differ over normative objectives of regulations and in case they agree to the same normative objective such as justice or fairness, they may disagree on its meaning. In case they agree to normative objectives and their meaning, they may disagree over the weights they wish to attach to these normative objectives. Given this normative diversity, a consensus over regulatory design seems to be unattainable. Assuming that scholars agree to a normative system for regulatory governance, it is very hard to agree on which set of legal institutions would be able to achieve these objectives, given the complexity of the institutional network, and the excessively numerous alternative institutional networks. The assessment of the socio-economic effects of any set of legal institutions would be highly tentative due to the complexity of the institutional network and the interactions of heterogeneous agents over this network. Finally, regulatory questions are questions about design and thus institutional innovations are endless. We cannot predict what engineers would invent after one century from now. Similarly, we cannot predict the institutional innovations that legal scholars may come up with. Given this open-ended nature of institutional innovation, one of the major sources of institutional innovations is to rethink the institutional network to come up with new institutional set-ups, which are more simple, consistent and effective. For example, the applied part has shown that there are at least eight potential institutional networks for the supply side of product market in developing economies. Many of these constellations have not been explored. Development economists have

⁴ The reader may opt for the term that he may be comfortable with, given the fact that many readers may dislike terms such as social engineering. The point I wish to make is that regulatory reform is a normative problem of *engineering, planning or design* and not a positive question.

been basically stuck in prolonged discussions over neoliberal versus developmental state models although the possible models for regulatory governance of capitalism go far beyond this dualism. Further, the integrated and systemic examination of real development experiences opens the door for further institutional innovations. Consider, for example, *coopetition law* inspired by the cooperative relations among the post-war Japanese firms.

The project of the integrated and systemic approach as such would be inconsistent with the globalization project because it would result in varieties of institutional foundations for capitalism, creating a wider variety of capitalist models. In these varieties of legal regimes, transnational corporations would find it difficult to accumulate capital and reestablish themselves beyond borders. Varieties of legal regimes of capitalism would inhibit deepening of the globalized markets. They would help re-embedding markets into national societies; embeddedness of the economic system into its socio-environmental context is only possible through a participatory process in which individuals in their social role as citizens while being well informed of the wide range of institutional alternatives. This would give the space for the people of each society to express their intrinsic values that can then form a foundation for assessment and design of socio-economic laws. In sum, in addition to revealing the sheer simplicity of neoclassical law and economics, the integrated and systemic approach, if adopted, would result in a well-founded resistance to globalization.

In addition to these important theoretical insights revealed by the application of the integrated and systemic approach, the applied part has made some important *substantive concrete* contributions to the legal areas of corporate governance, inter-firm relations, industrial policy, and the normative theory of economic regulations. First, the integrated approach brought *macroeconomic stability and organizational learning* to the center of the analysis and design of the institutions of corporate governance. Further, based on the integration of the insights of the knowledge theories of the firm and new institutional theories of the firm, chapter 8 has developed an integrated three-step framework for the assessment of whether the institutions of any corporate governance model ensures viable organizational learning and result in a reasonably cost-effective corporate governance system. Central to this framework is the organizational conditions for viable processes of organizational learning. Given this framework, the stakeholder model seems to dominate the shareholder value model as far as its non-embedded effects on organizational learning is concerned. In addition, chapter 11 then used this integrated framework for assessing

the organizational learning effect and cost-effectiveness (i.e., efficiency) of the post-war Japanese corporate governance system.

Second, in contrast to the neoclassical normative theory of economic regulations, the applied part has developed an integrated and systemic normative theory of economic regulations. This integrated and systemic theory determines *a system of regulatory objectives* for economic regulations; these objectives are divided into ultimate and instrumental objectives. The ultimate objectives are in turn divided into ultimate systemic and local objectives; the minimum thresholds of these ultimate objectives should be constitutionalized into an economic constitution. Economic regulations should then seek to achieve *the minimum thresholds* of these ultimate objectives.

To achieve the systemic ultimate objectives, economic regulations should achieve the instrumental objectives that can ensure the achievement of the minimum threshold of these ultimate objectives because economic regulations can affect these ultimate systemic objectives only indirectly through their effects on the ultimate objectives. Since economic regulations (e.g., corporate governance) can affect numerous instrumental objectives depending on how these regulations are designed (whether designed as a shareholder value or a stakeholder model), we need to *assign* each of the ultimate and instrumental objectives to each institutional domain. This objectives assignment problem and the proposed rules and principles for resolving this problem is among the main contributions of the applied part of the thesis.

Not only has the integrated and systemic approach enabled us to develop a system of regulatory objectives and to assign these objectives to economic regulations, it has also enabled us to attach weights to the instrumental objectives that each regulations should seek to achieve.

The applied part has used this sophisticated integrated and sophisticated normative theory of economic regulations to develop a system of objectives for the institutional network of the supply side of product markets in developing countries. Given this system of objectives and its network structure, chapter 10 has derived multi-criteria for assessment of the consistency of the institutional networks of product markets in the US, post-war Japan, and post-war Germany. Further, it has shown that some of these criteria (e.g., firms' learning capabilities) should be given high weight.

The integrated and systemic normative framework of economic regulations is one of the most important substantive contributions of the applied part of the thesis; it provides legal scholars with a distinct and sophisticated normative framework for assessment of economic regulations, which

overcomes the critiques of and poses a significant challenge to the neoclassical normative theory of economic regulations.

The applied part has also conducted a systemic consistency analysis of a large-scale institutional network (i.e., a large legal system) that consists of competition law, corporate governance, and industrial policy. Given that the four-step process of consistency analysis is one of the theoretical contributions of this thesis, it is reasonable to claim that the systemic consistency analysis of the post-war Japanese institutional network is the first legal (and economic) study of the consistency of this network. In economic scholarship, the previous comparative capitalism studies of capitalism have not made a clear distinction between the analytical concepts of complementarity and consistency, or between *embedded and non-embedded effects* of the institutional domains central to the assessment of the consistency, and they have not developed sophisticated normative framework for assessment of the consistency of the institutions of capitalism. More importantly, their *positive* analysis of these institutions of capitalist economies was not embedded into a systemic process aimed at guiding the *normative design* of consistent institutional networks for developed or developing economies.

Further, chapter 12 has made some important substantive contributions. First, this chapter has shown how the systemic institutional design concepts and process developed in chapter 6 can be used for the choice of a consistent institutional network for developing countries. It has suggested that developing countries should adopt an institutional network that consists of sectoral industrial policy, stakeholder corporate governance, and a cooperation law that consists of inter-firm cooperation law and Schumpeterian competition law. Indeed, cooperation law is a distinct legal system for governing inter-firm relations, which, to the best of my knowledge, has not been proposed previously in the legal literature. This proposed institutional network is the antithesis of the neoliberal institutional network that consists of a shareholder value corporate governance and post-Chicago model of competition law, and rejects sectoral industrial policies and does not encourage inter-firm cooperation.

To be transplanted successfully in developing countries, this institutional network should be adapted to the social norms prevalent in these countries. Further, it should be adapted to overcome its underperformance in terms of firms' flexibility and efficient allocation of labor resources. Chapter 12 suggests therefore a rules-based legal system for sectoral industrial policy based on the consummation of "industrial cooperation contracts" with the trade associations representing the

supported sectors or a consortium of firms. The selection of the supported sectors or consortiums of firms should be made in light of suggested clear-cut criteria. This rules-based industrial policy law fits developing countries that enjoy a moderately efficient and uncorrupt judiciary, but suffers from an inefficient and/or corrupt bureaucracy. In contrast, a standards-based industrial policy law has been suggested for developing countries that enjoy a moderately efficient and uncorrupt bureaucracy, but suffers from an inefficient and/or corrupt Judiciary.

With respect to corporate governance, chapter 12 has suggested that a developing country such as Egypt should adopt a stakeholder model of corporate governance that includes the following legal and economic institutions: concentrated ownership structure, a simple majority of independent directors on the board of directors, labor's non-voting representation on the board of directors, mandatory work councils, and periodical mandatory consultation between the management and the work councils. In this corporate governance system, minority shareholders should be legally protected against outright expropriation and the management should be hired from the senior long-term workers of the firm. A mutual commitment based labor regulation should complement this corporate governance system. Alternatively, Egypt may adopt a modified joint-investment model of corporate governance, which includes a default co-determination principle in addition to the above-suggested institutions of the stakeholder system of corporate governance. Instead of the mutual commitment system of labor regulation, labor law should secure a mutual commitment fixed-term employment contracts to complement this system of corporate governance. To achieve this objective, labor law should mandate a minimum duration of these employment contract and a profit-sharing scheme.

Moreover, chapter 12 suggested the need for the establishment of new legal field that aims to develop a consistent coopetition law that consists of inter-firm cooperation law and Schumpeterian competition law, which can ensure a sustainable coooperative relations among the firms of developing economies.

3. Further Research

Throughout the thesis, the cognitive perspective of the integrated and systemic approach has illustrated that legal scholarship on economic regulations does not engage with numerous

important regulatory questions that should be subject to future research. This section outlines *some* of these research questions that need future research.

First, chapter 6 of this thesis has sought to develop a four-step analytical framework for analysis of the consistency of legal institutions; still, this framework needs to be enhanced. Further, legal scholars and economists should attempt to develop analytical frameworks for analysis of *institutional complementarities and other forms of institutional interdependencies (e.g., institutional compatibility)*. In addition, future research should seek to formalize these analytical frameworks of institutional consistency and complementarities. Further, the systemic legal design toolkit has been a preliminary endeavor to develop a process for design of consistent and reasonable institutional networks (i.e., consistent legal systems); this should open a future stream of legal and economic scholarship that develops more sophisticated analytical toolkits for design of consistent and complementary legal institutions. Overall, the operationalization of the integrated and systemic approach needs to be enhanced and formalized, if possible. The formalization, if successful, should not impede the continuous use of informal frameworks for analysis because they complement and cannot substitute each other.

Second, the systemic critiques of the indices-based econometrical analysis of legal institutions developed in chapter 5 call for a new stream of *systemically informed* empirical analysis of legal institutions. This is both challenging and urgent research agenda for legal and economic empiricists.

Third, this thesis aimed to develop a systemic analysis of the institutional network of capitalism, but it did not integrate important non-institutional variables into this systemic analysis of capitalism such natural resources. Future research should seek to develop systemic analytical frameworks of the capitalist system that analyzes systemically the interaction of institutional and non-institutional variables such as natural resources.

Fourth, the application of the integrated and systemic approach suggests that new six areas of legal and economic scholarship need to be established and examined. They include integrative economics (suggested in chapter 4), economic regulatory studies (suggested in chapter 4), industrial policy law (suggested in chapter 12), inter-firm cooperation law (suggested in chapters 11 and 12), coopetition law that consists of inter-firm cooperation law and Schumpeterian law (suggested in chapters 11 and 12), integrative and systemic normative theory of economic policies and regulations (suggested and partially developed in chapter 10). As already argued, the

integrated and systemic approach should be used for examining each of these suggested fields of legal scholarship. For example, future research projects should develop, using the integrated and systemic approach, internally and externally consistent legal systems for sectoral industrial policies, inter-firm cooperation, and cooperation for developing countries. Similarly, the systemic normative theory of economic regulations developed in chapter 10 is indeed a broad normative theory for both economic regulations and policies. This systemic theory opens the door for a broader *integrated and systemic normative economics* that can and should replace welfare neoclassical economics. Instead of welfare criteria, the system of (ultimate and instrumental weighted) objectives is the crux of this integrated and systemic normative economics.

Fifth, the conclusion of chapter 10 illustrates that many of the significant insights of the Kantian ethics, virtue ethics, and religious moral theories have not been integrated into the development of the system of regulatory objectives for the economic regulations of the product markets in developing countries. Future research that integrates the insights of these theories is urgently needed in order to develop a better integrated normative framework for economic regulations that reflects a *non-materialistic* understanding of the nature of humans and the purpose of their existence.

Sixth, almost every socio-economic legal problem that legal scholars or economists have already addressed can be re-addressed by using the integrated approach, the systemic approach, or the integrated and systemic approach. The previous mainstream law and economic studies are not of no use; rather, their insights are the building blocks on which the integrated and systemic approach builds. The integrated approach assumes that the legal problems has already been addressed from the perspectives of numerous schools of thought and theories; otherwise, the integrated approach cannot be applied successfully. Further, the systemic approach requires a *broad informational basis* that includes a large amount of theoretical and empirical knowledge about the non-embedded and embedded effects of each institutional domain on numerous assessment criteria; otherwise, systemic analysis, whether compatibility, consistency or complementarity analysis, cannot be undertaken.

Seventh, a thorough consistency and complementarity analyses of the institutional networks of post-war Japan, post-war Germany, US, China, South Korea, Brazil, Taiwan, and Singapore are highly needed for guiding the design of legal institutions of capitalism in developing countries. Similarly, since most of these institutional networks diverge from the theoretically plausible

institutional networks (such as the eight plausible institutional networks identified in chapter 8) that results from combining different institutional domain models, the analysis of these theoretically plausible institutional networks can generate a fascinating knowledge basis informing law-making in developing countries. In addition, a thorough consistency and complementarity analysis of the institutional networks of developing countries is required prior to introducing any changes to these networks based on the insights gained from the systemic analysis of the institutional networks of the above successful development experiences and the theoretically plausible networks.

Further, the institutional networks subject to systemic consistency or complementarity analysis should be extended beyond the networks that include competition law, corporate governance and industrial policy to include, inter alia, tax law, monetary policy, labor regulation, intellectual property law, and investment regulations. This extension would result in an exponential increase in the theoretically plausible institutional networks, which scholars can investigate, and with which developing countries can experiment. If law and development, and law and economics scholars seriously endorse this proposed research agenda, legal (and hopefully economic) academia would pose a significant challenge to neoliberalism and the “one-size fits all” legal reforms of the World Bank and the IMF. Particularly, this research agenda finds its ground and guidance in an epistemologically justified and methodically replicable alternative: the integrated and systemic approach.

Eighth, one of the major contributions of this thesis is to develop an approach that can be *slightly adapted* to analysis and design of any legal system or regulation. As already mentioned in the introduction of this thesis, the generic integrated and systemic approach can be adapted to the application to non-economic legal institutions such as international law, family law, criminal and constitutional law. The same steps for the application of the integrated approach can be replicated with respect to these institutional networks. The main difference is that instead of the economic schools of thoughts and theories, the analysis will include the relevant non-economic schools of thought and theories. In this process, the economic paradigms and theories may be irrelevant or marginally relevant to the analysis and design of some of these legal systems such as family law. The application of the systemic approach is even more straightforward; the analytical concepts of institutional consistency, complementarities, and hierarchy can be directly applied to these legal systems. The systemic institutional design concepts developed in chapter 6 can be applied directly

to these legal systems as well. Moreover, the systemic and integrated normative theory of economic regulations can be used for developing comparable system of regulatory objectives for these legal systems. The project of adapting and applying the integrated and systemic approach to non-economic legal systems is very promising; legal scholars can finally find an analytical framework that does not require the surrender to the imperialism of a specific school of thought or theory in social sciences. Now, the numerous schools of thought and theories across social sciences are transformed into *an informational basis* for (systemic) legal analysis and design through a reasonable process that promises no hegemony for a specific theory, school of thought or a discipline over another. Rather, it promises rational dialogue, cross-critique, and pragmatic solutions to socio-economic problems without sacrificing deontological moral concerns. Given this broad and critically refined informational basis, the systemic approach ensures a systemically coherent analysis and design of legal systems.

