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Inequality of the distribution of personal wealth in Germany 1973 - 1998

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Working Paper No. 398

**Inequality of the Distribution of
Personal Wealth in Germany 1973 – 1998**

by

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Revised version

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I. Contents

1. *Introduction*
2. *Micro-data and wealth holdings of the household sector*
3. *Inequality of disposable wealth across households in West Germany from 1973 to 1998*
4. *Inequality of the distribution of net financial assets and net housing wealth across households in West Germany 1983 to 1998*
5. *Inequality of wealth holdings between and within age groups*
6. *Inequality of disposable household wealth in East and West Germany compared.*
7. *Conclusions*

1. INTRODUCTION

In their comprehensive survey of the distribution of wealth Davies and Shorrocks¹ describe some stylized facts about personal wealth holdings known for various countries:

- (1) The distribution of wealth is more unequal than that of income, and has a long upper tail.
- (2) Many households never accumulate much private wealth, even in rich countries.
- (3) Wealth inequality has been on a downward trend for most of the past century but with interruptions and reversals.
- (4) Financial assets are less unequally distributed than non-financial assets, at least when owner-occupied housing is the major component of non-financial assets.
- (5) The distribution of inherited wealth is much more unequal than that of wealth in general.
- (6) The age-wealth pattern is much less pronounced than predicted by the life cycle hypothesis.²

In this survey information about the distribution of wealth in Germany is very scarce. Only two studies are cited: One by Börsch-Supan referring to 1983, and another one by Burkhauser, Frick and Schwarze referring to 1988.³ Davies and Shorrocks neglected some earlier studies written in German, presumably because of language problems.⁴

Our paper presents cross-section results for the period from 1973 to 1998 based on the Income and Consumption Surveys (ICS) (Einkommens- und Verbrauchsstichprobe) of the

¹ Davies and Shorrocks (2000), pp. 607 and 663.

² An earlier survey by Wolff (1991) drew similar conclusions.

³ Davies and Shorrocks (2000), Table 1, p. 637.

The paper by Burkhauser et al. (1997) is based on the German Socio-economic Panel (GSOEP). There are methodological differences with respect to the analysis of the concentration of wealth between the Burkhauser et al. paper and our study. The most important differences are: (1) Burkhauser et al. use persons as the units of measurement. To derive Gini coefficients for disposable wealth of persons household wealth is divided by the sum of the weights of the household members based on the original OECD equivalence scale. We use either the household or persons as units of measurement. If persons are used household wealth is divided by the number of members without weighting. (2) Burkhauser et al. calculate the Gini coefficient and the quintile shares based on a ranking according to the net equivalent income of each person. Persons with zero or negative income are excluded. Our ranking is based on disposable wealth, and all households or persons with zero disposable wealth or negative disposable wealth are included when decile shares are computed. For calculating Gini coefficients units with negative disposable wealth are set to zero. In general, the method used by Burkhauser et al. leads to lower values of the Gini coefficient, and to a much higher share of wealth of the lowest quintile.

⁴ Ring (2000, pp. 200-252) gives an overview of earlier studies.

German Federal Statistical Office.⁵ We examine whether the summary of facts given by Davies and Shorrocks can be corroborated for Germany. Additionally, we analyze more closely to what extent the reunification of Germany and the change of the economic system in East Germany from a socialist economy with a dominance of state ownership of enterprises, land and housing to a Western type welfare state is reflected in the distribution of personal wealth.

We restrict the analysis to the conventional concept of marketable household wealth which we call -- following the terminology used by Wolff -- household disposable wealth.⁶ The unit of measurement is either the household and its disposable wealth or the person with its disposable wealth calculated per household member.

The paper is organized as follows:

At first, we describe main characteristics of our data sources, and we briefly report some aggregate figures of household wealth as estimated by the Deutsche Bundesbank, which include wealth holdings of non-profit organizations. The next three sections are restricted to West Germany for which we can construct a time series from 1973 to 1998. We present measures of the level and the overall trend of the inequality of household disposable wealth and household disposable income as well as equivalent disposable income of persons. Then we deal with inequality in the distribution of financial assets and housing as the two main components of disposable wealth of the vast majority of households. In the next section we look at average disposable wealth of age groups, and its dispersion. Additionally, we construct two pseudo cohorts to distinguish between age and cohort effects. Following a brief introduction to the main institutional changes that accompanied German reunification we analyze the distribution of disposable wealth and its components in East Germany in the final

⁵ Although there are some other data sources a cross-section time series can only be constructed from the Income and Consumption Surveys. There is a good chance that this time series can be continued in the near future because data from a new Income and Consumption Survey (ICS) referring to 2003 will become available by the end of 2004. Furthermore, in 2002 the German Socio-Economic Panel (GSOEP) conducted a special high income and wealth survey the data of which will become available for analysis by the end of 2003 (see Schupp and Wagner 2003). While the GSOEP data can be used anywhere by the international research community on a contractual basis, micro-data of the German Federal Statistical Office presently can only be analyzed within Germany due to legal restrictions. For a comparison of the GSOEP with the ICS see Becker et al. (2003).

⁶ Wolff (1991, p. 94) describes household disposable wealth as including "assets and liabilities that have a current market value and that are directly or indirectly marketable (fungible). A typical list of assets includes owner-occupied housing and other real estate; consumer durables and household inventories; cash checking and savings accounts; bonds, and other financial instruments; corporate stocks or shares; the equity in unincorporated businesses; trust funds; and the cash surrender value of life insurance policies and pension plans." It has to be noted, however, that the following results for Germany generally neglect consumer durables. Additionally, equity in private businesses is not included in most years. Traded stocks are included in financial assets at market value.

section. We conclude by arguing that wealth inequality may increase further because of the present retrenchment policy.

2. MICRO-DATA AND WEALTH HOLDINGS OF THE HOUSEHOLD SECTOR

The Income and Consumption Survey (ICS) of the Federal Statistical Office of Germany has been conducted at five-year intervals since 1962/1963. It is a quota sample of between 45,000 to 60,000 households who participate voluntarily.⁷ At first, it centered mainly on demographic characteristics and on income and expenditure. Later on, it also included the assets of private households. This survey places a great burden on the sample households because they have to answer to several interviews and to do book keeping of all incomes and expenditures up to a year. Since participation rates differ the Federal Statistical Office adjusts the survey weights to marginal distributions of a mandatory random 1 percent sample of the resident population in Germany, the Micro Census. Additionally, top coding is applied⁸. The institutionalized population and the homeless are excluded. Households with a foreign head are only included since 1993 but it is assumed that only the better integrated foreigners are represented. In 1973 and in 1983 tax values of equity in private businesses were reported, which had to be adjusted to market value. Marketable stocks are included in financial assets. The surveys of 1993 and 1998 contain market prices of houses and land as estimated by the owners but for previous years only much lower tax values were given that had to be adjusted to market values. For scientific analyses only random sub-samples of between 80 percent and 98 percent of the total sample are available. It is also well known that assets are usually underreported in surveys. These shortcomings of the ICS lead to a downward bias of measured inequality of disposable household wealth, and they to some extent also limit comparability over time.

⁷ The main characteristics of the ICS and the procedures used to calculate the inequality measures for household disposable wealth are summarized in the appendix.

⁸ The cut-off points referring to monthly net income of households were DM 15,000 in 1973, DM 20,000 in 1978, DM 25,000 in 1983 and 1988, and DM 35,000 DM in 1993 and 1998. As can be derived from Merz's analysis (Merz 2001) based on income tax records households with a monthly net income of more than DM 8,000 are grossly underrepresented in the Income and Consumption Surveys. Merz found that about 270,000 "rich" households were missing from the grossed-up figures of the Income and Consumption Survey 1998. In the mid-nineties these were about 0.75 percent of all households in unified Germany. The income of approximately 37,000 of these households exceeded the cut-off line.

From the ICS we can calculate grossed up values of total disposable wealth of private households as well as disposable wealth per household and per household member. Table 1 presents the results.

