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Middle incomes in Germany and the US

Corrected version

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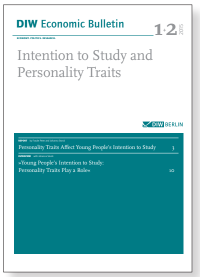

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Employment Arrangements over the Course of Time

Corrected version

Shrinking Share of Middle-Income Group in Germany and the US

By Markus M. Grabka, Jan Goebel, Carsten Schröder and Jürgen Schupp

According to calculations based on the Socio-Economic Panel (SOEP) study, the proportion of middle-income group in Germany fell by more than five percentage points from 1991 to 2013, taking it to 61 percent. Germany is not the only country to have experienced such a downturn, however. Analyses of the situation in the US indicate a similar decline. To the middle-income group belong individuals in households earning a total income, before tax and social security contributions, of 67 to 200 percent of the median. In the US, however, there has been a stronger increase in income polarization than in Germany: in the US, those who have left the middle-income group tend to be concentrated more on the periphery of the income distribution. The share of income of the middle-income group has also dropped substantially in both countries studied. This decline affected all age groups with the exception of individuals of people at retirement age. In the US, it was primarily immigrants from Latin America who tended to move down from the middle-income group, while in Germany, the most notable decline was seen in the share of foreigners in the middle-income bracket. However, when looking at the personal wealth of the middle-income group, patterns differ: while in the US, this group experienced a decline in real net worth of over one quarter, in Germany it experienced an increase of 15 percent in real terms.

Building on previous analyses conducted by DIW Berlin on the development of the income stratification of the population in private households, the present study focuses on the middle-income tier (often also referred to as the "middle class"—see box) in Germany up to 2013[1] and draws comparisons with the situation in the US. The empirical basis for Germany relies on data from the Socio-Economic Panel (SOEP) study conducted by DIW Berlin in cooperation with the fieldwork organization TNS Infratest Sozialforschung.[2] Since this is an annual repeated panel survey, it can be used to create time series on the development of income distribution for the same individuals or households.[3] The information on the development of income stratification in the US is based on data from the Current Population Survey conducted by the United States Census Bureau., and was published by the Pew Research Center (PEW) and published in December 2015,[4] triggering a broad public debate both in

1 Most recently in Jan Goebel, Martin Gornig, and Hartmut Häußermann, "Polarisierung der Einkommen: die Mittelschicht verliert," *DIW Wochenbericht*, no. 24 (2010): 2-8, and also Markus M. Grabka and Joachim R. Frick, "The Shrinking German Middle Class: Signs of Long-Term Polarization in Disposable Income?," *DIW Weekly Report*, no. 4 (2008): 21–27.

2 The SOEP is a representative longitudinal study of households conducted every year since 1984 in West Germany and since 1990 in eastern Germany; see G. G. Wagner, J. Goebel, P. Krause, R. Pischner, and I. Sieber, "Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland – Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)," *AStA Wirtschafts- und Sozialstatistisches Archiv* 2, no. 4 (2008): 301–328.

3 In each case in the present report, the income year is shown. This is in line with the conventions of the German Federal Government's Report on Poverty and Wealth (Federal Ministry of Labour and Social Affairs, *Life Situations in Germany* (2013)) and the Report of the German Council of Economic Experts (most recently *Annual Economic Report 2014/2015: More confidence in market processes*). In the SOEP, annual incomes are captured retrospectively for the preceding calendar year but adjusted for the population structure at the time of the survey. The data presented here for income year 2013 were therefore captured in the SOEP Wave Report 2014.

4 Pew Research Center, *The American Middle Class Is Losing Ground: No longer the majority and falling behind financially* (Washington, D.C.: December 2015), http://www.pewsocialtrends.org/files/2015/12/2015-12-09_middle-class_FINAL-report.pdf

Box

Understanding the term middle class in sociology and economics

In the present report, society is divided into different income groups and people with middle-incomes are referred to as the "middle class." This categorization is now commonly used in economic theories, many of which continue to be heavily based on the concept of *homo oeconomicus*, as well as in the media; this definition is not to be confused with the notion of middle class in the social context.

The term "middle class" first became popular in sociology in the field of social structure analysis. The term "levelled middle-class society" coined by Helmut Schelsky[1] in the 1950s described the social structure in post-war society as dynamic.[2] According to Schelsky, society was very much shaped by both vertical and horizontal permeability, and the traditional tension between the upper and lower class was increasingly being alleviated. Schelsky's thinking was thus very much in line with that of sociologist Theodor Geiger,[3] who studied the theory of social structure and social classes and who, even before the Second World War, described the middle class as being increasingly important and playing a key role in society. Much later, sociologist Rolf Heinze[4] took up this idea, characterizing the middle class as a symbol of an advancement-oriented and permeable society, although the empirical validity of this class was seriously doubted in the sociological debate that took place in the early 1980s. Even before the onset of the 2008 economic and financial crisis, these doubts once again dominated the debate at the time.[5]

In spite of the comparatively long tradition of debate in the social sciences, to date there is no standard definition or even

1 Helmut Schelsky, *Wandlungen der deutschen Familie in der Gegenwart* (Dortmund: 1953).

2 At the time of publication, Schelsky's study met with considerable interest worldwide, even if his rather optimistic outlook on the future was not one that many shared. In place of the study, see the literature review written at the time by Svend Riemer, *American Journal of Sociology* 59(3) (1953): 272–273.

3 Theodor Geiger, *Die soziale Schichtung des deutschen Volkes: soziographischer Versuch auf statistischer Grundlage*, reprint of 1932 edition (Stuttgart: Ferdinand Enke, 1987).

4 Rolf G. Heinze, *Die erschöpfte Mitte. Zwischen marktbestimmten Soziallagen, politischer Stagnation und der Chance auf Gestaltung* (Weinheim/Munich: Juventa, 2011).

