

Research Report

IT Value Creation in Bank Processes

RESULTS FROM EMPIRICAL STUDIES WITH THE 1,500 LARGEST BANKS IN THE US AND THE 1,000 LARGEST BANKS IN GERMANY REVEAL THE MAJOR IT VALUE DRIVERS AND MANAGEMENT ACTIONS TO IMPROVE THESE DRIVERS.

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Under which conditions does IT lead to better bank performance?

There has been great discussion on how the application of information technology (IT) creates value. For banks this is a central debate since they heavily rely on IT as it is the primary production factor. Carr argued in his article that IT doesn't matter because it is increasingly standardized and commoditized and therefore cannot serve as a source of competitive advantage against rivals on the market. Consequently, he proposed the following three "New Rules for IT Management": (1) Spend less, (2) Follow, don't lead, and (3) Focus on vulnerabilities, not opportunities (Carr, 2003).

Indeed, the lack of a clear and consistent framework regarding the assessment and measurement of the business value of IT in IT reliant areas such as financial services has been driving our research in cluster 1 from day one. How can banks effectively use IT and achieve and sustain a competitive advantage?

Traditionally, researchers measured the impact of IT investments on productivity on a macroscopic level – partly reasoned because these data were accessible more easily. In such research designs, however, value drivers are likely averaged away so that recent research results of cluster 1 request that examining the effects of IT on the business process level is necessary. Moreover, these results provide insights that IT per se does not lead to superior process performance or a competitive edge. Rather, the process of IT value creation is a complex and indirect network of several factors (see Figure 1). Meanwhile, there is unanimous agreement throughout the literature that – aside of IT resources – the decisive factors are complementary resources like business skills of the employees, flexibility, the effective use of IT, and good alignment between business and IT and also among the business units (e. g. between front office and back office in a bank). In particular, business IT alignment consistently shows to be a main driver of process per-

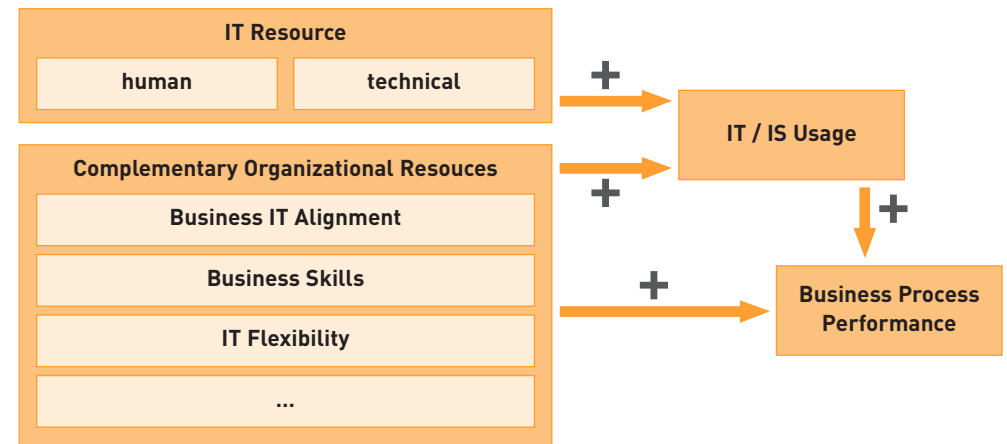


Figure 1: Model of IT value creation in financial business processes

formance and the number 1 top management concern over the last decade (Luftman et al., 2006).

Data and methodology

Based on an empirical survey "Business IT Alignment" among the 1,500 largest US banks we investigate the importance of the different IT value drivers derived from current research and insights from practice, and present some management actions which are expected to help develop IT in a way it can provide a measurable add-on business value. The unit of analysis is the process of granting credits to small and medium sized enterprises (*SME credit process*). Our survey is based on case studies as well as prior empirical studies in cluster 1 among German banks. We received 149 questionnaires filled out by the SME credit process managers. Besides general questions on the SME credit process we asked for example for process

performance, competitive advantage, business and IT skills of the employees, IT and business process outsourcing, information system (IS) usage, business internal alignment, IT flexibility, and business IT alignment.

In our analysis, we primarily focus on measures dealing with financial process performance, competitiveness, and those measures influencing these two success variables. The goal is to disclose the effect of the different factors on success, i.e. to reveal differences between high and low performing banks. Further, we identify actions which promise to improve the success factors in general and alignment in particular which in turn enhance financial business process performance and competitiveness. The basic question thus is what the major drivers of IT business value in banks are and how they conjointly generate this value.