From 1983 to 1998 total disposable wealth has increased from 1,626 in West Germany to 4,251 billion Euro in United Germany. This means an average growth rate of around 6.6 percent per year. Partly, this increase is due to the reunification of Germany. If we restrict the analysis to West Germany the increase is from 1,626 to 3,910 billion Euro, a growth rate of around 6 percent. During this period the number of households changed considerably. Therefore, disposable wealth per household increased only from 72,100 to 130,500 Euro, that means a growth rate of 4 percent. If we again restrict the view to West Germany the rate of growth of disposable household wealth per household was 3.2 percent. As will be explained in section 6 disposable wealth per household is much higher in West Germany than in East Germany. In 1993 the West German average was about 3.3 times as high as the East German average, but until 1998 this ratio had been reduced to 2.6.

To check the reliability of the grossed-up figures for disposable wealth of German households they could be compared with the respective figures of the national balance sheets. The German Federal Statistical Office, however, has never produced national balance sheets for total German wealth, disaggregated by sectors, so that such a comparison is not possible. The Deutsche Bundesbank published estimates of aggregate wealth for several sectors and for broad categories of assets but since the figures for the “household sector” include net wealth holdings of all non-profit organizations (e.g. churches, labor unions, foundations) comparability is limited. Furthermore, the reference years of the estimates of the Deutsche Bundesbank do not correspond to the survey years. Table 2 shows what is known for Germany.

From these figures of the Deutsche Bundesbank one can calculate rough estimates of total disposable wealth holdings of private households that correspond to the reference years of the surveys by simple interpolation. If consumer durables are left out and, additionally, 5 percent of wealth is deducted as a rough estimate of the wealth of non-profit organizations the resulting figures are comparable to the grossed-up figures from the surveys because equity in private businesses is neither included in the figures of the Deutsche Bundesbank nor in the grossed-up totals from the surveys. Moreover, the figure of the Deutsche Bundesbank for 1990 has to be reduced by another 10 percent because it refers to United Germany. These estimates in billions of Euros are: 2,038 (1983), 2,795 (1988), 4,200 (1993), and 5,087

(1998). Comparing these estimates with the respective figures in Table 1 one finds that the ICS figures are between 7 percent and 29 percent lower. Keeping in mind that the top income and wealth holder group is excluded from the survey and that some assets are underreported this can be considered an acceptable approximation.⁹

3. INEQUALITY OF DISPOSABLE WEALTH ACROSS HOUSEHOLDS IN WEST GERMANY FROM 1973 TO 1998

Table 3 presents time series of Gini coefficients for household disposable wealth, household disposable income and equivalent disposable income of persons. In Germany the Gini coefficients for household disposable wealth are in the range from 75 percent to 62 percent. This range lies within the wider range from 79 percent (U.S.) to 52 percent (Japan) as reported by Davies and Shorrocks referring to the mid-eighties.

We suppose, however, that these estimates for Germany -- with the exception of the result for 1973 -- are lower bounds of the estimates of the true values because the ICS does not capture households with very high incomes, most of whom also belong to the group of top wealth holders.^{10, 11}

Comparing the Gini coefficients for disposable wealth and disposable income of households one finds that this measure is much lower for income inequality than for wealth inequality, with a value of mostly less than a half. When one looks at the Gini coefficient for equivalent disposable income of persons this measure in all years is approximately one fifth lower than that for household disposable income, a typical fact shown in many studies of income distribution. This corroborates for Germany the findings summarized by Davies and Shorrocks as to the level of inequality of household disposable wealth and household disposable income. We also presume a long tail of the wealth distribution in Germany but we cannot give precise quantitative results.¹²

Another way of looking at the inequality of disposable wealth is to ascertain the share of the top 1 percent, top 5 percent, and top 10 percent of households in total disposable wealth. This is the strategy often used to characterize trends in wealth inequality because only

⁹ The figures for 1973 are a special case because the authors Mierheim and Wicke (1978) had adjusted their estimates derived from the ICS to national totals. We take these estimates at face value.

¹⁰ It should be noted that Burkhauser et al. (1997), who used the German Socio-economic Panel calculated a Gini coefficient of 69 percent 1988.

¹¹ Only for 1973 Mierheim and Wicke adjusted for missing households and missing assets.

¹² See Schupp and Wagner (2003)

tax figures for the wealthy households are available in some countries (Wolff 1996, Davies and Shorrocks 2000). Obviously, these measures focus attention on a small segment of the population, which may be of interest from a certain political point of view. These measures, however, do not capture the wealth distribution across the entire population that is also important, especially in Germany, which since several decades enacted a policy of promoting the spread of wealth holdings among the middle classes.¹³ Decile share distributions contain information for both views. Table 4 presents the decile share distributions for West Germany from 1973 to 1998.

The lowest decile shows negative disposable wealth. Since the value of consumer durables is not included consumer loans obviously are higher than available financial assets. More generally, we can observe that the lowest four deciles possess only a negligible share of total disposable wealth. This corroborates one of the findings reported for other countries by Davies and Shorrocks. The middle group consists of the fifth and sixth decile, which both have shares of total disposable wealth that are still far below their respective population shares. One has to go up to the seventh decile to see the first one whose share of total disposable wealth corresponds approximately to its population share. With the top three deciles the share of total disposable exceeds their population share. The lion's share of wealth, however, belongs to the top decile. Remembering that the top group of wealth holders is not fully covered by the ICS -- except for the year of 1973 -- these figures must again be considered lower bounds of the estimates of their true shares, which in reality may be slightly over one half of total disposable wealth in West Germany.¹⁴

Comparing these results for West Germany with figures for several other countries referring to the mid-eighties that are reported in Wolff (1996) one can gather from Table 5 that the shares of the two bottom quintiles are everywhere extremely low. Slight differences may be due to the inclusion of some consumer durables in some countries.

In West Germany the share of the third quintile is lowest but the share of the fourth quintile is highest. There seems to be a broader upper middle class of wealth holders in Germany than in other countries. This presumption is corroborated by looking at the shares of the top quintiles. The share of the top quintile is lower in Germany and in Canada than in the U.S. and in Sweden with Australia somewhere in the middle. This can only be a tentative

¹³ Ring (2000), ch. 9, pp 297-360

conclusion, however, since in Germany the share of the top quintile is biased downwards as mentioned before.

When we look at the development of the Gini coefficients in Table 3, and also at the changes of the shares of the two top deciles in Table 4 it seems that we can ascertain a trend of decreasing wealth inequality in West Germany for the two decades from 1973 to 1993. Such a tendency was also found for several other countries, at least for the seventies (Wolff 1996, Davies and Shorrocks 2000). There are, however, several limitations to an interpretation of these figures at face value. Mierheim and Wicke adjusted their figures for our first reference year 1973 to national totals. They estimated also the number and the average disposable wealth of households of the top income group that was neglected in the ICS, and combined them with the survey results, thus constructing a complete picture of wealth inequality in Germany.¹⁵ Such extensive adjustments were not made for the other years.

The Gini coefficient for 1983 in the first row is calculated including the value of stocks and equity in private businesses but neglecting the wealth holdings of the top wealth holders not covered by the ICS. This clearly causes a downward bias of the Gini coefficient, and the share of the top decile.¹⁶ For reason of better comparability with the following years the Gini coefficient for 1983 in the second row only includes the value of tradable stocks but excludes equity of private businesses.

The figures for 1983 (second row), 1988, 1993 and 1998 also neglect the top wealth holders, and, additionally, the equity in private businesses. Only stocks that are traded at the stock exchange were included. Since it can be assumed that equity in private businesses is concentrated in the top decile, both these facts contribute to a downward bias of the Gini coefficients, and of the shares of the top deciles in these years.

In 1993 the ICS for the first time included foreigners living in Germany. In West Germany they made up around 9 percent of the resident population. Although there are indications that only the better integrated foreigners participated in the surveys it can be

¹⁴ Stein (2003, section 3.1.4.3) estimates that this group of top wealth holders owns about 5 percent of total disposable wealth. If this group were included in the ranking it would increase the share of the top decile by about 4 percent to 5 percent.

