

**The Distribution of Income and Wealth
in European and North-American Societies**

Wolfgang Glatzer und Richard Hauser

Arbeitspapier Nr. 16

April 1998

Contents

1. Introduction	1
2. Distribution, redistribution and level of economic prosperity	3
3. Inequality of individual earnings and wages	5
4. Inequality of disposable household incomes	7
5. Poverty	15
6. Wealth	18
7. People's Assessment of Income Distribution	20
8. Perspectives of Income Inequality	22
References	23

The Distribution of Income and Wealth in European and North-American Societies

Wolfgang Glatzer, Richard Hauser
Johann Wolfgang Goethe-University, Frankfurt am Main

1. Introduction

Among the various criteria according to which inequality in modern societies is perceived, income is one paid most attention to. The reason for this is - since market economies are established - that access to goods and services is regulated mainly by income. Individuals and households cannot make ends meet without having a sufficient income at their disposal and most of the desirable things of the world cannot be attained without spending income. Of course, there are to a certain degree other possibilities to obtain „goods“, e.g. public goods provided free of charge and self provided goods from household production, but they can never be a full substitute of income.

Regarding this significance of income for individuals and households the question of income distribution gets crucial. It is not only seen as a question of acceptable distribution rules, of differences in the possibilities to satisfy material needs but also as a question of legitimization of societal order. The differences between high incomes and low incomes, between rich and poor households are a challenge for societies and great inequality is seen as a source of conflict which can threaten society. There are old hopes that inequality will be reduced when societies are growing richer but sometimes just the opposite is assumed.

In general in modern societies, the most often used possibility for obtaining market income is by being employed and receiving wages or salaries. Also important but not so widespread market incomes are the earnings of the self-employed and income from capital. Under the conditions of a welfare states if certain requirements are met market income is supplemented or even substituted by social transfers, like old age or disability pensions, unemployment benefits, sickness benefits, child allowances, social assistance, and so on. The disposable income of a household is constituted of its market incomes and its social transfers reduced by personal taxes and social security contributions. The disposable income of a private household constitutes the main resource for satisfying basic and higher needs and for establishing a certain life style.

Private ownership of wealth in various forms (bank balances, bonds, houses, land, ownership of unincorporated business or shares of joint-stock companies and other assets minus liabilities) is the second type of resources that is important for economic welfare. It provides

income consisting of interest, dividends, rent and it can be sold for consumption, it provides security in case of unexpected loss of regular income, it can be used to improve the life chances of one's children, and great wealth confers societal and sometimes even political power. In a market economy a very unequal distribution of wealth may also constitute a source of societal conflict, and the more so if certain population groups are practically excluded from wealth accumulation.

Studying the distribution of disposable income and of private wealth from a comparative point of view, therefore, is an important prerequisite for a more thorough analysis of societies especially of its stratification system. The questions here will be: what is common for all the countries and what is singular for a certain country? If there are patterns of distributions are they diverging or converging? What are the underlying forces that cause divergence or convergence? This comparison will be done for the five countries under review in this book as far as data allow. Canada, France, Germany, Spain, and United States are the countries selected which all belong to the group of industrialized modern countries with relatively large populations with 30 millions and more inhabitants.

In the next section some general remarks about income and wealth distribution, and about the aggregate level of income that determines what can be distributed in the various countries are given. The third section deals with the inequality of individual earnings and wages, which constitute the main part of the distribution of market incomes. The fourth section compares the distributions of disposable household income, which is decisive for the level of living of households. A fifth section is directed toward poverty, i.e. it is concerned with those people who have not enough income at their disposal for a decent life. The sixth section presents information on the distribution of wealth. In the seventh chapter the view is on subjective assessments of the inequality of income and wealth. The final section resumes the results of our study.

Before looking more closely at the statistics of income distribution a general remark on the quality of income statistics is appropriate. Statistics are usually a helpful instrument to measure social and economic facts although they are seldom as accurate as is desirable. This is especially the case for income statistics, and the general advice is to combine diverse theoretical and empirical knowledge to get a maximum of reliable information. With respect to income and wealth the concepts and procedures to measure them are somewhat different among countries. One should be careful, therefore, not to overrate the exactness of the data. Despite some problems in reliability, validity and comparability there is no doubt that we know much more with income statistics than we would know without them. Fortunately, the measurement of income and the international comparability of income statistics were greatly improved during the previous decade, and this process is still going on thanks to the activities of international organizations and of the Luxembourg Income Study project (LIS)

(Gottschalk, Smeeding 1997)¹. Most of the following analyses though using different studies are based on these data which are a unique resource for examining income distributions.

2. Distribution, redistribution and level of economic prosperity

Under the conditions of modern welfare capitalism each state has developed provisions for controlling income inequality. The interesting point is that this happens to rather different degrees and by rather different means. In some countries the distribution of market incomes, i.e. wages, salaries and profits (primary income distribution), is more unequal than in others. Additionally, the deduction of personal taxes and social security contributions are different as are the transfers received, e.g. social insurance payments. The distribution of disposable income (secondary income distribution) differs more or less from the primary distribution depending on these redistributive activities of the state. Sometimes there is a high amount of redistribution running from the one pocket into the other of the same household, although effective income redistribution is concerned with income transfers between different households, especially from the richer households to less rich households (vertical redistribution) and from families without children to families with children (horizontal redistribution) and of households who have been spared of social risks (like unemployment, accident, illness) to those who are hit by them.

Before dealing with the processes of distribution and redistribution it is necessary to ask how much can be distributed. The countries under review hold different positions with respect to economic prosperity as measured by Gross Domestic Product (GDP) per capita. They all belong to the group of richer industrialized countries, some with highest ranks. The rank order with respect to economic prosperity in 1995 was, starting from the richest, United States and then Canada, France and Germany which were rather close together, and finally at some distance Spain. (see Table 1). To attain comparability purchasing power parities were used to convert GDP per capita in national currency to US \$. Using purchasing power parities instead of exchange rates takes account of differences in price levels between countries (OECD 1997, p.21). As GDP is a concept devised to measure economic output it must not directly be interpreted as a measure of average well-being or of the levels of human potentials or happiness. The ranks of the countries under review with respect to a selection of Measures of Happiness are roughly about the same as for GDP (Veenhoven 1993, p.55/ Spain is missing); the rank order of Human Development Index (United Nations Development Programme 1997, p.18) shows a number of differences compared with GDP because it puts Canada and US at

¹ This study aims at collecting samples of individual income data according to certain standards for many industrialized countries in one single data bank in Luxembourg. The statistical data sets include individual, family and household data for net income, different types of income, taxes and labour market characteristics. The available data refer to years starting from 1968 for a few countries and from 1979 for most of them to the early 1990s.

the top and Germany beyond France and Spain below. The results in this field depend to a high degree - as for GDP and its alternatives - on the way the measures are constructed.

Table 1: Economic Position, Taxes and Social Security Contributions and Government Expenditures in European and North American Countries around 1994

	GDP per capita ^a at current prices (\$) 1995	Total Govern- ment Revenue ^b as % of GDP 1993/94	Total Government Expenditure ^c as % of GDP 1993/94
Canada	21,031	42.4	46.7
France	19,939	46.8	50.9
Germany	20,497	45.9	46.7
Spain	14,226	39.1	42.6
United States	26,438	31.7	35.8

^a Using current Purchasing Power Parities (PPPs) for currency conversion thus eliminating the differences in price levels between countries. This means that a given sum of money, when converted into different currencies at these rates, will buy the same basket of goods and services in all countries. PPPs are given in national currency units per US dollar.

^b Total Government Revenue includes contributions to social security funds by employees and employers

^c Total Government Expenditure includes all transfers

Source: OECD in Figures 1997, p. 28/29, 44/45.

A rough impression of the redistributive volume in the five countries can be gathered if one looks at the share of government revenue and of government expenditures in GDP. The shares of government revenue, mainly tax receipts and social security contributions, usually having a slightly equalizing effect, are lowest in the United States and highest in France, the other countries are situated in between but much closer to France than to the US. The same ranking is to be found for government expenditures, which include transfers in cash and in kind (pensions, health care, unemployment benefits, family allowances, social assistance, educational expenditure, housing expenditure and so on). But it has to be mentioned that only part of these expenditures is redistributive; a large share is used for financing general state activities. These rankings supports the view that the United States can be characterized as the most liberal market economy whereas Canada, France and Germany are more adapted to a combination of market economy and welfare state institutions. Spain represents a latecomer to industrialization and welfare state expansion which has not yet fully developed neither its economic potential nor its welfare state institutions. In general it should not forgotten, that the figures given for a single point of time are the result of longterm historical processes which change only slowly.