Ninth, most economists would find my arguments in defense of reasonableness or reliability instead of optimality as an institutional analytical and design concept for design of legal institutions, design of economic policies, design of the system of regulatory objectives, and the derivation of the weights of these objectives (i.e., determination of the desirable normative path) unacceptable. They would argue that maximization or optimization is possible, but I am unable to develop it. I must admit that I do not know how to optimize institutional design, the system of normative objectives or the normative path. Still, optimization has never been a design concept for the developmental policies in the countries that succeeded in industrialization such as the US in the 19th century, German in the 19th century, and Japan in the late 19th and early 20th centuries. Mathematical optimization techniques were not even available at these times. Similarly, both China and South Korea were not concerned about developing *optimal* developmental strategies. Instead of regulatory optimization, pragmatism, experimentation and adaptability are much more important institutional design concepts for developing countries. Once we acknowledge that optimization is not necessary for economic development, we can shift our limited cognitive resources to the task of identifying reasonable institutional designs, which is an excessively difficult task as should be clear by now. However, if economists were able to design dynamically optimal institutional networks that are reasonable, adaptable, and give space for experimentation, this would be impressive. Given the insurmountable difficulty of identifying reasonable system of objectives, reasonable normative path, and reasonable design of institutional network, the priority

should be given to these research projects. Still, the institutional *optimization* project can be a further research project for the subset of law and economics scholars who prioritize formalism and its academic rewards over urgent social needs.

Tenth, in the applied part of the thesis, I have made three assumptions, none of which is necessarily realistic. First, I have taken both capitalism and the constraints of globalization as given. As a result, in using the integrated and systemic approach, I was trying to design legal institutions for governing the capitalist economies of developing countries operating under the constraints of globalization. Most of the regulatory problems that developing countries need to address result from the systemic logic of the economic system of capitalism as embedded into a quasi-globalized economic system. The proposed legal institutions may improve over the current institutions, but due to the unethical imperatives of systemic logics of the globalized capitalism, these institutions may carry some unethical convictions concealed within the imperatives of the system; here, the socio-economic system shapes what is ethical or unethical and the law is just a receptive shaped institution that has a weak resistance capability. To escape this impasse, I have made a second assumption that despite the constraints of globalization and capitalism, there is a feasible space of balance of values that legal institutions can aspire to achieve. It seems, however, that this space is eroding over time. An example can illustrate this point. Recently, the French president, Hollande, insists on labor reforms to ensure lower unemployment rate. The problem presented to the public in the form of a bitter choice between the evils of unemployment or the evils of a more inhumane employment conditions. Given the highly productive process of accumulation of wealth appropriated by few individuals across the globe, the real problem is not the lack of an accelerated growth of global wealth, but is how this *accumulated wealth* is distributed. The French people and the people of developing countries have a real third choice that is almost never discussed seriously in public discourses or mainstream law and economics that is moving beyond capitalism (and communism) to other feasible alternatives domestically and moving beyond economic globalization to other feasible international economic orders globally. The most important research question, which has not been addressed in this thesis by using the integrated and systemic approach, is whether there are viable alternatives to capitalism and/or economic globalization that may ensure the satisfaction of the reasonable demands of the citizens of both developed and developing economies. Given the enormous degree of global wealth accumulation, it seems that such a system is feasible, but politicians, legal scholars, and economists

seem to ignore this research project that is most pressing. Once we recall the power structure underling the institutional structure of legal and economics education and research and policy-making spheres, we can understand why this research project that is the most pressing for both developed and developing economies would be marginal to current legal and economic scholarship.

In addition to taking capitalism and constraints of globalization as given and assuming the existence of a space of balance of values, I have made another problematic assumption that is the *compatibility of democracy and modern capitalism*. In chapter 9, I argued for replacing the preferences of individuals as economic actors with their preferences as citizens in the political sphere to be the normative basis for design of economic regulations. No one can counter argue my claim without taking an *anti-democratic* position. My argument, however, assumes that democracy is compatible with capitalism; in other words, there are feasible political institutions (that we call democratic institutions) that can satisfy the (economically reasonable) citizens' preferences regarding the normative framework of the governance of the capitalist economic system. In other words, I assumed that democratic political institutions could put into place the regulatory governance of capitalism that ensures the satisfaction of the reasonable normative demands of the citizens, which have been conceptualized as ultimate local and systemic objectives of the capitalist economic system. Unfortunately, this assumption is unwarranted. Citizens' preferences can be unethical, and can be manipulated, controlled and manufactured,⁵ particularly in a capitalist economy. Given Arrow's impossibility results, there is not theoretical basis for claiming the existence of social preferences; in theory, neither markets nor politics can aggregate the individuals' preferences.

Moreover, understanding the sophisticated coupling of capitalism and the democratic political system reveals how capitalism creates impediments to the functioning of democratic institutions beyond the famous political capture theory. Democracy can be a stable political system only if a minimum level of wealth is guaranteed for the population, but wealth cannot be accumulated in the capitalist system without exercise and concentration of economic power. This concentration of economic power implies that enormous amount of wealth is needed for stabilizing democracy in

⁵ The standard account of how the citizens' preferences can be manipulated and manufactured in the (so-called) democratic political system of the US is: Edward S Herman and Noam Chomsky, *Manufacturing Consent: The Political Economy of the Mass Media* (Pantheon Books 1988)

capitalist economies; the accumulated wealth needs to meet the economic aspirations of the general public, which are increasing over time and to ensure high returns to the holders of economic-political power. This concentration of economic power undermines the political process itself because it transforms into a political power that temporarily self-restrains itself from aggressive exploitations internally by expanding economic exploitations overseas (through wars, globalization, unfair international economic institutions, exploitation of the natural resources of developing economies, and political support of despotic regimes of developing countries in return of economic benefits, etc.) to ensure the stability of the (so-called) democratic processes domestically.⁶ Democracy needs the wealth creation mechanism of capitalism, but the latter results in the capture of the political system domestically in the short run, erosion of democratic institutions in the long-run, and externalizing the costs of sustaining democracy domestically to developing economies.

Given this concentration of economic and political power, there is no real dividing line between the space of economic and political power in the democratic capitalist societies. Hence, the law (whether designed in light of the preferences of individuals' as economic actors or citizens) face significant limits in constraining the economic-political power that constitutes the basis for the law itself. This is a fundamental paradox; law as an institution of control and exercise of power in capitalist democracies emanates from the exercise of the unified space of power underlying the coupled capitalist and democratic sub-systems of the society, while attempting to constrain the same power that lies at its foundation.

The shift from markets to politics in the normative theory of economic regulations implies that the question of regulatory governance of capitalism becomes indeed a question of regulatory governance of the democratic political system to ensure free and informed process of formation of citizens' preferences and their correct representation. However, due to the coupling of both capitalism and the democratic political system, a normative theory of economic regulations should

⁶ To understand this point, one needs to recall the instability of the democratic institutions in times of prolonged economic crisis. In the course of Greek sovereign debt crisis, the Greek people have opted for the far left, and there is a danger that they opt for the far right. For the 2016 presidential elections, many Americans seem to support presidential candidates who publicly ridicule the very rhetoric of morality traditionally claimed to be at the foundation of the American political system. Prolonged economic frustration among the public may lead into a process of deconstruction of the democratic institutions; the historical exceptionalism of democratic institutions reveals how they are more fragile than many may think they are.

be based on a more sophisticated normative theory of governance of both the political and economic spheres conceptualized as *a unified sub-system* of the society. Upon closer look, this question of the regulatory governance of the politico-economic system is in essence a question of rethinking the plausible political and economic systems and their couplings, which are open to human existence. Democracy, capitalism, and their current coupling in developed economies are only one possibility among many; none of these alternatives, except for the horrific unethical alternatives of authoritarianism and communism, have been seriously explored.

As already mentioned, in this thesis, I have taken capitalism and democracy as givens, while attempting to figure out a reasonable regulatory governance of capitalism in developing economies. It should be obvious, however, that the regulatory reforms this thesis have proposed would not resolve the fundamental problem of the unity of power underlying the coupling of capitalism and its political system in developed economies. Nothing is more important for future research than exploring ethical alternatives that can be sustained without externalizing the costs of its sustainability to weaker economies in order to replace the current unethical political and economic systems (i.e., capitalism and the eroded democratic political institutions and their current mode of coupling). The integrated and systemic approach can guide this challenging exploration, while allowing us to understand the role that law can play in constituting and sustaining these ethical alternatives. Until this challenging research is undertaken, we have focused in this thesis on the less demanding, but still difficult task of *improving* the regulatory governance of the capitalist economies in (democratic) political economies, given the strong unethical mode of coupling of political and economic spheres in capitalist economies.

In conclusion, the history of human thought in social sciences reflects numerous instances of philosophically pragmatic way of approaching real world problems, without a strict adherence to a single underlying theoretical framework. The integrated approach is nothing but an attempt to bring into light and operationalize *this intuitive pragmatic* way of approaching real world problems. Similarly, systemic way of thinking is a natural way of thinking; systemic intuitions span across all the fields of social sciences. Institutional complementarities in comparative capitalism literature is an analytical systemic concept, multi-criteria analysis in operational research, transportation economics, and environmental studies is both a systemic design concept for the system of objectives and a systemic assessment concept, and comparative organizational analysis in new institutional economics, if slightly modified to be based on embedded effects,

becomes a systemic rule for assignment of objectives to legal institutions. The systemic approach is nothing but a call to bring systemic thinking from *the intuitions* phase to the replicable *methodology* phase. Once we transform these intuitive ways of thinking into methods with replicable steps, we suddenly find these systemic and integrated intuitions link together in a way that we were not able to discern previously. More importantly, once these intuitions come together, they open to us a new research agenda with a long series of novel, difficult, and socially significant research questions.

Bibliography

- Abe M, 'Review Essay: Japanese Industrial Policy in Perspective' (1990) 24 *Law and Society Review*.
- Acemoglu D and Robinson JA, 'Economics versus Politics: Pitfalls of Policy Advice' (2013) 27(2) *Journal of Economic Perspectives*.
- 'The Rise and Decline of General Laws of Capitalism' (2015) 25(1) *Journal of Economic Perspectives*.
- Ackoff RL, 'Science in the Systems Age: Beyond TE, OR, and MS' (1973) 21(3) *Operations Research*.
- 'The Systems Revolution' (1974) 7(6) *Long Range Planning*.
- Acocella N, *The Foundations of Economic Policy: Values and Techniques* (Cambridge University Press 1994).
- Adams A, 'Deficit Bias: Why We Need to Tie Politicians' Hands ... Loosely' (11 August 2011, blogpost) <<https://abiadams.com/2011/08/11/deficit-bias-101-why-we-need-to-tie-politicians-hands-loosely/>>.
- Adams NA, 'Monkey See, Monkey Do: Imitating Japan's Industrial Policy in the United States' (1996) 31(3) *Texas International Law Journal*.
- Adelberger KE, 'Semi-Sovereign Leadership? The State's Role in German Biotechnology and Venture Capital Growth' (2000) 9(1) *German Politics*.
- Adler M, 'Beyond Efficiency and Procedure: A Welfarist Theory of Regulation' (2000) 28 *Florida State University Law Review*.
- *Well-Being and Fair Distribution: Beyond Cost-Benefit Analysis* (Oxford University Press 2011).
- Adler M and Posner EA, 'Happiness Research and Cost-Benefit Analysis' (2008) 37(S2) *Journal of Legal Studies*.
- Adler MD, 'Beyond Cost-Benefit Analysis: Social Welfare Functions, Fair Distribution, and Policymaking' (19 March 2012). Penn Program on Regulation, REG BLOG <<http://www.regblog.org/2012/03/19/beyond-cost-benefit-analysis-social-welfare-functions-fair-distribution-and-policymaking/>>.
- Adler MD and Posner EA, *New Foundations of Cost-Benefit Analysis* (Harvard University Press 2006).
- Agazzi E, 'Systems Theory and the Problem of Reductionism' (1978) 12 *Erkenntnis*.

- Aghion P and others, 'Competition and Innovation: An Inverted-U Relationship' (2005) 120(2) *The Quarterly Journal of Economics*.
- Aghion P and others, 'Industrial Policy and Competition' (2015) 7(4) *American Economic Journal: Macroeconomics*.
- Aghion P, Dewatripont M and Rey P, 'Corporate Governance, Competition Policy and Industrial Policy' (1997) 41(3-5) *European Economic Review*.
- Aghion P, Dewatripont M and Rey P, 'Competition, Financial Discipline and Growth' (1999) 66(4) *The Review of Economic Studies*.
- Aghion P, Dewatripont M and Rey P, 'Corporate Governance, Competition Policy and Industrial Policy.' (1997) 41(3-5) *European Economic Review*.
- Aghion P and Schankerman M, 'On the Welfare Effects and Political Economy of Competition-Enhancing Policies' (2004) 114(498) *The Economic Journal*.
- Aglietta M, 'Shareholder Value and Corporate Governance: Some Tricky Questions' (2000) 29(1) *Economy and Society*.
- *A Theory of Capitalist Regulation: The US Experience* (Translated by David Fernbach, Verso 2015, first published in 1979).
- Ahdieh R, 'Beyond Individualism in Law and Economics' (2011) 91(43) *Boston University Law Review*.
- Akerlof G, 'The Market for "Lemons": Quality Uncertainty and the Market Mechanism' (1970) 84(3) *The Quarterly Journal of Economics*.
- Aldegwy M and Thiemann M, 'How Economics Got it Wrong: Formalism, Equilibrium Modelling and Pseudo-Optimization in Banking Regulatory Studies' (2015). *EAEPE Papers in Evolutionary Political Economy* no. 2015-1, <http://eaepe.econ.tuwien.ac.at/pepe/papers/PEPE_2015_1.pdf>.
- Allen M, Funk L and Tüselmann H, 'Can Variation in Public Policies Account for Differences in Comparative Advantage?' (2006) 26(01) *Journal of Public Policy*.
- Amable B, *The Diversity of Modern Capitalism* (Oxford University Press 2003).
- 'Complementarity, Hierarchy, Compatibility, Coherence' in: Crouch C and others, 'Dialogue on 'Institutional Complementarity and Political Economy'' (2005) 3(2) *Socio-Economic Review*.
- 'Structural reforms in Europe and the (In)coherence of Institutions' (2009) 25(1) *Oxford Review of Economic Policy*.
- Amable B, Demmou L and Gatti D, 'The Effect of Employment Protection and Product Market Regulation on Labour Market Performance: Substitution or Complementarity' (2011) 43(4) *Applied Economics*.

- Amsden AH and Singh A, 'The Optimal Degree of Competition and Dynamic Efficiency in Japan and Korea' (1994) 38(3) *European Economic Review*.
- Anchustegui IH, 'Competition Law through an Ordoliberal Lens' (2015) 2(2) *Oslo Law Review*.
- Andersson J, 'Evolution of Company Law, Corporate Governance Codes and the Principle of Comply or Explain: A Critical Review' in Hanne Birkmose, Mette Neville and Karsten E Sørensen (eds), *The European Financial Market in Transition* (Wolters Kluwer 2012).
- Andre FJ, Cardenete MA and Romero C, *Designing Public Policies: An Approach Based on Multi-Criteria Analysis and Computable General Equilibrium Modelling* (Springer-Verlag 2010).
- Ang JS, Cole RA and Lin JW, 'Agency Costs and Ownership Structure' (2000) 55(1) *The Journal of Finance*.
- Aoki M, 'The Nature of the Japanese Firm as a Nexus of Employment and Financial Contracts: An Overview' (1989) 3(4) *Journal of the Japanese and International Economies*.
- 'Toward an Economic Model of the Japanese Firm' (1990) 28(1) *Journal of Economic Literature*.
- 'The Japanese Firm as a System of Attributes: A Survey and Research Agenda' in Masahiko Aoki and Ronald Dore (eds), *The Japanese Firm: Sources of Competitive Strength* (Oxford University Press 1994).
- *Toward a Comparative Institutional Analysis* (The MIT Press 2001).
- 'Whither Japan's Corporate Governance?' in Masahiko Aoki, Gregory Jackson and Hideaki Miyajima (eds), *Corporate Governance in Japan: Institutional Change and Organizational Diversity* (Oxford University Press 2007).
- 'Why is the Equilibrium Notion Essential for a Unified Institutional Theory? A Friendly Remark on the Article by Hindriks and Guala' (2015) 11(03) *Journal of Institutional Economics*.
- Archie J. Bahm, 'Five Types of Systems Philosophy' (1981) 6 *International Journal of General Systems*.
- Argyrous G, 'Kuhn's Paradigms and Neoclassical Economics' (1992) 8(1) *Economics and Philosophy*.
- Arndt HW, '"Market Failure" and Underdevelopment' (1988) 16(2) *World Development*.
- Aron N, Moulton B and Owens C, 'Economics, Academia and Corporate Money in America: The 'Law and Economics' Movement' (1992-1993) 24(27) *Antitrust Law and Economics*.
- Arrow KJ, 'A Difficulty in the Concept of Social Welfare' (1950) 58(4) *The Journal of Political Economy*.