¹⁵ For details see Mierheim and Wicke (1978), pp. 21-30 and pp. 38-54.

¹⁶ Only in 1973 and 1983 the ICS contained the tax value of equity in private businesses. This tax value had to be converted to market prices by a roughly estimated multiplier.

assumed that they mostly belonged to the lower wealth deciles.¹⁷ This means that the values of the Gini coefficient referring to the years 1993 and 1998 -- if restricted to the German population -- would be somewhat lower than their values for the resident population as shown in Table 3.¹⁸

It depends on the theoretical question pursued whether one wants to refer to the total resident population in each year or only to a subset of it in determining the trend in wealth inequality. We prefer to look at the resident population because in a period of globalization one can no longer abstract from migration. We consider, therefore, the Gini coefficients for 1983 and 1988, which excluded foreigners, as a little downward biased in addition to the other biases mentioned.

Given the available evidence, and taking all these arguments into consideration, we can corroborate only a slight tendency of decreasing inequality of household disposable wealth from 1983 to 1993. This tendency was reversed from 1993 to 1998. We suppose also a slight decrease of wealth inequality between 1973 and 1983 but its magnitude is in doubt.

4. INEQUALITY OF THE DISTRIBUTION OF NET FINANCIAL ASSETS AND NET HOUSING WEALTH ACROSS HOUSEHOLDS IN WEST GERMANY 1983 TO 1998

When one disregards consumer durables and equity in private businesses, then total disposable household wealth can be split up into net financial assets and net housing wealth. "Net" means that consumer debts are deducted from the gross sum of financial assets, and housing debts are deducted from the gross value of housing and real estate. It is interesting to note that the share of net financial assets in total disposable wealth was about one quarter, rising from 22.1 percent in 1983 to 27.6 percent in 1998. Correspondingly, the share of the net value of housing wealth decreased during this period from 77.9 percent to 72.4 percent despite the fact that the ownership rate for housing wealth increased from 45.5 percent in 1983 to 49.1 percent in 1998 after a high of 50.7 percent in 1993.¹⁹ Thus the ownership rate

¹⁷ During the eighties and nineties Germany experienced considerable immigration, mostly from non-EU countries. Net immigration between 1980 and 1990 amounted to about 800,000 persons. Between 1991 and 1997 another 1.5 million persons came into United Germany. The most important groups of immigrants were family members joining their already present spouses who originally came into the country as so-called guest-workers, repatriates from former socialist countries, refugees and asylum seekers. In general, these immigrants came with no or very little wealth. Enquete-Kommission (1998), Table 2, p. 738

¹⁸ The Gini coefficients for West Germany excluding foreign households are 61.9 (1993) and 63.5 (1998).

¹⁹ Stein (2002), Table 4, p. 11 and Table 6, p. 12. The decrease in the ownership rate of housing wealth between 1993 and 1998 seems to be due to net immigration because immigrants usually are not able to acquire housing wealth within a short period after immigration for lack of financial assets they bring with them.

for houses in Germany is far lower than for financial assets of all kinds, which may be over 90 percent, although many households own only small amounts.

For these two broad categories of household wealth we can also ask what is the level of inequality, and whether this period was characterized by a trend in inequality. Table 6 shows the results.

We can gather from Table 6 that net financial wealth is less unequally distributed than total disposable wealth except in the last year of our series, 1998. This lower concentration of financial assets could be expected since households with low disposable wealth usually keep their assets in the form of bank accounts, savings accounts with banks or housing associations, or in life insurance plans. Since in Germany the prices of apartments and houses are rather high compared to average disposable income, and since banks usually finance not more than 75 percent of the price of a house one needs a large amount as a down payment to acquire property. This is the main reason why ownership rates of housing are low compared to other countries. It is not astounding, therefore, that net housing wealth is more unequally distributed than total disposable wealth.

There was, however, a noticeable trend of decreasing inequality of net housing wealth from 1983 to 1993, which was reversed after 1993. Inequality of net financial wealth fluctuated. One has to bear in mind, however, that the boom at the stock market had already started in 1998 but had not reached its peak. This picture corresponds with the mixed results reported by Davies and Shorrocks (2000, p. 607) with respect to the inequality of monetary asset holdings observed in other countries.

5. INEQUALITY OF WEALTH HOLDINGS BETWEEN AND WITHIN AGE GROUPS²⁰

The simple life-cycle model predicts that personal disposable wealth at the beginning of working life of each birth cohort is zero for all members of a birth cohort, which implies also

Burkhauser et al. (1997, Tab. 5) compare the ownership rates of houses and apartments between Germany and the US by age group and by gender. At the end of the eighties the overall US rate are about one third higher than the German rate.

²⁰ We distinguish age groups, i.e. households or household members according to the age of the head of household, from birth cohorts, i.e. households or members of households with the same year of birth of the head of household.

complete equality.²¹ In the course of working life wealth is accumulated according to the possibilities and the willingness to save from unequally distributed earned incomes. Personal disposable wealth is highest at retirement age, and inequality of the distribution of personal wealth is also highest. During the retirement period disposable wealth is steadily reduced to finance consumption, and, therefore, inequality of wealth holdings may also be decreasing. At the time of death personal disposable wealth is again reduced to zero, and equality of wealth holdings is restored. To come closer to reality many factors have to be integrated into this simple life-cycle model. The first factor at the person level is the distribution of earnings and its determinants. The second factor at the person level are the rates of return for accumulated wealth, and capital gains or losses. Marriage and divorce behavior, e.g. class specific mating or random mating, differential fertility and labor market participation of the spouses that influences the possibility to save are the main factors if one changes from the person to the family level. The propensity to save may be influenced by the tax system and by the social protection system, which covers social risks on a broader or smaller scale and with higher or lower benefits. Uncertainty about expected life time income and about the life span of the individuals or, in case of a couple of both spouses, introduces the precautionary motive into the considerations about wealth accumulation and decumulation, and, finally, the bequest motive and the legal rules for the division of estates among heirs including the motive to invest in the children's education and to support their start in life by gifts inter vivos may play a role, at least for couples with children or close relatives.²²

Elaborated models that include most of these factors often yield inconclusive results as to the accumulation or decumulation of household wealth after retirement, and the effects of bequests on the inequality of the wealth distribution. Davies and Shorrocks (2000, p.616) state in their review "...the broad consensus is that, after the first few years of retirement, private wealth declines in retirement. What remains in considerable doubt is the speed at which dissaving takes place ...". In what follows we show some empirical facts for Germany to check whether they are in line with this view.

²¹ Under the assumption of perfect capital markets with the possibility to borrow on future earnings initial wealth personal holdings at the beginning of working life would even be negative and debts would be unequally distributed.

²² For an overview of the relevant factors see Davies and Shorrocks (2000), pp. 608-627.

Diagram 1 displays for four sample years average levels of disposable wealth of various age groups of households²³ as proportion of the respective overall average disposable wealth.

One sees the well-known hump shape. In every ICS sample one middle-aged group has the highest relative wealth position. But the respective age group is not the same. In the ICS of 1983 it is the group at the age between 50 and 54 years, and in the ICS of 1998 it is the group at the age between 60 and 64 years. This points to a cohort effect.

Household size changes over the life course. Therefore, it is interesting to check whether this shape remains the same if we look at household disposable wealth per household member. To be comparable to the previous approach all members of a household are classified according to the age of the head of household irrespective of their own age. From Diagram 2 we can see much less of a hump. The peak is now at about the same age.

A decrease in *relative* average wealth holdings is only visible for the age group over 65, the mandatory retirement age in Germany. The ICS of 1993 presents even an exception because there is no decrease at all. Obviously, this flattening of the hump is the effect of changing household size, especially in old age, when one spouse dies and leaves most or all of its personal wealth to the surviving spouse. It seems obvious, that the bequest motive should not only be discussed with respect to children but also modeled with respect to surviving spouses to improve the explanatory power of models of wealth accumulation and distribution.