3. Inequality of individual earnings and wages

Primary income distribution at the individual level depends on the distribution of wages and salaries, the distribution of earnings from self-employment and the distribution of income from various kinds of assets. Since individuals may receive market income from several sources, there exists an overlapping of these three partial distributions that is not easily disentangled. Moreover, monthly wage income depends on the number of hours worked; therefore, even the distribution of monthly wage income may give a misleading impression. As a first step of the analysis, therefore, it is usual to consider the distribution of monthly or yearly wage income among prime age (25 to 54 years) full-time male workers. These wages can be measured as gross wages including taxes and employees social security contributions, or net of these deductions. Taxes may be deducted at source (Germany) or ex post (France) their impact is more or less progressive and therefore it can be expected that the distributions of net wages is less unequal than the distribution of gross wages. On the other hand, since social security contributions often have an upper ceiling this may result in higher inequality of the distribution of net wages. It is an empirical question depending on the regulations of each country which of these two effects dominates. Table 2 presents results for three of our five countries under review using the Gini-Coefficient².

Table 2: Gini Coefficients of Individual Gross and Net Wages of prime age full-time workers in Selected Countries of Europe and North America

	Canada	France	Germany	Spain	United States
Gross wages (around 1986)	0.234	n.a.	0.200	n.a.	0.286
Net wages (around 1986)	0.196	n.a.	0.188	n.a.	0.256

Source: Bradbury 1993, Table 6; n.a. = not available

As can be gathered from Table 2 Gini coefficients for the distributions of gross and net wages are rather low (compare the values in the following chapters) indicating a rather moderate inequality of the wage distribution among prime age full-time workers. In each country the distribution of net wages is less unequal than the distribution of gross wages, i.e. the inequality reducing effect of progressive taxation dominates. Germany shows the lowest net wage inequality, the United States appear to have the highest degree of inequality. But it is also interesting to note, that the relative difference between the Gini coefficients of gross and net wages is smallest in Germany and greatest in Canada. This means that the overall inequality reducing effect of taxes and social security contributions is strongest in Canada. This ranking is corroborated for full-time full-year male workers and also for all male workers by analyses of Gottschalk and Smeeding (1997, p. 643).

The distribution of wages among women whether looking at the subgroup of those in full-time full-year employment or at the whole group of female workers is usually more unequal than among men (see Gottschalk and Smeeding 1997, p. 643 for results on Canada, Germany and the US). The dispersion of wages for full-time full-year working women is higher in Canada than in the US but is again lowest in Germany. When all working women are taken into account Canada shows the lowest inequality followed by Germany and the US. As was mentioned earlier this reversal of ranking may depend on differences in the share of full-time and part-time workers and on other differences in annual working hours. If one looks at the distribution of yearly gross wages among women and men, the general hypothesis is that this distribution is more unequal than the gender specific distributions although this hypothesis has to be checked for each country separately.

Changes of the inequality of wage earnings over time are observed for some countries. In a comparative study of five countries the United States and Canada are mentioned as those with a strong increase during the eighties and it is argued: „The earnings inequality of household heads increased over the time period in most countries , thus contributing more to overall inequality.“ (Jännti, 1993, p.27).

Explaining the differences in inequality found in the distributions of wage income between countries is a difficult and not yet resolved issue. A rather general but nevertheless plausible interpretation is, that the national combination of market forces and union power is responsible to a high degree. The general view is that in the US market forces dominate scarcely regulated labor markets and that weak unions cannot or will not counteract very strongly in the direction of wage equalization. In contrast to this in Germany the labor market is heavily regulated, and wage negotiations are conducted by strong unions with the explicit aim of reducing the spread of wage rates. These differences in the organization of the labor market may explain to some extent the differences in the inequality of the wage distributions. But one has to bear in mind that such a comparison only refers to the wage income of those employed. The unemployed with no wage income at all are left outside the picture. If the smaller spread of the wage rates is followed by higher unemployment the overall distribution of wages among employed and the unemployed might be more unequal than in a country with a larger spread of wage rates but lower unemployment.

Usually, inequality of yearly income of wage earners is much less than inequality of yearly income of the self-employed and also inequality of income from capital that is closely related to inequality in wealth holdings (see section 6). But statistical information on these other components is not sufficiently reliable to present figures for comparison.

If we change our view from the primary distribution of individual income to the primary distribution of household income the problem of multi-earner households additionally

² We will use the Gini-coefficient to measure income inequality. This indicator of inequality shows a value of 0 if there is complete equality; the values are the higher the more unequal the distribution of income is, and a value of 1 means that the total income is concentrated with one household or person (OECD 1995).

complicates the analysis, especially since the labor force participation rate of women differs between countries. As it is seeming it cannot be hypothesized in general that a higher labor force participation rate of women has an inequality reducing effect on the distribution of primary household income.

4. Inequality of disposable household incomes

In terms of welfare the disposable income of households is of more relevance than individual earnings. The amount of disposable income defines the upper limit of how much a household can spend for consumption and savings if debts and a reduction of accumulated wealth are to be avoided. In each household disposable income can be composed of different kinds of income (wages, salaries, self employment income, property income, social insurance cash transfers, occupational pensions and so on), and it may stem from different household members. But households of different size have different needs and, therefore, it is not easy to decide which is the adequate amount of income that provides the same level of welfare for a household of one person and of two or more persons. Moreover, it is generally assumed that there are economies to scale if several persons live in the same household and share their resources. But sceptical economists generally doubt the possibility of comparing levels of utility or welfare between persons and they also doubt the possibility of scientifically sound estimates of need differences and economies to scale in consumption. If comparisons are to be made in the field of income distribution, value judgments are a necessary component of any analysis. This is also the case with the following method to make the income of households of different size comparable with respect to the welfare each household member derives from the household income. The incomes of all household members are added up and then divided by the sum of „weights“ of the different members of the household that are derived from an „equivalence scale“. A resulting net equivalent income defined by this procedure is assigned to each household member. The choice of the adequate equivalence scale is in dispute (OECD, 1995, p.18) but in any case a reasonable equivalence scale is a better solution than comparing just total household incomes or even household incomes per member of the household.

A comparison of the inequality of disposable household income for several countries was the subject of an OECD study based on the Luxembourg Income Study data bank (OECD 1995). The concept of disposable income used in this study generally excludes non-cash income and in kind transfers in the fields of housing, health care, education and transport. Monetary transfers for special purposes like housing allowances or student scholarships which can be clearly measured are included. Additional results are given in Smeeding and Gottschalk (1995) and recently based on the Europanel (Vogel 1996).

Table 3: Gini Coefficients and Percentile Ratios of Disposable Household Income and Market Income, calculated as Equivalent Income per Person, in European and North American Countries

Country	Gini Coeff. Disposable Income ^a	Gini Coeff. Disposable Income ^b	Gini Coeff. Market Income ^b	Difference between Gini Coeff. ^b	Percentile Ratio for Disp.Income ^c
Canada	n.a.	0.286 (1991)	0.415	0.129	3.89
France	0.303 (1994)	0.295 (1984)	0.470	0.175	3.51
Germany	0.280 (1994)	0.250 (1984)	0.428	0.178	2.98
Spain	0.354 (1994)	0.308 (1990)	0.429	0.121	4.04
United States	n.a.	0.343 (1991)	0.449	0.107	5.59

^a Euro-Panel 1994.

^b LIS-data, reference years given in parenthesis.

^c Ratio of 90th to 10th percentile.

Source: Col. 1, Vogel 1997, Table 8.5; Col. 2-5 Smeeding/Gottschalk 1995, Table 1, Table 3 and Figure 1

The ranking of countries according to the inequality of equivalent disposable income per person shows a picture known from several other investigations: the United States can be characterized as the most unequal of the five societies, and on the opposite side Germany has the least unequal distribution. Spain, Canada and France form the middle group. This is true whether inequality is measured by the Gini coefficient or by the percentile ratio 90/10³.