IT value creation in banks

There is evidence that IT by itself can merely create considerable benefits rather than it should be regarded as a firm resource that unfolds its impact together with other resources within a business process.

The IT resource consists of technical and non-technical elements. While the technical part comprises issues like IT architecture (e. g. organization-wide used services) and the deployed applications (e. g. the customer relationship management tool or the billing tool), the human IT resource addresses the technical capabilities and the management skills of the IT personnel. Interestingly, studies have shown that the technical knowledge, i.e. how good the coders are in programming, helps to achieve a competitive advantage in the short-term, but for sustaining this advantage over time management skills of IT staff, i.e. being able to effectively manage projects, are needed [Bharadwaj, 2000].

However, both parts of the IT resource have to be deployed within the processes and moreover be aligned with the business resources and processes. This interplay between business units and IT unit is addressed by business IT alignment. Its roots lie in the organizational premise that firm success is a result of the mutual fit between two or more factors like strategy, structure, technology, culture, and environment. Accordingly, similar terms like harmony, synergy, or linkage can be found to describe this collaboration. They all share the insight that an integration of

business strategy and IT will lead to success and facilitate the "right" usage of IT within a bank's processes. From a traditional point of view, this integration is about strategic business IT alignment which calls for bringing strategies, goals, and needs between business and IT in line. Thus, it strives for consistency regarding strategy content and also in terms of the employees who are in charge of developing the plans. Moreover, it is helpful to develop business and IT plans in a two-way interaction, with common goals and an identical planning horizon.

On top of that, recent research has identified alignment on the operational level to be important (e. g. Wagner, 2007). The reason is that strategies can only be effective and successful when they are implemented in daily business. Operational business IT alignment thus is addressed by the three dimensions *communication, shared domain knowledge, and cognitive linkage*, which are empirically shown to be key value drivers and are expected to be highly interrelated. Operational alignment is concerned with mutual trust and commitment of business units and the IT unit which arise, among others, from frequent and regular communication and interaction. Mutual understanding of goals, plans, and approaches are particularly emphasized.

The positive effect of alignment has been shown in several empirical studies. For example, strategic business IT alignment is positively related to the effectiveness of IT, IS usage, and firm success [Chan et al., 1997].

Revealing differences between high and low performing banks

Our current study confirms that successful banks, in terms of business process performance and competitive advantage, are characterized by both strong strategic and operational alignment. Besides this general interrelationship of alignment and success, a more detailed investigation shows an indirect impact of operational alignment on success by significantly enhancing IS usage. In other words: Better operational alignment leads to much higher usage of core credit application systems by bank employees in the front and back office and in turn to better cycle times, process costs, and quality.

So what about an observable IT business value? Banks with good alignment, accom-

panied by high performance levels regarding the other factors like IT and business skills of the employees, business internal alignment, or flexibility, regularly achieve high returns from their IT, while those banks which perform worse in alignment in general fail to derive business value from their IT.

Implications for practice

Having noticed that several factors, including alignment, are crucial for financial process quality and competitiveness, the question is how to manage these firm resources in order to push them into the right direction. Regarding alignment, this is subject of many studies, but yet severely under-researched. However, there are some auspicious starting points but no silver bullet or some kind of check list providing a complete set of guidelines on what to do.