With a time series of cross-section data one cannot distinguish between the effects of economic development and changes in the institutional structure, that influence each birth cohort at a different point in their life courses, and life-course effects, due to the aging of each individual member of a certain birth cohort. A long time series of cross-section data, however, makes it possible, to construct pseudo birth cohorts that can be observed for a certain period of their life course. Such a pseudo birth cohort consists of as many annual birth cohorts as there are years between the various sample years, on condition that the time interval between the various samples remains constant. If the cross-section data came from a random sample, one could assume that one has different random samples of the same pseudo birth cohort at different points in their life course. The same is true of a quota sample like the ICS but the results may be biased to some extent. This methodology is not a full substitute for

²³ The households are classified according to the age of the head of household.

real panel data with which one can observe the life course of each individual separately, and can aggregate life courses in any way one likes, but it provides us at least with some tentative insights if long-running panels are not yet available.

Diagram 3 shows average wealth holdings of the two pseudo birth cohorts born between 1924 and 1928, and between 1929 and 1933 in relation to overall average wealth holdings.

In the first year of our observation period (1983) the heads of households of the younger birth cohort were at an age of between 50 and 54 years, while heads of households of the older birth cohort were between 55 and 59 years old. The heads of households of both pseudo birth cohorts were retired in the last year of the observation period (1998).²⁴

Referring to disposable wealth per household we can see from Diagram 3 that both pseudo birth cohorts had reached their best relative position in the first year of the observation period (1983) at the age between 50 and 60 years. During the entire observation period their *relative* wealth position decreased. This relative decrease, however, was rather small compared to the prediction of the simple life cycle model. In 1998 the average the wealth holdings per household of the older birth cohort was still at about the overall average, and average wealth per household of the younger birth cohort was still far above the overall average. This points to the fact that these cohorts on average could not save as much as the average household to keep their relative position. But on average there was no dissaving in monetary terms after retirement. Therefore, it is extremely implausible that both cohorts will on average run down their disposable wealth to almost zero during the rest of their lives. On the contrary, several German studies²⁵ predict high bequests that can be expected by the younger generation, which in public discussions is often dubbed “the generation of heirs.”

Is this picture the same if we look at the relative position of the members of these two birth cohorts by calculating it on a per capita basis but still classifying all the household members according to the age of the head of household?

Looking at the *relative* wealth position from this perspective we find from Diagram 4 that the younger cohort born between 1929 and 1933 did not fall behind in their relative position at all but increased it until an age between 65 and 70. This usually is the period of retirement in which most persons are still healthy and can enjoy their life without work. Only

²⁴ Due to limitations of the data in the sample of 1998 the members of the oldest cohort include all households with an head older than 70 years with no upper age limit. If there exists dissaving with increasing age this biases average wealth holdings of the “true” birth cohort members downwards.

the oldest cohort, born between 1924 and 1928, reduced its relative position meaning that they could not save as much to keep up with average growth of disposable wealth per capita. Moreover, for both cohorts we do not find an absolute decrease of wealth holdings in monetary terms. This means that on average there was no dissaving at the person level. The decrease that was observed at the household level is to a large extent compensated for by changes in household size, and, presumably, by bequests to surviving spouses. Additionally, there may exist a selection effect because less wealthy persons seem to die earlier²⁶ thus changing the composition of the pseudo birth cohort in favor of the richer group causing an increase in average wealth holdings. This effect could only be controlled by using data of a long-running panel. We can conclude, therefore, that in Germany because of the rather well developed pension system, and social insurance provisions for the cost of nursing in old age, there is no evidence that birth cohorts on average are running down their disposable wealth to a great extent.²⁷ The bequest motive seems to be very strong.

If disposable wealth were completely self-accumulated from current income young households would possess little wealth, and the distribution of wealth among them would be rather equal. Inequality would develop during the life course, and it would decrease after retirement when wealth is run down to finance consumption in old age. Therefore, one can get some insight into the deviations from this simple hypothesis if one checks the distribution of disposable wealth within age groups. Table 7 shows the results for West Germany for the years 1983 and 1998.

In all age groups the distribution of household disposable wealth at the household level is a little more unequal than at the person level but displays the same pattern. In 1983 inequality was highest within the youngest age group, then it decreased until retirement age, and finally it increased again.²⁸ In 1998 inequality within age groups was considerably lower in every age group than in 1983 but the same pattern emerges. Inequality is highest among the young households, it decreases until retirement age, and then it increases again. This pattern is exactly the opposite of what one would expect. If one wants to explain this pattern one has to look especially at inheritances and gifts *inter vivo* that some members of the youngest age group have already received.

²⁵ Hauser and Stein (2001), pp. 147-158; Braun et. al. (2002).

²⁶ See Reil-Held (2000)

²⁷ Similar conclusions for the presently old cohorts are drawn by Börsch-Supan et al. (2003).

We can only hint at some facts known for West Germany. Based on data from the GSOEP (wave 1988) Schlomann (1992, Tab. 8.1, p. 248) estimates that 8.5 percent of the households of the youngest age group had already received inheritances during their life time. The proportion increases to 14.4 percent of the age group between 30 and 44 years, 21.1 percent of the age group between 45 and 64 years, and is lower again for the oldest cohort over 65 years. One has to note, however, that the participants of the GSOEP were asked for inheritances they received since 1960, i.e. during the past 28 years. This would include all of the inheritances of the youngest age group but to a lesser extent those of the older age groups. Based on the ICS Stein (2003, Tab. 3.23) finds for 1998 that among the households of the top decile about 27.5 percent mention that houses or apartments they possess were inherited or given to them as a gift inter vivo. Among the entire population only 8.9 percent of the households declare that they have inherited houses or apartments. This is about a fifth of all homeowners. From this fragmentary information we can derive the tentative conclusion that inheritances and gifts inter vivo play an important role for overall inequality of disposable household wealth, especially among the youngest age group.²⁹ For a considerable group of the population the so-called original accumulation, i.e. the accumulation of wealth by saving from own earned income is by far not the only source of the wealth they hold in old age. This seems especially true for the top wealth holders.

6. INEQUALITY OF DISPOSABLE HOUSEHOLD WEALTH IN EAST AND WEST GERMANY COMPARED

In 1949 the Federal Republic of Germany (FRG) was founded on the territory the American, British and French Allied Forces had occupied, and a so-called social market economy was established. In contrast, the Soviet Government in collaboration with the German Communist Party established the socialist so-called German Democratic Republic (GDR) in the Soviet zone. Enterprises and farms were expropriated and transformed to state owned so-called industrial combinats and agricultural cooperatives. Private property of means of production was no longer allowed. Larger houses that could be let to renters also became state property or the property of housing cooperatives. The GDR introduced the system of a planned

²⁸ This picture had to be modified especially for the elderly if their capitalized pension wealth were included in our definition of household disposable wealth. Inequality within the youngest cohort, however, would not change very much.

²⁹ Davies and Shorrocks (2000, p. 655) after discussing the various contributions give a rough estimate of the influence of bequests on wealth holdings to lie between 35 percent to 45 percent.

economy run by the state authorities and with its own non-convertible currency (Mark, M). The economy was integrated into the Eastern block. Step by step the border controls were tightened to stop a continuous flow of emigrants from the GDR to the FRG. In 1962 the Berlin Wall was erected to close the last loophole for emigration. During the course of the years the economy of the GDR lagged more and more behind the development in the Western World, and economic and political difficulties mounted in all the socialist states. It is up to the historians to exactly gauge the various factors that led to the break down of the Socialist block. In Germany the Berlin Wall fell in November 1989, and within a few days all the border controls were cancelled. It took only a few month until a Parliament was democratically elected in the German Democratic Republic that started to transform her economic and social system. In spring 1990 this Parliament decided to reunite the German Democratic Republic with the Federal Republic of Germany. The governing bodies of the Federal Republic of Germany and the Four Powers accepted this decision, and within a few month a reunification treaty was concluded, detailing how the economic and social system of the GDR could be transformed to fit the Constitution of the Federal Republic of Germany (Grundgesetz) and her social order.