Insofar the findings are in congruence with popular ideas of the significance of welfare states in the various countries. More recent Europanel data from 1994 (first column of table 3) show the same difference in ranks between Germany (least unequal), France (in between) and Spain (more unequal). Altogether the impression of a stable ranking of the countries with respect to inequality of equivalent disposable household incomes is reinforced.

In comparison to all OECD countries the position of the US as an extremely unequal country is not shared by others whereas Germany position at the low end of the inequality scale is challenged by countries like Sweden and Finland (OECD 1995, p.40) which are even less unequal than Germany. But in the category of countries with large populations Germany seems to be the exception with respect to income equality.

It is also interesting to note that in every country the Gini coefficient for equivalent market income is much higher than the coefficient for equivalent disposable income. This difference indicates in a rough way the equalizing effect of the tax and transfer systems in the countries. This redistribution effect is strongest in France and Germany, and weakest in the US. This means that one country with very high inequality in market incomes (United States) is doing very little redistribution while another country with very high inequality of market incomes (France) is redistributing heavily. With respect to the extent of redistribution Canada and Spain are in between the US on the one side and the pair of France and Germany on the other side. Again this difference between the countries to a large degree can be traced back to more or less developed institutions of the welfare state.

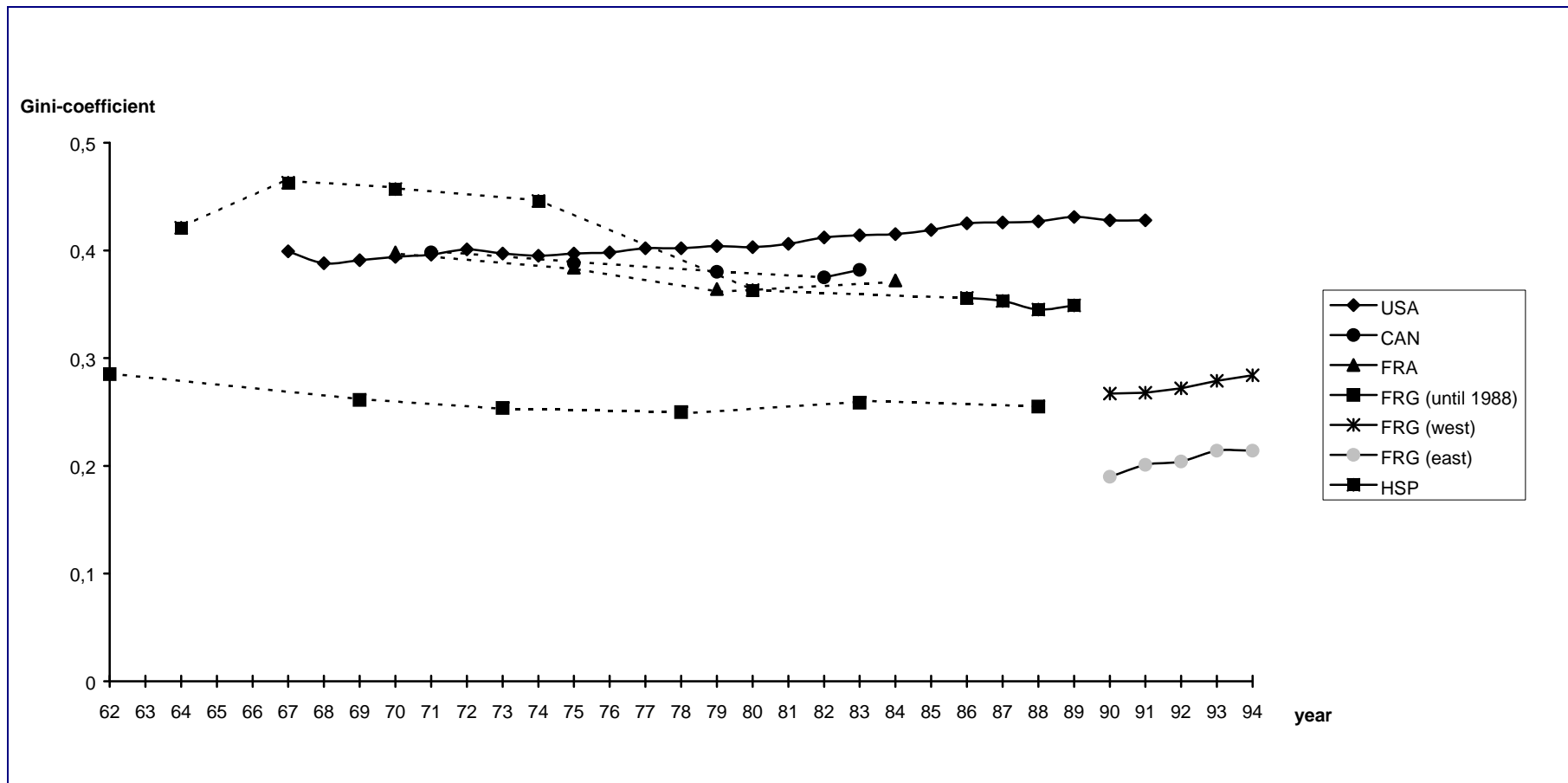
³ The percentile ratio is defined in the following way: When persons are ranked according to their equivalent disposable income from lowest to highest this is the ratio of the average income of a person among the highest 10 % of the population to the average income of a person among the lowest 10 % of the population.

But there are other important factors that influence the distribution of equivalent disposable income, e.g. the different contributions of women to household incomes. „Although no clearly discernible pattern emerges ... there is a tendency for (household) income inequality to be lower in those countries where female participation rates are highest...“ (Saunders, O`Connor, Smeeding, p. 6). This is the opposite effect compared with the influence female working force participation seem to have on the inequality of salaries and wages, which are getting more unequal.

There is sometimes the demand to include the value of household production into the household income to get a more comprehensive estimation. But as stated before it is not possible to measure the value of household production without value judgement. Especially there have to be met decisions about the value of the household output of goods or the household input of working power for example in market prices. Attempts to add the value of household production to household income and to estimate its effect on inequality led basically to the same ranking of countries with respect to inequality of total income demonstrating within each country the equalizing effect of household production (Saunders, O`Connor, Smeeding, p. 41ff).

In recent years the question whether income inequality is changing over time received more and more attention (Gottschalk/Smeeding 1997, p.633). It was Kuznets a long time ago who proposed the hypothesis that in modern societies economic growth would contribute to decreasing inequality. In line with this thinking during the early decades after the Second World War income inequality showed to be stable or even decreasing in many countries. More recent studies point out that at the end of the seventies and during the eighties a reversal of this development toward more inequality took place. „Income inequality increased in most, but not all, OECD nations during the 1980s and early 1990s.“ (Gottschalk/Smeeding 1997, p. 636). This is indicated also by the Gini-coefficients for the five countries under consideration: In the US the increase of inequality began rather early, but in recent years each country for which data are available shows an increasing coefficient. These developments are specific for each nation and it is difficult to detect a pattern: With the exception of Spain no country changes its rank of inequality. But the income data used in figure 1 seem to be rather valid with respect to the national comparisons over time and less valid with respect to comparisons of levels of inequality between the countries.