5 See, in particular, the study by Burkhart Lutz published in the mid-'80s entitled *Der kurze Traum immerwährender Prosperität. Eine Neuinterpretation der industriell-kapitalistischen Entwicklung im Europa des 20. Jahrhunderts* (Frankfurt/New York: Campus, 1984), as well as the numerous works by Ulrich Beck, such as *Risikogesellschaft – Auf dem Weg in eine andere Moderne* (Frankfurt: Suhrkamp, 1986) and *Die Neuvermessung der Ungleichheit unter den Menschen* (Frankfurt: Suhrkamp, 2008). For a sociological perspective, also see Robert Castel, "Die Wiederkehr der sozialen Unsicherheit," in *Prekarität, Abstieg, Ausgrenzung. Die soziale Frage am Beginn des 21. Jahrhunderts*, eds. Robert Castel and Klaus Dörre (Frankfurt: Campus, 2009), 21-34, as well as Berthold Vogel, "Wohlstandskonflikte und Unsicherheitsverschärfung: Die Mitte der Gesellschaft gerät unter Druck," in *Unsichere Zeiten – Herausforderungen gesellschaftlicher Transformationen. Verhandlungen des 34. Kongresses der Deutschen Gesellschaft für Soziologie in Jena 2008*, ed. Hans-Georg Soeffner (Wiesbaden: VS Verlag für Sozialwissenschaften, 2010), 157–168. Heinze, *Die erschöpfte Mitte,* therefore characterizes the new middle class as precarious or the "depleted middle class, although he does pinpoint the ever-increasing power of professional independence in addition to their waning social integration.

the US and in Germany.[5] The present report compares the findings on income distribution for American society with the equivalent situation in Germany.

Median incomes in US and Germany on downward trend since 2000

For reasons of comparison, the stratification of the population in private households used here is based on needs-adjusted household income before tax deductions and social security contributions and including public transfers and old-age pensions. This is different from the commonly used concept of disposable income.[6] Household income is divided into three income categories: the poorest group comprises individuals with a household income of less than 67 percent of the median income of the country's total population,[7] the middle-income group has an

5 See "Middle-class families, pillar of the American dream, are no longer in the majority, study finds," *Los Angeles Times*, December 9, 2015, http://www.latimes.com/nation/la-fi-middle-class-erosion-20151209-story.html. For reactions to the findings in Germany, also see, for example, "Den Populisten die Stirn bieten," *die ZEIT*, December 19, 2015, http://www.zeit.de/wirtschaft/2015-12/parteien-populismus-usa-frankreich-wahlen-gefahr

6 The needs-weighting in the analysis for both countries was based on the square root of the household size and income was adjusted for a three-person household. Non-monetary transfers—such as food stamps which were received by almost 46 million people in the US in 2015, making them a relevant variable (see United States Department of Agriculture Food and Nutrition Service http://www.fns.usda.gov/sites/default/files/pd/SNAPsummary.pdf)—are not factored into the imputed income concept.

7 The median of the income distribution is the value separating the wealthier half of the population from the poorer half. Also see the term "median income" in the DIW Glossary, www.diw.de/de/diw_01.c.413351.de/presse_glossar/diw_glossar/medianeinkommen.html (available in German only). According to this demarcation, the threshold values for the income an individuclear-cut operationalization guideline on how to demarcate and analyze the "middle class."[6] Income-based demarcations commonly used in economics to describe the middle class employ a needs-adjusted approach to measuring household income that is recognized worldwide.[7] Nonetheless, for the middle class discussed here as a major socio-structural group, actual scope for action, formal education and qualifications, social and professional standing, family background, network connections, leisure behavior, and their value systems are not necessarily accurately characterized. This in turn invokes public debate on whether the crumbling middle class that empirical studies point to are not rather a case of "orchestrated middle-class panic."[8]

Income-based concepts mean that the size of the middle-income class can change solely as a result of economic developments, which is why such concepts infer "mobility" of sorts, without the socio-structural classes of those affected by fluctuations in income, such as those in permanent full-time employment,[9] necessarily having to change. This methodological limitation also applies to the findings in the present report.

With regard to the labor market, what is being referred to as the "employee middle class" also occasionally features in public debates on the middle class.[10] The "employee middle class" includes, for example, regular wage-earners and civil servants (including those in vocational training and apprenticeships). Self-employed persons with no employees also fall into this category. This category does not include self-employed people with employees, those in marginal employment, and those who are not in gainful employment (primarily pensioners, the unemployed, and students). This distinction is not, however, the focus of the present report.

Lastly, it is also worth bearing in mind adults' own subjective perception of what class they belong to. Adults will factor both earnings and formal qualifications into their decision on whether they consider themselves lower/working class, upper class, or, as is the case here, middle class.[11]

6 See Steffen Mau, *Lebenschancen. Wohin driftet die Mittelschicht?* (Berlin: Suhrkamp, 2012).

7 The advantage of this is that social positioning can be applied to every individual within a household instead of using a definition of middle class that is based on a person's professional standing or education, in which, for example, the unemployed, pensioners, and children cannot be assigned their own status. In a market economy society, the disposable income of a household has its own social impact.

8 Jürgen Kaube, "Die inszenierte Mittelschichtspanik," *Frankfurter Allgemeine Zeitung*, June 17, 2010, 35.

9 Also see Gert G. Wagner, "Wachsende Teilzeitbeschäftigung zu Lasten der Vollzeiterwerbstätigkeit?," *DIW Wochenbericht*, no. 44 (1998): 807–811.

10 See Gert G. Wagner, "Die Mär von der bröckelnden Mittelschicht," *Frankfurter Allgemeine Sonntagszeitung*, April 3, 2016, 28.

11 Heinz-Herbert Noll and Stefan Weick, "Schichtzugehörigkeit nicht nur vom Einkommen bestimmt," *Informationsdienst Soziale Indikatoren*, no. 45 (2011).

income of between 67 and 200 percent of the median,[8] while the highest-income group contains those with incomes of more than 200 percent of the median.

The analysis of the situation in the US is based on the period beginning 1970 (see Figure 1). Here, the real median income of the middle class increased by 40 percent from around 55,000 US dollars to just under 77,000 US dollars between 1970 and 2000. From 2000 to 2014, however, the median income of the middle-income group declined by four percent in real terms.

