

3. INEQUALITIES BETWEEN INCOME AND WEALTH

The Case of Germany in 1998

Richard Hauser and Irene Becker

Johann Wolfgang Goethe-University Frankfurt am Main, Germany

ABSTRACT

In an international perspective, Germany can be regarded as a rich country with high levels of income and wealth. But how are incomes and wealth holdings distributed among the population? Analysing data of the Income and Consumption Survey a considerable inequality of equivalent net income distribution becomes evident which is by far exceeded by the inequality of net wealth distribution. Additionally, there exists a strong correlation between high equivalent net incomes and high net wealth per capita, but the overall correlation between income and wealth is at a medium level. Since the data base does not sufficiently represent the highest income and wealth groups the figures given characterize a lower bound of inequality. True inequality is somewhat higher.

1. INTRODUCTION¹

In an international perspective, Germany² can be regarded as a rich country with high levels of income and wealth. In 1999, disposable income amounted to about 30,200 DM per capita, and net wealth of private households even amounted to 177,400 DM, i.e. almost six times that value³. These figures refer to mean values. But how are incomes and wealth holdings distributed among the population? Does relative income poverty exist in Germany? And is there a group of very rich people? Who are the poor and who are the rich? These questions are discussed in this paper. The analysis is restricted, however, to monetary income and wealth. First we will look at each of the distributions of income and wealth separately, and then we will take a view at the joint distribution.

2. DEFINITIONS OF INCOME AND WEALTH

To measure the personal distribution of income some value must be assigned to each person even if he or she does not personally receive any monetary income but is supported within a household. For this purpose equivalent net income of a person is computed as a function of the net incomes of all members of the household⁴, and of their number and age. This concept is based on several assumptions widely accepted in recent literature⁵, and has to be specified with respect to an appropriate equivalence scale. An equivalence scale serves to take into account economies of scale in

consumption and differences in need between children and adults. As any decision for a scale implies some value judgements, it seems advisable to refer to institutional regulations of a country as determined by parliament, and thus reduce arbitrariness⁶. As has been shown elsewhere, the equivalence scale originally used by the OECD offers the closest reflection of the German institutional arrangements, assigning a weight of 1.0 to the first adult in a household, weights of 0.7 to additional members over the age of 14, and weights of 0.5 to children (Faik, 1997). In applying a certain scale one has to keep in mind, however, that some results may be sensitive to this decision. Contrary to the measurement of personal net income, personal net wealth of each member of a household is calculated on a per capita basis. This neglect of economies of scale and other aspects of need results from the assumption that wealth accumulation is not primarily intended to finance current consumption but is intended as a stock that in the future can be used for many purposes when household composition possibly will have changed. In the following analysis each person is assigned her equivalent net income and her share of wealth of the household, and then is counted separately.

3. THE INCOME AND CONSUMPTION SURVEY (EVS)

An analysis of the distribution of income and wealth needs very rich micro-data. The only data set covering income and wealth holdings for Germany in 1998 is the Income and Consumption Survey (Einkommens- und Verbrauchsstichprobe, EVS), an official cross-section survey conducted every five years and based on voluntary participation. The survey of 1998 comprises about 50,000 households in the subsample available for scientific studies. Households in East and West Germany and households with a foreign head are included. Inequality indicators refer to Germany without any distinction between these two parts of united Germany.

Despite of many advantages of the EVS, there are several shortcomings which bias the results. First of all, the institutionalized population and the homeless are not included so that the poverty problem is underestimated. Furthermore, the top group is underrepresented⁷. As in many other surveys with voluntary participation interest payments, dividends, profits of unincorporated businesses and incomes from self-employment are underrepresented compared to the respective aggregates of the National Accounting System⁸. The same holds for monetary assets⁹. Of the various forms of property holdings of unincorporated and incorporated firms only shares traded at a stock exchange are included. Because of these shortcomings of the data set the following results have to be interpreted cautiously. We assume that these results indicate only a lower bound of inequality.

