INCOME INEQUALITY: AN IN-DEPTH ANALYSIS

This is a translated version of the original German-language chapter "Einkommensungleichheit: Eine tiefergehende Analyse", which is the sole authoritative text. Please cite the original German-language chapter if any reference is made to this text.

SUMMARY

As confirmed by the current Fifth Report on Poverty and Wealth, the **distribution of net income** in Germany has been **largely stable** since 2005. An intensive discourse on inequality is nevertheless being held in this country. This might be partly due to the fact that perceptions deviate from the reality of the situation in several respects.

The German Council of Economic Experts updates its income analysis and, in addition, examines the distribution of net income and market outcomes within and between different sections of the population, which are defined according to the **socio-economic characteristics** age, gender, education and migration background. Yet even this more in-depth analysis does not justify the narrative of an inexorably increasing inequality of net income either.

Societal changes like the continuing trend toward smaller households impact on both the income distribution and the at-risk-of-poverty rate, which represents a relative income concept. Further-more, comparatively frequent low income and a higher risk of poverty correlate with such characteristics as migration background and low qualification. Political action can counter these low incomes by promoting **equal opportunities** and **societal and economic participation**. Starting points for this lie in the education system, above all in early childhood education.

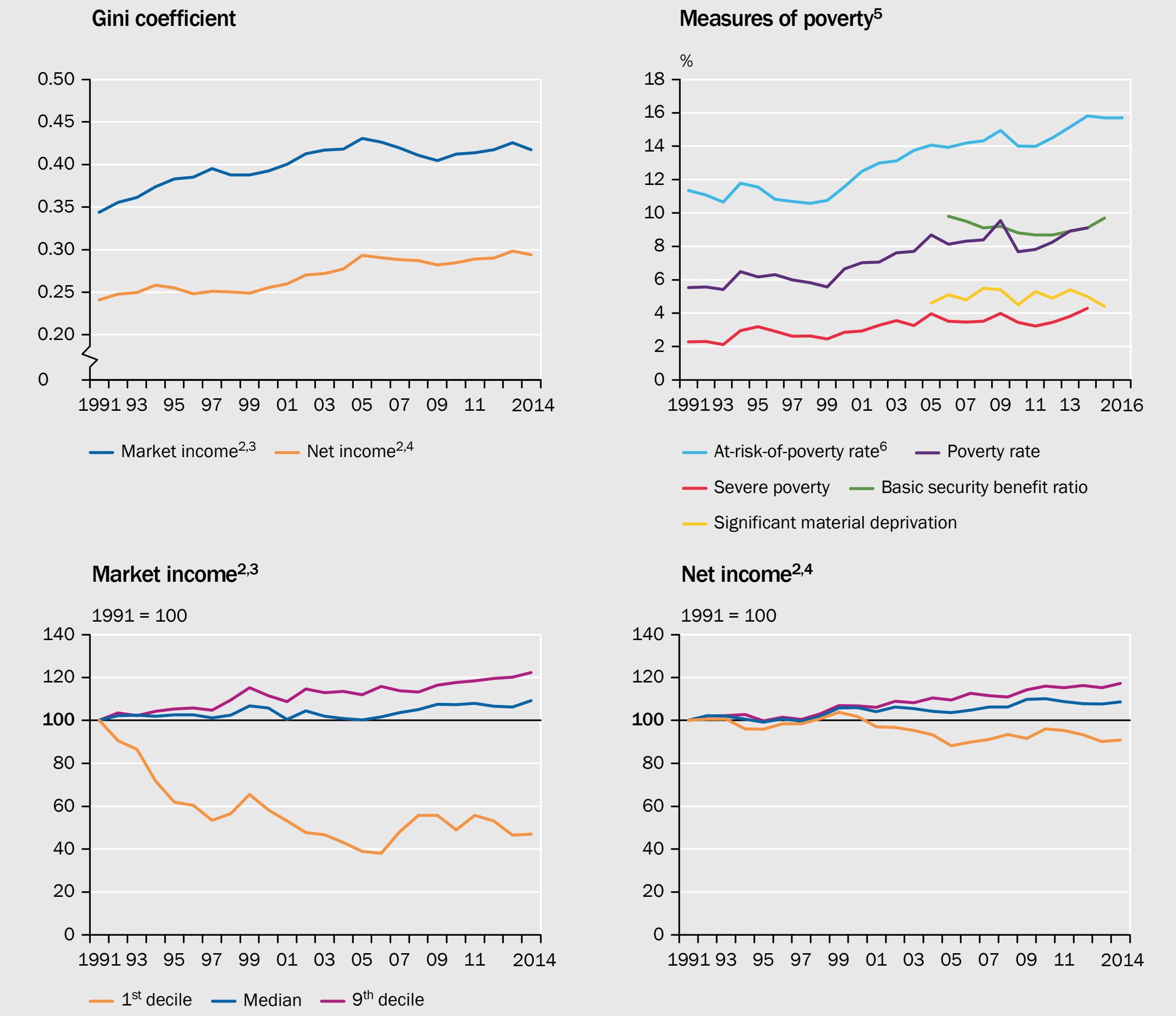
I. INCOME AND POVERTY IN GERMANY

822. In the past few years in Germany, few topics have been the subject of such intense economic and socio-political discussion as the distribution of income and their development. The **inequality of net income** has remained largely stable since 2005. The update of the statistical analysis carried out in this chapter confirms this. The fact that an increasingly intense discourse on inequality is nevertheless being conducted seems to reflect a divergence of perception from the base of statistical evidence. However, the analysis of income inequality can contribute little to understanding the much more diffuse perception of increasing injustice in society.

823. This chapter examines **income inequality within and between different sections of the population**. These are defined by key socio-economic charac-

↘ CHART 100

Development of the equivalence-weighted income of persons in households with at least one member of working age and development of poverty in the overall population[1]



1 – Price-adjusted with the consumer price index. 2 – For persons in households with at least one member of working age. 3 – Income before taxes and transfers. 4 – Income after taxes and transfers. 5 – In the overall population. 6 – Until 2014 SOEP, from 2015 Mikrozensus.

Sources: Fifth Report on Poverty and Wealth, SOEP v32, System of social reporting in official statistics, own calculations teristics, i.e. according to age, gender, education and migration background. The results illustrate the complexity of income distribution and the key role of intra-family processes in the distribution of resources, which inevitably cannot be verified by statistical analysis for lack of information. The results also show that the narrative of an inexorably growing income inequality cannot be deduced from this differentiated analysis any more than from an examination of the population as a whole.