Figure 1: The Distribution of Household Income - Gini-coefficients for the period 1962 - 1994

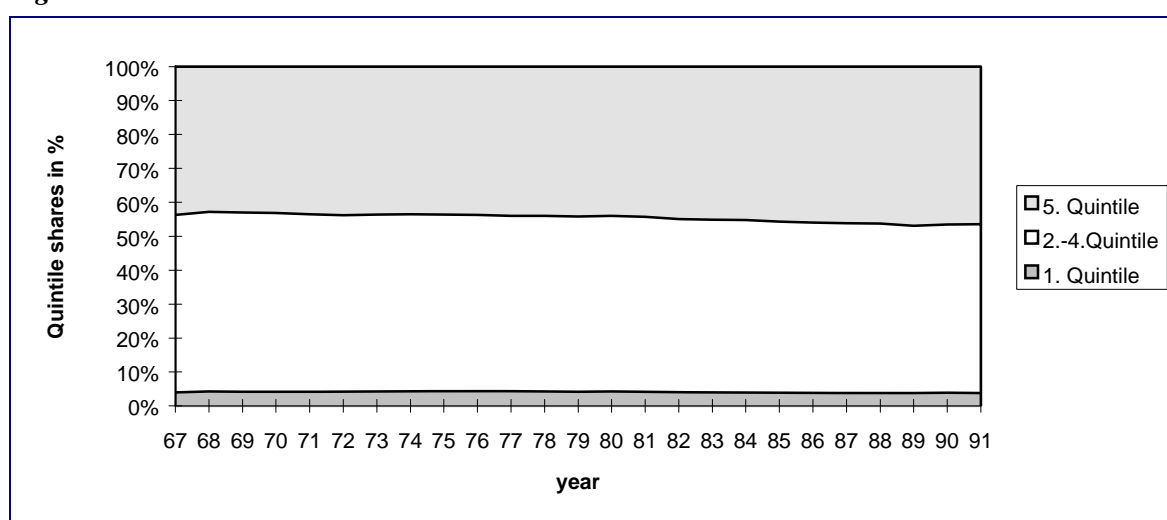


Note: USA: Household gross income, no adjustment for household size; CAN: Total disposable income per family unit; FRA: Tax declared income enlarged by family benefits and minimum vieillesse; FRG: Total disposable income adjusted to household size by equivalent scale; HSP: Disposable monetary income, no adjustment for family size.

Source: USA (1967-91): OECD 1995, p. 77; CAN (1971-83): OECD 1995, p. 64; FRA (1970-84): OECD 1995, p. 66; FRG (1962-88): Becker 1995, Table 5; FRG (1990-94): Hauser/Becker 1996, p. 287; HSP (1964-89): S. del Campo (ed.) 1994, p. 559.

As far as the single nations are concerned the usual descriptions of the trends of inequality are the following:⁴ In respect to US there was a rather stable distribution of income for families and related individuals between 1949 and 1984 (Caplow et al p. 381). A slight increase (OECD 1995, p.47 and Gottschalk, Smeeding 1997, p 686) as it is shown by the Gini-coefficient is also visible in the income shares of the lowest 20 % and the highest 20 % income groups of the population. It is stated that „inequality of total family income rose more than inequality of earnings in the US“ (Gottschalk 1997, p. 31) and this implies that in the US we find an increase of inequality of earnings and a weakening of redistribution at the same time. This is different from the other countries.

Figure 2: Income Distribution in the United States 1967-1991



Note: Household gross income, not deducting direct taxes, no adjustment for household size.

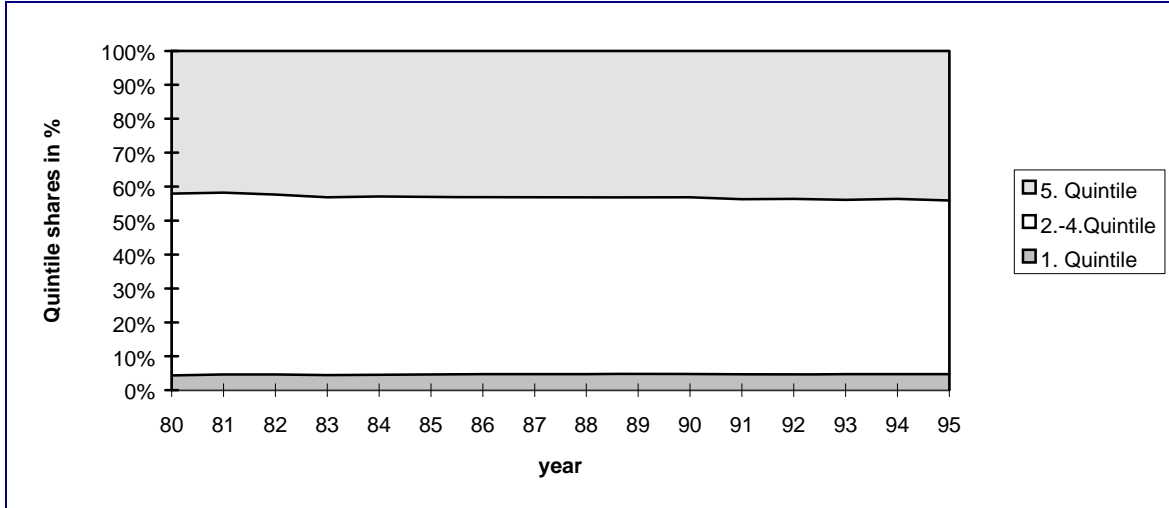
Source: OECD 1995, p. 77.

In Canada we find a decrease of income inequality during the seventies and then a small increase in the early eighties (OECD 1995, p.47 and Gottschalk, Smeeding 1997, p. 686). The lowest quintile got in the last decade a rather constant share around 4,7 % of total disposable income, the highest quintile went up to 44,1 % in 1995 the first time. „In the 1980`s Canada achieved some stability in the distribution of income, despite rising inequalities of earnings, because the source of greater earnings inequality was greater inequalities of hours worked , and the impact of unemployment on earnings was mitigated by unemployment insurance levels“ (Osberg, Erksoy, Phipps 1997, p. 103).

⁴ It has to be kept in mind that the following descriptions of changes in the income distribution for Canada, France, Spain and US refer to household or family income without adjustment for household size. Since average household size has decreased during the 70`s and 80`s it may be that the changes of the distribution of net equivalent income per person were somewhat different.

It can be added that in Canada growth of public transfers was more responsible for the low growth of post-transfer income inequality than in the US (Gottschalk 1997, p. 27).

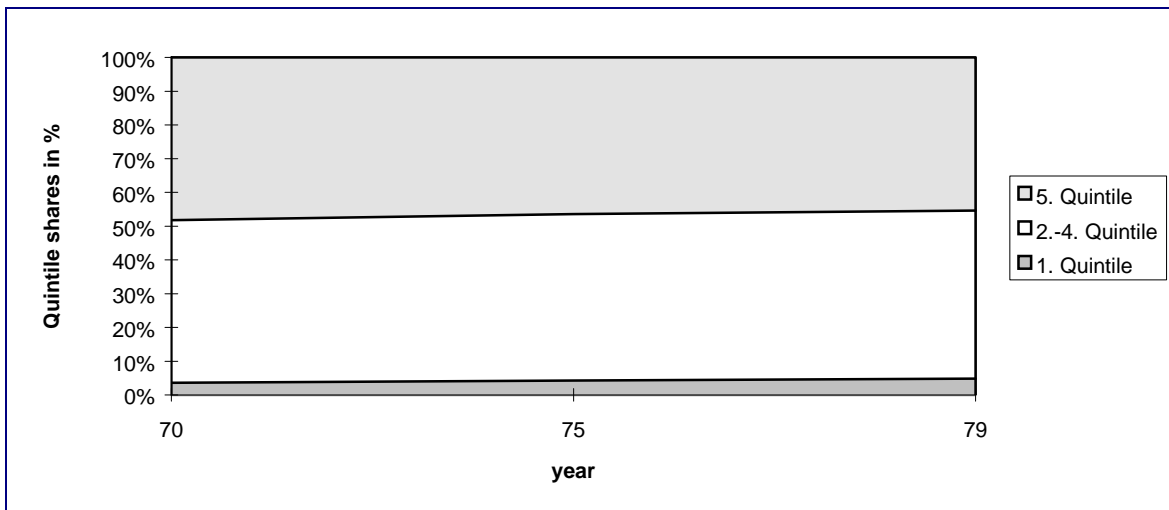
Figure 3: Income distribution in Canada 1980-1995



Note: Income distribution by size in Canada; Total disposable income per family unit, no adjustment for household size.

Source: Statistics Canada-Catalogue 13-207-XPB 1995, p. 159.

Figure 4: Income distribution in France 1970-1979



Note: Tax declared income enlarged by family benefits and minimum vieillesse.