Data for the former West Germany (prior to reunification) have only been available since 1983 and since 1991 for the reunified Germany. Between 1983 and 1991, the median income of the middle-income tier in West Germany increased by 13 percent in real terms. For Germany as a whole, the corresponding figure increased by as little as seven percent by 2000, and this, too, was followed by a one-percent slight drop by 2013.[9]

al needs to reach in order to be deemed middle-income class were for a one-person household just under 2,660 euros per month in 2013 and 7,950 euros per month at 2014 prices.

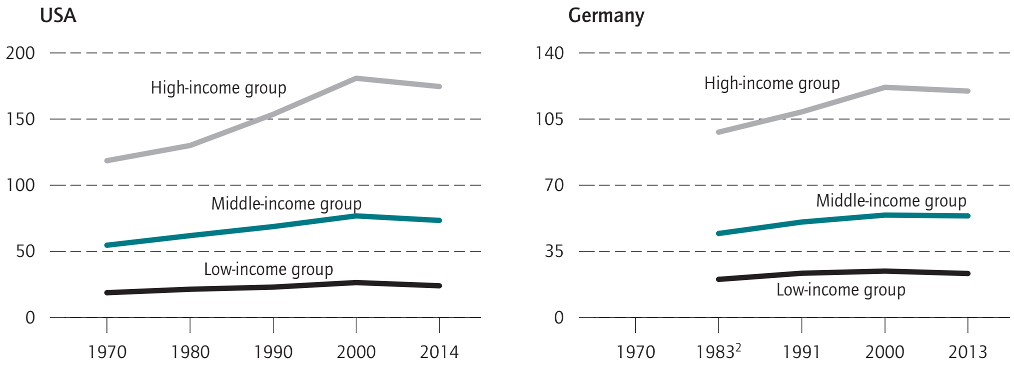
8 Previous studies on the development of the middle class use different threshold values. Further, there is generally no uniform income concept used to describe the middle class. For example, an earlier DIW Berlin study was based on disposable household income rather than the total income used in the present study. See Grabka and Frick, "Schrumpfende Mittelschicht."

9 In contrast to the median, the mean value for the total population shows an increase for the period from 2000 to 2012. On this, see J. Goebel, M. M. Grabka, and C. Schröder, "Income Inequality Remains High—Young Singles and Career Entrants Increasingly At Risk of Poverty," *DIW Economic Bulletin*, no. 25 (2015): 325–340. The different trends in the arithmetic mean and median indicate an increase in inequality over this period.

Figure 1

Median[1] of overall income

In 1,000 US-Dollar and in 1,000 Euro respectively, both in 2014 prices



1 Categorization based on household income before taxes and social-security contributions, income is needs-weighted by square root equivalence scale, normalization with respect to 3-person household.
2 Old German states only.

Source: PEW(2015), SOEPv31 calculations by DIW Berlin.

Median income of middle-income group is declining after 2000 in US and Germany.

Share of individuals having a middle-level income on the decline in both the US and Germany

A change in income level over time is in itself not enough to give us an insight into the changes in the distribution of income and income-based social stratification in the two countries of interest. In addition to the development of incomes within the different income strata, demographic developments are also relevant here. In recent years, the US has seen a considerable increase in the number of adults (see Figure 2), with growth of 50 percent between 1981 and 2015 an increase from 183 to 242 million adults between 1991 and 2015 alone. By way of contrast, in post-reunification Germany, the number of adults rose by as little as around four million to just under 68 million adults in 2013.

In Germany, the middle-income group is traditionally the largest population group in total numbers.[10] The share of this group in the total adult population, however, is on a downward slope. While in 1983 this group still accounted for around 69 percent of the adult population, this number had fallen to 64 and 61 percent by 2001 and 2013, respectively. For some time, a similar trend could be seen in the US, where in 1971 the middle-income group accounted for 61 percent of the total adult population, compared to 59 percent, 54 percent, and just under 50 percent in 1981, 2001, and 2015, respectively.

This declining relative importance of the middle-income tier in the US population is also reflected in the income share it accounts for (see Figure 3). In the US, in 1980, the middle class still accounted for a 60-percent share of income, compared with 54 percent in 1990 and as little as 43 percent in 2014. Thus, over the entire period from 1980 to 2014/15, the middle-income group's income share has declined more drastically (a 28-percent drop) than its population share (an 18-percent drop). The income share of the lower-income tier remained at a good one-tenth during the same period, while this group's population share increased from 25 to 29 percent. The upper-income group was able to increase its income share from 30 percent in 1980 to 49 percent in 2014. By comparison, this group's population share only rose from 14 percent to 21 percent.

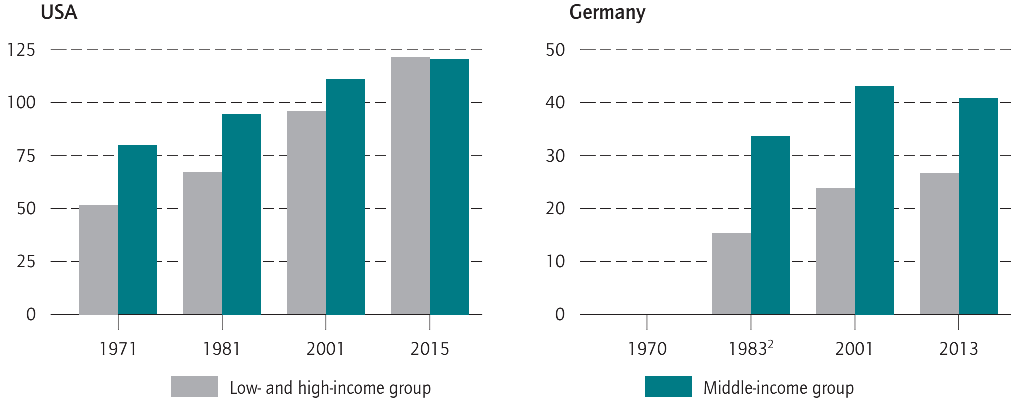
A similar trend can be observed in Germany. Here, too, the income share accruing to the lower-income bracket has barely changed over the years. In Germany as a whole, the share of the country's total income accounted for by the upper-income group was 22 percent in 1991 and this increased to 29 percent by 2005, and only slightly increased to more than 30 percent until 2013. The population share of this upper-income group has only slight-

10 Over the decades, the majority of the German population have also consistently perceived themselves to be members of the middle class. See Roland Habich, "Soziale Lagen und soziale Schichtung," *Datenreport 2013* (Federal Statistical Office, 2013): 181–188.

