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Article

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Gerhard Bosch and Thorsten Kalina

The Erosion of the German Middle Class

In comparative research on the welfare state, the German social model is often regarded as based on the prototype of the conservative Bismarckian welfare state, in which differences in labour market status are perpetuated by income-related benefits.¹ This status-perpetuating effect certainly cannot be dismissed out of hand; nevertheless, this categorisation underestimates the levelling effect of the German welfare state in the post-war period for two reasons. First, virtually all dependent employees were (and still are) members of the major social insurance schemes. Among dependent employees, only tenured civil servants (*Beamte*) have their own special system. The universal nature of these insurance schemes means that the vast majority of the German population is protected against life's main contingencies. Second, earnings differentials were reduced by industry-level collective agreements covering practically all workers in the relevant industry and geographical area. In combination with an inclusive wage-setting system, these social insurance schemes resulted in only slight differences in status. By virtue of these complementarities – and to depart somewhat from Esping-Andersen's typology – the German social model in the post-war period can be described as an *inclusive Bismarckian welfare state*.² As such, it provided the economic underpinning for a broadly based middle class that enjoyed a high level of stability over the various phases of the life course, including old age.

Since the mid-1990s, however, income inequality has increased more sharply in Germany than in many other European countries. The question of whether this has led to the erosion of the income policy that provided a firm foundation for the middle classes is hotly debated.³

1 See G. Esping-Andersen: *The Three Worlds of Welfare Capitalism*, Princeton 1990, Princeton University Press.

2 G. Bosch: *The German Welfare State: From an Inclusive to an Exclusive Bismarckian Model*, in: D. Vaughan-Whitehead (ed.): *The European Social Model in Crisis: Is Europe losing its soul?*, Cheltenham 2015, Edward Elgar Publishing, pp. 175-229.

3 Institut für Sozialforschung und Gesellschaftspolitik: *Überprüfung der These einer "schrumpfenden Mittelschicht" in Deutschland*, Köln 2011; C. Arndt: *Zwischen Stabilität und Fragilität: Was wissen wir über die Mittelschicht in Deutschland?*, Konrad Adenauer Stiftung, 2012.

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In fact, it does not necessarily follow that increasing inequality in individual incomes inevitably leads to inequalities in household disposable income levels, which are a decisive factor in determining class affiliation. Household members can compensate for losses of income through increased economic activity, for example, and the welfare state can also compensate such losses.

In what follows, we will first outline the growing inequality of income in the primary and secondary distribution between 1992 and 2013 and investigate whether and to what extent this has altered the earnings position of the middle-income groups and their various subgroups. This will be followed by an analysis of the household compositions in the various income groups, their annual working time and their hourly wages. We then sum up the results and draw conclusions.

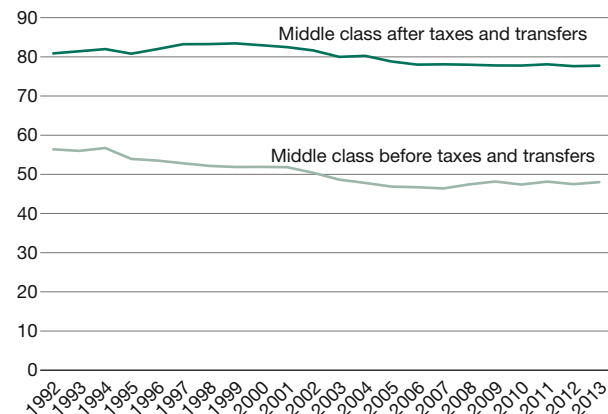
Evolution of the middle household income groups between 1995 and 2013

The size and evolution of the middle-income groups are very strongly influenced by how the middle is defined statistically. We adopt the internationally acknowledged poverty threshold of 60 per cent of the median income as the lower limit, and we use double the median income as the upper limit. Such a broad definition, which puts more than two-thirds of all households in the middle-income groups, brings with it the risk that major shifts within this large group will be overlooked; these shifts may be of similar or even greater significance than those among the three major income groups. For this reason, we divide the middle-income group into three subgroups, resulting in the following five income groups:

- i. less than 60 per cent of the median (lower income group)
- ii. 60 to less than 80 per cent of the median (lower-middle subgroup)
- iii. 80 to less than 120 per cent of the median (intermediate-middle subgroup)
- iv. 120 to less than 200 per cent of the median (upper-middle subgroup)
- v. 200 per cent of the median and above (upper income group).