- ‘Economic Welfare and the Allocation of Resources for Invention’ in Harold M Groves (ed), *The Rate and Direction of Inventive Activity: Economic and Social Factors* (Princeton University Press 1962).
- ‘Methodological Individualism and Social Knowledge’ (1994) 84(2) *The American Economic Review*.
- Arthur WB, ‘Positive Feedbacks in the Economy’ [1994] *Mckinsey Quarterly*.
- ‘Complexity Economics: A Different Framework for Economic Thought’ (2013). SFI Working Paper 2013-04-012, <<http://www.santafe.edu/research/working-papers/abstract/36df2f7d8ecd8941d8fab92ded2c4547/>>.
- Asher CC, Mahoney JM and Mahoney JT, ‘Towards a Property Rights Foundation for a Stakeholder Theory of the Firm’ (2005) 9(1) *Journal of Management and Governance*.
- Audi R, *Epistemology: A Contemporary Introduction to the Theory of Knowledge* (Routledge, 3rd edn, Routledge 2011).
- Augsburg T, *Becoming Interdisciplinary: An Introduction to Interdisciplinary Studies* (2 ed. Kendall/Hunt Pub. 2006).
- Ayres I and Braithwaite J, *Responsive Regulation: Transcending the Deregulation Debate* (University Press 1992).
- Baba M and others, ‘Conclusion’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Backhouse RE, ‘Friedman’s 1953 Essay and the Marginalist Controversy’ in Uskali Mäki (ed), *The Methodology of Positive Economics: Reflections on the Milton Friedman Legacy* (Cambridge University Press 2009).
- Bagaric M and McConvill J, ‘Goodbye Justice, Hello Happiness: Welcoming Positive Psychology to the Law’ (2005) 10(1) *Deakin Law Review*.
- Baird DG, Gertner RH and Picker RC, *Game Theory and the Law* (Harvard University Press 1994).
- Baldwin R, ‘Better Regulation: The Search and the Struggle’ in Robert Baldwin, Martin Cave and Martin Lodge (eds), *The Oxford Handbook of Regulation* (Oxford University Press 2010).
- Baldwin R, Cave M and Lodge M, ‘Introduction: Regulation-The Field and the Developing Agenda’ in Robert Baldwin, Martin Cave and Martin Lodge (eds), *The Oxford Handbook of Regulation* (Oxford University Press 2010).
- *Understanding Regulation: Theory, Strategy and Practice* (2nd, Oxford University Press 2012).
- Balkin JM, ‘Interdisciplinarity as Colonization’ (1996) 53 *Washington and Lee Law Review*.

- Barabási A-L, *Linked: How Everything is Connected to Everything Else and What it Means for Business, Science, and Everyday Life* (Basic Books 2014).
- Bardhan P, 'On the Concept of Power in Economics' (1991) 3(3) *Economics and Politics*.
- Barrett CB and Carter MR, 'The Power and Pitfalls of Experiments in Development Economics: Some Non-random Reflections' (2010) 32(4) *Applied Economic Perspectives and Policy*.
- Bebchuk LA, Cohen A and Ferrell A, 'What Matters in Corporate Governance?' (2009) 22(2) *Review of Financial Studies*.
- Becker G, 'Crime and Punishment: An Economic Approach' (1968) 76(2) *Journal of Political Economy*.
- Beech E, 'The U.S. Government Lost \$11.2 Billion Bailing Out GM' *Huffington Post* (30 June 2014) <http://www.huffingtonpost.com/2014/04/30/gm-bailout-cost_n_5240260.html>.
- Behrens P, 'The 'Consumer Choice' Paradigm in German Ordoliberalism and its Impact upon EU Competition Law' (22 July 2014). Europa-Kolleg Hamburg, Discussion Paper no. 1/14. <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2568304>.
- Bell S, 'The Role of the State and the Hierarchy of Money' (2001) 25(2) *Cambridge Journal of Economics*.
- Belloc F, 'Corporate Governance and Innovation: A Survey' (2012) 26(5) *Journal of Economic Surveys*.
- Bergh RJ and Paces AM, 'An Introduction to the Law and Economics of Regulation' in van den Berg, Roger and Alessio M Paces (eds), *Regulation and Economics: Encyclopedia of Law and Economics* (2nd edn. Edward Elgar 2012).
- Berkowitz D, Pistor K and Richard J-F, 'The Transplant Effect' (2003) 51(1) *The American Journal of Comparative Law*.
- Bernstein A, 'Whatever Happened to Law and Economics?' (2005) 64 *Maryland Law Review*.
- Bertalanffy Lv, *General System Theory: Foundations, Development, Applications* (George Braziller 1968).
- Bevir M, 'Governance as Theory, Practice and Dilemma' in Mark Bevir (ed), *The SAGE Handbook of Governance* (SAGE 2013).
- Bhagat S, Bolton B and Romano R, 'The Promise and Peril of Corporate Governance Indices' (2008) 108(8) *Columbia Law Review*.
- Bhatt VV, 'The Lead Bank Systems in India' in Masahiko Aoki and Hugh Patrick (eds), *The Japanese Main Bank System: Its Relevance for Developing and Transforming Economies* (Oxford University Press 1995).

- Bigo V and Negru I, 'From Fragmentation to Ontologically Reflexive Pluralism' (2008) 1(2) *Journal of Philosophical Economics*.
- Billiet CM, 'Formats for Law and Economics in Legal Scholarship: Views and Wishes from Europe' (2011) 2011(5) *University of Illinois Law Review*.
- Bird A, 'Thomas Kuhn' in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2013), <<http://plato.stanford.edu/archives/fall2013/entries/thomas-kuhn/>>
- Black J, 'Critical Reflections on Regulation' (2002) 27 *Australian Journal of Legal Philosophy*.
- 'Seeing, Knowing, and Regulating Financial Markets: Moving the Cognitive Framework from the Economic to the Social' (13 November 2013) <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2346098> accessed 28 April 2015.
- Blackorby C, 'Partial-Equilibrium Welfare Analysis' (1999) 1(3) *Journal of Public Economic Theory*.
- Blair MM and Stout LA, 'A Team Production Theory of Corporate Law' (1999) 85(2) *Virginia Law Review*.
- Blanchard OJ, 'Neoclassical Synthesis' in Steven N Durlauf and Lawrence E Blume (eds), *The New Palgrave Dictionary of Economics* (2nd. Palgrave Macmillan 2008).
- Blaug M, *The Methodology of Economics or How Economists Explain* (2nd, Cambridge University Press 1992).
- 'The Fundamental Theorems of Modern Welfare Economics Historically Contemplated' (2007) 39(2) *History of Political Economy*.
- 'The Trade-Off between Rigor and Relevance: Sraffian Economics as a Case in Point' (2009) 41(2) *History of Political Economy*.
- Block F, 'Swimming Against the Current: The Rise of a Hidden Developmental State in the United States' (2008) 36(2) *Politics and Society*.
- Blyth M, 'A Pain in the Athens: Why Greece Isn't to Blame for the Crisis' *Foreign Affairs* (7 July 2015) <<https://www.foreignaffairs.com/articles/greece/2015-07-07/pain-athens>>.
- Boadway R, 'Public Economics and the Theory of Public Policy' (1997) 4a(30) *The Canadian Journal of Economics*.
- Boadway RF and Niel B, *Welfare Economics* (Wiley-Blackwell 1984).
- Bohm P, 'Second Best' in Steven N Durlauf and Lawrence E Blume (eds), *The New Palgrave Dictionary of Economics* (2nd. Palgrave Macmillan 2008).
- Bond EJ, *Ethics and Human Well-Being: An Introduction to Moral Philosophy* (Blackwell Publishers 1996).

- Borio C and Zhu H, 'Capital Regulation, Risk-taking and Monetary Policy: A Missing Link in the Transmission Mechanism?' (2012) 8 *Journal of Financial Stability*.
- Bork RH, *The Antitrust Paradox: A Policy at War with Itself* (Basic Books 1978).
- Bossel H, *Systems and Models: Complexity, Dynamics, Evolution, Sustainability* (Books on Demand 2007).
- Botero JC and others, 'The Regulation of Labor' (2004) 119(4) *The Quarterly Journal of Economics*.
- Boumans M and others, *Economic Methodology: Understanding Economics as a Science* (Palgrave Macmillan 2010).
- Bowles S and Gintis H, 'Power and Wealth in a Competitive Capitalist Economy' (1992) 21(4) *Philosophy and Public Affairs*.
- Boyer R, 'The Regulation Approach as a Theory of Capitalism: A New Derivation' in Agnès Labrousse and Jean-Daniel Weisz (eds), *Institutional Economics in France and Germany: German Odoliberalism versus the French Regulation School* (Springer 2001).
- 'Coherence, Diversity, and the Evolution of Capitalisms—The Institutional Complementarity Hypothesis' (2005) 2(1) *Evolutionary and Institutional Economics Review*.
- 'Complementarity in Regulation Theory' in: Crouch C and others, 'Dialogue on 'Institutional Complementarity and Political Economy'' (2005) 3(2) *Socio-Economic Review*.
- Bracker J, 'The Historical Development of the Strategic Management Concept' (1980) 5(2) *Academy of Management Review*.
- Braithwaite J, 'Responsive Regulation and Developing Economies' (2006) 24(5) *World Development*.
- *Regulatory Capitalism: How it Works, Ideas for Making it Work Better* (Edward Elgar Ltd 2008).
- Braithwaite J, Coglianese C and Levi-Faur D, 'Can Regulation and Governance Make a Difference?' (2007) 1(1) *Regulation and Governance*.
- Brinkman RL, 'The Genesis of New Industrial Policy: Equity and Efficiency' (1986) 20(2) *Journal of Economic Issues*.
- Bryden DP, 'Scholarship About Scholarship' (1992) 63 *University of Colorado Law Review*.
- Brynjolfsson E and Milgrom P, 'Complementarity in Organizations' in Robert Gibbons and John Roberts (eds), *Handbook of Organizational Economics* (Princeton University Press 2013).
- Buccirossi P and others, 'Competition Policy and Productivity Growth: An Empirical Assessment' (2013) 95(4) *The Review of Economics and Statistics*.

- Buck T and Shahrim A, 'The Translation of Corporate Governance Changes across National Cultures: The Case of Germany' (2005) 36(1) *Journal of International Business Studies*.
- Budzinski O, 'Monoculture versus Diversity in Competition Economics' (2008) 32(2) *Cambridge Journal of Economics*.
- Bunge M, *Treatise on Basic Philosophy-Volume 5: Epistemology & Methodology I - Exploring the World* (D. Reidel Publishing Company 1983).
- Bunge M, 'Systemism: The Alternative to Individualism and Holism' (2000) 29 *Journal of Socio-Economic*.
- 'Ten Modes of Individualism-None of Which Works-And Their Alternatives' (2000) 30(3) *Philosophy of the Social Sciences*.
- Cafaggi F, 'Contractual Networks and Contract Theory: A Research Agenda for European Contract Law' in Fabrizio Cafaggi (ed), *Contractual Networks, Inter-Firm Cooperation and Economic Growth* (Edward Elgar 2011).
- 'Introduction' in Fabrizio Cafaggi (ed), *Contractual Networks, Inter-Firm Cooperation and Economic Growth* (Edward Elgar 2011).
- Calabresi G, *The costs of accidents: A legal and economic analysis* (Yale University Press 1970).
- 'The Pointless of Pareto: Carrying Coase Further' (1991) 100(3) *Yale Law Journal*.
- Calabresi G and Melamed AD, 'Property Rules, Liability Rules, and Inalienability: One View of the Cathedral' (1972) 85(6) *Harvard Law Review*.
- Caldwell B, 'Comment: Varieties of Pluralism' in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997).
- *Beyond Positivism: Economic Methodology in the Twentieth Century* (George Allen and Unwin 1982).
- Campbell D, 'Luhmann without Tears: Complex Economic Regulation and the Erosion of Market Sphere' (2013) 33(1) *Legal Studies*.
- Campbell JL, 'Ideas, Politics and Public Policy' (2002) 28 *Annual review of sociology*.
- Carney M and Gedajlovic E, 'Corporate Governance and Firm Capabilities: A Comparison of Managerial, Alliance, and Personal Capitalism' (2001) 18(3) *Asian Pacific Journal of Management*.
- Caudill DS and LaRue LH, 'Why Judges Applying the Daubert Trilogy Need to Know About the Social, Institutional, and Rhetorical-and Not Just the Methodological-Aspects of Science' (2003) 45 *Boston College Law Review*.

- Chang D-o, 'Labour and the 'Developmental State': A Critique of the Developmental State Theory of Labour' in Ben Fine, Jyoti Saraswati and Daniela Tavasci (eds), *Beyond the Developmental State: Industrial Policy into the Twenty-First Century* (Pluto Press 2013).
- Chang H-J, 'The Economics and Politics of Regulation' (1997) 21(6) *Cambridge Journal of Economics*.
- 'Institutions and Economic Development: Theory, Policy and History' (2011) 7(4) *Journal of Institutional Economics*.
- 'Reply to the Comments on 'Institutions and Economic Development: Theory, Policy and History'' [2011] *Journal of Institutional Economics*.
- Chang H-J, Andreoni A and Kuan ML, 'International Industrial Policy Experiences and the Lessons for the UK' (October, 2013). *Future of Manufacturing Project, Evidence Paper no. 4*, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/277162/ep4-international-industrial-policy-experiences.pdf>.
- Charreaux G. 'Micro Theories of Corporate Governance' in A. Naciri (ed), *Corporate Governance Around the World* (Routledge 2008).
- Cheffins BR, 'Does Law Matter? The Separation of Ownership and Control in the United Kingdom' (2001) 30(2) *Journal of Legal Studies*.
- Chen J, 'China's Venture Capital Guiding Funds: Policies and Practice' (2010) 2(3) *Journal of Chinese Entrepreneurship*.
- Chen XC and Yur-Austin J, 'Re-measuring Agency Costs: The Effectiveness of Blockholders' (2007) 47(5) *The Quarterly Review of Economics and Finance*.
- Cheung, Steven N. S. 'The Contractual Nature of the Firm' (1983) 26(1) *Journal of Law and Economics*.
- Claessens S and Fan JPH, 'Corporate Governance in Asia: A Survey' (2002) 3(2) *International Review of Finance*.
- Clougherty JA, 'Competition Policy Trends and Economic Growth: Cross-National Empirical Evidence' (2010) 17(1) *International Journal of the Economics of*.
- Coase RH, 'The Nature of the Firm' (1937) 4(16) *Econometrica*.
- 'The Problem of Social Cost' (1960) 3 *The Journal of Law and Economics*.
- Cohn A and Fehr, Ernst, Goette, Lorenz, 'Fair Wages and Effort Provision: Combining Evidence from a Choice Experiment and a Field Experiment' (2015) 61(8) *Management Science*.
- Colander D, 'From Muddling through to the Economics of Control: Views of Applied Policy from J. N. Keynes to Abba Lerner' (2005) 37 *History of Political Economy*.