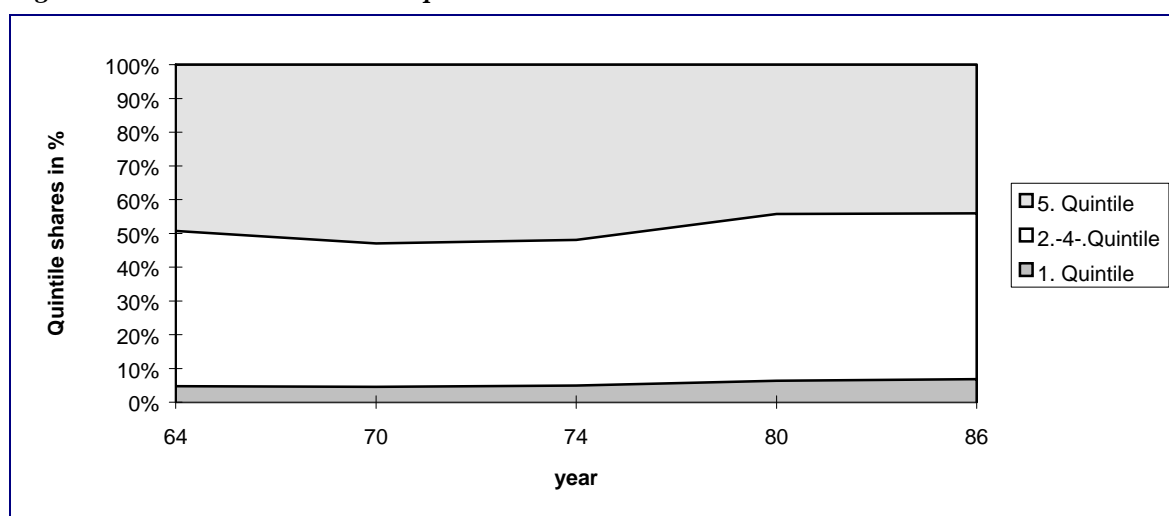
Source: OECD 1995, p. 66.

Especially with respect to France the validity of the data about income distribution is in doubt though the combination of the different sources of income statistics is an improvement (Atkinson 1997, p.23 and 34). As far as the Synthèses (1995) are concerned

they report a decreasing Gini-coefficient from 1975 up to 1990 but the reduction is minor. The comments hint to increased inequalities in the first parts of the 1990s in contrast to a clear reduction in inequalities observed up to the mid-1980`s (Atkinson, p.35). But there are somewhat different statements: a reduction in inequality between 1970 and 1979 (OECD 1995, p.47) and than a minor increase of inequality between 1979 and 1984 (OECD 1995, p.66; Gottschalk, Smeeding 1997, p. 687). „From official data for France we can say that the trend toward reduced inequality came to halt during the 1980`s, and there is some evidence that the turning point was around the mid 1980`s.“ (Concialdi 1997, p. 260).

In Spain the inequality of the income distribution seems to have taken a rather special development compared with the other countries. It increased in the beginning of the sixties and decreased considerably between 1970 and 1986 (Del Campo, 1994, p.559). The same picture is shown on the basis of LIS-data (Gottschalk, Smeeding 1997, p. 686). There were strong shifts in the income shares: the share of the lowest quintile went up from 4,7 to 6.8 % and the share of the highest quintile went down from 49,2 to 44,1 %⁵. Spain is insofar an exception as it shows the strongest change in the direction to equality. But also this trend was broken in recent time.

Figure 5: Income distribution in Spain 1964-1986



Note: Disposable monetary income, no adjustment for family size.

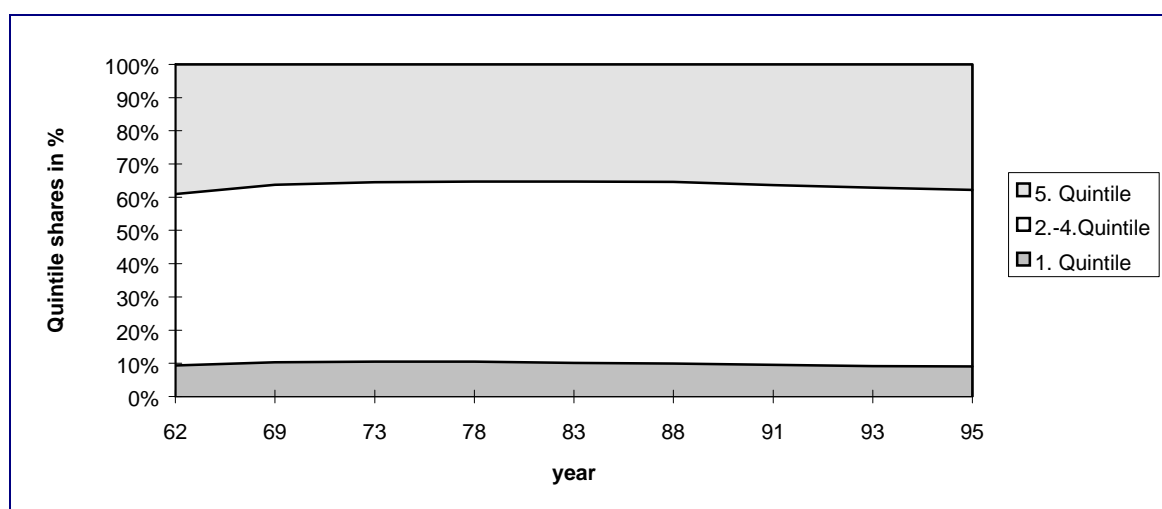
Source: S. del Campo (ed.) 1994, p. 559.

Germany is an example for a rather high stability of income inequality in the long run, which is shown by different data sets. For example the estimates from DIW (Deutsches

⁵ The data of the graphs are not adapted for international comparisons but they are based on national data sources that provide long time series. In any case results about changes and differences should be considered

Institut für Wirtschaftsforschung) show from 1950 up to 1984 only slight changes (Glatzer et al. p. 379): a decrease up to 1960, than an increase up to 1970, then a more remarkable decrease up to 1984 and then again an increase. Other calculations based on the Income and Consumption Surveys and the Socio-economic Panel demonstrate basically the same. From 1973 to 1990 „the changes during the whole period appear to be only minor“ (Hauser/Becker 1997, p. 203). Until 1988 - in the Income and Consumption survey - persons living in households with a foreign head were excluded from the sample, but since 1991 - in the Socio-economic Panel - they are included. Despite this population change the trend toward more inequality, that began in the mid eighties, remains the same.

Figure 6: Income distribution in Germany (west) 1962-1995



Note: Total disposable income adjusted to household size by equivalent scale.

Source: Hauser/Becker 1996, p. 287.

Since 1990 Germany has become a very peculiar case because the German Democratic Republic joined the Federal Republic of Germany. Depending on its past as a socialist country with strong equalizing institutions the income distribution in East Germany is much less unequal than in West Germany though inequality grew considerably since unification (Figure 1).

In the former German Democratic Republic the change of the political and economic system lead to high unemployment and for most of the employed persons and their households to widespread increases and decreases of income although average real income grew considerably. At the beginning of this transformation period this income mobility was much higher in the East than in the West but within five years it was reduced to a normal level (Hauser, Fabig 1997). But the experience of income mobility at the individual

tentative if they are small because they may be biased by changes in the method and errors in the data production.

and household level despite relative structural stability is a characteristic of all the countries.

The development of income distributions over time depend on each country's special conditions, nevertheless a certain pattern seem to emerge. „Where inequality is comparable at different dates, there was a rise in the 1980s for the majority of countries studied, but this was not universal“ (OECD 1995, p.58). The public debate about inequality seem to follows the lines as it was stated for France : „While public debate in the 1960`s and 1970`s focused on reducing inequality between social groups, the current challenge for society is to find effective means for battling the marginalisation that threatens a growing number of people“ (Concialdi, 1997, p.260). This is the question of growing poverty in the countries which is somewhat independent from the overall inequality of the household incomes.

5. Poverty

With industrialization the hope grew to overcome poverty completely. To a considerable degree this hope has been fulfilled. Not only the rise in market incomes but also the introduction of social security and the expansion of other provisions of the welfare state have contributed avoiding poverty for those with low and those without earning capacities. But nevertheless the poverty problem remained a serious one: „In spite of the existence of social security systems in all countries, the poverty rate is very high in the poorer countries and poverty still exists in the richer countries“ (Deleeck/ Van den Bosch/ De Lathouver 1992, p. 123).

As there is some poverty to be found in each country the differences are of special interest. Can we trust that a well developed welfare system is a better shelter against poverty than a more liberal market economy? The answer is not easy, not at least because of the difficulties to measure poverty. For example poverty indicators in Europe are not fully consistent in the various approaches to measure poverty (Deleeck/ Van den Bosch/ De Lathouver 1992, 122 ff). And sometimes they refer to adults and don`t take into account that the poverty risk of children seems to have grown.