Figure 1
German middle class before and after taxes and transfers, 1992-2013

in % of households



Sources: SOEP v30, authors' calculations.

In the following analysis, we differentiate between the primary distribution – that is, the distribution of income generated directly by the market process – and the secondary distribution, which relates to the disposable income after taxation and transfer payments. The equivalence-weighted data on income at the household level includes all market income from dependent employment and self-employment, as well as income from assets, maintenance payments and private pension plans.⁴ The primary distribution includes transfers, albeit – in contrast to the secondary distribution – only private ones. The analysis of the secondary as well as the primary distribution will enable us to ascertain whether, and to what extent, the state (including the social insurance funds) compensates for possible increasing inequalities in primary incomes in the middle-income groups via the revenue side (taxes, social insurance contributions) or the expenditure side (transfers) and whether redistribution is stronger or weaker than two decades ago.

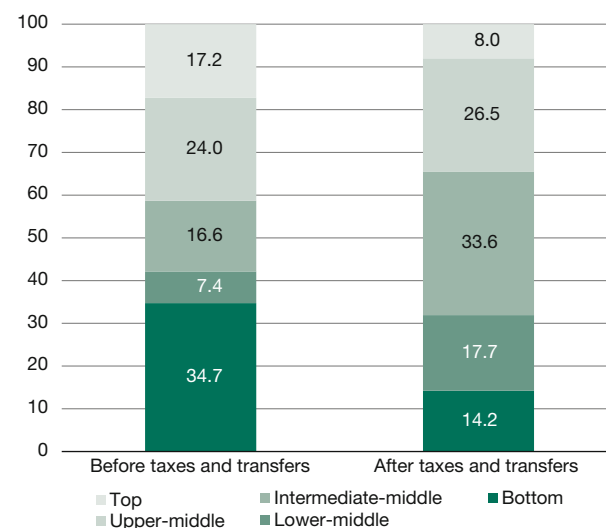
According to Figure 1, the share of households in the middle-income groups before taxes and transfers fell between 1992 and 2013 by eight percentage points, from 56.4% to 48%.⁵ In the same period, the share of the mid-

4 The analysis is based on the German Socio-Economic Panel (SOEP). The SOEP is a household survey that has been carried out annually in Germany since 1984 on behalf of the DIW Berlin by TNS Infratest Sozialforschung. A representative sample of households and all people aged 17 and over living in them are surveyed. The SOEP's basic population is the resident population living in private households within the current boundaries of the Federal Republic of Germany. The SOEP data is rendered representative by means of a differentiated extrapolation procedure. See G.G. Wagner, J.R. Frick, J. Schupp: The German Socio-Economic Panel Study (SOEP) – Scope, Evolution and Enhancements, in: Schmollers Jahrbuch, Vol. 127, No. 1, 2007, pp. 139-169.

5 Calculated on the basis of the previous year's incomes.

Figure 2
German income classes before and after taxes and transfers, 2013

in %



Sources: SOEP v30, authors' calculations.

dle-income groups after redistribution fell only by about three percentage points. While the share of the middle-income groups was increased by 24.5 percentage points through taxes and transfers in 1992, it was increased by 30 percentage points in 2013. Thus the effect of redistribution by the state became stronger over time.

Compared with the primary distribution, the German welfare state halves the highest income groups' share of the total number of households, mainly via the progressive income tax system (Figure 2). At the other end of the income distribution, the combined effect of a reduced tax burden and transfer payments reduces the share of the lowest income group by almost two-thirds, because many households are "promoted" to the lower-middle or intermediate-middle group when classified by disposable income.

Thus, to a large extent, though not fully, the welfare state has been able to compensate for the growing inequality in the primary income distribution. Particularly since the beginning of the new millennium, the shares of households in the upper and lower income groups have been growing, not dramatically but nevertheless by 3.7 percentage points at the bottom and by 1.5 percentage points at the top. Meanwhile, the share of the middle-income groups declined from 83% in 2000 to less than 78% in 2013. This development has been interpreted in very different ways in the vigorous German debate over these changes. According to Goebel et al., incomes are becoming increasingly polarised and the middle-income groups are shrink-

ing.⁶ Enste et al., on the other hand, do not detect any clear trend but rather fluctuations in the shares of the various income groups and point to what is, by international standards, the high share of the middle-income groups (in terms of disposable income).⁷ They argue that the slight increase at the lower margin is, above all, a consequence of the growth in one-person households – when couples split up, the partner with the lower income could be relegated to the lowest income group.