- Colander D, Holt R and Rosser Jr B, 'The Changing Face of Mainstream Economics' (2004) 16(4) *Review of Political Economy*.
- Cole DH, 'Varieties of Comparative Institutional Analysis' [2013] *Wisconsin Law Review*.
- Coleman JL, *Markets, Morals, and the Law* (Oxford University Press 2002).
- Coleman JS, *Foundations of Social Theory* (Harvard University Press 1990).
- Coleman M and Teece DJ, 'The Meaning of Monopoly: Antitrust Analysis in High-Technology Industries' (1998) 43(3/4) *Antitrust Bulletin*.
- Colman AM, Pulford BD and Rose J, 'Collective Rationality in Interactive Decisions: Evidence for Team Reasoning' (2008) 128(2) *Acta Psychologica*.
- Committee on the Development of the Third Edition of the Reference Manual on Scientific Evidence and others, *Reference Manual on Scientific Evidence* (3rd ed, National Academies Press 2011).
- Commons JR, 'Law and Economics' (1924-1925) 34 *Yale Law Journal*.
- Cooter R and Ulen T, *Law and economics* (5th edn, Pearson Addison-Wesley 2008).
- Corbett A, 'A Systems Approach to Regulatory Excellence' (June, 2015). Paper Prepared for the Penn Program on Regulation's Best-in-Class Regulation Initiative <<https://www.law.upenn.edu/live/files/4713-corbett-ppr-bicregulatordiscussionpaper-062015pdf>>.
- Crouch C and others, 'Dialogue on 'Institutional Complementarity and Political Economy'' (2005) 3(2) *Socio-Economic Review*.
- Crouch C, 'Models of Capitalism' (2005) 10(4) *New Political Economy*.
- Dai S, *Networks of Institutions: Institutional Emergence, Social Structure and National Systems of Policies* (Routledge 2015).
- Dam KW, *The Law-Growth Nexus: The Rule of Law and Economic Development* (Brookings Institution Press 2006).
- Darwish A-FE and Huber GL, 'Individualism vs Collectivism in Different Cultures: a Cross-Cultural Study' (2003) 14(1) *Intercultural Education*.
- Dau-Schmidt KG, 'Economics and Sociology: The Prospects for an Interdisciplinary Discourse of Law' [1997] *Wisconsin Law Review*.
- Dau-Schmidt KG and Brun CL, 'Lost in Translation: The Economic Analysis of Law in the United States and Europe' (2006) 44 *Columbia Journal of Transnational Law*.
- Davis JB, 'The Turn in Economics: Neoclassical Dominance to Mainstream Pluralism?' (2006) 2(1) *Journal of Institutional Economics*.

- Deakin S and others, 'Legal Institutionalism: Capitalism and the Constitutive Role of Law' (April, 2015). The University of Cambridge Faculty of Law Legal Studies Research Paper no. 26/2015, <http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2601035>.
- Deeg R, 'Complementarity and Institutional Change in Capitalist Systems' (2007) 14(4) *Journal of European Public Policy*.
- Demsetz H, 'Barriers to Entry' (1982) 72(1) *The American Economic Review* 47.
- 'The Theory of the Firm Revisited' (1988) 4(1) *Journal of Law, Economics, and Organization*.
- 'Review of 'Firms, Contracts, and Financial Structure: Clarendon Lectures in Economics by Oliver Hart'' (1998) 106(2) *Journal of Political Economy*.
- Den Hertog J, 'General Theories of Regulation' in Boudewijn Bouckaert and Gerrit De Geest (eds), *Encyclopedia of Law and Economics, Volume III: The Regulation of Contracts* (Edward Elgar 2000).
- Denis A, 'A Century of Methodological Individualism Part 1: Schumpeter and Menger' . Discussion Paper Series City University London no. 10/02 <http://openaccess.city.ac.uk/1490/1/A_Century_of_Methodological_Individualism_part_1.pdf>
- Department for Communities and Local Government: London, 'Multi-Criteria Analysis: A Manual' (January 2009). London, Communities and Local Government Publications.
- Depoorte B and Demot J, 'The Cross-Atlantic Law and Economics Divide: A Dissent' (2011) 2011(5) *University of Illinois Law Review*.
- Dibadj R, 'Weasel Numbers' (2006) 27(3) *Cardozo Law Review*.
- Dixit A, Skeath S and Reiley DH, *Games of Strategy* (3rd edn, W. W. Norton & Company 2009).
- Dixit AK and Nalebuff BJ, *Thinking Strategically: The Competitive Edge in business, Politics, and Everyday Life* (W. W. Norton & Co. 1991).
- Dobusch L and Kapeller J, 'Heterodox United vs. Mainstream City? Sketching a Framework for Interested Pluralism in Economics' (2012) 46(4) *Journal of Economic Issues*.
- Dogan M and Pahre R, *Creative Marginality: Innovation at the Intersections of Social Sciences* (Westview Press 1990).
- Don L, 'Two Varieties of Industrial Policy: A Critique' (1984) 4(2) *Cato Journal*.
- Dopfer K, Foster J and Potts J, 'Micro-Meso-Macro' (2004) 14(3) *Journal of Evolutionary Economics*.
- Dow S, 'Plurality in Orthodox and Heterodox Economics' (2008) 1(2) *The Journal of Philosophical Economics*.

- ‘Methodological Pluralism and Pluralism of Method’ in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997).
- ‘Structured Pluralism’ (2004) 11(3) *Journal of Economic Methodology*.
- Doyle C and Weale M, ‘Do We Really Want an Independent Central Bank?’ (1994) 10(3) *Oxford Review of Economic Policy*.
- Driver J, *Consequentialism* (Routledge 2012).
- Dutz MA and Hayri A, ‘Does More Intense Competition Lead to Higher Growth?’ (April 2000). The World Bank Policy Research Working Paper no. 2320, <http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2000/05/25/000094946_00050405325137/Rendered/PDF/multi_page.pdf>.
- Easley D and Kleinberg J, *Networks, Crowds, and Markets: Reasoning about a Highly Connected World* (Cambridge University Press 2010).
- Easterbrook FH and Fischel DR, *The Economic Structure of Corporate Law* (Harvard University Press 1991).
- Eichhorn W, ‘Uneasy Polygons: Environment and Security within the Systems of Aims in an Economy’ (1992) 43(1-2) *Metroeconomica*.
- El-Kot G and Leat M, ‘Investigating Team Work in the Egyptian Context’ (2005) 34(2) *Personnel Review*.
- Elliotta J and Jensenb H, ‘Can Neoclassical Economics Become Social Economics?’ (1996) 26(1) *Forum for Social Economics*.
- Elsner W, Heinrich T and Schwardt H, *The Microeconomics of Complex Economies: Evolutionary, Institutional, Neoclassical, and Complexity Perspectives* (Elsevier Academic Press 2015).
- Etzioni A, ‘Socio-Economics Revisited’ (1991) 61(1) *Sociological Inquiry*.
- Evenett SJ, ‘Links between Development and Competition Law in Developing Countries’ (28 October 2003). Case Studies for the World Development Report 2005: Investment Climate, Growth and Poverty <[file:///cws1/Benutzer/aldegwy/Downloads/dfidpaper%20\(3\).pdf](file:///cws1/Benutzer/aldegwy/Downloads/dfidpaper%20(3).pdf)>.
- Fabbri M and Castro de Britto, Diogo Gerhard, ‘When Choosing the Social Welfare Function Really Matters: A Quantitative Analysis’ (9 March 2013). Rotterdam Institute of Law and Economics (RILE) Working Paper Series 2013/01.
- Fama EF, ‘Agency Problems and the Theory of the Firm’ (1980) 88(2) *Journal of Political Economy*.
- Farid D, ‘70 Million Reliant on Food Subsidies in Peril Amid Government Austerity and Mismanagement’ *Daily News Egypt* (2 March 2016)

<http://www.dailynewsegypt.com/2016/03/02/70-million-reliant-on-food-subsidies-in-peril-amid-government-austerity-and-mismanagement/>.

- Farmer JD and others, 'A Complex Systems Approach to Constructing Better Models for Managing Financial Markets and the Economy' (2012) 214 *The European Physical Journal Special Topics*.
- Federoff HJ and Gostin LO, 'Evolving From Reductionism to Holism: Is There a Future for Systems Medicine?' (2009) 302(9) *JAMA (The Journal of American Medical Association)*.
- Feichtner I, 'Transnational Law of Natural Resource Exploitation: The Role of Law in Constituting, Transforming and Resolving Distribution Conflicts Over Extractive Resources' Unpublished Manuscript.
- 'International (Investment) Law and Distribution Conflicts over Natural Resources' in Stephan W Schill, Christian J Tams and Rainer Hofmann (eds), *International Investment Law and Development: Bridging the Gap* (Edward Elgar Publishing 2015).
- Feintuck M, 'Regulatory Rationales beyond the Economic: In Search of the Public Interest' in Robert Baldwin, Martin Cave and Martin Lodge (eds), *The Oxford Handbook of Regulation* (Oxford University Press 2010).
- Feldman AM, 'Welfare Economics' in Steven N Durlauf and Lawrence E Blume (eds), *The New Palgrave Dictionary of Economics* (2nd. Palgrave Macmillan 2008).
- Feyerabend PK, *Against Method* (4th ed. Verso 2010).
- Feynman RP, 'Cargo Cult Science' (1974) 37(7) *Engineering and Science*.
- Fine B, 'Beyond the Developmental State: An Introduction' in Ben Fine, Jyoti Saraswati and Daniela Tavasci (eds), *Beyond the Developmental State: Industrial Policy into the Twenty-First Century* (Pluto Press 2013).
- Fink E, 'Post-Realism, or the Jurisprudential Logic of Late Capitalism: A Socio-Legal Analysis of the Rise and Diffusion of Law and Economics' (2003-2004) 55 *Hastings Law Journal*.
- Fisch JE, 'Measuring Efficiency in Corporate Law: The Role of Shareholder Primacy' (2006) 31 *The Journal of Corporation Law*.
- Fogalia AT and Jennings AK, 'A Happiness Approach to Cost-Benefit Analysis: Foreword' (2013) 62(8) *Duke Law Journal*.
- Foss K and Foss N, 'Coasian and Modern Property Rights Economics' (2015) 11(2) *Journal of Institutional Economics*.
- 'Learning in Firms: Knowledge-based and Property Rights Perspectives' (2000) 14(2) *European Journal of Economic and Social Systems*.

- Foss NJ, 'Theories of the Firm: Contractual and Competence Perspectives' (1993) 3(2) *Journal of Evolutionary Economics*.
- 'The Strategic Management and Transaction Cost Nexus: Past Debates, Central Questions, and Future Research Possibilities' (2003) 1(2) *Strategic Organization*.
- Foster J, 'From Simplistic to Complex Systems in Economics' (2005) 29(6) *Cambridge Journal of Economics*.
- Foucault M, 'Truth and Power: An Interview with Michel Foucault' (1979) 4(13) *Critiques of Anthropology*.
- Friedman LM, 'Law and Society Movement' (1986) 38(3) *Stanford Law Review*.
- Friedman M, 'The Methodology of Positive Economics' in Daniel Hausman (ed), *The Philosophy of Economics: An Anthology* (3rd edn. Cambridge University Press 2008).
- Fullbrook E (ed), *Ontology and Economics: Tony Lawson and His Critics* (Routledge 2009).
- Furubotn EG, 'Codetermination and the Modern Theory of the Firm: A Property-Rights Analysis' (1988) 61(2) *The Journal of Business*.
- Gallagher R and Appenzeller T, 'Beyond Reductionism' (1999) 284(5411) *Science*.
- Gao B, *Economic Ideology and Japanese Industrial Policy: Developmentalism from 1931 to 1965* (Cambridge University Press 2002).
- Garfinkel A, 'Reductionism' in Richard Boyd, Philip Gasper and J. D Trout (eds), *Philosophy of Science* (MIT Press 1991).
- Garnett RF, 'Paradigms and Pluralism in Heterodox Economics' (2006) 18(4) *Review of Political Economy*.
- Gary B, 'The Best Industrial Policy is None at All' *Business Week* (25 August 1985).
- Gay B, 'How Do Distinct Firm Assets and Behaviors Shape the Form of Alliance Networks and Provoke Their Instability? A Multi-level Network Analysis' (2015) 16(1) *Journal of Innovation Economics and Management*.
- Gerber DJ, 'Constitutionalizing the Economy: German Neo-liberalism, Competition Law and the "New" Europe' (1994) 42 *The American Journal of Comparative Law*.
- *Law and Competition in Twentieth Century Europe: Protecting Prometheus* (Oxford University Press 1998).
- Gerber J-F and Steppacher R, 'Introduction' in Julien-François Gerber and Rolf Steppacher (eds), *Towards an Integrated Paradigm in Heterodox Economics: Alternative Approaches to the Current Eco-social Crises* (Palgrave Macmillan 2012).
- (eds), *Towards an Integrated Paradigm in Heterodox Economics: Alternative Approaches to the Current Eco-social Crises* (Palgrave Macmillan 2012).

- Giddens A, *The Constitution of Society: Outlines of the Theory of Structuration* (University of California Press 1984).
- Giere RN, 'Perspectival Pluralism' in Stephen H Kellert, Helen E Longino and Kenneth C Waters (eds), *Minnesota Studies in the Philosophy of Science, Vol. XIX: Scientific Pluralism* (University of Minnesota Press 2006).
- *Scientific Perspectivism* (Chicago University Press 2006).
- Ginsburg DH and Wright JD, 'Dynamic Analysis and the Limits of Antitrust Institutions' (2012) 78(1) *Antitrust Law Journal*.
- Giroud X and Mueller HM, 'Corporate Governance, Product Market Competition, and Equity Prices' (2011) 66(2) *The Journal of Finance*.
- Gmür M, 'Co-citation Analysis and the Search for Invisible Colleges: A Methodological Evaluation' (2003) 57(1) *Scientometrics*.
- Goff B, *Regulation and Macroeconomic Performance* (Springer 1996).
- Goldmann M, 'The Financial Crisis as a Crisis of Public Reasoning' in Benjamin Isakhan and Steven Slaughter (eds), *Democracy and Crisis: Democratising Governance in the Twenty-First Century* (Palgrave Macmillan 2014).
- Goodhart, C. A. E, *The Central Bank and The Financial System* (Macmillan 1995).
- Gordon JN, 'The Mandatory Structure of Corporate Law' (1989) 89(7) *Columbia Law Review*.
- Gordon S, 'The Political Economy of Big Questions and Small Ones' (1975) 1(1) *Canadian Public Policy/Analyse de Politiques*.
- Goto A and Wakasugi R, 'Technology Policy' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Grechenig K and Gelter M, 'The Transatlantic Divergence in Legal Thought: American Law and Economics vs. German Doctrinalism' (2007) 30(1) *Hastings International and Comparative Law Review*.
- Greenwald B and Stiglitz JE, 'Helping Infant Economies Grow: Foundations of Trade Policies for Developing Countries' (2006) 96(2) *The American Economic Review*.
- Groenewegen J, Kerstholt F and Nagelkerke A, 'On Integrating New and Old Institutionalism: Douglass North Building Bridges' (1995) 29(2) *Journal of Economic Issues*.
- Groenewegen J, Spithoven A and van den Berg A, *Institutional Economics: an Introduction* (Palgrave Macmillan 2010).
- Grossman SJ and Hart OD, 'The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration' (1986) 94(4) *Journal of Political Economy*.