An overall measure of poverty for a country gives only a very general impression but it is the starting point to look at differences between and inside the countries.

Table 5: Income Poverty in European and North American Countries

	Population below poverty line (%) ^a	Population below poverty line (%) ^b	Population below poverty line (%) ^c
Canada	13 (1991)	6 (1991)	n.a.
France	15 (1989)	12 (1984)	13 (1994)
Germany	9 (1990)	12 (1989)	11 (1994)
Spain	16 (1988)	21 (1990)	19 (1994)
United States	23 (1991)	14 (1994)	n.a.

^a Poverty line: 50% of average equivalent income.

^b Poverty is measured at \$ 14.40 (1985 PPP\$) a day per person, corresponding to the official US poverty line

^c Poverty line: 50% of the national average adjusted disposable income, persons aged 20-84.

Source: col. 1: Bosch/Marx 1996, table 2a,

col. 2: Human Development Report 1997, Table 2.6, p. 36,

col. 3: Vogel 1997, table 8.8 p. 85.

Two different methods of defining a poverty line are employed in table 5 above.

Col. 1 and 3 use relative poverty lines, defined as 50 % of the mean equivalent income of each country. The argument in favor of such a relative poverty line is that the difference in income between the average person and those on the low side should not be too large if social exclusion ought to be avoided. With economic growth a relative poverty line moves upwards. Poverty, therefore, will only be reduced if the poor experience a more than proportionate growth of their income, i.e. if they move closer to the average.

In col. 2 the poverty line is defined as the value (in 1985 US \$) of a bundle of goods that is necessary for a decent life in the United States according to the official US definition of poverty. Other countries are thus perceived and measured from the perspective of one of the richest countries. But since this bundle of goods remains the same over time poverty measured at this poverty line should diminish during economic growth.

According to the \$-based poverty line (col. 2) Spain shows the highest and Canada the lowest percentage of poor people in the country. France and Germany have an equal poverty rate and the US poverty rate is only slightly higher.

With respect to the relative poverty line there is the lowest incidence of poverty in Germany and the highest in the United States. Spain, France, Canada rank with decreasing poverty rates in between the two countries at the extremes (col. 1). Rather recent data for 1994 (col. 3) show the same order for Germany, France, Spain from the low to the high poverty incidence.

These differences may be traced back in the case of the US to the less developed welfare state in the case of Spain to its lower economic level without fully developed capacities to diminish poverty. Especially Germany but also France and Canada are examples that a

developed welfare system has an considerable effect on diminishing poverty. At least the hypothesis is not falsified that the extent of the social protection system, and more generally the development of the welfare state contributes to the avoidance of poverty.

Which groups are the victims of poverty? Especially the elderly deserve attention because their share of the population will grow considerably during the next decades in all countries, and they will mainly depend on transfers (OECD 1996). One of the conclusions of a special study referring to the middle of the eighties is: „The United States has the largest low income elderly population at three levels of poverty than does any other country. And the difference between the low income rates of single elderly women and elderly couples is larger in the United States than in any other country“ (Smeeding/Torrey/Rainwater 1993, p. 12). That there are differences among the elderly depending on their family status is an important aspect in each country. But the poverty risk for the older ones was higher than for the younger adults in the United States while it was lower in France and Canada. In Germany it was about the same. It is an open question whether these results that refer to the middle of the eighties still hold. There are indications that child poverty has grown in some countries while poverty of the elderly has been reduced. Especially for Germany and the US it can be shown that the poverty risk changed in the last two decades from the old ones to young ones (Smolensky, Danziger, Gottschalk 1997, p. 35; Olk, Rentsch 1997, S. 2).

Two other population categories are usually overrepresented among the poor population and these are the one-parent-families and the unemployed. In the first case sociodemographic change leads to new poverty risks in the second case the structural unemployment is a continuing cause.

An important question in respect to the social significance of poverty is the duration of poverty. From panel studies it is well known that a certain poverty rate at two points of time does not imply that the poor are the same persons (Duncan 1984). There is a lot of exchange among the poor and only a small fraction of them remains in poverty permanently. For Germany it is known from recent panel studies that only about 17,5 percent of persons who were below the 50 % poverty line at least once between 1990 and 1995 remained poor for five years or longer (Statistisches Bundesamt 1997, p.521).

The development of poverty over time seems to follow the general tendencies of income distribution in most countries. Though there are some data the changes of the poverty incidence in the countries should be regarded with caution (Bosch/Marx 1996 p.13):

Canada is an example of a consistent and significant decrease in relative poverty between 1975 and 1991.

In France the trend of poverty seemed to change but only slightly. In comparison of 1979 to 1984 poverty incidence was reduced and in comparison of 1984 to 1989 (with another

data set) it has increased. Another study for France prefers to speak of stability: „As far as trends over time are concerned , the figures show some variation from year to year, but the broad impression is that of stability“ (Atkinson 1997, p.36).

In Germany the time series for relative poverty go back to 1962 and they show that poverty incidence decreased between the beginning of the sixties and the middle of the seventies (Hauser 1997, p. 524). Then followed an increase up to the end of the eighties. In the nineties we find a marginal increase in West Germany and a strong increase - starting from a very low level - in East Germany. There is no doubt that Germany has a growing poverty problem.

The number of poor according to the relative poverty line of 50 % of the average equivalent income decreased in Spain a little bit between 1980 and 1988.

In the United States a rather strong increase of the poverty rate between 1984 and 1991 can be observed, based on a relative poverty line. In contrast poverty - measured at an absolute level defined as a bundle of goods necessary for life - was reduced in the long run from 80 % in 1939 to 16 % in 1969 (UNDP 1997, p.32), a trend which now has been reversed.

There is no pattern of changes of poverty: „The incidence of income poverty increased marginally in Germany and the United States, but fell in Canada, France and Spain.“ (UNDP 1997, p. 32). This is insofar astonishing as the poverty risks due to economic disorder, unemployment and reduction of social security were growing but in three of the five countries the poor were obviously not the victims of the crisis. In comparison to many other countries only the USA and Germany (and also the United Kingdom) show an increase of relative poverty rates (Bosch/Chen 1996, p. 15). Depending on these results the Human Development Report 1997 resumes: „The immediate postwar decades saw a substantial reduction in income poverty in the industrial countries..... But by the 1980s and the early 1990s this progress was in jeopardy.“

6. Wealth

Though statistics about wealth are less often available than about income it is a well-known fact that in each country wealth is more unequally distributed than income (Wolff 1995, p.28). For example in Germany the Gini-coefficient for personal wealth is more than twice as for personal income (Schlomann 1997, p.139). Because income can be used to increase wealth and wealth can be used to enlarge income there exists a reinforcing circle. But this is not the only function of wealth, additionally it has also a utility value, a social security value and a power value (Hauser 1997, p.2).

To measure wealth is somewhat more difficult and precarious than to measure income because „the estimates of personal wealth inequality are very sensitive to analysis, and the sampling frame, particularly the degree of stratification on high income families or

persons“ (Wolff 1996, p.433). The concepts of wealth in use divide especially between marketable wealth (current value of all marketable assets less the value of debts) and augmented value (defined as the sum of marketable wealth, pension wealth and social security wealth). The augmented wealth will become a more and more important concept in societies with increasing number of elderly people.

In contrast to socialist countries where national wealth especially the „means of production“ is concentrated in the hands of the state the market economies are characterized by holding the biggest share of national wealth in the hands of the private households. Nevertheless there remains a certain share of national wealth in the hands of the state and this share is in dispute during privatization campaigns. In Germany the state share of the national wealth („Volksvermögen“) is about one fifth.

The following Table 6 shows some results referring to the distribution of marketable wealth, recently compiled by Wolff (1996). It has to be noted that these estimates are derived as best as possible but some minor problems could not be solved satisfactory. Unfortunately data for the wealth distribution in Spain are missing.

Table 6: Distribution of Household Wealth in Selected Countries of Europe and North America (Gini-Index, Top and Bottom Share)

	Gini-Coeff.	Percent of Total Wealth Held by:		
		Top 1%	Top 20%	Bottom 20%
I. Conformable Databases, Gross Assets				
1. France, 1986 INSEE Survey	0.71	26	69	1
2. U.S., 1983 SCF	0.77	33	78	0
II. Conformable Databases, Net Worth				
1. Germany, 1988 GSOEP	0.694	n.a.	n.a.	n.a.
2. U.S., 1988 PSID	0.761	n.a.	n.a.	n.a.
III. Net Worth, Various Sources				
A. United States, 1983 SCF, orig. Survey Data	0.79	35	80	0
B. Canada, 1984 SCF, orig. Survey Data	0.69	17	69	0

Source: Wolff 1996, Table 4.