Our more up-to-date data supports the position adopted by Goebel et al.⁸ However, what is surprising about the debate, for several reasons, is the one-sided focus on disposable household income after tax and transfers and the consequent neglect of the primary distribution. First, for people of working age, it makes a big difference whether they earn their income themselves or are reliant on transfers. Achieving one's income position self-sufficiently imparts self-confidence and a feeling of greater social independence than being dependent on transfers, which can be restricted at any time by political decisions. Second, the growing inequality in primary incomes means that the welfare state is increasingly being required to compensate for growing income deficiencies in the middle and lower income groups. The increasing demands on the welfare state were offset by the spurts of strong economic growth from 2004 to 2008 and from 2009 to 2015 and the associated growth in employment. However, it is becoming increasingly uncertain whether this will continue to be possible in the event of a sustained economic crisis and with an ageing population. Third, it takes decades for the social costs of an unequal primary distribution to fully show up in the social protection system. This applies in particular to the effects of low pay on future pensions. Thus, growing inequality in primary incomes is a reliable indicator of increasing distribution problems in fiscal and social policy.

Taken as a whole, the data shows a clear trend towards an increasingly unequal primary distribution of income. The trend over the past 20 years has been relatively continuous and thus cannot be explained by one-off events, such as the Hartz Acts of 2003. In contrast to other countries, even the financial crisis has not had any detectable influence on the primary income distribution in Germany.⁹ Despite a sharp decline in GNP of 4.9% in 2009, employment remained stable, because the drop in orders was

cushioned by a redistribution of working time and, above all, by state-subsidised short-time working.¹⁰ The main beneficiaries of this protection were the middle-income groups in the high-earning German export sector.

Employment patterns, working times and wages by household

The distribution of equivalence-weighted household incomes can be influenced by changes in employment patterns. Thus, households can slide down the income distribution if the total number of paid hours worked by household members is reduced and, conversely, climb the distribution if the number of paid hours worked increases. Increasing the household labour supply by increasing individual working times or increasing the number of earners is a familiar compensation strategy for maintaining living standards in the event of wage reductions. However, such compensation strategies are not always successful if household members are offered only part-time work because of inadequate skills or qualifications or if they are involuntarily unemployed. This is why we describe changes in employment patterns below, rather than preferred employment behaviour. In order to obtain reliable results despite the inadequate number of cases in several cells, we pooled the data to form two periods for comparison – 1995-1997 and 2011-2013.¹¹

Households in Germany have become smaller over the past two decades. The share of the total population living in one-person households has increased by almost four percentage points (Table 1). The biggest increase is in multi-person households with low levels of gainful employment, i.e. at most one part-time job in the household, a category which is up five percentage points. The share of households with more than one earner has evolved in different ways since the 1990s. The share of multiple-earner and single-breadwinner households has declined, while the share of households with secondary earners and two part-time workers has increased. Thus, the increase in women's employment in Germany has not been reflected in an increase in two-earner households with two full-time jobs but rather in an increase in the number of secondary earners working part-time.¹²

6 J. Goebel, M. Gornig, H. Häußermann: Polarisierung der Einkommen. Die Mittelschicht verliert, in: DIW-Wochenbericht, No. 24, 2010, pp. 2-9.

7 D.H. Enste, V. Erdmann, T. Kleineberg: Mythen über die Mittelschicht. Wie schlecht steht es wirklich um die gesellschaftliche Mitte?, Roman Herzog Institut e.V., 2011.

8 J. Goebel et al., op. cit.

9 D. Vaughan-Whitehead (ed.): Work Inequalities in the Crisis: Evidence from Europe, Cheltenham 2011, Edward Elgar Publishing.

10 G. Bosch: The German Labour Market after the Financial Crisis: Miracle or Just a Good Policy Mix?, in: D. Vaughan-Whitehead: Work Inequalities ..., op. cit., pp. 243-277.

11 Definition of employment patterns: multiple earners: ≥ 2 full-time; secondary earner: 1 full-time + ≥ 1 part-time; single breadwinner: 1 full-time; dual part-time: ≥ 2 part-time; low level of gainful employment: maximum 1 part-time; single: only one person in household.