- Hackethal A, Schmidt R and Tyrell M, 'Corporate Governance in Germany: Transition to a Modern Capital-Market-Based System?' (2003) 159(4) *Journal of Institutional and Theoretical Economics*.
- Hackethal A, Schmidt RH and Tyrell M, 'The Transformation of the German Financial System' (2006) 116(4) *Revue d'économie politique*.
- Haines VA, 'Social Network Analysis, Structuration Theory, and the Holism-Individualism Debate' (1988) 10 *Social Networks*.
- Haldane AG and May RM, 'Systemic Risk in Banking Ecosystems' (2011) 469 *Nature*.
- Hall PA, 'Policy Paradigms, Social Learning and the State: The Case of Economic Policy Making in Britain' (1993) 25(3) *Comparative Politics*.
- Hall PA and Soskice DW, 'An Introduction to Varieties of Capitalism' in Peter A Hall and David W Soskice (eds), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (Oxford University Press 2001).
- Hamamura T, 'Are Cultures Becoming Individualistic? A Cross-Temporal Comparison of Individualism–Collectivism in the United States and Japan' (2012) 16(1) *Personality and Social Psychology Review*.
- Reflection without Rules: Economic Methodology and Contemporary Science Theory (Cambridge University Press 2001).
- Hands DW, 'Popper and Lakatos in Economic Methodology' in Uskali Mäki, Bo Gustafsson and Christian Knudsen (eds), *Rationality, Institutions and Economic Methodology* (Routledge 1993).
- Reflection without Rules: Economic Methodology and Contemporary Science Theory (Cambridge University Press 2001).
- Hargreaves Heap SP, 'The Economic Consequences of Pluralism' in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997).
- Hart O, 'Corporate Governance: Some Theory and Implications' (1995) 105(430) *The Economic Journal*.
- *Firms, Contracts, and Financial Structure* (Oxford University Press 1995).
- 'The Market Mechanism as an Incentive Scheme' (1983) 14(2) *The Bell Journal of Economics*.
- Hart O and Moore J, 'Property Rights and the Nature of the Firm' (1990) 98(6) *Journal of Political Economy*.
- Hausman DM and McPherson MS, *Economic Analysis, Moral Philosophy and Public Policy* (2nd edn, Cambridge University Press 2006).

- Hausmann R, Rodrik D and Velasco A, 'Growth Diagnostics' in Narcís Serra and Joseph E Stiglitz (eds), *The Washington Consensus Reconsidered: Towards a New Global Governance* (Oxford University Press 2008).
- Hayek FA, *The Counter-Revolution of Science: Studies on the Abuse of Reason* (The Free Press 1952).
- He J, Mahoney JT and Wang HC, 'Firm Capability, Corporate Governance and Competitive Behaviour: A Multi-Theoretic Framework' (2009) 1(4) *International Journal of Strategic Change Management*.
- Heath J, 'Methodological Individualism' in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2009).
- Hechter M, 'Role of Values in Rational Choice Theory' (1994) 6(3) *Rationality and Society*.
- Heilmann S, 'Policy Experimentation in China's Economic Rise' (2008) 43(1) *Studies in Comparative International Development*.
- Heinrich RP, 'A Model of Corporate Governance as a System' (1999) <<http://www.econstor.eu/bitstream/10419/17791/1/271663987.pdf>> accessed 1 July 2015.
- Heisohn G and Steiger O, 'The Property Theory of Interest and Money' in John Smithin (ed), *What is Money?* (Routledge 2000).
- Henriksen LF, 'Economic Models as Devices of Policy Change: Policy Paradigms, Paradigm Shift, and Performativity' (2013) 7 *Regulation and Governance*.
- Herman ES and Chomsky N, *Manufacturing Consent: The Political Economy of the Mass Media* (Pantheon Books 1988).
- Hersch J and Viscusi K, 'Law and Economics as a Pillar of Legal Education' (2012) 8(2) *Review of Law and Economics*.
- Heyer K, 'Consumer Welfare and the Legacy of Robert Bork' (2014) 57 *Journal of Law and Economics*.
- Hidalgo CA and others, 'The Product Space Conditions the Development of Nations' (2007) 317(5837) *Science*.
- Hindriks F and Guala F, 'Institutions, Rules, and Equilibria: A Unified Theory' [2014] *Journal of Institutional Economics*.
- 'Understanding Institutions: Replies to Aoki, Binmore, Hodgson, Searle, Smith, and Sugden' (2015) 11(03) *Journal of Institutional Economics*.
- Hockett R, 'Why Paretians Can't Prescribe: Preferences, Principles, and Imperatives in Law and Policy' (2009) 18 *Cornell Journal of Law and Public Policy*.

- Hodgson GM, 'Behind Methodological Individualism' (1986) 10(3) Cambridge Journal of Economics.
- 'The Reconstruction of Economics - Is There Still a Place for Neoclassical Theory?' (1992) 26(3) Journal of Economic Issues.
- 'Metaphor and Pluralism in Economics: Mechanics and Biology' in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997).
- 'Opportunism Is Not the Only Reason Why Firms Exist: Why an Explanatory Emphasis on Opportunism May Mislead Management Strategy' (2004) 13(2) *Industrial and Corporate Change*.
- 'Evolutionary and Institutional Economics as the New Mainstream' (2007) 4(1) *Evolutionary and Institutional Economic Review*.
- 'Institutions and Individuals: Interaction and Evolution' (2007) 28 *Organization Studies*.
- 'Meanings of Methodological Individualism' (2007) 14(2) *Journal of Economic Methodology*.
- *Conceptualizing Capitalism: Institutions, Evolution, Future* (University of Chicago Press 2015).
- Holcombe RG, 'Pluralism versus Heterodoxy in Economics and the Social Sciences' (2008) 1(2) *The Journal of Philosophical Economics*.
- Hooker B, 'Rule Consequentialism' in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (June 2008), <<http://plato.stanford.edu/archives/win2008/entries/consequentialism-rule/>>
- Hopner M, 'What Connects Industrial Relations and Corporate Governance' (2005) 3(2) *Socio-Economic Review*.
- Hovenkamp H, 'The First Great Law and Economics Movement' (1990) 42(4) *Stanford Law Review*.
- 'Schumpeterian Competition and Antitrust' (October, 2008). University of Iowa Legal Studies Research Paper no. 08-43,
- Howarth D, *Law as Engineering: Thinking about What Lawyers do* (Edward Elgar 2013).
- Huang IB, Keisler J and Linkov I, 'Multi-criteria Decision Analysis in Environmental Sciences: Ten Years of Applications and Trends' (2011) 409(19) *The Science of the Total Environment*.
- Hurka T, 'Value Theory' in David Copp (ed), *The Oxford Handbook of Ethical Theory* (Oxford University Press 2005).

- Hurley P, *Beyond Consequentialism* (Oxford University Press 2009).
- Huutoniemi K and others, 'Analyzing Interdisciplinarity: Typology and Indicators' (2010) 39(1) *Research Policy*.
- Itoh M and others, 'Industrial Policy as a Corrective to Market Failures' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- 'Industry Promotion and Trade' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Itoh M and Kiyono K, 'Foreign Trade and Direct Investment' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Iwasaki A, 'Mergers and Reorganizations' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- J. Krafft and Ravix J.-L. 'Corporate Governance and the Governance of Knowledge: Rethinking the Relationship in Terms of Corporate Coherence' (2008) 17(1&2) *Economics of Innovation and New Technology*.
- Jackson G and Petraki A, 'Understanding Short-Termism: The Role of Corporate Governance' (Stockholm 2011). Report to the Glasshouse Forum <http://sofi-goettingen.de/fileadmin/Textarchiv/WIP2/Praesentationen/jackson-petraki_short-termism.pdf>.
- Jackson MC, 'Fifty Years of Systems Thinking for Management' (2009) 60 *The Journal of the Operational Research Society*.
- Jackson MO and Zenou Y, 'Games on Networks' in H. P Young and Shmuel Zamir (eds), *Handbook of Game Theory with Economic Applications: Volume 4* (North Holland 2015).
- Jacobson AJ, 'Autopoietic Law: The New Science of Niklas Luhmann' (1989) 87(6) *Michigan Law Review*.
- Jensen MC, 'Value Maximization, Stakeholder Theory, and the Corporate Objective Function' (2001) 14(3) *Journal of Applied Corporate Finance*.
- Jensen MC and Meckling WH, 'Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure' (1976) 3(4) *Journal of Financial Economics*.
- 'Rights and Production Functions: An Application to Labour-Managed Firms and Codetermination' (1979) 52(4) *The Journal of Business*.
- Joerges C, 'What is left of The European Economic Constitution? A Melancholic Eulogy' (2005) 30(4) *European Law Review*.
- Johnson C, *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975* (Stanford University Press 1982).

- Johnson R and Cureton A, 'Kant's Moral Philosophy' in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (2016).
- Jolls C, Sunstein CR and Thaler R, 'A Behavioral Approach to Law and Economics' (1998) 50(5) *Stanford Law Review*.
- Jones A and Sufrin B, *EC Competition Law: Text, Cases, and Materials* (Oxford University Press 2008).
- Jones GT, 'Dynamical Jurisprudence: Law as a Complex System' (2008) 24(4) *Georgia State University Law Review*.
- Jones RH, *Reductionism: Analysis and the Fullness of Reality* (Bucknell University Press 2000).
- Jorde TM and Teece DJ, 'Innovation, Cooperation and Antitrust' (1989) 4(1) *High Technology Law Journal*.
- Jürgens U, Naumann K and Rupp J, 'Shareholder Value in an Adverse Environment: the German Case' (2000) 29(1) *Economy and Society*.
- Kaiser M, Görner M and Hilgetag CC, 'Criticality of Spreading Dynamics in Hierarchical Cluster Networks Without Inhibition' (2007) 9(110) *New Journal of Physics*.
- Kang N and Moon J, 'Institutional Complementarity between Corporate Governance and Corporate Social Responsibility: A Comparative Institutional Analysis of Three Capitalisms' (2012) 10 *Socio-Economic Review*.
- Kaplow L and Shavell S, 'Why the Legal System Is Less Efficient than the Income Tax in Redistributing Income' (1994) 23(2) *The Journal of Legal Studies*.
- 'Fairness versus Welfare' (2001) 114(4) *Harvard Law Review*.
- Katkalo VS, Pitelis CN and Teece DJ, 'Introduction: On the Nature and Scope of Dynamic Capabilities' (2010) 19(4) *Industrial and Corporate Change*.
- Kaufman BE, 'Labor Markets and Employment Regulation: The View of the "Old" Institutionalists' in Bruce E Kaufman (ed), *Government Regulation of the Employment Relationship* (Cornell University Press 1997).
- 'The Institutional Economics of John R. Commons: Complement and Substitute for Neoclassical Economic Theory' (2007) 5 *Socio-Economic Review*.
- 'Economic Analysis of Labor Markets and Labor Law: An Institutional/Industrial Relations Perspective' in Cynthia Estlund and Michael L Wachter (eds), *Research Handbook on the Economics of Labour and Employment Law* (Edward Elgar 2012).
- 'The Optimal Level of Market Competition: Neoclassical and New Institutional Conclusions Critiqued and Reformulated' (2013) 47(3) *Journal of Economic Issues*.

- Kavka GS, 'Is Individual Choice Less Problematic than Collective Choice?' (1991) 7(2) *Economics and Philosophy*.
- Kelman M, 'Could Lawyers Stop Recessions? Speculations on Law and Macroeconomics' (1993) 45(5) *Stanford Law Review*.
- Kennedy D, 'Law and Development Economics: Toward a New Alliance' in David Kennedy and Joseph E Stiglitz (eds), *Law and Economics with Chinese Characteristics: Institutions for Promoting Development in the Twenty-First Century* (Oxford University Press 2013).
- 'Law and the Political Economy of the World' (2013) 26 *Leiden Journal of International Law*.
- Kerber W, 'Should Competition Law Promote Efficiency? Some Reflections of An Economist on the Normative Foundations of Competition Law' in Josef Drexl, Laurence Idot and Joël Monéger (eds), *Economic Theory and Competition Law* (Edward Elgar 2009).
- Ketels, Christian H. M. 'Industrial Policy in the United States' (2007) 7(3) *Journal of Industry, Competition and Trade*.
- Keynes JM, *General Theory of Employment, Interest and Money* (BN Publishing 1936 reprinted in 2008).
- Kibritcioglu A and Dibooglu S, 'Long-Run Economic Growth: An Interdisciplinary Approach' (2001) 13(4) *Knowledge, Technology, & Policy*.
- Killick T, 'Relevance, Meaning and Determinants of Flexibility' in Tony Killick (ed), *The Flexible Economy. Causes and Consequences of the Adaptability of National Economies* (Routledge 1995).
- Kim D and Santomero AM, 'Risk in Banking and Capital Regulation' (1988) 43(5) *The Journal of Finance*.
- Kirkwood JB and Lande RH, 'The Chicago School's Foundation Is Flawed: Antitrust Protects Consumers, Not Efficiency' in Robert Pitofsky (ed), *How the Chicago School Overshot the Mark: The Effect of Conservative Economic Analysis on US Antitrust* (Oxford University Press 2008).
- Kjaer PF, Teubner G and Febbrajo A (eds), *The Financial Crisis in Constitutional Perspective: The Dark Side of Functional Differentiation* (Hart Pub. 2011).
- Klein JT, *Interdisciplinarity: History, Theory, and Practice* (Wayne State University Press 1990).
- Klein PG, 'New Institutional Economics' in Boudewijn Bouckaert and Gerrit De Geest (eds), *Encyclopedia of Law and Economics, Volume I: The History and Methodology of Law and Economics* .
- Klodt H, 'Industrial Policy and Repressed Structural Change in West Germany' (1990) 207(1) *Jahrbücher für Nationalökonomie und Statistik*.

- Knight B, 'Germany Sets Out Major Cash Incentive For Electric Car Buyers' Deutsche Welle (DW) (18 May 2016) <<http://www.dw.com/en/germany-sets-out-major-cash-incentive-for-electric-car-buyers/a-19266326>>.
- Komiya R, 'Introduction' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Koopmann G, Kreienbaum C and Borrmann C, *Industrial and Trade Policy in Germany* (Nomos Verlagsgesellschaft 1997).
- Kosai Y, 'The Reconstruction Period' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Kraakman R and others, *The Anatomy of Corporate Law: A Comparative and Functional Approach* (2nd edn, Oxford University Press 2009).
- Kreps DM, *Game Theory and Economic Modelling* (Oxford University Press 1990).
- Kronenberg T, 'Finding Common Ground between Ecological Economics and Post-Keynesian Economics' (2010) 69 *Ecological Economics*.
- Kuhn TS, *The Structure of Scientific Revolutions* (2nd, University of Chicago Press 1970).
- La Porta R and others, 'Legal Determinants of External Finance' (1997) 52(3) *Journal of Finance*.
- 'Law and Finance' (1998) 106(6) *Journal of Political Economy*.
- 'Investor Protection and Corporate Governance' (2000) 58(1-2) *Journal of Financial Economics*.
- Lakatos I, *The Methodology of Scientific Research Programmes: Volume 1: Philosophical Papers* (John Worrall and Gregory Currie eds., Cambridge University Press 1987).
- Landes WM, 'The Art of Law and Economics: An Autobiographical Essay' (1997). Chicago Working Paper in Law and Economics, no. 45, <http://chicagounbound.uchicago.edu/law_and_economics/488/>.
- Langlois RN and Foss NJ, 'Capabilities and Governance: The Rebirth of Production in the Theory of Economic Organization' (1999) 52(2) *KYKLOS*.
- Laszlo E, *The Systems View of the World: A Holistic Vision for Our Time* (2nd edn, Hampton Press 1996).
- Lavoie D (ed), *Economics and Hermeneutics* (Routledge 1990).
- Lavoie M, *Introduction to Post-Keynesian Economics* (Palgrave Macmillan 2006).
- Lawson T, *Economics and Reality* (Routledge 1997).