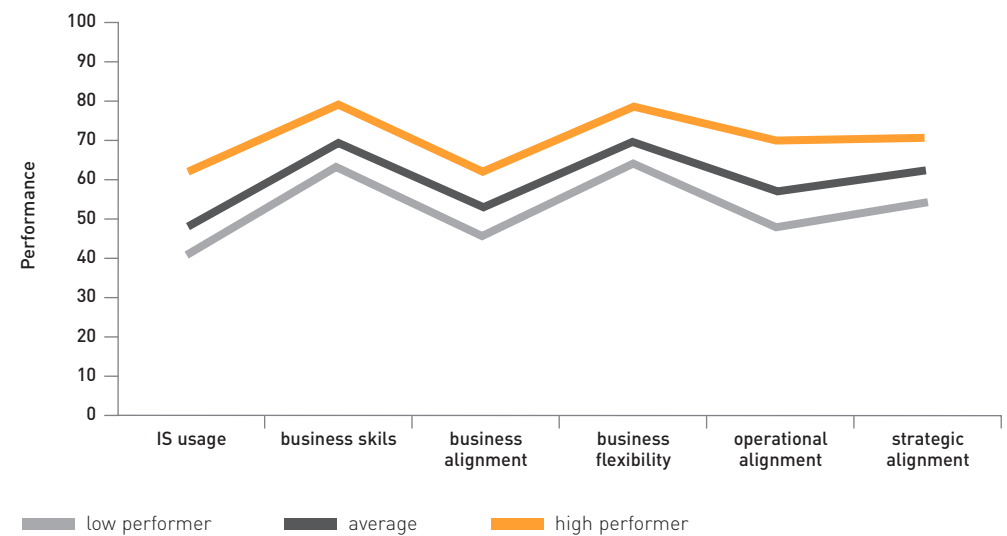


Figure 2: Performance levels of high vs. low performers (US banks)

One important aspect of alignment is shared domain knowledge, i.e. the mutual knowledge of IT and business employees on the other side, respectively. Within this, in particular there is a need for a profound business knowledge of the IT employees, so that they are able to interpret the problems of their customers and develop appropriate solutions instead of application systems with too less, too many, or bad functionalities. The IT should work business oriented. Furthermore, mutual trust and respect between business and IT serve as a valuable precondition of good alignment. All this is most likely to happen when there is regular and effective communication between the different units. As a result, a mutual business understanding may arise. Our study shows that those banks being superior regarding process performance (high performers) are better than their competitors indicating a lower performance level (low performers) with respect to the presented resources (see Figure 2).

From IT to value: Which actions are necessary?

First, regarding alignment as the single most important enabler of IT business value, there is a considerable set of promising actions to drive the different dimensions of alignment. From a strategic point of view, business and IT strategy should be aligned and documented by a close collaboration of both sides in the strategy development process. Then, these strategies need to be articulated and made transparent within the firm. Also, top management support for IT and a sufficient representation of IT in the board are of high importance. Only when business executives acknowledge

the relevance of IT and actively support the interplay between business and IT, IT will be in a position to effectively support the business.

Considering operational alignment, there is also a number of tools that can be used to enhance collaboration between business units and IT unit. Among the most important are regular cross-departmental meetings on varying issues like process improvements or application system changes. Furthermore it turned out to be useful when the business and IT sides regularly consult each other. Some banks have already implemented a specific unit or function (liaison unit) to establish organizational routines for challenging and fostering cross-departmental knowledge exchange. Those banks, on average, show better alignment. Another important issue are trainings where employees from both sides participate or, even better, when such trainings are organized by the business units for the IT unit, and vice versa. This helps, among others, to develop a common understanding of each other's problems and demands. Of course, banks can also try to improve communication and collaboration by rewarding incentives in case of good communication between business and IT.

However, the success of all these mechanisms heavily depends on the people who are involved. Hence, banks should both try to hire heterogeneity, i.e. employees with mixed career background (people who have already worked in business and IT) and correspondingly train their staff towards close collaboration and shared knowledge by special trainings, workshops,

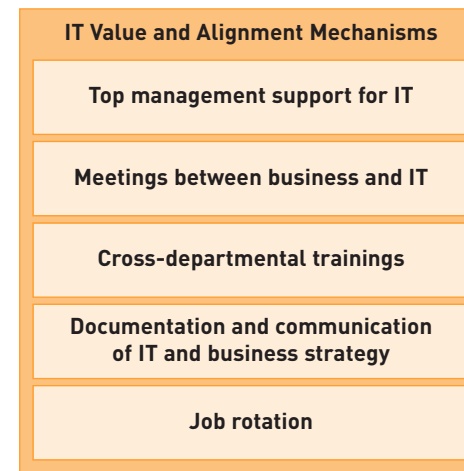


Figure 3: Mechanismus to improve IT value creation and business IT alignment.

and job rotations. This will bring an understanding of how the different process parts are interlinked.

Conclusion

Our current study shows that to create business value out of IT banks need to address not only a single resource like the technical part of IT or the business competencies rather than trying to build capabilities which comprise all relevant resources in order to improve their business process performance. One major enabler for IT value creation is business IT alignment, describing the interplay of IT and other organizational resources.

Still, there are interesting facets to further analyze. In the next steps of our analysis we will conduct country comparisons between German and US banks. Also, we will investi-

gate how effective the concrete management actions are in enhancing the business value of IT and business IT alignment, and which performance levels the banks actually show regarding the application of these actions. This evaluation can then serve as a basis for benchmarking individual banks against the average of the whole sample or different sub-groups.

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