12 This increase could constitute a compensation strategy for a reduction in the volume of working time by increasing the number of earners. In order to be able to assess this accurately, however, one would have to investigate the evolution of individual households over time in order to ascertain whether a second-earner household, for example, was in the past a two-earner or single-breadwinner household.

Table 1
Evolution of household employment patterns, Germany, from 1995-1997 to 2011-2013
in %

Employment pattern	All households		Multi-person households with substantial levels of employment	
	1995-1997	2011-2013	1995-1997	2011-2013
Multiple earners	17.6	12.3	28.4	23.2
Secondary earner	19.8	21.8	32.0	41.0
Single breadwinners	21.0	15.0	34.0	28.2
Dual part-time	3.5	4.0	5.6	7.6
Low level of gainful employment	21.5	26.5		
Single	16.6	20.3		

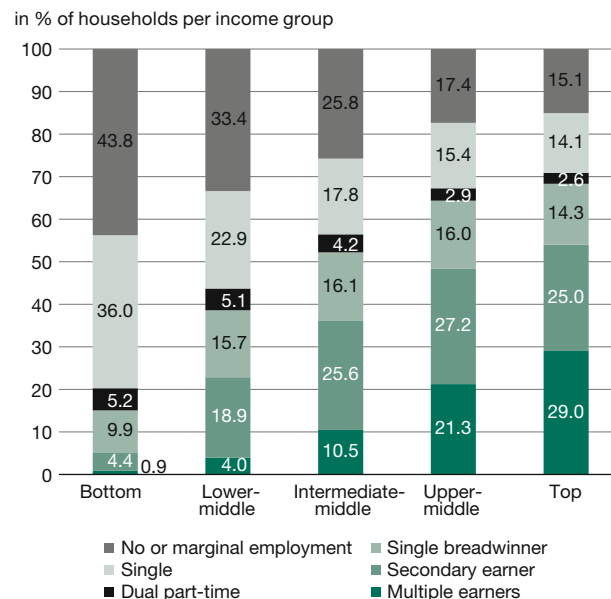
Sources: SOEP v30, authors' calculations.

Figure 3 shows the distribution of the population among the various types of households by equivalence-weighted disposable income. In multi-person households with, for example, four people, all four individuals are included in the analysis. The high proportion of single-person households and households in the lower income groups with no or only marginal levels of gainful employment is clearly evident. As household income rises, so does the share of people in multiple-earner households, which is indicative of the close association between the presence of several gainfully employed individuals and membership of the higher-earning households.

The upper income groups not only have more earners but also significantly longer working times. Figure 4 shows average gross paid hours worked per household by income group. Gross paid hours include the hours actually worked, together with paid holidays, paid sick days and statutory public holidays. Households in the highest income group work on average around 2000 hours more per year than households in the lowest income group. Since 1995-1997, the number of paid hours worked has declined in all income groups, but the reductions are much greater in the lower income groups than in the middle and upper groups. Thus, the increasing differentiation of household working times has contributed to the growing inequality in primary income among households.

The third variable that determines the level of household market income, besides the number of earners and working hours, is the hourly rate of pay (Table 2). Average hourly pay in the upper income group, at €38.62 in 2011-2013, was around five times higher than the hourly rate in the bottom income group. Hourly rates, as well as

Figure 3
Employment patterns by income group, Germany, 2011-2013
in % of households per income group



Note: Income group based on net disposable, equivalence-weighted household income in the previous year.

Sources: SOEP v30, authors' calculations.

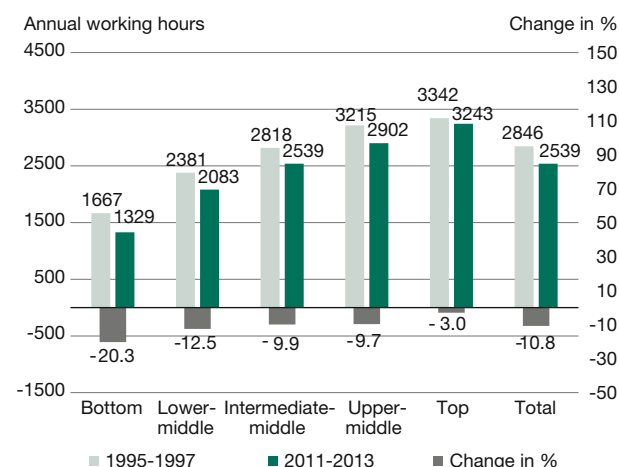
working hours, rise with income level, such that the differences in euros between the groups widen and are at their greatest (more than €17) between the upper-middle and top income groups. These average figures conceal large differences among employment patterns. By far the highest rate, €52.07 per hour, is found among households with two part-timers in the top income bracket. In each income group, the hourly rates of households with a single breadwinner or with two part-time workers are higher than those of multiple-earner and secondary-earner households. This is evidence of a clear trade-off between pay and working time. As hourly rates of pay rise, so do the working time options, and households are better able to manage with two part-time earners or a single breadwinner.