Figure 2

Adult population[1] in US and Germany

In million persons



1 Categorization based on household income before taxes and social-security contributions, income is needs-weighted by square root equivalence scale, normalization with respect to 3-person household.
2 Old German states only.

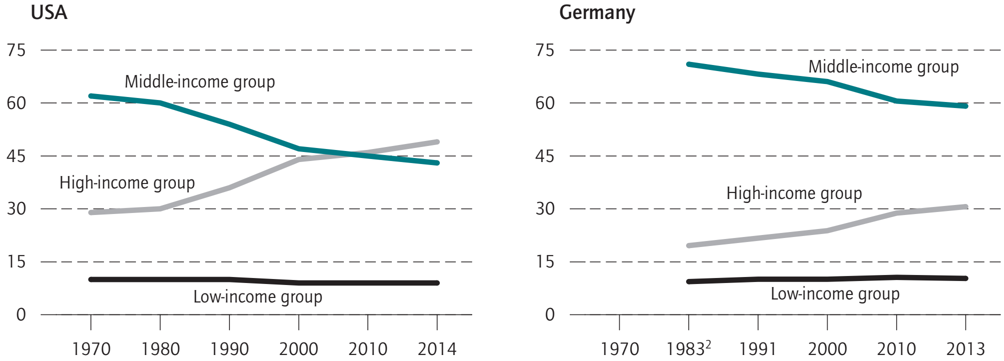
Source: PEW(2015), SOEPv31 calculations by DIW Berlin.

Adult population is growing after 2001 in US but size is stagnating in Germany. Population share of middle-income group is declining in both countries.

Figure 3

Group-specific shares in total income[1]

In percent



1 Categorization based on household income before taxes and social-security contributions, income is needs-weighted by square root equivalence scale, normalization with respect to 3-person household.
2 Old German states only.

Source: PEW(2015), SOEPv31 calculations by DIW Berlin.

Share of middle-income group in overall income is decreasing in US and Germany.

Figure 4

Group-specific shares in adult population[1]

In percent

1 Categorization based on household income before taxes and social-security contributions, income is needs-weighted by square root equivalence scale, normalization with respect to 3-person household.
2 Old German states only.

Source: PEW(2015), SOEPv31 calculations by DIW Berlin.

Population share of middle-income group is declining in US and Germany. Polarization is more pronounced in US.

ly increased since 1983, from 9 percent to 13 percent. In contrast, the income share of the middle-income group in Germany, which was 68 percent in 1991, had fallen by nine percentage points by 2013. At the same time, this group's population share declined from around 66 percent to 61 percent over the same period. Thus, the middle-income groups remains the largest group in Germany.

Similar decline in middle-income group in both the US and Germany

In the following section, two additional groups (one above and one below the middle-income bracket) are introduced to illustrate the complexity of income stratification. Accordingly, the lower-income group now comprises all individuals with a total income of less than 50 percent of the median and the lower middle-income bracket is made up of those with incomes of 50 to 67 percent of the median. Above the middle-level group are those with an income of between 200 and 300 percent of the median and, in the top tier of the income hierarchy are those with incomes over 300 percent of the median.

According to this classification, 60 percent of the adult population in the US was in the middle-income group at the beginning of 1970 (see Figure 4). By 2015, this share had shrunk to 50 percent. The only groups to show any increase in the population shares were those at the margins of the distribution. While the share of those with a lower income grew by three percentage points, the increase in the upper-income group was twice as high at six percentage points.[11] The share of the upper-income group in the US now lies at nine percent, which is more than twice as large as in the early 1980s.

In Germany too, a relative decline in the number of middle-income individuals can be observed.[12] In 2013, the middle class still accounted for 61 percent of the popula-

11 In the US, there was already evidence of growing income polarization in the 1980s. See James E. Foster and Michael C. Wolfson, "Polarization and the decline of the middle class: Canada and the U.S.," *The Journal of Economic Inequality* 8(2) (2010): 247–273.
Even if alternative income concepts and different threshold values are used, the US middle class can still be seen to be shrinking drastically. See Edward N. Wolff, Ajit Zacharias, and Thomas Masterson, "Trends in American Living Standards and Inequality, 1959-2007," *Review of Income and Wealth* 58(2) (2012): 197–232.

12 Even if we use needs-adjusted disposable household income including the imputed rental value of owner-occupied residential property—the standard basis for calculating income inequality and relative poverty risk used in the German Federal Government's Report on Poverty and Wealth—a seven-percentage-point decline in the number of middle-income recipients can still be seen. Likewise, if we restrict our analysis to the development of the middle-income group since 1991 only, the middle class is down by just under seven percentage points. This downward trend was particularly notable after the turn of the millennium and since 2005 this decline has not worsened.

Table

Income mobility[1] in Germany
In percent

	Low-income group	Low-middle income group	Middle-income group	Upper-middle income group	High-income group	Overall	Population share in base period
1991\1997							
Low-income group	44	27	28	1	0	100	12
Low-middle income group	15	30	53	1	0	100	12
Middle-income group	6	9	79	6	1	100	66
Upper-middle income group	3	2	46	39	11	100	9
High-income group	2	1	27	33	37	100	2
1999\2005							
Low-income group	49	24	25	3	0	100	12
Low-middle income group	21	38	40	0	0	100	13
Middle-income group	5	8	77	9	1	100	65
Upper-middle income group	1	1	39	42	16	100	9
High-income group	4	1	39	23	34	100	3
2007\2013							
Low-income group	53	19	25	3	0	100	14
Low-middle income group	23	35	40	1	0	100	12
Middle-income group	4	8	79	7	2	100	62
Upper-middle income group	2	1	45	37	15	100	8
High-income group	2	0	27	22	49	100	4

1 Categorization based on household income before taxes and social-security contributions, income is needs-weighted by square root equivalence scale, normalization with respect to 3-person household.