In July 1990 a monetary union was concluded substituting the currency of the GDR by the Deutsche Mark. Wages and other current incomes as well as prices were converted on a 1 to 1 basis. Monetary assets and liabilities were converted 2 to 1 with the exception of savings of M 6,000 per person, which were also converted 1 to 1. Foreign debts of the German Democratic Republic were to be paid back by united Germany.³⁰ State property of the production sector and of land was privatized by a new organization, called Treuhandanstalt. Contrary to the expectations, this process resulted in a deficit of about 300 billions Deutsche Mark. Land, houses, and companies, which had been expropriated, were restituted in kind. The West German legal system was introduced including the labor market regulations, the social protection system, and the tax system. Special regulations guaranteed a minimum income in case of unemployment and retirement. Very generous early retirement regulations and special employment measures were also introduced. Despite the 1 to 1 conversion of the currency of the GDR, the wage level amounted to a little less than 50 percent of the West German average wage in 1991. East German pensions were tied to the East German wage level, and, consequently, were also very low. Although both groups soon

³⁰ For the period after reunification we use the terms East Germany and West Germany if we have to distinguish between the two parts of Germany .

saw considerable increases of their income in monetary and real terms pensioners gained more by the change of the old age protection system. During the first half of the 90s West German financial aid to East Germany increased from 100 billions DM in 1991 to 125 billions DM in 1995. In 1991 these transfers amounted to roughly 4 percent of the West German but to about 50 percent of the East German Gross Domestic Product. These West-East transfers were partly channeled through social security system, and partly through direct transfers from West German to East German budgets. West-East transfers are still continuing on a large scale, which explains part of Germany's problems with budget deficits. The economy in the Eastern part of reunited Germany is still lagging far behind in productivity and income growth. It may take another 20 years until the discrepancy between the Eastern and the Western parts of Germany will be reduced to a politically negligible difference.

It does not come as a surprise that the transformation from the socialist system of the GDR to a social market economy in East Germany had serious consequences for the distribution of disposable household wealth, not only at the time of reunification but also for a long time to come.³¹ As can be gathered from Table 1 disposable wealth per household in 1993 was 126,600 Euro in West Germany compared to 38,400 Euro in East Germany. From 1993 to 1998 the gap between West and East German households was somewhat reduced in relative terms but in 1998 West German households still owned about 2.6 times the amount of East German households.

Table 8 compares the Gini coefficients for disposable wealth, disposable household income and equivalent disposable income of persons between East and West Germany in 1993 and 1998.

We see again that inequality of the distribution of disposable household wealth is much greater than inequality of disposable incomes of households or equivalent disposable incomes of persons. Surprisingly, the distribution of disposable wealth of households is more unequal in East Germany than in West Germany but the distribution of disposable household income and of equivalent disposable income of persons is less unequal. While in East Germany inequality of disposable wealth was decreasing from 1993 to 1998 it was increasing in West Germany. Household disposable income as well as equivalent disposable income

³¹ In comparing East and West Germany one can look either at the population resident in the former GDR in 1989 irrespective of the residence at the time of the survey (principle of origin) or one can look at the population resident on the territory of the former GDR (principle of territory). This makes a difference if there is considerable migration between the two parts of Germany which still is the case. In what follows we stick to the principle of territory.

became considerably more unequal in East Germany while inequality in West Germany increased only very little. On all counts, therefore, we can see a tendency of convergence.

Table 9 presents the decile shares of household disposable wealth. In East Germany the top decile lost while the fifth to the ninth decile increased their shares. In West Germany only the three top decile gained while all the lower deciles lost.

It is interesting to look also at the distribution of the two main components of disposable wealth, net financial wealth and net housing wealth.

Table 10 shows that inequality of net financial wealth has increased more in East Germany than in West Germany, and that it has come close to the West German level. A much greater discrepancy exists with net housing wealth although there is also a slight tendency of convergence. Differences in the distribution of net housing wealth seem to be the main reason for greater inequality of disposable household wealth in East Germany. This can be explained by a much lower proportion of house and land owners in East Germany³², and a tremendous rise of land prices after unification when land and house prices were no longer fixed by the Government at a very low level but market prices were allowed.

Since ownership of means of production, especially equity in private businesses and large land holdings, were not allowed in the former German Democratic Republic, and, therefore, could not be inherited or received as gifts inter vivo, one could hypothesize that the distribution of disposable wealth among age groups would be much closer to the life cycle model than in West Germany. Table 11 shows that this hypothesis cannot be supported.

In East Germany inequality within all age groups is on a higher level than in West Germany but with a similar pattern. We find highest inequality among the group of young households, decreasing with age until retirement age, and then increasing again. From 1993 to 1998 inequality among the youngest age group even increased in both parts of Germany but more so in the East than in the West. For the older age groups one finds a convergence in inequality. One decade after unification the East German pattern of household wealth distribution within and between age groups has mostly converged to that of West German. Obviously, a tendency of convergence between East and West Germany cannot only be found at the macro level of GDP per capita but also from various perspectives of inequality

³² In 1993 the proportion of home owner households in East Germany was only 27.4 percent compared to 50.7 percent in West Germany. Until 1998 it increased to 33.9 percent in East Germany while it fell in West Germany to 49.1 percent. (Hauser/Stein 2001, p.120). While in the former German Democratic Republic it was very difficult to keep up houses which resulted in a deterioration of the buildings land kept its value.

analysis. The consequence of narrowing the gap in GDP per capita is more inequality of the distributions of income but less inequality of wealth.

7. CONCLUSIONS

The results presented show that the inequality of the distribution of household disposable wealth is somewhere in the middle of industrialized countries. Inequality has decreased slightly from 1973 to 1993, and then increased again. East German inequality of the distribution of disposable household wealth and of disposable household income is converging to the West German levels although from different starting points. For United Germany we can expect an increase in inequality of disposable household wealth for three reasons: First, since a further retrenchment of the welfare state is under way this will force the long-term unemployed, the prematurely disabled, and early retirees to run down their household wealth for consumption during their working life thus increasing the proportion of households with little or no wealth holdings. Second, it will make it more difficult for those with reduced social transfers to accumulate wealth. Third, the inheritances due during the two decades to come will be much larger than in earlier years, and they will be distributed more unequally because the number of heirs within families is considerably smaller than in former times due to the decrease in birth rates. We can also expect that political decisions under discussion, like a reduction of the highest marginal tax rate, a permanent abolition of the former wealth tax, a further loosening of the taxation of the returns of capital, and a reduction of the inheritance tax will increase this trend to more wealth inequality in Germany.