- ‘On Criticizing the Practices of Economists: A Case for Interventionist Methodology’ in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997).
- *Reorienting Economics* (Routledge 2003)
- Lazega E and Snijders, Tom A. B. (eds), *Multilevel Network Analysis for the Social Sciences: Theory, Methods, and Applications* (Springer 2016).
- Lazonick W, ‘The Financialization of the US Corporation: What has been Lost, and How it can be Regained’ (2013) 36 *Seattle University Law Review*.
- ‘Innovative Enterprise or Sweatshop Economics? In Search of Foundations of Economic Analysis’ (October 2015). Institute for New Economic Thinking Working Paper no. 25, <<https://ineteconomics.org/uploads/papers/WP25-Lazonick-Innovative-Enterprise.pdf>>.
- Leat M and El-Kot G, ‘HRM Practices in Egypt: the Influence of National Context?’ (2007) 18(1) *International Journal of Human Resource Management*.
- Lee F, ‘The Pluralism Debate in Heterodox Economics’ (2011) 43(4) *Review of Radical Political Economy*.
- Lee FS and Cronin B (eds), *Handbook of Research Methods and Applications in Heterodox Economics* (Edward Elgar 2016).
- Lee K-M, Min B and Goh K-I, ‘Towards Real-World Complexity: An Introduction to Multiplex Networks’ (2015) 88(48) *The European Physical Journal B*.
- Lee Y-S, ‘Call for a New Analytical Model for Law and Development’ (2015) 8(1) *Law and Development Review*.
- Levine R, ‘Financial Development and Economic Growth: Views and Agenda’ (1997) 35(2) *Journal of Economic Literature*.
- Lianos I, Mateus A and Raslan A, ‘Is There a Tension between Development Economics and Competition?’ in D. D Sokol, Thomas K Cheng and Ioannis Lianos (eds), *Competition Law and Development* (Stanford University Press 2013).
- Libretta P, ‘The Economic and Monetary Union: A Standards or Rules-Based Institutions?’ (2003) 29 *Brooklyn Journal of International Law*.
- Lindbeck T, ‘The Weberian Ideal-Type: Development and Continuities’ (1992) 35(4) *Acta Sociologica*.
- Lindenberg W, ‘Intrinsic Motivation in a New Light’ (2001) 54(2/3) *KYKLOS*.
- Liou, James J. H. and Tzeng G-H, ‘Comments on "Multiple Criteria Decision Making (MCDM) Methods in Economics: An Overview"' (2012) 18(4) *Technological and Economic Development of Economy*.

- Lipsey RG, 'Reflections on the Theory of the Second Best at Its Golden Jubilee' (2007) 14 *International Tax and Public Finance*.
- 'Technological Transformation, Intellectual Property Rights and Second Best Theory' (2007) 4(2) *Review of Economic Research on Copyright Issues*.
- Lipsey RG and Lancaster K, 'The General Theory of Second Best' (1956) 24(1) *The Review of Economic Studies*.
- Listokin Y, 'Equity, Efficiency, and Stability: The Importance of Macroeconomics for Evaluating Income Tax Policy' (2012) 29(1) *Yale Journal on Regulation*.
- Livingston MA, 'Reinventing Tax Scholarship: Lawyers, Economists, and the Role of the Legal Academy' (1998) 53 *Cornell Law Review*.
- Loasby BJ, 'Running a Business: An Appraisal of Economics, Organization and Management by Paul Milgrom and John Roberts' (1995) 4(2) *Corporate and Industrial Change*.
- Lobel O, 'New Governance as Regulatory Governance' in David Levi-Faur (ed), *Oxford Handbook of Governance* (Oxford University Press 2012).
- Longino HE, 'Theoretical Pluralism and the Scientific Study of Behavior' in Stephen H Kellert, Helen E Longino and Kenneth C Waters (eds), *Minnesota Studies in the Philosophy of Science, Vol. XIX: Scientific Pluralism* (University of Minnesota Press 2006).
- LoPucki LM, 'The Systems Approach to Law' (1997) 82 *Cornell Law Review*.
- LoPucki LM and Triantis GG, 'A Systems Approach to Comparison of U.S. and Canadian Reorganization of Financially Distressed Companies' (1994) 35(2) *Harvard International Law Journal*.
- LoPucki LM and Warren E, *Secured Credit: A Systems Approach* (7th edn, Aspen Publishing 2011).
- Lu L and McDonald IM, 'Does China Save too Much?' (2006) 51(03) *The Singapore Economic Review*.
- Luhmann N, *Social Systems* (John Bednarz Jr. with Dirk Baecker trs., Stanford University Press 1995).
- Lundberg M and Squire L, 'The Simultaneous Evolution of Growth and Inequality' (2003) 113(487) *The Economic Journal*.
- Lutz M, 'Emphasizing the Social: Social Economics and Socio-Economics' (1990) 48(3) *Review of Social Economy*.
- Ma T-c, 'Legal Transplant, Legal Origin, and Antitrust Effectiveness' (2013) 9(1) *Journal of Competition Law and Economics*.
- MacCormick N, *Legal Reasoning and Legal Theory* (Oxford University Press 1994).

- Institutions of Law: An Essay in Legal Theory (Oxford University Press 2007).
- MacCormick N and Weinberger O, *An Institutional Theory of Law: New Approaches to Legal Positivism* (Reidel 1986).
- Madema SG and Zerbe Jr. Richard O. ‘The Coase Theorem’ in Boudewijn Bouckaert and Gerrit De Geest (eds), *Encyclopedia of Law and Economics, Volume I: The History and Methodology of Law and Economics* .
- Mäki U, ‘The One World and the Many Theories’ in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997).
- Malloy RP and Braun CK, *Law and Economics: New and Critical Perspectives* (P. Lang 1995).
- Manderson D, ‘Some Considerations about Transdisciplinarity: A New Metaphysics’ in Margaret Somerville and David J Rapport (eds), *Transdisciplinarity: Recreating Integrated Knowledge* (EOLSS Publishers Co. Ltd. 2000).
- Manski CF, ‘Identification Problems in the Social Sciences’ (1993) 23 *Sociological Methodology*.
- Marchionatti R, ‘J. M. Keynes, Thinker of Economic Complexity’ (2010) 18(2) *History of Economic Ideas*.
- Markovits RS, ‘Second-Best Theory and Law & Economics: An Introduction’ (1998) 73 *Chicago-Kent Law Review*.
- Masouros PE, ‘Corporate Governance and the Great Recession: An Alternative Explanation for Germany’s Success in the Post-2008 World’ (January 2014). Hellenic Foundation for European and Foreign Policy (ELIAMEP), Crisis Observatory Research Paper no. 8/2014, <<http://ssrn.com/abstract=2388611>>.
- Matsushita M, ‘The Legal Framework of Japanese Industrial Policy’ [1987] *Brigham Young University Law Review*.
- Mattei U, *Comparative Law and Economics* (University of Michigan Press 1997).
- ‘A Theory of Imperial Law: a Study on US Hegemony and the Latin Resistance’ (2003) 3(2) *Global Jurist Frontiers*.
- Max-Neef MA, ‘Foundations of Transdisciplinarity’ (2005) 53 *Ecological Economics*.
- Mazzucato M, *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (Anthem Press 2013).
- McDowell B, ‘The Audiences for Legal Scholarship’ (1990) 40 *Journal of Legal Education*.
- McMurtry RR, ‘Reflections on Transdisciplinarity’ in Margaret Somerville and David J Rapport (eds), *Transdisciplinarity: Recreating Integrated Knowledge* (EOLSS Publishers Co. Ltd. 2000).

- Meadows DH, *Thinking in Systems: A Primer* (Earthscan 2009).
- Mella P, *Systems Thinking: Intelligence in Action* (Springer 2012).
- Meltzer AH and Richard SF, 'A Positive Theory of Economic Growth and the Distribution of Income' (2015) 69(3) *Research in Economics*.
- Mercuro N and Medema SG, *Economics and the Law: From Posner to Post-Modernism* (Princeton University Press 1997).
- Messenger JC and Ray N, 'The Distribution of Hours of Work in Developed and Developing Countries: What are the Main Differences and Why?' (1 May 2013). ILO Policy Brief no. 5, <http://www.ilo.org/travail/info/fs/WCMS_247974/lang--en/index.htm>.
- Messerly JG, *An Introduction to Ethical Theories* (University Press of America 1995).
- Mey Md, *The Cognitive Paradigm: Cognitive Science, a Newly Explored Approach to the Study of Cognition Applied in an Analysis of Science and Scientific Knowledge* (D. Reidel Publishing Company 1982).
- Milgrom P and Roberts J, 'Complementarities and Fit: Strategy, Structure, and Organizational Change in Manufacturing' (1995) 19(2) *Journal of Accounting and Economics*.
- Milhaupt CJ, 'A Relational Theory of Japanese Corporate Governance: Contract, Culture, and the Rule of Law' (1996) 37 *Harvard International Law Journal*.
- Miller J and Page S, *Complex Adaptive Systems: An Introduction to Computational Models of Social Science* (Princeton University Press 2007).
- Miller JM, 'A Typology of Legal Transplants: Using Sociology, Legal History, and Argentine Examples to Explain the Transplant Process' (2003) 51 *The American Journal of Comparative Law*.
- Ministry of Planning, Follow-up, and Administrative Reform, 'Sustainable Development Strategy: Egypt Vision 2030' <<http://sdsegypt2030.com/?lang=en>>.
- Mirowski P, *Machine Dreams: How Economics Becomes a Cyborg Science* (Cambridge University Press 2002).
- Mishan EJ, *Introduction to Normative Economics* (Oxford University Press 1981).
- Mitchell JC, 'The Doctrine of Market Failure and Early Development Theory' (2006) 44 *History of Economics Review*.
- Mitchell M, *Complexity: A Guided Tour* (Oxford University Press 2009).
- Miwa Y, 'Coordination within Industry: Output, Price, and Investment' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).

- Mohamed S, 'The Effect of a Mainstream Approach to Economic and Corporate Governance on Development in South Africa' in Omano Edigheji (ed), *Constructing a Democratic Developmental State in South Africa: Potentials and Challenges* (HSRC Press 2010).
- Monateri PG (ed), *Methods of Comparative Law* (Edward Elgar 2012).
- Moore J, 'The Firm as a Collection of Assets' (1992) 36(2-3) *European Economic Review*.
- Morgan MS, *The World in the Model: How Economists Work and Think* (Cambridge University Press 2012).
- Moss DA and Oey M, 'The Paranoid Style in the Study of American Politics' in Edward J Balleisen and David A Moss (eds), *Government and Markets: Towards a New Theory of Regulation* (Cambridge University Press 2010).
- Munda G, 'Beyond Welfare Economics: Some Methodological Issues' (2016) 23(2) *Journal of Economic Methodology*.
- Murray MD, 'The Great Recession and the Rhetorical Canons of Law and Economics' (2012) 58(2) *Loyola Law Review*.
- Musgrave RA and Musgrave PB, *Public Finance in Theory and Practice* (4th edn, McGraw-Hill 1984).
- Mutoh H, 'The Automotive Industry' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Newell WH, 'Transdisciplinarity Reconsidered' in Margaret Somerville and David J Rapport (eds), *Transdisciplinarity: Recreating Integrated Knowledge* (EOLSS Publishers Co. Ltd. 2000).
- 'A Theory of Interdisciplinary Studies' (2001) 19 *Issues in Integrative Studies*.
- Ng Y-K, *Welfare Economics: Towards a More Complete Analysis* (Palgrave Macmillan 2004).
- Norgaard RB, 'The Case for Methodological Pluralism' (1989) 1(1) *Ecological Economics*.
- North DC, *Institutions, Institutional Change and Economic Performance* (Cambridge University Press 1990).
- Nussbaum MC, 'Flawed Foundations: The Philosophical Critique of (a Particular Type of) Economics' (1997) 64(4) *The University of Chicago Law Review*.
- 'Capabilities as Fundamental Entitlements: Sen and Social Justice' (2003) 9(2-3) *Feminist economics*.
- 'Constitutions and Capabilities: Perception Against Lofty Formalism' (2007) 121 *Harvard Law Review*.
- Nyborg K, 'Homo Economicus and Homo Politicus: Interpretation and Aggregation of Environmental Values' (2000) 42(3) *Journal of Economic Behavior and Organization*.

- Odagiri H, *Growth Through Competition, Competition Through Growth: Strategic Management and the Economy in Japan* (Clarendon Press 1994).
- OECD, 'Turning Science into Business: Patenting and Licensing at Public Research Organizations' (14 May 2003) <<http://www.oecd.org/sti/sci-tech/turningscienceintobusinesspatentingandlicensingatpublicresearchorganisations.htm>>.
- 'Average Usual Weekly Hours Worked on the Main Job' (2016). OECD Statistics Database <<https://stats.oecd.org/Index.aspx?DataSetCode=ANHRS>>.
- Ogura S and Yoshino N, 'The Tax System and the Fiscal Investment and Loan Program' in Ryutaro Komiya, Masahiro Okuno and Kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- O'Hara PA, 'Principles of Institutional-Evolutionary Political Economy: Converging Themes from the Schools of Heterodoxy' (2007) 41(1) *Journal of Economic Issues*.
- Ohnesorge, John K. M. 'Developing Development Theory: Law and Development Orthodoxies and the Northeast Asian Experience' [2007] *University of Pennsylvania Journal of International Economic Law*.
- Osterloh M and Frey BS, 'Corporate Governance for Knowledge Production: Theoretical Foundations and Practical Implications' (2006) 3(4) *Corporate Ownership and Control*.
- Østreg W, 'Reductionism versus Holism - Contrasting Approaches' in Willy Østreg (ed), *Consilience: Interdisciplinary Communications 2005/2006* (Oslo, Centre for Advanced Study 2007).
- Ostrom E, 'Challenges and Growth: the Development of the Interdisciplinary Field of Institutional Analysis' (2007) 3(3) *Journal of Institutional Economics*.
- 'Background on the Institutional Analysis and Development Framework' (2011) 39(1) *The Policy Studies Journal*.
- O'Sullivan M. 'The Innovative Enterprise and Corporate Governance' (2000) 24(4) *Cambridge Journal of Economics*.
- P. F. 'Why the World is Addicted to Debt' *The Economist* (May 17th 2015) <<http://www.economist.com/blogs/economist-explains/2015/05/economist-explains-20>>.
- Pack H and Saggi K, 'Is There a Case for Industrial Policy?: A Critical Survey' (2006) 21(2) *The World Bank Research Observer*.
- Page SE, *Diversity and Complexity* (Princeton University Press 2010).
- Palermo G, 'Misconceptions of Power: From Alchian and Demsetz to Bowles and Gintis' (2007) 31(2) *Capital & Class*.
- Palley TI, 'Inequality and Growth in Neo-Kaleckian and Cambridge Growth Theory' (May 2016). IMK Working Paper no. 167.