Source: SOEPv31 calculations by DIW Berlin.

Mobility of middle-incomes in Germany remains at stable level—about ⅔rd of the middle-income group remain in the same group after six years.

tion—eight percentage points less than in 1983. Income polarization is less pronounced in Germany than in the US but it increased nonetheless. Unlike in the US, in Germany, the population share in both the lower-income brackets (in each case an increase of more than 1.5 percentage points) and the upper-income brackets (over two percentage points) rose more consistently.

However, to factor in the impact of reunification in Germany, the change in middle incomes that has occurred since 1991 should be paid particular attention. Here, it is evident that the share of the middle-income group has fallen by more than five percentage points in both countries examined. The similarity in the patterns is particularly surprising given the more than 25-percent increase in the population of the US—predominantly as a result of migration. Having said that, migrants generally earn below-average levels of income, at least during the period immediately after immigration, which partially explains the waning significance of the middle class in the US. In Germany, the total population increased to a lesser extent between 1991 and 2013 and the number of people migrating to Germany was also lower than to the US which resulted in a contraction of the "middle class," not only in relative but also in absolute terms (by approximately 2.5 million adults). What is particularly remarkable in current developments in Germany is the fact that, to date, the growth in employment[13] seen since 2006 has not caused the population share of the middle-income group to stabilize, much less grow. This brings us to the conclusion that there must be a multitude of other reasons for the developments outlined in the present report.[14]

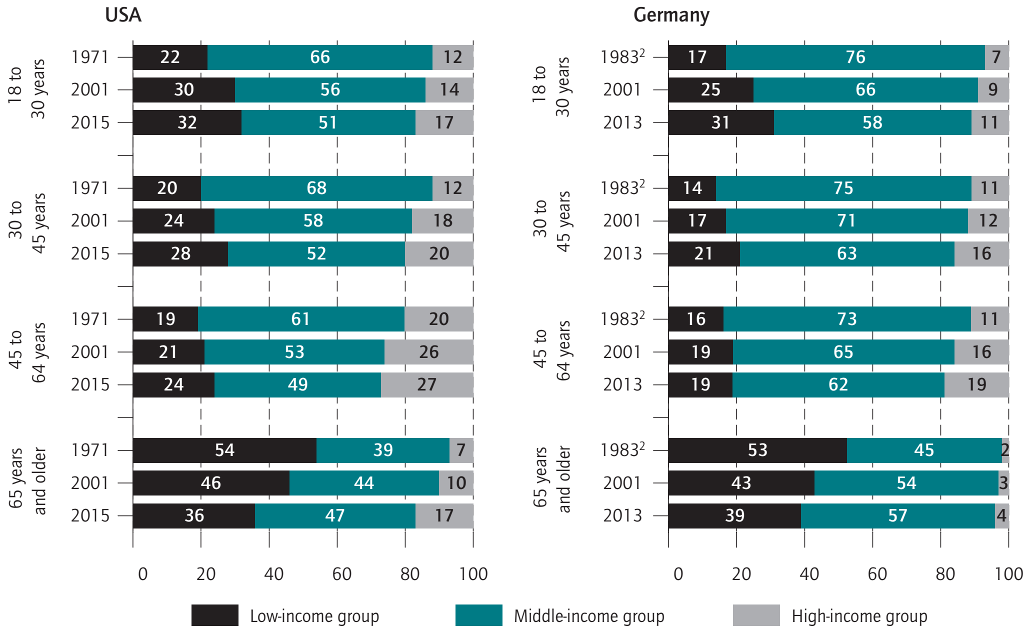
Another interesting aspect that has come to light in our comparison of the two countries is that, based on comparable group definitions, the population share of the two

13 According to official employment figures, the number of employed people living in Germany increased by 2.7 million or 6.8 percent between 2006 and 2013 (Federal Statistical Office, *Employment Accounts* (2016)), https://www.destatis.de/DE/ZahlenFakten/GesamtwirtschaftUmwelt/Arbeitsmarkt/Erwerbstaetigkeit/TabellenErwerbstaetigenrechnung/InlaenderInlandskonzept.html

14 For example, when we compare gross wages in Germany and the US, we must bear in mind that there are significant differences between the two countries in terms of their average tax and contribution rates. Whereas in the US over the last 15 years, the average contribution rate was around 31 percent (for a single person), the corresponding figure for Germany in the year 2000 was as much as 53 percent, and even now is still around 49 percent (OECD, *Taxing Wages 2016* (2016)).

Figure 5

Share of adult population by age and income group[1]
In percent



1 Categorization based on household income before taxes and social-security contributions, income is needs-weighted by square root equivalence scale, normalization with respect to 3-person household.
2 Old German states only.

Source: PEW(2015), SOEPv31 calculations by DIW Berlin.

Share of age group 30–44 years in middle-income group drops most pronounced—both in US and Germany.

lower-income groups is approximately the same in both countries (29 percent in the US and 26 percent in Germany), while the population share of the upper-income group is more than twice as high in the US as in Germany.[15]

Since the SOEP survey interviews the same people repeatedly, for Germany, we are able to portray the level of individual upward and/or downward mobility (see Table). Three post-reunification six-year periods are examined (1991–1997, 1999–2005, and 2007–2013). During all three periods, over two-thirds of those who belong to the middle-income group in the reference year were still in this income bracket six years later.[16] The remaining middle-income units experienced both upward and downward shifts. Downward mobility predominated in our findings, which have not been corrected for demographic changes:[17] in all three periods, up to 15 percent of the middle-income group in the reference year slipped down into a lower-income bracket. The share of individuals moving upward out of the middle-income group, in contrast, was between seven and ten percent.[18]

More and more individuals of people at retirement age in middle-income bracket

In both countries studied, it is evident that, apart from individuals of people at retirement age, the share of middle-income recipients has fallen across all age groups (see Figure 5). In both countries, this decline was particularly

15 This is also reflected in the higher level of income inequality in the US, where the Gini coefficient on market income in 2012 was 0.513, compared to 0.501 in Germany (OECD Income Distribution Database – new income definition).