4. ISOLATED PERSPECTIVES: OVERALL INEQUALITY OF THE PERSONAL DISTRIBUTION OF EQUIVALENT NET INCOME AND OF NET WEALTH PER HOUSEHOLD MEMBER

In Table 1 inequality of the personal distribution of equivalent net income and of net wealth per household member is measured by the Gini coefficient. Additional details can be gathered from the decile shares.

Table 1: Inequality of the Personal Distribution of Equivalent Net Income and of Net Wealth per Household Member, Germany 1998

	Equivalent net income ¹⁾		Net wealth ²⁾ per household member	
Mean value (DM)	2,767 ³⁾		101,995	
Median value (DM)	2,418 ³⁾		47,074	
Gini coefficient	0.2694		0.6477	
Decile shares in % (cumulated shares in %)				
1 st decile	4.0		-0.3	
2 nd decile	5.5	(9.5)	0.2	(-0.1)
3 rd decile	6.5	(16.0)	0.8	(0.6)
4 th decile	7.4	(23.4)	1.7	(2.4)
5 th decile	8.3	(31.6)	3.5	(5.8)
6 th decile	9.2	(40.9)	6.0	(11.9)
7 th decile	10.4	(51.3)	9.3	(21.2)
8 th decile	11.9	(63.2)	13.5	(34.7)
9 th decile	14.3	(77.6)	20.3	(55.1)
10 th decile	22.4	(100.0)	44.9	(100.0)

1) Household net income divided by the sum of the equivalence weights of household members (old OECD-scale: 1.0 for head of household, 0.7 for further household members older than 14 years, 0.5 for household members younger than 15 years).

2) Real estate, savings deposits, actual value of insurance contracts, stocks, other securities minus debts.

3) DM per month.

Source: EVS-Databank, Income and Consumption Survey 1998; own calculations.

First we turn to personal distribution of income. The Gini coefficient of about 0.27 indicates a mid-position of income inequality in international comparison (see Atkinson, Rainwater & Smeeding, 1995; Smeeding, 2000, p. 213). From other research we know that inequality in West Germany has only moderately risen from the beginning of the 80s until the beginning of the 90s. In united Germany the Gini coefficient remained constant from 1993 to 1998, but there were some changes in West and East Germany (Hauser & Becker, 2000, pp. 79-81; Hauser & Becker, 2001, chapters 6.1.3. and 6.2.3.).

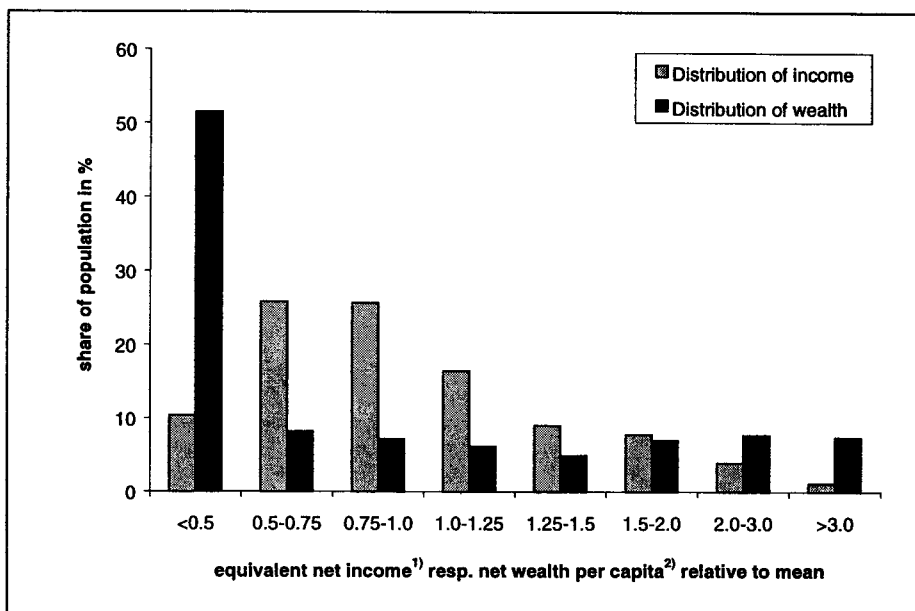
The decile shares show in a less abstract way the extent of income disparities. If equivalent net income were distributed equally each decile had the same share of 10 %. Reality is far away from this. While the lowest 10 % of the population have an income share of less than half their population share, the highest 10 % dispose of an income share of more than double the population share.