- Parchomoksky G and Siegelman P, 'Selling Mayberry: Communities and Individuals in Law and Economics' (2004) 92(1) California Law Journal.
- Paredes TA, 'Systems Approach to Corporate Governance Reform: Why Importing US Corporate Law Isn't the Answer' (2004) 45 William and Mary Law Review.
- Parisi F, 'Positive, Normative and Functional Schools in Law and Economics' (2004) 18(3) European Journal of Law and Economics.
- Parker C and Braithwaite J, 'Regulation' in Peter Cane and Mark V Tushnet (eds), *The Oxford Handbook of Legal Studies* (Oxford University Press 2005).
- Parker R, 'From National Champions to Small and Medium Sized Enterprises: Changing Policy Emphasis in France, Germany and Sweden' (1999) 19(1) Journal of Public Policy.
- Parnell JA and Hatem T, 'Cultural Antecedents of Behavioural Differences between American and Egyptian Managers' (1999) 36(3) Journal of Management Studies.
- Pattanaik PK, 'Social Welfare Function' in Steven N Durlauf and Lawrence E Blume (eds), *The New Palgrave Dictionary of Economics* (2nd. Palgrave Macmillan 2008).
- Pejovic C, 'Japanese Corporate Governance: Behind Legal Norms' (2011) 29 Penn State International Law Review.
- Pellegrin J and others, 'EU Industrial Policy: Assessment of Recent Developments and Recommendations for Future Policies' (February, 2015). Study prepared for the European Parliament's Committee on Industry, Research and Energy <[http://www.europarl.europa.eu/RegData/etudes/STUD/2015/536320/IPOL_STU\(2015\)536320_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/536320/IPOL_STU(2015)536320_EN.pdf)>.
- Pfleiderer P, 'Chameleons: The Misuse of Theoretical Models in Finance and Economics' (March 2014). Stanford Business School Working Paper no. 3020, <<https://www.gsb.stanford.edu/faculty-research/working-papers/chameleons-misuse-theoretical-models-finance-economics>>.
- Phelps ES, 'What Is Wrong with the West's Economies?' *The New York Review of Books* (13 August 2015) <www.nybooks.com/articles/2015/08/13/what-wrong-wests-economies/>.
- Pindyck RS and Rubinfeld DL, *Microeconomics* (7th edn, Prentice Hall 2009).
- Pink D, *Drive: The Surprising Truth About What Motivates Us* (Riverhead Books 2009).
- Pirie I, 'Globalization and the Decline of the Developmental State' in Ben Fine, Jyoti Saraswati and Daniela Tavasci (eds), *Beyond the Developmental State: Industrial Policy into the Twenty-First Century* (Pluto Press 2013).
- Pistor K, 'Codetermination: A Sociopolitical Model with Governance Externalities' in Margaret M Blair and Mark J Roe (eds), *Employees and Corporate Governance* (Brookings Institution Press).

- ‘A Legal Theory of Finance’ (2013) 41(2) *Journal of Comparative Economics*.
- Posner EA and Sunstein CR (eds), *Law and Happiness* (Chicago University Press 2010).
- Posner RA, *Economic Analysis of Law* (8th edn, Wolters Kluwer first published 1973, 2011).
- ‘Economic Approach to Law’ (1975) 53 *Tax Law Review*.
- ‘The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication’ (1980) 8 *Hofstra Law Review*.
- ‘Some Economics of Labor Law’ (1984) 51 *University of Chicago Law Review*.
- ‘An Economic Theory of the Criminal Law’ (1985) 85(6) *Columbia Law Review*.
- ‘The Decline of Law as an Autonomous Discipline: 1962-1987’ (1987) 100(4) *Harvard Law Review*.
- ‘Legal Scholarship Today’ (1992-1993) 45 *Stanford Law Review*.
- ‘The New Institutional Economics Meets Law and Economics’ (1993) 149(1) *Journal of Theoretical and Institutional Economics*.
- ‘The Problematics of Moral and Legal Theory’ (1998) 111(7) *Harvard Law Review*.
- ‘Law and Economics in Common-Law, Civil-Law, and Developing Nations’ (2004) 17(1) *Ratio Juris*.
- ‘From the New Institutional Economics to Organization Economics: With Applications to Corporate Governance, Government Agencies, and Legal Institutions’ (2010) 6(1) *Journal of Institutional Economics*.
- ‘On the Receipt of the Ronald H. Coase Medal: Uncertainty, the Economic Crisis, and the Future of Law and Economics’ (2012) 14(1) *American Law and Economics Review*.
- Posusney MP, ‘Irrational Workers: The Moral Economy of Labor Protest in Egypt’ (1993) 46(01) *World Politics*.
- Prosser T, *The Regulatory Enterprise: Government, Regulation, and Legitimacy* (Oxford University Press 2010).
- Pugel TA, ‘Japan’s Industrial Policy: Instruments, Trends, and Effects’ (1984) 8 *Journal of Comparative Economics*.
- Putnam H, ‘For Ethics and Economics without the Dichotomies’ in Hilary Putnam and Vivian C Walsh (eds), *The End of Value-Free Economics* (Routledge INEM advances in economic methodology vol 13. Routledge 2012).
- Radin MJ, ‘Market-Inalienability’ (1987) 100(8) *Harvard Law Review*.
- Rankin N, ‘Is Delegating Half of Demand Management Sensible?’ (1998) 12(3) *International Review of Applied Economics*.

- Raskolnikov A, 'Accepting the Limits of Tax Law and Economics' (2013) 98 Cornell Law Review.
- Raz J, *Practical Reason and Norms* (Oxford University Press 1999).
- Reed OL, 'Nationbuilding 101: Reductionism in Property, Liberty, and Corporate Governance' (2003) 36 Vanderbilt Journal of Transnational Law.
- Repko AF, 'Integrating Interdisciplinarity: How the Theories of Common Ground and Cognitive Interdisciplinarity are Informing the Debate on Interdisciplinary Integration' [2007] *Issues in Integrative Studies*.
- *Interdisciplinary Research: Process and Theory* (2nd edn, SAGE 2012).
- Repko AF, with Szostak R and Buchberger MP, *Introduction to Interdisciplinary Studies* (SAGE Publications 2013).
- Reuten G, 'A Revision of the Neoclassical Economics Methodology: Appraising Hausman's Mill-Twist, Robbins-Gist, and Popper-Whist' (1996) 3(1) *Journal of Economic Methodology*.
- Rey ED and Lopez-Garcia M-A, 'On Welfare Criteria and Optimality in Endogenous Growth Model' (2012) 14(6) *Journal of Public Economic Theory*.
- Rey P, 'Competition Policy and Economic Development' (September 1997) <<https://www.tse-fr.eu/publications/competition-policy-and-economic-development>>.
- Rhode DL, 'Legal Scholarship' (2001) 115 *Harvard Law Review*.
- Rima IH, *Development of Economic Analysis* (5th edn, Routledge 1996).
- Ringe W-G, 'Changing Law and Ownership Patterns in Germany Corporate Governance and the Erosion of Deutschland AG' (2015) 63 *The American Journal of Comparative Law*.
- Ritzer G, 'Sociology: A Multiple Paradigm Science' (1975) 10(3) *The American Sociologist*.
- Robbins L, *An Essay on the Nature and Significance of Economic Science* (Macmillan and Co. Limited 1932).
- Rodrik D, 'Second-Best Institutions' (2008) 98(2) *American economic review*.
- 'Industrial Policy: Don't Ask Why, Ask How' (2009) 1(1) *Middle East Development Journal*.
- Roe MJ, 'Chaos and evolution in law and economics' (1996) 109(3) *Harvard Law Review* 641.
- Romano R, 'The State Competition Debate in Corporate Law' (1987) 8 *Cordozo Law Review*.
- Romer P, 'Increasing Returns and Long-Run Growth' (1986) 94(5) *Journal of Political Economy*.
- *Advanced Macroeconomics* (4th edn, McGraw Hill 2012).
- Rubin EL, 'What Does Prescriptive Legal Scholarship Say and Who is Listening to It: A Response to Professor Dan-Cohen' (1992) 63 *University of Colorado Law Review*.

- Rubinstein A, 'Dilemma of an Economic Theorist' (2006) 64(4) *Econometrica*.
- Ruhl JB, 'Complexity Theory as a Paradigm for the Dynamical Law-and-Society System: A Wake Up Call for Legal Reductionism and the Modern Administrative State' (1996) 45(5) *Duke Law Journal*.
- 'Law's Complexity: A Primer' (2008) 24(4) *Georgia State University Law Review*.
- Rushton M, 'Methodological Individualism and Cultural Economics' (1999) 23 *Journal of Cultural Economics*.
- Rutherford M, 'The Old and the New Institutionalism: Can Bridges Be Built?' (1995) 29(2) *Journal of Economic Issues*.
- 'The Prospects of Heterodox Economics: A Comment' (2000) 22(2) *Journal of the History of Economic Thought*.
- 'Institutional Economics: Then and Now' (2001) 15(3) *The Journal of Economic Perspectives*.
- Saaty TL, 'Fundamentals of the Analytic Network Process—Dependence and Feedback in Decision-Making with a Single Network' (2004) 13(2) *Journal of Systems Science and Systems Engineering*.
- Sachs J, 'Death by Debt - My Response to The German Finance Ministry' *Süddeutsche Zeitung (SZ) International* (31 July 2015) <<http://international.sueddeutsche.de/post/125522613465/death-by-debt-my-response-to-the-german-finance>>.
- Sachweh P, 'The Moral Economy of Inequality: Popular Views on Income Differentiation, Poverty and Wealth' (2012) 10 *Socio-Economic Review*.
- Saks MJ and Faigman DL, 'Expert Evidence after Daubert' (2005) 1 *Annual Review of Law and Social Science*.
- Salanti A and Screpanti E (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997).
- Samuels WJ, 'Welfare Economics, Power, and Property' in Warren J Samuels and A. A Schmid (eds), *Law and Economics: An Institutional Perspective* (Martinus Nijhoff 1981).
- 'Methodological Pluralism: The Discussion in Retrospect' in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997).
- 'The Case for Methodological Pluralism' in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997).

- Sanchirico CW, 'Taxes Versus Legal Rules as Instruments for Equity: A More Equitable View' (2000) 29(2) *The Journal of Legal Studies*.
- Sarkar S, 'Models of Reduction and Categories of Reductionism' (1991) 91 *Synthese*.
- Sassen S, *Expulsions: Brutality and Complexity in the Global Economy* (The Belknap Press of Harvard University Press 2014).
- Schaede U, *Cooperative Capitalism: Self-Regulation, Trade Associations, and the Antimonopoly Law in Japan* (Oxford University Press 2000).
- Schefold B, 'Comment on 'Eichhorn: Uneasy Polygons; Environment and Security within the System of Aims of an Economy'' (1992) 43(1-2) *Metroeconomica*.
- 'Marx, Sombart, Weber and the Debate about the Genesis of Modern Capitalism' (2014) 6(2) *Journal of Institutional Studies*.
- Schelkle W, 'EU Fiscal Governance: Hard Law in the Shadow of Soft Law?' (2007) 13 *Columbia Journal of European Law*.
- Scherer FM, 'Schumpeter and Plausible Capitalism' (1992) 30 *Journal of Economic Literature*.
- Schmalensee R, 'Thoughts on the Chicago Legacy in U.S. Antitrust' in Robert Pitofsky (ed), *How the Chicago School Overshot the Mark: The Effect of Conservative Economic Analysis on US Antitrust* (Oxford University Press 2008).
- Schmid AA, 'Institutional Law and Economics' (1994) 1(1) *European Journal of Law and Economics*.
- *Conflict and Cooperation: Institutional and Behavioral Economics* (Blackwell Publishers 2004).
- Schmidt RH, 'Methodology and Finance', (1983) 14 *Theory and Decision*.
- 'Corporate Governance in Germany: An Economic Perspective' in Jan P Krahn and Reinhard H Schmidt (eds), *The German Financial System* (Oxford University Press 2004).
- Schmidt RH and Tyrell M, 'What Constitutes a Financial System in General and the German Financial System in Particular?' in Jan P Krahn and Reinhard H Schmidt (eds), *The German Financial System* (Oxford University Press 2004).
- Schrank A and Whitford J, 'Industrial Policy in the United States: A Neo-Polanyian Interpretation' (2009) 37(4) *Politics and Society*.
- Schumpeter JA, *Capitalism, Socialism and Democracy* (5th edn, first published 1976, Routledge 2003).
- Schweitzer F and others, 'Economic Networks: The New Challenges' (2009) 325(5939) *Science*.
- Scott N, 'The Dialectics of Law and Development' in David M Trubek and Santos Alvaro (eds), *The New Law and Economic Development: A Critical Appraisal* (2006).

- Scott WR, *Institutions and Organizations: Ideas, Interests, and Identities* (4th edn, SAGE Publications 2014).
- Screpanti E, 'Afterword: Can Methodological Pluralism be a Methodological Canon?' in Andrea Salanti and Ernesto Screpanti (eds), *Pluralism in Economics: New Perspectives in History and Methodology* (Edward Elgar 1997).
- Searle JR, 'What is an Institution?' (2005) 1(1) *Journal of Institutional Economics*.
- Seita AY and Tamura J, 'The Historical Background of Japan's Antimonopoly Law' (1994) 115 *University of Illinois Law Review*.
- Sekiguchi S and Horiuchi T, 'Trade and Adjustment Assistance' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Sen A, 'Personal Utilities and Public Judgements: or What's Wrong with Welfare Economics?' (1979) 89(355) *The Economic Journal*.
- 'The Living Standard' (1984) 36 *Oxford Economic Papers*.
- *Development as Freedom* (Oxford University Press 1999).
- 'The Discipline of Cost-Benefit Analysis' (2000) 29(S2) *Journal of Legal Studies*.
- Shalakany A, 'Between Identity and Redistribution: Sanhuri, Genealogy and the Will to Islamise' (2001) 8(2) *Islamic Law and Society*.
- Shavell S, *Foundations of Economic Analysis of Law* (The Belknap Press of Harvard University Press 2004).
- Shen ZM, 'Legal Transplant and Comparative Law' (1999) 51(4) *Revue internationale de droit comparé*.
- Shinjo K, 'The Computer Industry' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Shwed U and Bearman PS, 'The Temporal Structure of Scientific Consensus Formation' (2010) 75(6) *American Sociological Review*.
- Sidak JG and Teece DJ, 'Dynamic Competition in Antitrust Law' (2009) 5(4) *Journal of Competition Law and Economics*.
- Sidani YM and Jamali D, 'The Egyptian Worker: Work Beliefs and Attitudes' (2010) 92(3) *Journal of Business Ethics*.
- Silvestre J, *Public Microeconomics: Efficiency and Equity in Public Policy* (Edward Elgar 2012).
- Simon HA, 'The Architecture of Complexity' (1962) 106(6) *Proceedings of The American Philosophical Society*.