16 Mobility processes occurring within the six-year period are excluded from the present analysis.

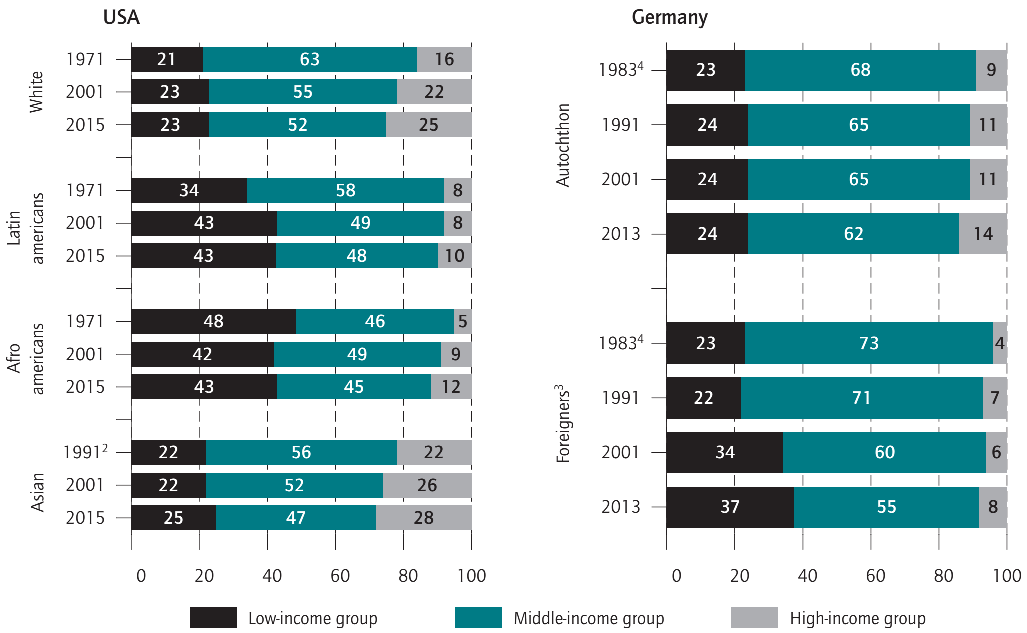
17 Consequently, this longitudinal view does not include individuals moving into a particular income group in the time between the reference year and the end of the observation period in much the same way as it excludes those individuals who migrated to or emigrated from Germany during the period in question.

18 Wage mobility in East and West Germany is described in Regina T. Riphahn and Daniel D. Schnitzlein, "Wage mobility in East and West Germany," *Labour Economics*, 39 (2016): 11–34.

Figure 6

Shares of adult population by ethnicity (resp. migration background) and income group[1]

In percent



1 Categorization based on household income before taxes and social-security contributions, income is needs-weighted by square root equivalence scale, normalization with respect to 3-person household.
2 Data for 1971 not available.
3 Born abroad.
4 Old German states only.

Source: PEW(2015), SOEPv31 calculations by DIW Berlin.

Population shares in income groups by ethnicity and migration background are changing: in US white and Asians are more frequent among high-income group, afro and latin american are more frequent in low-income group. In Germany, we find a decreasing population share of foreigners in middle-income group and an increasing share in low-income group.

pronounced among 30- to 44-year-olds. In the US, this group has seen a 15-percentage-point decline since 1971, with a similar drop in Germany since 1983. What is striking in the groups of young adults (aged 18–29) was the increase in their share in the lowest-income group in particular, whereas the proportion of middle-aged individuals (aged 30–44) increased in both the lower- and upper-income groups. For individuals of people at retirement age, on average, an improvement in income position can be seen; in both countries, the share of this group in the poorest income bracket fell by just about 15 percentage points. In Germany, we are seeing this age group's share in the middle-income bracket grow once again. In the US, for its part, frequent cases of movement into the upper-income category have even been observed.

In the US, age plays a minor role for the probability to belong to the middle-income group. In 2015, irrespective of the age group, between 47 and 52 percent of all adults fell into this income bracket. In Germany, the middle-age groups (those aged from 30–44 and 45–64) continued to be overrepresented in the middle-income group (63 percent).

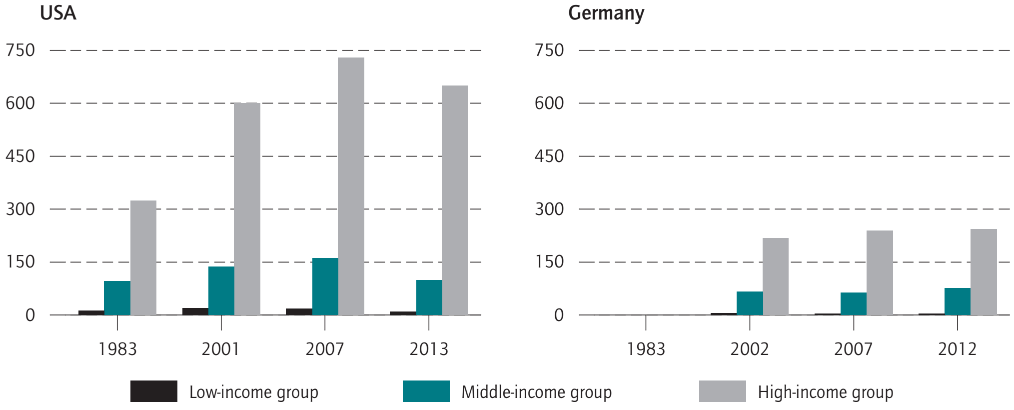
Ethnicity and immigrants

In the US, ethnicity plays a major role in income-distribution analyses. Throughout the entire observation period, the Afro-American population accounted for a below-average share of the middle-income tier (see Figure 6). In 1971, their share was 46 percent; in 2015, this figure was unchanged. Nevertheless, the decrease in the share of Afro-Americans in the lower-income group by five percentage points since 1971 is evidence of upward social mobility in this group. For all other ethnic groups, there was a decline in the population share in the middle-income tier—particularly for those in the white ethnic category (a decrease of approximately ten percentage points). The ethnic group which experienced the strongest growth in the lower-income tier was those with Lat-