However, the personal distribution of wealth is much more unequal. The Gini coefficient of 0.6477 amounts to more than twice the value of the coefficient of the income distribution. Moreover, the lowest 10 % of the population *now ranked by*

their net wealth have negative wealth holdings, i.e. their debts are higher than their assets¹⁰. The lower half of the population disposes of a very small share of total wealth of less than 6 %. Consequently, the upper half of the population owns 94 % of net wealth. Even within the upper 50 % of the population the distribution of net wealth is extremely unequal. The 6th and the 7th decile own less than 10 % of total wealth. In contrast, the top decile owns nearly half of total net wealth and the share of the 9th decile is about double its population share.

This enormous difference between the inequality of equivalent net income and of net wealth per household member results in completely different types of distribution. In Figure 1 the population is grouped on the one hand by income brackets (light bars) and on the other hand by wealth brackets (dark bars); the limits of the brackets are defined in relation to the respective mean values. The distribution of the population according to relative equivalent net income brackets shows the well known shape with a steeper slope on the left side at low income positions, but with only a small population share in the lowest income bracket. In contrast, the distribution according to relative wealth positions shows the highest frequency in the lowest wealth bracket with negative or small positive net wealth. Above this lowest wealth bracket there exists a nearly uniform distribution with only slightly rising frequencies above 150 % of net wealth mean.

Figure 1: Personal Distribution of Income and Wealth, Germany 1998



- 1) Household net income divided by the sum of the equivalence weights of household members (old OECD-scale: 1.0 for head of household, 0.7 for further household members older than 15 years, 0.5 for household members younger than 15 years).

- 2) Real estate, savings deposits, actual value of insurance contracts, stocks, other securities minus debts.

Source: EVS-Databank, Income and Consumption Survey 1998; own calculations.

5. INTEGRATED PERSPECTIVE OF THE TWO DIMENSIONS: RICH AND POOR WITH RESPECT TO INCOME AND WEALTH

We now look at the joint distribution of equivalent net income and net wealth per capita. Are persons with high incomes also rich with respect to their net wealth, and are all the income poor in debt? Since assets produce income it is obvious that there must be a high correlation between high equivalent net income and high net wealth per capita but the overall correlation between equivalent net income and net wealth per capita is far from being perfect¹¹.

Table 2: The Personal Distribution of Net Wealth per Household Member within Relative Income Brackets, Germany 1998

Relative income position ¹⁾ from ... to less than ...	Relative wealth position ²⁾ from ... to ...					All
	< 0.5	0.5 – 1.0	1.0 – 2.0	2.0 – 3.0	> 3.0	
< 0.5	91.6	(4.6)	(2.5)	*	*	10.4
0.5 – 1.0	63.9	16.4	14.4	3.6	1.7	51.4
1.0 – 2.0	26.2	18.1	28.3	14.9	12.5	33.3
2.0 – 3.0	9.8	10.7	20.2	17.0	42.3	3.9
> 3.0	*	*	(13.8)	(11.6)	65.2	1.1
All	51.5	15.4	18.0	7.7	7.4	100.0

If the number of observations in the income and consumption survey is less than 100, the percentage is represented in brackets, because of weak statistical significance. If the number of observations is less than 30 it is replaced by * and statistically not significant.