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**Appendix: Characteristics of the Income and Consumption Surveys (ICS) of the
German Federal Statistical Office³³**

1.1. General information

Year	ICS 1983	ICS 1988	ICS 1993	ICS 1998
Type of survey	repeated cross-section (no panel)			
Sampling method	quota sample based on the mandatory random Micro Census (Micro Census = 1 per cent survey of all inhabitants)			
Household definition	income sharing unit			
Definition of reference person (household head)	person with the highest income			
Sample size (households)	44,500	45,000	50,000	62,300
Intended number of households	54,900	57,400	69,700	73,900
Coverage of intended number of households	81 %	78 %	72%	84%
Willingness to participate	Less willing to participate are: - self-employed, farmers, workers - single-person households - households with very low or very high income			
Coverage of East-Germany	no		yes	
Coverage of households with foreign heads	no		yes	
Grossed up number of persons covered (in 1,000)	52,648	53,229	80,758	79,775
Inhabitants	61,383 ^a	61,715 ^b	81,338 ^b	82,037 ^c
Weighting	Weights derived from marginal distributions of the obligatory and random Micro Census for each federal state based on household size, social status of head, and net household income			
Available weighting factors	West Germany		- Unified Germany - East- and West-Germany - Federal States (<i>Länder</i>)	

a) Statistisches Bundesamt (1995): Statistisches Jahrbuch 1995 für die Bundesrepublik Deutschland, Wiesbaden, p. 46.

b) Statistisches Bundesamt (2000): Datenreport 1999. Herausgegeben vom Statistischen Bundesamt in ZUSammenarbeit mit dem Wissenschaftszentrum Berlin für Sozialforschung und dem Zentrum für Umfragen, Methoden und Analysen, Mannheim, Wiesbaden, p. 27.

c) Statistisches Bundesamt (2002), Datenreport 2002 p. 29

³³ German title: Einkommens- und Verbrauchsstichprobe (EVS)

Year	ICS 1983	ICS 1988	ICS 1993	ICS 1998
Size of households covered (number of persons)	1 - 6	1 - 6	1 - 9	1 - 9 and more
Households or persons not covered	- homeless - institutionalized persons - households with very high monthly net incomes			
Cut-off line for households with very high monthly net incomes	DEM 25,000		DEM 35,000	
Size of the sub-sample used for analysis (percent of the original sample)	98%		80%	
Size of the sub-sample used for analysis (number of households)	42,752	43,730	40,230	49,720
Size of the sub-sample used for analysis (number of persons)	118,367	116,606	104,837	128,022

1.2 Wealth components reported in the ICS

Year	ICS 1983	ICS 1988	ICS 1993	ICS 1998
Components of wealth	gross property wealth (real estates and houses) + gross monetary wealth (including quoted shares) - liabilities in form of consumer debt and housing debts = net total wealth			
Collection of wealth data (monetary wealth)	end of the year			during the year
Collection of wealth data (property wealth)	end of the year			beginning of the year
Collection of wealth data	- wealth data are collected on a voluntary basis - households with the highest incomes are not included in the data base (because of the cut-off line)			
Monetary wealth				
Recorded monetary wealth	- building society savings accounts - quoted shares - bonds - savings - other monetary wealth (investment funds etc.)	- building society savings accounts - quoted shares - bonds - savings - other monetary wealth (investment funds etc.) - life insurance - giro accounts	- building society savings accounts - quoted shares - bonds - savings - other monetary wealth (investment funds etc.) - life insurance	
Estimated monetary wealth	- life insurance (by contract volume and age of the reference person) - giro accounts (by income position, ownership of property wealth, age of the reference person)	not necessary	- giro accounts (by income position, ownership of property wealth, age of the reference person)	
Consumer debt etc.	recorded			

Year	ICS 1983	ICS 1988	ICS 1993	ICS 1998
Property assets				
Ratable value for taxation of property assets	recorded			
Market values of property assets	calculation by means of a conversion factor on the basis of the ratable value for taxation of property assets. The aim is to adapt the taxation values of property assets to the market values	recorded (estimate by owner)		
Debts for house construction	recorded			
Additional information				
Wealth components not recorded	- market value of equity in private businesses (except current value of quoted shares) - consumer durables - cash money - jewellery - objet d'art			
Estimation of market value of wealth components only partly recorded	The ownership of wealth components is recorded in some cases – but not the market value. These values are estimated by income position, ownership of property wealth, age of reference person and number of persons living in the household	not necessary		The ownership of wealth components is recorded in some cases – but not the market value. These values are estimated by income position, ownership of property wealth, age of reference person and number of persons living in the household

Table 1

Disposable wealth of private households in Germany from 1983 to 1998 based on the Income and Consumption Surveys
- recalculated in Euro -

Year	1983	1988	1993	1998
Total disposable wealth of households (in billions of Euro)				
- West Germany	1,626	1,984	3,662	3,910
- East Germany	n.a.	n.a.	257	341
- United Germany	n.a.	n.a.	3,919	4,251
Disposable wealth per household (in Euro)				
- West Germany	72,100	82,900	126,600	130,500
- East Germany	n.a.	n.a.	38,400	50,000
- United Germany	n.a.	n.a.	110,100	115,600
Disposable wealth per person (in Euro)				
- West Germany	30,900	37,300	56,200	60,300
- East Germany	n.a.	n.a.	16,500	22,800
- United Germany	n.a.	n.a.	48,500	53,300

Notes: n.a. = not available

Disposable wealth includes gross monetary assets (including quoted shares) and gross housing wealth less consumer debts and debts for housing construction. Consumer durables and equity in private businesses are not included. Mierheim/Wicke (1978, p. 199) estimated equity of private businesses together with quoted shares to be about 10 % of gross total assets.

Source: Calculations based on the Income and Consumption Surveys of the German Federal Statistical Office. Anonymized versions of these surveys were made available to the Chair of Economics, especially Social Policy and Distribution, at the University of Frankfurt am Main by the German Federal Statistical Office. Official exchange rate: 1 Euro = 1.95583 DM

Table 2

Disposable wealth of the household sector in Germany from 1980 to 1997^{1) 2)}

- recalculated in billions of Euro -

-

Year	1980 ^a	1990 ^b	1993 ^b	1997 ^b
Property wealth ³⁾	1,228	2,598	3,096	3,626
Consumer durables ⁴⁾	315	574	715	827
Monetary wealth ⁵⁾	754	1,573	2,011	2,646
Gross wealth	2,297	4,745	5,822	7,099
Debts ⁶⁾	314	548	687	917
Disposable wealth	1,983	4,197	5,135	6,182

Notes:

¹⁾ Figures for 1990, 1993 and 1997 refer to unified Germany.

²⁾ Disposable wealth of the household sector includes net wealth of non-profit organizations.

³⁾ Housing (replacement costs less depreciation) and proportional ownership of real estate
Equity in private businesses is excluded.

⁴⁾ Evaluated at replacement costs less depreciation.

⁵⁾ Includes securities evaluated at current prices and traded shares.

⁶⁾ Includes consumer debts and debts for housing construction.

Sources: a) Deutsche Bundesbank (1993), p. 31 and b) Deutsche Bundesbank (1999), p. 43.

Official exchange rate: 1 Euro = 1.95583 DM

Table 3

The distribution of disposable wealth and disposable income across households and equivalent disposable income across persons in West Germany from 1973 to 1998
 - Gini coefficients in percent -

Coverage of population	German households only			Resident population including foreigners	
Year	1973	1983	1988	1993	1998
Household disposable wealth	74.8 ¹⁾	70.1 ²⁾ 68.3 ³⁾	66.8 ⁴⁾	62.2 ⁴⁾	64.0 ⁴⁾
Household disposable income	30.1 ⁵⁾	32.7 ⁵⁾	32.9 ⁵⁾	33.3 ⁶⁾	33.5 ⁶⁾
Equivalent disposable income of persons ⁶⁾	24.8	25.0	25.3	26.9	27.2

Notes: All the results are based on the Income and Consumption Surveys of the German Federal Statistical Office. For the years 1983 to 1998 they are based on anonymized versions of these surveys which are made available to the Chair of Economics, especially Social Policy and Distribution, at the University of Frankfurt am Main by the German Federal Statistical Office. Disposable wealth of households does not include consumer durables. Furthermore, some components are missing in some years due to data restrictions. For details see text and appendix.

Gini coefficients were calculated by setting negative disposable wealth holdings of certain households to zero.

1) Mierheim and Wicke (1978), pp. 58-59

2) Schlomann (1992), pp. 136-139

3) Stein (2003), Table 3.19. This figure is derived by excluding equity in private businesses and by reducing the multiplier for correcting the tax value of housing to market prices.

4) Hauser (2003), Table 7.1

5) Special calculations by Irene Becker from the micro-data sets available at the University of Frankfurt

6) Hauser (2003), Table A.1, p. 25. To adjust for household size the original OECD equivalence scale was used which assigns a weight of 1.0 to the first adult of a household, weights of 0.7 to additional members who are 15 years or older, and weights of 0.5 to younger children.