Figure 7

Median household net worth[1]

In 1,000 US-Dollar and in 1,000 Euro respectively, both in 2014 prices



1 Categorization based on household income before taxes and social-security contributions, income is needs-weighted by square root equivalence scale, normalization with respect to 3-person household.

Source: PEW(2015), SOEPv31 calculations by DIW Berlin.

Pronounced differences between US and Germany in wealth positions of middle- and high income group.

in-American roots.[19] The decrease in the share of whites and Asians in the middle-income group was primarily due to an increase in the upper-income group.

In Germany, ethnicity is usually not surveyed in population studies. For this reason, the present study makes a distinction as to whether an individual was born in Germany or abroad. The share of foreign-born in the middle-income group has fallen particularly dramatically—by more than 15 percentage points since 1991. For those born in Germany, the decreasing importance of the middle-income tier is less pronounced (a drop of four percentage points). The share of foreigners in the lower-income group, in particular, has increased, while, the autochthonous population has increasingly shifted to the upper-income group.

Marked differences in net worth between US and Germany across all income strata

What is striking in both countries studied is the pronounced difference in the median net worth[20] of the middle-income group compared to the upper-income group (see Figure 7). If we calculate the ratio between the median net worth values in these two income groups, we can see that, in 2013, the upper-income group in the US had a net worth which was, on average, over 6.6 times higher than that of the middle-income group. The corresponding quotient for Germany was considerably lower at 3.2 in 2012. What is also striking is the differences in wealth between the German and US upper-income tier. Without taking purchasing power parities into account, the wealth of the upper-income group in the US is more than twice that of Germany.

The development of net worth has differed between the two countries since the early 2000s. In the US, there was a noticeable decline in the net worth of those in the poorer population group. The initial level was already low, at under 20,000 US dollars in 2001, and by 2013 this figure had halved to less than 10,000 US dollars. The American middle class experienced losses of 28 percent in its net worth: from 136,000 US dollars in 2001 to 98,000

19 This is also a result of the migration that has taken place since then. New immigrants generally have more problems on the labor market when they first arrive, partly because the educational qualifications acquired in their country of origin are not recognized, meaning they frequently find themselves in the lower-income bracket.

20 Net worth is the sum of a household's tangible and non-tangible assets minus liabilities. In the US, tangible assets include the value of vehicles; this is not the case in Germany. In the present analysis, the net worth figures are not needs-adjusted. The net worth described in the present report does not include entitlements from state pension schemes. Wealth data in the US are based on the Survey of Consumer Finances (SCF) funded by the Federal Reserve. Further, when drawing comparisons between US and German wealth data, it is important to bear in mind that, due to statutory pension entitlements in Germany compared to the predominantly private pension system in the US, the current wealth figures, particularly for the middle class, are lower in Germany and/or would be higher if pension entitlements were to be monetarized (see Joachim R. Frick and Markus M. Grabka, "Old-age pension entitlements mitigate inequality—but concentration of wealth remains high," *DIW Weekly Report*, no. 8 (2010): 55–64.

US dollars in 2013. Despite the financial market crises at the time, the upper-income tier saw an increase in its net worth over the median, of eight percent in real terms, or just under 50,000 US dollars; the median net worth in 2013 was 650,000 US dollars.[21]

In Germany, we can see a very different picture. From 2002 to 2012, people belonging to the low-income group recorded real wealth losses of 16 percent, whereas people in the middle-income and high-income group experienced a gain in wealth of 15 and more than 10 percent in real terms, respectively. This growth in wealth of the middle-income tier is primarily the result of an increase in financial assets (not including private insurance).[22]

Role of the middle income group in functional income distribution

Parallel to the declining share of middle-income group, a change in functional income distribution can also be observed in both countries analyzed. The share of national aggregate income made up of employees' salaries in the US declined from 67 percent to 61 percent between 1980 and 2013.[23] In Germany, this figure fell from 73 percent to 68 percent during the same period.[24] Earnings from dependent employment, however, constitute the most important income component in the middle-income group, while at the upper edge of the income distribution, capital income and earnings from self-employment along with rental income are the most important factors. Members of the lower-income groups, in contrast, often rely on social security transfers.

Despite the growth in employment observed in Germany since 2006, there is no notable upward mobility of low-income earners into the middle class. There are a number of possible reasons for this, one of which is presumably the sectoral shift away from an industry- toward a services-oriented society, because average earnings in the German commercial sector are still higher than in the services sector and the proportion of part-time employees is larger here, too. Correspondingly, in the US, the number of jobs in the manufacturing industry declined by 36 percent from 1979 to 2015 alone.[25] The service sector, however, is also the branch of industry with an below-average level of trade union organization.

Conclusion

The shrinking middle class is a phenomenon which can be observed both in Germany and the US. The present report describes the change in social structure in both countries on the basis of total household income before tax deductions and social security contributions. This income concept is also affected by demographic changes such as the rise in single-person households, migration, or the increase in homogamy (relationships between individuals who are on a quasi-level footing in terms of education and socioeconomic status). Changes in the tax and transfer system, however, have no direct impact. The following, therefore, focuses predominantly on developments in the labor market since this is the primary factor contributing to changes in income structure in Germany.[26] There are a number of comparisons of labor market developments in the US and Germany during the period studied, which particularly highlight the importance of the labor market reforms implemented in Germany between 2001 and 2005 with the aim of reducing unemployment and, at the same time, increasing labor market flexibility. These comparisons also highlight the moderate wage policies of the trades unions.[27] Of course, even all these policy measures could not prevent the lower-income group from growing and the middle-income group from slipping down the hierarchy.