- Simon WH, 'Optimization and its Discontent in Regulatory Design: Bank Regulation as an Example' (2010) 4 Regulation and Governance.
- Singelis TM and others, 'Horizontal and Vertical Dimensions of Individualism and Collectivism: A Theoretical and Measurement Refinement' (1995) 29(3) Cross-Cultural Research.
- Singh A, 'Competition and Competition Policy in Emerging Markets: Institutional and Developmental Dimensions' in Philip Arestis, John McCombie and Roger Vickerman (eds), Growth and Economic Development: Essays in the Honour of A.P. Thirlwall (Edward Elgar Publishing 2006).
- Singh M and Davidson III WN, 'Agency Costs, Ownership Structure and Corporate Governance Mechanisms' (2003) 27(5) Journal of Banking & Finance.
- Sinnott-Armstrong W, 'Consequentialism' in Edward N Zalta (ed), The Stanford Encyclopedia of Philosophy (Spring 2014), <<http://plato.stanford.edu/archives/spr2014/entries/consequentialism/>>
- Skyttner L, General Systems Theory: Problems, Perspectives, Practice (2nd edn, World Scientific 2005).
- Smith DK, 'What Is Regulation - A Reply to Julia Black' (2002) 27(37) Australian Journal of Legal Philosophy.
- Smith SD, 'Reductionism in Legal Thought' (1991) 91 Columbia Law Review.
- Smulders S, Toman M and Withagen C, 'Growth Theory and 'Green Growth'' (2015) 30(3) Oxford Review of Economic Policy.
- Solo R, 'Industrial Policy' (1984) 18(3) Journal of Economic Issues.
- Somerville MA, 'Transdisciplinarity: Structuring Creative Tension' in Margaret Somerville and David J Rapport (eds), Transdisciplinarity: Recreating Integrated Knowledge (EOLSS Publishers Co. Ltd. 2000).
- Spaeth SM, 'Industrial Policy, Continuing Surveillance, and Raised Eyebrows: A Comparison of Informality in Administrative Procedure in Japan and the United States' (1994) 20 Ohio Northern University Law Review.
- Spash CL, 'New Foundations for Ecological Economics' (2012) 77 Ecological Economics.
- 'Towards the Integration of Social, Ecological and Economic Knowledge' in Julien-François Gerber and Rolf Steppacher (eds), Towards an Integrated Paradigm in Heterodox Economics: Alternative Approaches to the Current Eco-social Crises (Palgrave Macmillan 2012).
- Spencer DA, 'Integrating Economics with the Other Human (And Related) Sciences: Some Initial Considerations' (2011) <http://fessud.eu/?page_id=1836>.
- Spielthener G, 'Consequentialism or Deontology?' (2005) 33(1) Philosophia.

- Stanford K, 'Underdetermination of Scientific Theory' in Edward N Zalta (ed), *The Stanford Encyclopedia of Philosophy* (Spring 2016), <<http://plato.stanford.edu/archives/spr2016/entries/scientific-underdetermination/>>
- Stember M, 'Advancing the Social Sciences through the Interdisciplinary Enterprise' (1991) 28(1) *The Social Science Journal*.
- Stiglitz JE, 'Markets, Market Failures, and Development' (1989) 79(2) *The American Economic Review*.
- *Whither Socialism?* (The MIT Press 1994).
- 'From Miracle to Crisis to Recovery: Lessons from Four Decades of East Asian Experience' in Joseph E Stiglitz and Shahid Yusuf (eds), *Rethinking the East Asian Miracle* (Oxford University Press and the World Bank 2001).
- 'Government Failure vs. Market Failure: Principles of Regulation' in Edward J Balleisen and David A Moss (eds), *Government and Markets: Towards a New Theory of Regulation* (Cambridge University Press 2010).
- *The Price of Inequality: How Today's Divided Society Endangers Our Future* (W. W. Norton & Co. 2012).
- Stiglitz JE, Lin JY and Monga C, 'The Rejuvenation of Industrial Policy' (September 2013). *The World Bank Policy Research Working Paper* no. 6628, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2333944>.
- Storm S, 'German Wage Moderation and the Eurozone Crisis: A Critical Analysis' (8 January 2016). *Institute for New Economic Thinking Blog* <<https://www.ineteconomics.org/ideas-papers/blog/german-wage-moderation-and-the-eurozone-crisis-a-critical-analysis>>.
- Stout LA, 'Bad and Not-So-Bad Arguments for Shareholder Primacy' (2002) 75 *Southern California Law Review*.
- Streeck W, 'German Capitalism: Does it Exist? Can it Survive?' in Colin Crouch and Wolfgang Streeck (eds), *Political Economy of Modern Capitalism* (SAGE Publications 1997).
- *Re-Forming Capitalism: Institutional Change in the German Political Economy* (Oxford University Press 2009).
- Sundaram AK and Inkpen AC, 'The Corporate Objective Revisited' (2004) 15(3) *Organization Science*.
- Sunstein CR, *After the Rights Revolution: Reconceiving the Regulatory State* (Harvard University Press 1990).
- Systems Management College, Department of Defense, 'Systems Engineering Fundamentals' (Fort Belvoir, Virginia January 2001) <http://ocw.mit.edu/courses/aeronautics-and-astronautics/16-885j-aircraft-systems-engineering-fall-2005/readings/sefguide_01_01.pdf>.

- Taboso F, 'Institutional Individualism and Institutional Change: The Search for a Middle Way Mode of Explanation' (2001) 25 *Cambridge Journal of Economics*.
- Teece DJ, 'Competition, Cooperation, and Innovation: Organizational Arrangements for Regimes of Rapid Technological Progress' (1992) 18 *Journal of Economic Behavior and Organization*.
- Teece DJ, Pisano G and Shuen A, 'Dynamic Capabilities and Strategic Management' (1997) 18(7) *Strategic Management Journal*.
- Teubner G, 'Autopoiesis in Law and Society: A Rejoinder to Blankenburg' (1984) 18(2) *Law and Society Review*.
- 'Juridification: Concepts, Aspects, Limits, Solutions' in Gunther Teubner (ed), *Juridification of Social Spheres: A Comparative Analysis in the Areas of Labor, Corporate, Antitrust, and Social Welfare Law* (de Gruyter 1987).
- 'A Constitutional Moment: the Logics of 'Hitting the Bottom'' in Poul F Kjaer, Gunther Teubner and Alberto Febbrajo (eds), *The Financial Crisis in Constitutional Perspective: The Dark Side of Functional Differentiation* (Hart Pub. 2011).
- "“And if I by Beelzebub cast out Devils, ...”": An Essay on Diabolics of Network Failure' (2014) 10(4) *German Law Journal*.
- Teubner G and Bankowski Z, *Law as an Autopoietic System* (Blackwell 1993).
- Teubner G and Korth P, 'Two Kinds of Legal Pluralism: Collision of Transnational Regimes in the Double Fragmentation of World Society' in Margaret Young (ed), *Regime Interaction in International Law: Facing Fragmentation* (Oxford University Press 2009).
- Thiemann M, Aldegwy M and Ibrocevic E, 'Understanding the Shift from Micro to Macro-Prudential Thinking: A Discursive Network Analysis' (9 May 2016). SAFE Working Paper no. 136, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2777484>.
- Tinbergen J, *On the Theory of Economic Policy* (North-Holland 1952).
- Towfigh and others, *Economic Methods for Lawyers* (Edward Elgar 2015).
- Transparency International, 'Corruption Perceptions Index 2015' (2016) <<http://www.transparency.org/cpi2015#downloads>>.
- Tresch RW, *Public Finance: A Normative Theory* (2nd, Academic Press Inc. 2002).
- Trubek DM, 'Law, State, and the New Developmentalism: An Introduction' in David M Trubek and others (eds), *Law and the New Developmental State: The Brazilian Experience in Latin American Context* (Cambridge University Press 2014).
- Trubek DM and Alvaro S, 'Introduction: the Third Movement in Law and Development Theory and the Emergence of the New Critical Practice' in David M Trubek and Santos Alvaro (eds), *The New Law and Economic Development: A Critical Appraisal* (2006).

- Trubek DM, Coutinho DR and Schapiro MG, 'New State Activism in Brazil and the Challenge for Law' in David M Trubek and others (eds), *Law and the New Developmental State: The Brazilian Experience in Latin American Context* (Cambridge University Press 2014).
- Tsuruta T, 'The Rapid Growth Era' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Tunick M, 'Efficiency, Practices, and the Moral Point of View: Limits of Economic Interpretations of Law' in Mark D White (ed), *Theoretical Foundations of Law and Economics* (Cambridge University Press 2009).
- Turner A, *Economics After the Crisis: Objectives and Means* (The MIT Press 2012).
- Udehn L, 'The Changing Face of Methodological Individualism' (2002) 28 *Annual review of sociology*.
- Uekusa M, 'The Oil Crisis and After' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Ulen T and Nonu G, 'The Market for Legal Innovation: Law and Economics in Europe and the United States' (2007) 59(5) *Alabama Law Review*.
- Ulen T, 'The General Theory of Second Best in Law and Economics' (1998) 73 *Chicago-Kent Law Review*.
- Upham FK, *Law and Social Change in Postwar Japan* (Harvard University Press 1987).
- van den Bergh R, 'Growth of Law and Economics in Europe' (1996) 40 *European Economic Review*.
- van Hees M, *Legal Reductionism and Freedom* (Kluwer Academic Publishers 2000).
- van Kersbergen K and van Waarden F, "'Governance' as a Bridge between Disciplines: Cross-disciplinary Inspiration Regarding Shifts in Governance and Problems of Governability, Accountability and Legitimacy' (2004) 43 *European Journal of Political Research*.
- Vanberg VJ, 'The Freiburg School: Walter Eucken and Ordoliberalism' (2004) <<http://www.walter-eucken-institut.de/publikationen/diskussionspapiere.html>>.
- Vandenberg P, 'North's Institutionalism and the Prospect of Combining Theoretical Approaches' (2002) 26(2) *Cambridge Journal of Economics*.
- Veljanovski C, 'Economic Approaches to Regulation' in Robert Baldwin, Martin Cave and Martin Lodge (eds), *The Oxford Handbook of Regulation* (Oxford University Press 2010).
- Venohr B and Meyer KE, 'The German Miracle Keeps Running: How Germany's Hidden Champions Stay Ahead in the Global Economy' (Berlin 2007). Working Papers of the Institute of Management at the Berlin School of Economics, Paper no. 30, <<http://www.hwr->

berlin.de/fileadmin/downloads_internet/Forschung/Veroeffentlichungen/Working_paper/working_paper_30.pdf>.

- Vickers J, 'Concepts of Competition' (1995) 47(1) Oxford Economic Papers, New Series.
- Viscusi KW, Vernon JM and Harrington JE, Economics of Regulation and Antitrust (MIT Press 2001).
- Vitols S, 'German Industrial Policy: An Overview' (1997) 4(1) Industry and Innovation.
- Voigt S, 'The Effects of Competition Policy on Development – Cross-Country Evidence Using Four New Indicators' (2009) 45(8) The Journal of Development Studies.
- 'How (Not) to Measure Institutions' (2013) 9(1) Journal of Institutional Economics.
- Wade RH, 'What Strategies are Viable for Developing Countries Today? The World Trade Organization and the Shrinking of 'Development Space'' (2003) 10(4) Review of International Political Economy.
- 'Return of Industrial Policy?' (2012) 26(2) International Review of Applied Economics.
- Wakiyama T, 'The Nature and Tools of Japan's Industrial Policy' (1986) 27 Harvard International Law Journal.
- Walley K, 'Coopetition: An Introduction to the Subject and an Agenda for Research' (2007) 37(2) International Studies of Management & Organization.
- Walzer M, Spheres of Justice: A Defence of Pluralism and Equality (Basic Books 1983).
- Weinberg GM, An Introduction to General Systems Thinking (Silver Anniversary ed. Dorset House Publishing 2001, first published in 1975).
- Weinberg GM and Weinberg D, General Principles of Systems Design (Dorset House Publishing 1988).
- Weisbach DA, 'Should Legal Rules Be Used to Redistribute Income?' (2003) 70(1) The University of Chicago Law Review.
- Weisz J-D, 'A Systemic Perception of Eucken's Foundations of Economics' in Agnès Labrousse and Jean-Daniel Weisz (eds), Institutional Economics in France and Germany: German Odoliberalism versus the French Regulation School (Springer 2001).
- White MD (ed), Theoretical Foundations of Law and Economics (Cambridge University Press 2009).
- Whitehead CK, 'Reframing Financial Regulation' (2010) 90(1) Boston University Law Review.
- 'Destructive Coordination' (2011) 96(2) Cornell Law Review.
- Williamson OE, 'Corporate Governance' (1984) 93 Yale Law Journal.

- ‘Technology and Transaction Cost Economics: A Reply’ (1988) 10(3) *Journal of Economic Behavior and Organization*.
 - ‘Comparative Economic Organization: The Analysis of Discrete Structural Alternatives’ (1991) 36(2) *Administrative Science Quarterly*.
 - ‘Transaction Cost Economics Meets Posnerian Law and Economics’ (1993) 149(1) *Journal of Theoretical and Institutional Economics*.
 - ‘The Institutions of Governance’ (1998) 88(2) *The American Economic Review*.
 - ‘Strategy Research: Governance and Competence Perspectives’ (1999) 20(12) *Strategic Management Journal*.
 - ‘The New Institutional Economics: Taking Stock, Looking Ahead’ (2000) 38(3) *Journal of Economic Literature*.
 - ‘The Theory of the Firm as Governance Structure: From Choice to Contract’ (2002) 16(3) *The Journal of Economic Perspectives*.
 - ‘Why Law, Economics, and Organization?’ (2005) 1 *Annual Review of Law and Social Science*.
 - ‘Transaction Cost Economics: the Precursors’ (2008) 28(3) *Economic Affairs*.
- Wise EM, ‘The Transplant of Legal Patterns’ (1990) 38 *The American Journal of Comparative Law*.
- Wohlmuth K, ‘Global Competition and Asian Economic Development: Some Neo-Schumpeterian Approaches and Their Relevance’ in Karl Wohlmuth and Toshihiko Hozumi (eds), *Schumpeter and the Dynamics of Asian Development* (LIT Verlag 2000).
- World Bank, *World Development Report 2002: Building Institutions for Markets* (Oxford University Press 2002).
- World Economic Forum, ‘Global Competitiveness Report 2015-2016’ (Geneva 2015) <<http://reports.weforum.org/global-competitiveness-report-2015-2016/>>.
- ‘Global Competitiveness Report 2015-2016: Competitiveness Rankings’ (2015) <<http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/>>.
- Yamamoto H, ‘Complementary Competition in Japan’ (1994) 37(2) *Research-Technology Management*.
- Yamawaki H, ‘The Steel Industry’ in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Yeung K, ‘The Regulatory State’ in Robert Baldwin, Martin Cave and Martin Lodge (eds), *The Oxford Handbook of Regulation* (Oxford University Press 2010).

- Yokokura T, 'Small and Medium Enterprises' in Ryutaro Komiya, Masahiro Okuno and kotaro Suzumura (eds), *Industrial Policy of Japan* (Academic Press Inc. 1988).
- Young A, 'Increasing Returns and Economic Progress' (1928) 38(152) *Economic Journal*.
- Young M, 'Judicial Review of Administrative Guidance: Governmentally Encouraged Consensual Dispute Resolution in Japan' (1984) 84 *Columbia Law Review*.
- Zäch R, 'Competition Law Should Promote Economic and Social Welfare by Ensuring Freedom to Compete - A Lawyer's View' in Josef Drexl, Laurence Idot and Joël Monéger (eds), *Economic Theory and Competition Law* (Edward Elgar 2009).
- Zalizer VA, 'Beyond the Polemics on the Market: Establishing a Theoretical and Empirical Agenda (1988) 3, *Sociological Forum*' (1988) 3 *Sociological Forum*.
- Zamagni S, 'Economic Reductionism as a Hindrance to the Analysis of Structural Change: Scattered Notes' (2000) 11 *Structural Change and Economic Dynamics*.
- Zamir E and Medina B, *Law, Economics, and Morality* (Oxford University Press 2010).
- Zavadskas EK and Turskis Z, 'Multiple Criteria Decision Making (MCDM) Methods in Economics: An Overview' (2011) 17(2) *Technological and Economic Development of Economy*.
- Zerbe Jr. R and McCurdy HE, 'The Failure of Market Failure' (1999) 18(4) *Journal of Policy Analysis and Management*.
- Zimmermann R and Reimann M (eds), *The Oxford Handbook of Comparative Law* (Oxford University Press 2006).
- Zumbansen P, 'Governance: An Interdisciplinary Perspective' in David Levi-Faur (ed), *Oxford Handbook of Governance* (Oxford University Press 2012).