The United States come out as the country with the strongest inequality in household wealth compared with France, Germany and Canada. The high inequality in the US can be traced back especially to the 1980s when a strong push to more wealth inequality emerged.

As is stated by Wolff (1995, 27) for the period from 1983 to 1989: „To put it succinctly, the top quintile received more than three quarters of the total increase in income and essentially all of the increase in wealth. The starkness of these numbers suggests a widening fissure separating the strata within our society.“ Other countries didn't have this experience or to a lesser degree (Wolff 1996, p. 435 ff). In the long run phases of increasing and decreasing inequality follow another which is rather well documented for the United States.

7. People`s Assessment of Income Distribution

The complex field of income distribution should be complemented by the subjective perception of the people, because this matters how people react to it. The income distribution as a whole is invisible and has to be reconstructed by socio-economic research. What people get into their perception are „indicators“, for example the rich neighbour or the poor clochard. There are many facets which could play an important role but only few have found broad interest and were included into international surveys. Are there differences in the satisfaction with income and income distribution in the different countries and how far is redistribution accepted? These are main questions about people`s perception of income distribution and they are implemented in international surveys as follows:

- satisfaction with income, with individual earnings and with the households financial situation

insufficient income, i.e. difficulties for the household to make ends meet.

Satisfaction with earnings in the sense of income from gainful work, including influences of labour market participation, working hours, and hourly wage levels is measured on a six-point scale. Table 7 shows averages for the selected nations.

Table 7: Subjective Indicators for the Perception and Assessment of Income Distribution in Selected European and North American Countries 1992 and 1994

	Canada	France	Germany- West	Germany- East	Spain	United States
satisfaction with earnings, score		3,5		3,7		3,1
satisfaction with financial situation, score		3,5		3,9		3,0
difficulties to make ends meet %		19,3		7,2		37,6
make ends meet easily %		15,7		42,8		8,9
income differences too large %	25,3		30,5		60,5	27,7
state responsibility to reduce differences %	16,1		20,0		42,4	9,5

Source: Vogel 1997, ZUMA 1994.

Satisfaction with earnings is lowest in Spain, somewhat higher in France and again a little bit higher in Germany. The same ranking is to be found with satisfaction with the financial situation. As it is known there are many factors influencing satisfaction with income including the relative position in one's own country. But nevertheless the subjective indicators seem to represent to some degree the different income levels of the countries. More dramatically this is shown in the percentages of people, who have difficulty to make ends meet. Only 7.2 percent of the German respondents state this whereas the figure for France is 19,1 and for Spain 37,6. These figures are interpreted as measures for subjective poverty. Complementary are the figures for those who make ends meet easily which can be interpreted as figures for a certain affluence.

More related to the core of the problem of income inequality are questions put in the International Social Survey Program (ISSP) 1992. Agreement and disagreement is measured by the answers to the following questions:

- differences in income in („country“) are too large.
- it is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes.

The results are rather interesting insofar as Canada and USA are below Germany in respect to the percentage of people defining the differences in income as too large in their country. Very exceptional results are to be found for East Germany where the preference for

equality of income is especially high. It is known that in other countries there exist also differences between regions and parts, for example Quebec has much more egalitarian views than the rest of Canada. But these differences are much smaller than the East-West-difference in Germany. The explanation has to be found in diverging value systems and inequality cultures which allow much more inequality in the US than in Germany (Frizell/Pammett 196, p. 116).

With respect to the state responsibility to reduce income differences it is found: Relatively small agreement in the US, substantial more agreement in Canada and again highest agreement in Germany. Especially the agreement in East Germany is overwhelming.

8. Perspectives of Income Inequality

Limited inequality of income and wealth is often seen as crucial for the legitimization of modern societies. Especially high inequality seems to threaten the integration of society. But up to now nobody has been successful in defining an acceptable fair or just income and wealth distribution. What we find in each society are warning signs from social and economic scientists telling that societies should control their inequalities especially if they are growing. In general, the proponents of the welfare state were emphasizing less inequality.

Obviously market economies need a certain inequality of income and wealth to function efficiently but how much exactly is a difficult question to which an answer is missing. If the regulation of the distribution of income and wealth is left to the market then forces to increase inequality are at work.

In empirical studies a certain spectrum of income distribution patterns can be found but from the birds eye view one may be astonished that in so different contexts as the five countries we find roughly spoken a similar distribution, for example in respect to the income shares the lowest 20 % of the population and the highest 20 % are getting from total disposable income.

Of course each country has historically developed a certain pattern of income and wealth distribution, supported and challenged at the same time by economic, cultural and political forces. There are in different degrees well established national redistribution patterns for income but always for wealth to a lesser degree. The liberal market society of the United States constitute in our comparison one extreme of a country with relatively high inequality of income. „The United States redistributive system is decidedly weaker than that found in other nations. We appear to be willing to tolerate greater inequality as a nation than do other countries.“ (Smeeding/Coder, 1993, p.10). On the other side there is the differentiated welfare state of Germany with the relatively lowest inequality among the big countries. And its people, especially in the East would like even less inequality. In

between there are France and Canada whose welfare systems developed in the long run and also Spain who is the late comer in respect to industrialization and establishing a welfare system.

The basic question of the study is if new structures of income and wealth inequality are emerging? To a certain degree such a hypotheses can be justified because income inequality grew in the past decade in the United States and Germany whereas the other three countries Canada, France and Spain showed a rather stable distribution pattern. Since recent data are not available the general economic conditions support the expectation that the long term hope for more income equality is challenged in all the countries. Some authors tell a real danger of long term polarization at least in the US economy is arising (Smeeding, Coder 1993, p.12). In political terms a tendency for a neo-liberal correction of the income distribution trends in the direction of more inequality gained influence in the eighties and nineties.

There are old problems coming back as the poverty problem and the unemployment problem and new problems arise e.g. providing income for a growing share of the elderly and of integrating women into the labour market. In the course of ongoing globalization the countries may learn from another and adapt to similar successful measures. But they have very different starting points and the culturally formed attitudes toward inequality are astonishingly different.

Still modern societies - at least those under consideration - seem to be modifying the distribution of market income by redistribution via the tax system and the social protection system to a considerable extent. But these efforts seem to have weakened during the last decade, thus resulting in slight or even considerable increases in inequality of disposable income and wealth.

References

- Atkinson, A. B. 1975. *The Economics of Inequality*, Oxford: Oxford University Press.
- Atkinson, A.B. 1997. *Measurement and Trends in Poverty and the Income Distribution*. DAE Working papers Amalgamated Series No. 9712.
- Burkhauser, Richard V.; Smeeding, Timothy M.; and Merz, Joachim. 1996. *Relative Inequality and Poverty in Germany and the United States Using Alternative Equivalence Scales*. The review of income and wealth, series 42, number 4, p.381-400
- Bosch, Karel van den; Marx, Ive. 1996. *Trends in Financial Poverty in OECD Countries*. Luxembourg Income Study, Working Paper No. 148.
- Bradbury, Bruce. 1993. *Male Pre and Post Tax Wages Inequality: A Six Country Comparison*. Luxembourg Income Study, working paper No. 90.