The middle class is perceived as an important economic and social actor[28] owing to the significant contribution it makes to capital accumulation—human capital as well as

21 One explanation for the different changes in net worth is the importance of real estate ownership in the different income tiers. In the lower strata, from a quantitative perspective, property ownership is the most important type of asset. The financial crisis resulted in considerable losses in the value of these assets. The wealth of the upper tier primarily takes the form of securities. These incurred short-term book losses but this type of asset has recovered rapidly since the crisis.
Compared to 1983, it is also clear that both the lower- and the middle-income group in the US have been stagnating at more or less the same level in real terms, while the upper-income group was able to double its real wealth (based on the median).

22 For the middle-income group, however, the value of private insurance and net real estate ownership barely changed during the ten-year period studied.

23 Robert Z. Lawrence, "Recent Declines in Labor's Share in US Income: A Preliminary Neoclassical Account," *Working Paper Series*, no. 15–10 (Peterson Institute for International Economics, 2015).

24 Federal Statistical Office, *National Accounts* (2016). The unadjusted wage share is shown.

25 The number of people employed in the manufacturing and construction industries more or less remained constant between 2000 and 2015; Federal Statistical Office, *Erwerbstätige im Inland nach Wirtschaftsbereichen* (2016), https://www.destatis.de/DE/ZahlenFakten/Indikatoren/Konjunkturindikatoren/VolkswirtschaftlicheGesamtrechnungen/vgr010.html

26 On this, see Martin Biewen and Andos Juhasz, "Understanding Rising Inequality in Germany, 1999/2000 – 2005/06," *Review of Income and Wealth* 58(4) (2012): 622–647.

27 On this, see the recent article by Florian Hoffmann and Thomas Lemieux, "Unemployment in the Great Recession: A Comparison of Germany, Canada, and the United States," *Journal of Labor Economics* 34 (1) (2016): 95–139. Also see analyses by Christian Dustmann, Bernd Fitzenberger, Uta Schönberg, and Alexandra Spitz-Oener, "From Sick Man of Europe to Economic Superstar: Germany's Resurgent Economy." *Journal of Economic Perspectives* 28 (1) (2014): 167–188. For a discussion of the period after German reunification, see Jennifer Hunt and Michael C. Burda, "From Reunification to Economic Integration: Productivity and the Labor Market in East Germany," *Brookings Papers on Economic Activity* (2) (2001): 1–72.

28 OECD (2012), http://www.oecdobserver.org/news/fullstory.php/aid/3681/An_emerging_middle_class.html.

real and financial assets—in doing so boosting the country's aggregate income and consumption.

In order to increase the income share of the middle class, besides having a proactive wage policy (e.g., upgrading service-class jobs), various other steps can be taken. These include: increasing opportunities for upward mobility in the labor market, providing incentives for converting what are known as "mini-jobs" (salary of up to 450 euros per month) into jobs subject to mandatory social insurance, taking steps to help people reconcile work and family life, and implementing measures to improve people's access to education, training, and qualifications (buzzword: lifelong learning).

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SEVEN QUESTIONS TO MARKUS M. GRABKA

»Despite the strong labour market, the share of the middle income group has not risen in Germany«

1. Dr. Grabka, you conducted a study of the share of middle-income group in the US and Germany. Why did you choose these two countries for your comparison? In December 2015, the Pew Research Center in the US published findings on the development of the middle-income tier which triggered a broad public debate beyond the borders of the US. This prompted us to conduct similar analyses using comparative income concepts in Germany, too.

2. How would you define middle income? The American colleagues based their definition of the middle income group on the basis of total money income. This mainly comprises labour income, as well as capital income, but also includes income from pensions and public transfers. The important thing here is that this income concept is calculated before tax deductions and social security contributions. On this basis, the middle-income group derive total income between 67 to 200 percent of the median of the total population.

3. What trends have been observed in the middle class according to the definition you just outlined? In the period from 1971 to 2015, a nine-percentage-point drop was seen in the population share of the middle-income group in the US. For Germany, the period beginning 1991, i.e., following reunification seemed to be the most logical time-frame for the analysis. Here, too, the share of the middle-income group was found to decrease—by six percentage points from 1991 to 2013. Interestingly, the US figures for the same time period likewise displayed a six-percentage-point decrease.

4. In other words, the middle class is shrinking in both countries? Yes and no. In Germany, this relative drop in population share is linked to the absolute decrease in the number of middle-income group. In the US, in contrast, this decline in the importance of the middle class is relative. The US population has increased substantially in the past 40 years, meaning in the US both the relative and the absolute increase in importance was more pronounced at the periphery than in the middle of the distribution.

5. What groups of people have moved up the ladder, and what groups have dropped down a tier? In the US, ethnicity has to be factored into the analyses. In this context, we can see that it was primarily those from Latin America who tended to move down to lower-income brackets, while an increasing number of people from the white US population, for example, were moving out of the middle class into the upper-income group. In Germany, in comparison, it has been foreigners who have tended to move down the ladder into the lower-income group.

6. In recent years, Germany has seen a sharp increase in employment figures, something that one would expect to have a positive impact on the middle class. Is this the case? Surprisingly, the relatively strong increase in employment that we have seen in Germany since 2006 has not stabilized, or increased, the share of the middle-income group. This is what one would have expected, but the sheer diversity in the forms of employment, plus the increase in low-paid jobs has offset this.

7. How does the German middle class differ from that in the US? In our study, we looked at the pure development of total income among the different income earners in the US and Germany, on the one hand, and the net worth of the different income strata, on the other hand. The disparity between the two countries was sizable. Since the early 2000s, for example, the net worth of the US middle class has dropped by around one-quarter in real terms, while Germany's middle-income group has increased its net worth by some 15 percent since 2002.

Interview by Erich Wittenberg