Since inadequate qualification and a migration background in particular are closely linked to low income, economic policy should aim to ensure that **equal opportunities** for societal and economic participation are open to all citizens. Above all, this should include the possibility for future generations to contribute their talents, motivation and commitment to gaining qualifications and entering employment. Crucially important here is the **ability to adapt** to the accelerated structural change involved in digitization. ↘ ITEMS 811 F.

1. Stable development of net income

824. The Federal Government published its Fifth Report on Poverty and Wealth in spring 2017 (BMAS, 2017). It confirms the finding that income distribution in Germany has remained largely stable since 2005. However, there were appreciable increases in the **inequality of market income and net income** up to 2005. ↘ CHART 100 TOP LEFT Among people in households with at least one household member of working age, the inequality of market income before taxes and transfers is significantly higher than that of net income. ↘ CHART 100 BOTTOM Since 2005, net income has risen to a similar extent across the income distribution. ↘ CHART 100 BOTTOM RIGHT This finding applies to all conventional measures of income distribution, be they concentration measures, variance measures or decile ratios. Relative measures of poverty, such as the at-risk-of-poverty rate, the poverty rate and severe poverty also reflect these results, since they are based on income relations. ↘ CHART 100 TOP RIGHT

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Income analyses have recourse to a variety of poverty measures. These are divided into **absolute and relative poverty** measures. Thanks to basic security benefits, measures like 'absolute' or 'extreme poverty' (disposable income of less than US$ 1.25 per day at 2005 prices) and 'poverty' ↘ CHART 75 RIGHT (less than US$ 2 per day at 1985 prices), which reflect the subsistence minimum, are practically irrelevant in Germany. Of greater importance in this country are relative measures, which compress income distribution into a statistic without making a statement about the absolute standard of living. These measures include 'severe poverty' (disposable income of less than 40 % of median income), the 'poverty rate' (less than 50 % of median income) and the 'at-risk-of-poverty rate' (less than 60 % of median income). The at-risk-of-poverty rate attracts the most media attention, but it is often misinterpreted as an absolute measure of poverty. The basic security benefit ratio – defined as the percentage of people receiving basic security benefits – continues to represent the 'rate of poverty being mitigated'. Finally, 'material deprivation' measures the percentage of households who themselves state that they cannot meet the costs of housing and consumer goods because of insufficient financial resources. When living conditions are highly restricted in at least four of nine areas due to a lack of resources, the term used is 'substantial material deprivation'.