Thus, high hourly rates of pay enable households to reduce their working hours, while low pay has the opposite effect, encouraging households to increase their labour supply.

Conclusions

From the end of the Second World War onwards, a middle class emerged in Germany that was, by international standards, broadly based. The economic basis for this middle class was good pay and relatively low income

Figure 4
Gross working hours per household by income group, Germany, 1995-1997 and 2011-2013



Note: Also includes paid holidays, sick days and statutory public holidays; the basis for calculation is the working hours of all economically active individuals. The inactive population is not included. Income group is based on net disposable income in the previous year.

Sources: SOEP v30, authors' calculations.

differentiation, which was the result of a high coverage rate by collective agreement. In this *inclusive Bismarckian welfare state*, the various social insurance schemes protected the vast majority of the population from life's contingencies.

Since the mid-1990s, however, the economic basis of middle-class prosperity and security has been crumbling. In the primary distribution, the share of households in the middle-income groups fell between 1992 and 2013 by more than eight percentage points, from 56.4% to 48.0%. The welfare state was no longer able to compensate fully for this unequal primary distribution. The middle-income groups' share in the secondary distribution – that is, after taxes, social insurance contributions and social transfers – also fell from 81% to 78% over the same timeframe. This decline cannot be explained by demographic factors, such as changes in household size, or inadequate qualification levels among low-earners, but is largely due to the increasingly unequal distribution of working time among households and the explosion of the low-wage sector and precarious employment forms in Germany.

The decline in coverage by collective agreements and the erosion of the previously inclusive wage system cannot be explained solely by the deregulation of the labour market following the Hartz Acts of 2003. Equally important factors include the trade unions' weaker bargaining power following the rapid increase in unemployment in

Table 2
Average hourly wage of households by income group and household structure, Germany, 2011-2013
 in euros

Income brackets	Multiple earners	Secondary earner	Single breadwinner	Dual part-time	Total
Bottom	4.76	7.11	7.70	7.98	7.55
Lower-middle	7.72	10.87	11.94	12.55	11.23
Intermediate-middle	10.81	14.46	18.60	17.77	15.29
Upper-middle	15.72	20.35	27.48	24.10	21.43
Top	25.97	40.79	51.35	52.07	38.62
Total	16.32	18.80	23.50	19.21	19.88

Note: Income group based on equivalised disposable household income.

Sources: SOEP v30, authors' calculations.

the wake of the collapse of the Eastern German economy, the difficulties of transferring the Western German collective bargaining system to the less productive Eastern German economy and increased reluctance on the part of employers to adhere to collective agreements. Also important are product market deregulation, the transfer of previously publicly operated services into the hands of private providers, large-scale job cuts in the public sector, the repeated cuts in pension levels and, finally, the traditional German family model, which offers strong incentives for women to restrict their labour supply. At the same time, the middle-income groups have been stabilised by the strong employment growth since 2005, the introduction of long-term care insurance and the so-called "employment miracle" following the financial crisis, in which there were neither mass redundancies nor increases in youth unemployment. The new minimum wage and the easing of the process of declaring collective agreements to be generally binding may work in the same direction – which at the time of writing, however, could not be demonstrated with statistics.

The middle-income groups have also shrunk further in the past decade, when these stabilising factors had already begun to work. Thus, the continuing decline in coverage by collective agreements, the growth in relatively unprotected employment forms and the above-average reduction in paid working hours in low-income households are interacting with all the other changes. Consequently, the new minimum wage, an increase in coverage by collective agreements, the re-regulation of atypical employment forms and the elimination of incentives to take marginal, part-time jobs are the keys to strengthening the middle-income groups in Germany.