- Bradshaw, Jonathan; Chen, Jun-Rong. 1996. Poverty in the UK: A Comparison With Nineteen Other Countries. Luxembourg Income Study, working paper No. 147.
- Caplow, Theodore; Bahr, Howard M.; Modell, John; Chadwick, Bruce A. 1991. Recent Social Trends in the United States 1960-1990. Frankfurt a.M., Montreal & Kingston et.al: Campus, McGill-Queen's University Press.
- Concialdi, Pierre. 1997. Income Distribution in France: the Mid 1980s turning point. In: Gottschalk, Peter; Gustafsson, Björn; Palmer, Edward (eds.). 1997. The Distribution of Economic welfare - An International Perspective. Cambridge/UK: Cambridge University Press: 239-264.
- Deleeck, Herman; Van den Bosch, Karel; De Lathouwer, Lieve (eds.). 1992. Poverty and the Adequacy of Social Security in the EC. A comparative analysis. Aldershot et. al: Avebury.
- Duncan, Greg J. 1984. Years of poverty, years of plenty. Ann Arbor, University of Michigan Press.
- Duran, Maria-Angeles. 1997a. The Role of Women and Men in the Spanish Economy. working paper, unpublished.
- Duran, Maria-Angeles. 1997b. Towers, Pyramids and Stars (Images of class structure). working paper, unpublished.
- Forsé, Michel; Jaslin, Jean-Pierre; Lemel, Yannick; Mendras, Henri; Déchaux, Jean-Hugues. 1993. Recent Social Trends in France 1960-1990. Frankfurt a.M., Montreal & Kingston et.al: Campus, McGill-Queen's University Press.
- Frizzell, Alan; Pammett, Jon H. (eds.). 1996. Social Inequality in Canada. Ottawa: Carleton University Press.
- Glatzer, Wolfgang; Hondrich, Karl Otto; Noll, Heinz-Herbert; Stiehr, Karin; Wörndl, Barbara. 1992. Recent Social Trends in West Germany 1960-1990. Frankfurt a.M., Montreal & Kingston et.al: Campus, McGill-Queen's University Press.
- Glatzer, Wolfgang 1978: Einkommenspolitische Zielsetzungen und Einkommensverteilung. In: Wolfgang Zapf 1978: Lebensbedingungen in der der Bundesrepublik. Frankfurt, New York: Campus, p. 323-384
- Gottschalk, Peter. 1997. Inequality, Income Growth, and Mobility: The Basic Facts. Journal of Economic Perspectives, vol. 11, no. 2:21-40.
- Gottschalk, Peter; Smeeding, Timothy. M. 1997. Cross-National Comparisons of Earnings and Income Inequality. Journal of Economic Literature, vol. 35, no. 2:633-687.
- Gottschalk, Peter. 1997. Policy Changes and Growing Earnings Inequality in the US and six other OECD-Countries. In: Gottschalk, Peter; Gustafsson, Björn; Palmer, Edward (eds.). 1997. The Distribution of Economic welfare - An International Perspective. Cambridge/UK: Cambridge University Press: 12-35.
- Gottschalk, Peter; Gustafsson, Björn; Palmer, Edward (eds.). 1997. The Distribution of Economic welfare - An International Perspective. Cambridge/UK: Cambridge University Press.
- Hauser, Richard. 1996. Armut als sozialpolitisches Problem der Europäischen Union? Pp. 25-55 in: Soziale Integration in Europa II, edited by G. Kleinhenz. Berlin: Duncker & Humblot.
- Hauser, Richard. 1997. Poverty, Poverty Risk and Anti-Poverty Policy in Germany. Jahrbücher für Nationalökonomie und Statistik, vol. 216, no. 4+5:524-548.

- Hauser, Richard; Fabig, Holger. 1997. Labor Earnings and Household Income Mobility in Reunified Germany: A Comparison of the Eastern and Western States. Syracuse University, Center for Policy Research, Income Security Policy Series Paper no. 15, Syracuse, N.Y.
- Hauser, Richard; Becker, Irene. 1997. The Development of Income Distribution in the Federal Republic of Germany during the 1970s and 1980s. In: Gottschalk, Peter; Gustafsson, Björn; Palmer, Edward (eds.). 1997. The Distribution of Economic welfare - An International Perspective. Cambridge/UK: Cambridge University Press: 184-219.
- Hauser, Richard. 1998. Einkommen und Vermögen. In: 1998: Handwörterbuch zur Gesellschaft Deutschlands, edited by B. Schäfers and W. Zapf. Leverkusen: Leske und Budrich.
- Huster, Ernst-Ulrich (ed.): Reichtum in Deutschland. Die Gewinner in der sozialen Polarisierung. Campus, Frankfurt am Main
- Jäntti, Markus. 1993. Changing Inequality in Five Countries: The Role of Markets, Transfers and Taxes. The Luxembourg Income Study, working paper series, no. 91.
- Langlois, Simon; Baillargeon, Jean-Paul; Caldwell, Gary; Fréchet, Guy; Gauthier, Madeleine; Simard, Jean-Pierre. 1992. Recent Social Trends in Québec 1960-1990. Frankfurt a.M., Montreal & Kingston et.al: Campus, McGill-Queen's University Press.
- Langlois, Simon; Caplow, Theodore; Mendras, Henri; Glatzer, Wolfgang (eds.). 1994. Convergence or Divergence. Comparing Recent Social Trends in Industrial Societies. Frankfurt a.M., Montreal & Kingston et.al: Campus, McGill-Queen's University Press.
- OECD. 1995. Income Distribution in OECD Countries. Evidence from the Luxembourg Income Study, prepared by A. B. Atkinson, L. Rainwater and T. M. Smeeding, Social Policy Studies no. 18, Paris.
- OECD. 1996. Ageing in OECD Countries. A Critical Policy Challenge. Social Policy Studies No. 20, Paris.
- OECD in Figures. 1997. Supplement to The OECD Observer, No 206, June/July 1997.
- Olk, Thomas; Rentzsch Doris. 1997. Kinder in ostdeutschen Armutshaushalten. To be published in Kinder und Jugendliche in Armut, edited by A. Klocke and K. Hurrelmann. Opladen: Westdeutscher Verlag.
- Osberg, Lars; Erksoy, Sadettin; Phipps, Shelley. 1997. Unemployment, Unemployment Insurance and the Distribution of Income in Canada in the 1980s. In: Gottschalk, Peter; Gustafsson, Björn; Palmer, Edward (eds.). 1997. The Distribution of Economic welfare - An International Perspective. Cambridge/UK: Cambridge University Press: 84-107.
- Palmer, John L.; Smeeding, Timothy; Torrey, Barbara Boyle (eds.). 1988. The Vulnerable. Washington: The Urban Institute Press.
- Ramprakash, Deo. 1994. Poverty in the Countries of the European Union: A Synthesis of Eurostat's Statistical Research on Poverty. Journal of European Social Policy, vol. 4, no. 2:117-128
- Saunders, Peter; O'Connor, Inge; Smeeding, Timothy M. 1994. The Distribution of Welfare: Inequality, Earnings Capacity, and Household Production in Comparative Perspective. The Luxembourg Income Study, working paper no. 122
- Schlomann, Heinrich. 1992. Vermögensverteilung und private Altersvorsorge. Campus, Frankfurt/New York
- Smeeding, Timothy M.; Coder, John. 1993. Income Inequality in Rich Countries During the 1980s'. The Luxembourg Income Study working paper no. 88.

- Smeeding, Timothy M.; Torrey, Barbara B.; Rainwater, Lee. 1993. Going to Extremes: an International Perspective on the Economic Status of the US Aged. The Luxembourg Income Study, working paper no. 87.
- Smeeding, Timothy M.; Gottschalk, Peter. 1995. The International Evidence on Income Distribution in Modern Economies: Where Do We Stand? The Luxembourg Income Study, working paper no. 137.
- Statistisches Bundesamt (Hrsg.). 1997. Datenreport 1997. Bonn, pp. 517-520.
- Systhèses, 1995, No. 1, Revenus and Patrimoine de Ménages, INSEE, Paris
- United Nations Development Programme. 1997. Human Development Report. New York/Oxford: Oxford University Press.
- Vogel, Joachim. 1997. Living conditions and Inequality in the European Union 1994. Statistics Sweden, University of Umea.
- Wolff, Edward N. 1995. Top Heavy. A Study Of The Increasing Inequality Of Wealth In America. New York: The Twentieth Century Fund Press.
- Wolff, Edward N. 1996. International Comparisons of Wealth Inequality. Review of Income and Wealth, S. 42, no. 4:433-451.
- ZUMA 1994. ISSP 1992 - Social Inequality II. ZA Study 2310.

The authors want to say thank you to Angeles Duran Heras, Michael Braun, Ted Caplow, Simon Langlois, Paul Kingston and Claudio Roccioletti for their worthwhile support for this study.

This paper will be published in Noll, Heinz Herbert/Lemel, Yannik; 1998: New Structure of Inequality. Mc Gill-Queens University Press, Montreal&Kingston London Buffalo