1) Household net income divided by the sum of the equivalence weights of household members (old OECD-scale: 1.0 for head of household, 0.7 for further household members older than 14 years, 0.5 for household members younger than 15 years). Brackets are defined relative to mean equivalent net income (2,767 DM per month).

2) Real estate, savings deposits, actual value of insurance contracts, stocks, other securities minus debts. Brackets are defined relative to mean net wealth per household member (101,995 DM).

Source: EVS-Databank, Income and Consumption Survey 1998; own calculations.

In Table 2 combinations of income and wealth positions on the individual level are revealed in more detail. The population is first grouped by relative income positions, and then within each income bracket persons are additionally classified by relative wealth positions¹². The cells show the combination of both aspects. In 1998, about 90 % of those with less than half the mean equivalent net income – often called the poor population – also had only less than half the mean net wealth per household member. With rising income positions, the relative frequency of the lowest wealth positions decreases strongly. When we look at the upper income groups above 200 % of mean income we find that nearly half of the persons or more in these groups dispose also of net wealth of more than three times the average indicating a strong correlation between high incomes and high wealth. On the other hand, there are frequent discrepancies between the income and wealth positions. For example,

one quarter of the group with middle range incomes between the mean and twice the mean owns only less than half the mean net wealth whereas another quarter of them owns more than double the mean net wealth. It follows that income and wealth should be analyzed simultaneously when discussing the phenomenon of poor and rich groups.

6. WHO ARE THE RICH AND THE POOR?

In the following poverty is defined in relative terms: Persons are considered *poor* if their equivalent net income is less than half the mean equivalent net income, *and* if they do not own real estate, *and* if their net wealth is below the yearly income poverty line of a single adult (16,600 DM in 1998). On the other side, persons are considered *prosperous* if their equivalent net income is above 200 % of the mean equivalent net income, and if their net wealth is also above 200 % of the mean net wealth per capita. For defining those who are really *rich*, we keep the 200 percent-line with respect to equivalent net income but we introduce another wealth line, namely one million DM per household member. In this case, income from capital based on a moderate interest rate is already sufficient to enjoy a living standard above the average without earnings from work. Since there is no consensus in the literature which income and wealth levels indicate richness, these lines are somewhat arbitrary; but they allow us to take a first step in measuring richness in a society. In 1998, about 8.2 % of the German population have been living in poverty, a population share of 3.1 % have been prosperous¹³ and 0.3 % have been rich.

In the following the social structure of these groups will be analyzed in comparison to the structure of the total population. Figure 2 shows the composition of the population by social status of the head of household. A quarter of the poor is living in households headed by a blue-collar worker. Since they also comprise about one quarter of the total population, this group and their families are hit by poverty proportionally. Thus, a gainful employment is no guarantee to escape poverty. Persons living in pensioner households are less than proportionally hit by poverty. Within the population living in poverty, persons in households with an unemployed head are strongly overrepresented as they come to nearly one quarter compared to 5 % in total population. For persons living in households with a head not gainfully employed for other reasons than unemployment or old age, the risk of poverty is even higher¹⁴.

In contrast to that and not surprising, within the prosperous group – above the 200 percent-line with respect to income and wealth – persons living in households of the self-employed are the most overrepresented as with 26 % their share is four times the share in the total population. However, the largest share within the prosperous group comprises persons living in households of white-collar workers and civil servants. They make up nearly half of the prosperous population, and thus a considerably higher share than in the total population. In the rich group with top wealth persons living in households of self-employed even have a higher share than in the prosperous group, whereas those in households of white-collar workers and civil servants have a smaller share. Surprisingly, the share of persons living in pensioner households is of the same percentage in the rich group as in the total population.



<http://www.springer.com/978-1-4020-1012-5>

Rich and Poor

Disparities, Perceptions, Concomitants

Glatzer, W.D. (Ed.)

2002, VII, 277 p., Hardcover

ISBN: 978-1-4020-1012-5