Table 4

The distribution of household disposable wealth in West Germany 1973 - 1998

- Decile shares in percent -

Coverage of population	German households only			Resident population including foreigners	
Year	1973 ¹⁾	1983 ²⁾	1988 ³⁾	1993 ³⁾	1998 ³⁾
1 st decile		-0.3	-0.8	-0.3	-0.4
2 nd decile	0.8	0.1	0.1	0.3	0.1
3 rd decile		0.4	0.5	0.7	0.6
4 th decile	2.0	0.7	1.2	1.6	1.3
5 th decile		1.5	2.4	3.3	3.0
6 th decile	5.7	4.0	5.0	7.1	6.5
7 th decile		9.0	9.6	11.2	10.7
8 th decile	13.5	14.5	15.1	15.1	15.2
9 th decile		21.3	21.9	20.2	21.1
10 th decile	78.0	48.8	45.0	40.8	41.9
Total	100.0	100.00	100.0	100.0	100.0

Notes: All the results are based on the Income and Consumption Surveys of the German Federal Statistical Office. Disposable wealth of households does not include consumer durables. Furthermore, some components are missing in some years due to data restrictions. For details see text and appendix.

1) Mierheim and Wicke (1978), pp. 58-59; only quintile shares available.

2) Schlomann (1992), pp. 136-139

3) Hauser/Stein (2001), pp. 112 and 124

Table 5

The size distribution of household wealth in selected countries in the mid-80s

based on household survey data

- quintile shares -

Country	West Germany 1983 ¹⁾	USA 1983 ²⁾	Canada 1984 ²⁾	Australia 1986 ²⁾	Sweden 1986 ²⁾
1 st quintile	- 0.2	0	0	0	n.a.
2 nd quintile	1.1	2	2	0	n.a.
3 rd quintile	5.5	6	9	7.1	n.a.
4 th quintile	23.5	13	20	20.8	n.a.
5 th quintile	70.1	80	69	72.0	75

Note: n.a. = not available

Sources: 1) Schlomann (1992), pp. 136-139

2) Wolff, 1996, Table 4, p.447 (abbreviated). For details about the country surveys from which these figures are derived, see footnotes to Wolff's Table.

Table 6

Distribution of net financial wealth and net housing wealth across households in West Germany 1983 to 1998
 - Gini coefficients in percent -

Year	1983	1988	1993	1998
Net financial wealth	62.1	63.5	60.6	65.3
Net housing wealth	76.2	74.0	69.1	70.4
Total disposable wealth	68.3 ¹⁾	66.8	62.2	64.0

1) Table 4 only shows the values of the Gini coefficient as calculated by Stein, who made some corrections for reason of consistency of the time series.

Source: Stein (2003), Table 3.19. Calculations are based on the Income and Consumption Surveys of the German Federal Statistical Office. Anonymized versions of these surveys were made available to the Chair of Economics, especially Social Policy and Distribution, at the University of Frankfurt am Main by the German Federal Statistical Office.

Diagram 1: Relative wealth position of various age groups of households

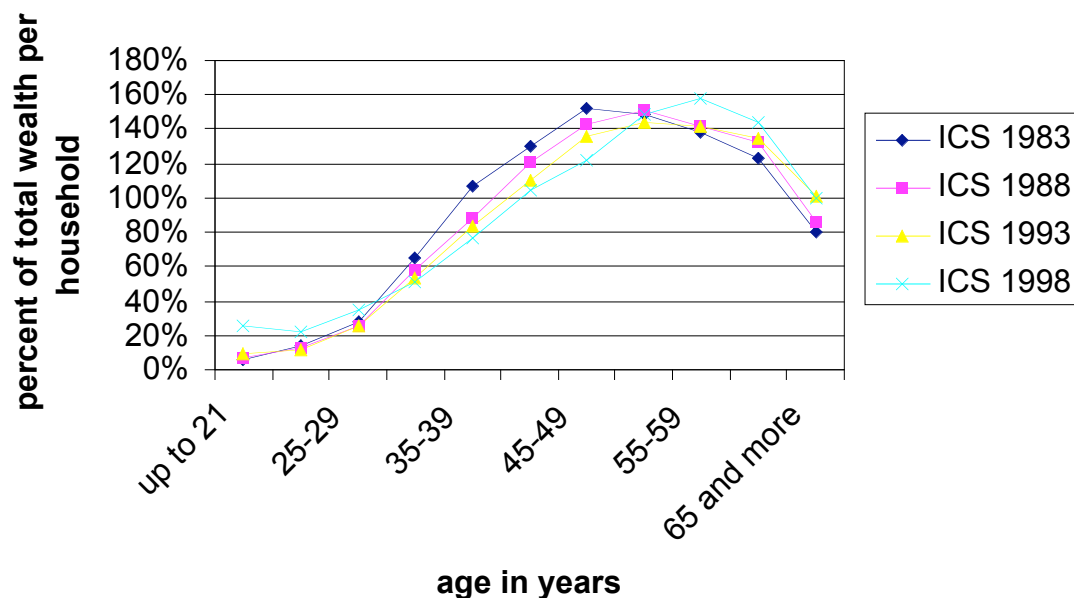


Diagram 2: Relative wealth position of various age groups of household members in West Germany

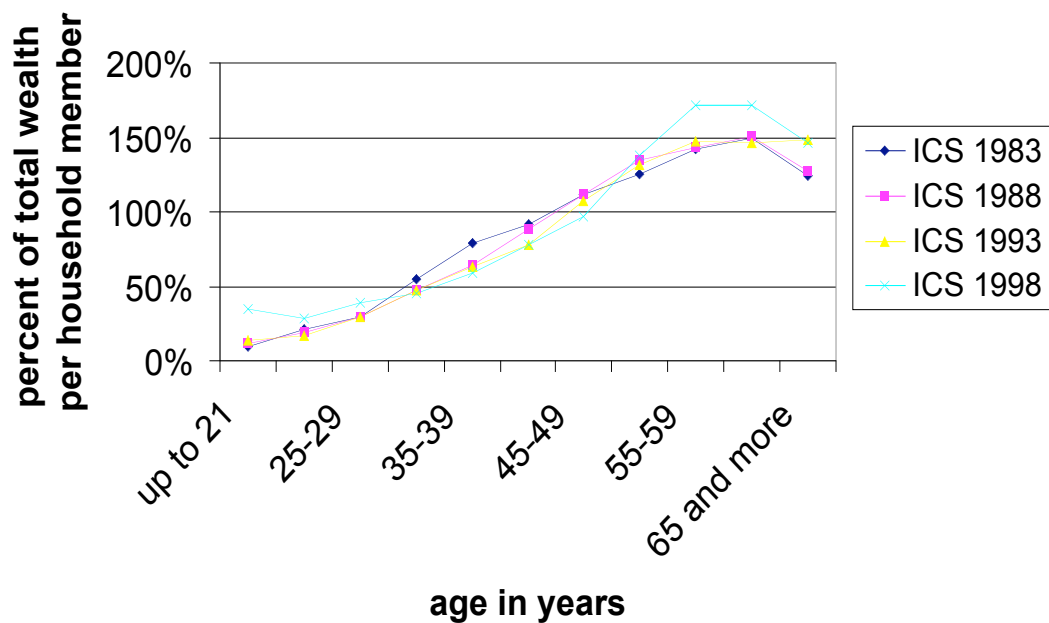


Diagram 3: Average wealth holdings per household of birth cohorts 1924-1928 and 1929-1933 in relation to overall wealth holdings of household members in West Germany

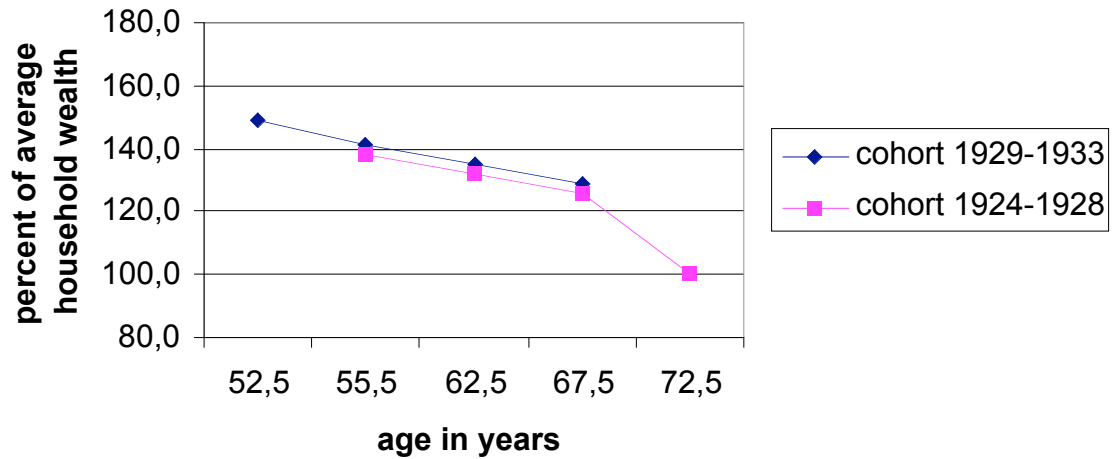


Diagram 4: Average wealth holdings per household member of birth cohorts 1924-1928 and 1929-1933 in relation to overall wealth holdings of household members in West Germany

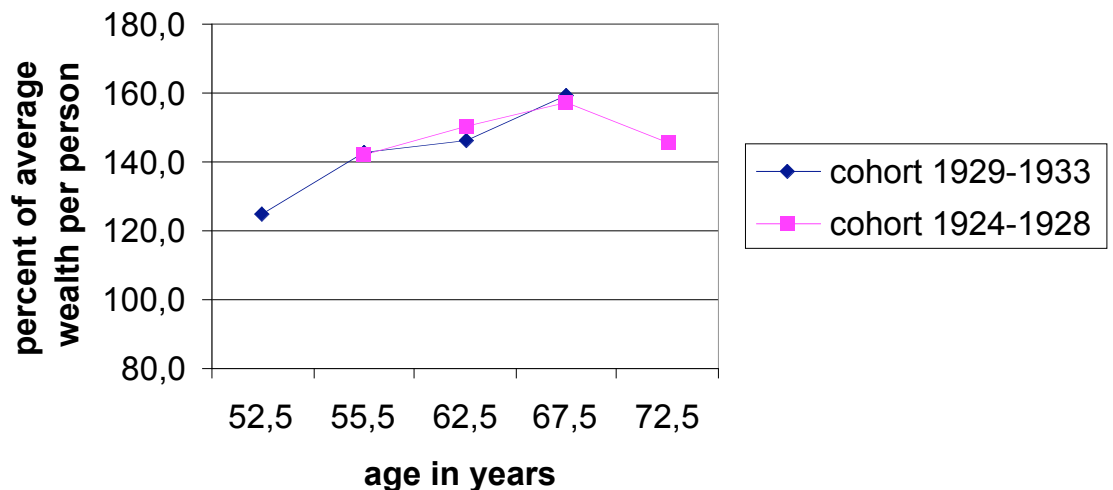


Table 7

Inequality of household disposable wealth within age groups at the household and at the person level in West Germany 1983 and 1998

- Gini coefficients in percent -

Age groups according to the age of the head of household	1983 ¹⁾		1998 ²⁾	
	Households	Persons	Households	Persons
All age groups	70.1	66.2	64.0	62.4
Age group 18-29 years	85.1	82.7	79.9	74.8
Age group 30-44 years	65.8	63.4	65.1	61.0
Age group 45-64 years	62.6	59.6	56.3	54.5
Age group 65 and older	75.4	72.1	62.2	59.4

Sources:

- 1) Schlomann (1992), Tab. 6.15 and 6.16, p. 164; figures are rounded. Household disposable wealth also comprises equity in private businesses.
- 2) Calculations based on the Income and Consumption Surveys of the German Federal Statistical Office. Anonymized versions of these surveys were made available to the Chair of Economics, especially Social Policy and Distribution, at the University of Frankfurt am Main by the German Federal Statistical Office. Household disposable wealth does not include consumer durables and equity in private businesses.

Table 8

The distribution of disposable wealth and disposable income across households and household size-adjusted equivalent disposable income across persons in West and East Germany

1993 and 1998

- Gini coefficients in percent -

Resident population	East Germany		West Germany	
Year	1993	1998	1993	1998
Household disposable wealth ¹⁾	69.4	67.6	62.2	64.0
Household disposable income ²⁾	22.8	30.2	33.3	33.5
Equivalent disposable income of persons ³⁾	19.9	21.8	26.9	27.2

Notes: All the results are based on the Income and Consumption Surveys of the German Federal Statistical Office made available to the Chair of Economics, especially Social Policy and Distribution, at the University of Frankfurt am Main by the German Federal Statistical Office. Disposable wealth of households does not include consumer durables. Gini coefficients were calculated by setting negative disposable wealth holdings of certain households to zero
Source: 1) Hauser (2003), Table 7.1.

2) Hauser (2003), Table A.1

3) Hauser (2003), Table A.1. To adjust for household size the original OECD equivalence scale was used which assigns a weight of 1.0 to the first adult of a household, weights of 0.7 to additional members who are 15 years or older, and weights of 0.5 to younger children.

Table 9

The distribution of household disposable wealth in West and East Germany 1993 and 1998

- Decile shares in percent -

Resident population	East Germany		West Germany	
Year	1993	1998	1993	1998
1 st decile	- 0.3	- 0.5	-0.3	-0.4
2 nd decile	0.6	0.2	0.3	0.1
3 rd decile	1.2	0.9	0.7	0.6
4 th decile	1.9	1.7	1.6	1.3
5 th decile	2.6	2.9	3.3	3.0
6 th decile	3.8	4.5	7.1	6.5
7 th decile	5.8	7.3	11.2	10.7
8 th decile	9.6	12.5	15.1	15.2
9 th decile	22.2	22.5	20.2	21.1
10 th decile	52.6	47.8	40.8	41.9
Total	100.0	100.0	100.0	100.0

Notes: All the results are based on the Income and Consumption Surveys of the German Federal Statistical Office. Disposable wealth of households does not include consumer durables. Furthermore, some components are missing in some years due to data restrictions. For details see text and appendix.

Source: Hauser/Stein (2001), Table 5.3, p. 112

Table 10

Distribution of net financial wealth and net housing wealth across households in
West and East Germany 1993 and 1998
Gini coefficients in percent

Resident population	East Germany		West Germany	
Year	1993	1998	1993	1998
Net financial wealth	51.6	62.0	60.6	65.3
Net housing wealth	85.9	82.5	69.1	70.4
Total disposable wealth	69.4	67.6	62.2	64.0

Source: Hauser/Stein (2001), Table 5.8. Calculations are based on the Income and Consumption Surveys of the German Federal Statistical Office. Anonymized versions of these surveys were made available to the Chair of Economics, especially Social Policy and Distribution, at the University of Frankfurt am Main by the German Federal Statistical Office.

Table 11

Inequality of household disposable wealth within age groups of households
in East and West Germany 1998
- Gini coefficients in percent -

Resident population	East Germany		West Germany	
Year	1993	1998	1993	1998
All age groups	69.3	67.6	62.2	64.0
Age group 18-29 years	75.3	83.3	75.2	79.9
Age group 30-44 years	71.3	66.6	62.9	65.1
Age group 45-64 years	63.3	62.7	54.0	56.3
Age group 65 and older	65.1	65.1	61.7	62.2

Sources:

Calculations based on the Income and Consumption Surveys of the German Federal Statistical Office. Anonymized versions of these surveys were made available to the Chair of Economics, especially Social Policy and Distribution, at the University of Frankfurt am Main by the German Federal Statistical Office. Household disposable wealth does not include equity in private businesses and consumer durables.