825. The **at-risk-of-poverty rate** has increased almost continuously since the late 1990s. ↘ CHART 100 TOP RIGHT This development has recently come to a standstill, even though a large number of migrants added to the labour force. While the at-risk-of-poverty rate has increased slightly in West Germany, in East Germany it has declined significantly from a higher level; the risk of poverty is converging in the two parts of the country (Federal Statistical Office, 2016a, 2017). The proportion of the population living in severe poverty has been at a low level in recent years (approximately 4 %), and the proportion of the population with considerable material deprivation has been declining since 2013. ↘ CHART 100 TOP RIGHT

826. At the core of the ongoing distribution debate is the extent to which the **economic growth** generated in Germany **improves the living conditions of the population as a whole**. For example, the median of net income has risen by much less over the last 25 years than the gross domestic product (GDP). Apart from different measuring concepts, the main reason for this difference, however, is the way price adjustments are made in the case of income and in the national accounts (GCEE Annual Report 2016 item 800). In any case, it can certainly not be deduced that economic growth has raised net income much more in the higher income groups in the last ten years than among the lower income groups.

827. According to a study by Grabka and Goebel (2017), the **bottom 40 % of the income distribution** has not experienced any significant increase in real net income since 1991. Since a significant number of persons experience real increases in income over time and therefore move higher in the income distribution , and since the population is being changed not least by immigration, this must not be confused with a finding that 40 % of the people experienced no increase in their income in the period mentioned. This restriction is particularly relevant when newly added sections of the population are to be found more often at the lower end of the income distribution.

Moreover, problems with recording changes in the quality of consumer goods make the comparison of real income more difficult over such long periods. After all, the analyses of income inequality discussed here only represent a snapshot at a certain time. On the other hand, in order to look at **lifetime income** – i.e. income patterns of individuals throughout the course of their lives – long administrative panel data sets are required, such as the sample of insured persons and their insurance accounts of the German Pension Insurance (Brenner, 2010).

2. Overlaps in the inequality discourse

828. The development of income distribution is currently the subject of critical discussion. The discourse suffers from the fact that the general **perception** is not in line with the reality of the situation. For example, the at-risk-of-poverty rate among the elderly and pensioners is often drastically overestimated, while, in reality, it is much lower than the poverty risk among adolescents and children. Even though basic existential needs are being met, child poverty remains a

pressing problem. About a fifth of children in Germany are threatened with poverty for at least five consecutive years (Tophoven et al, 2017).

It is therefore very much to be applauded that the Federal Government recently contributed to **clarifying the facts** with its Fifth Report on Poverty and Wealth. Even so, subjective perceptions are still not in line with the report's analytical finding that income inequality is largely stable. ↘ BOX 22

↘ BOX 22

Poverty and income distribution: perception and the actual situation

The Fifth Report on Poverty and Wealth shows that **subjective perception** of income levels often does not reflect the reality of the situation in Germany. When asked what changes there had been between 2010 and 2015 in the **share of poor people** in Germany, 44 % of respondents replied that it had greatly increased. At the same time, 31 % of the respondents stated that the percentage of rich people had increased significantly in the same period. This perceived intensification of inequality is not confirmed by the largely unremarkable developments of poverty and wealth indicators (BMAS, 2017, pp. 108 f.).

There is also a certain contradiction between the empirical indicators and people's assessment of the general poverty risk in different stages of life. Two out of three people rate the **poverty risk** as high or very high **especially in the retirement phase** (BMAS, 2017, p. 111). By contrast, national statistics show an increased risk of poverty particularly for young people up to the age of 24. This relation will not change significantly even with the foreseeable increase in the risk of poverty in old age over the coming decades.

Incorrect estimates by the population relate not least to the **development of extreme poverty worldwide.** Between 1990 and 2015, the number of people in extreme poverty worldwide fell by half – from around two billion to approximately one billion people. Nevertheless, 88 % of respondents mistakenly assume that extreme global poverty has remained unchanged or increased (Lampert and Papadongonas, 2016).

Furthermore, many people also systematically rate their **own position in the income distribution** incorrectly. For example, in surveys a large proportion of society is placed at the lower end of the distribution (GCEE Annual Report 2014 item 514; Niehues, 2014). In actual fact, however, the analysis of the distribution of net household income shows that much of the population is to be found in the middle income segment. According to the Federal Government's definition of the middle class – i.e. people earning between 60 % and 200 % of median net income – the figure for the middle class as a percentage of the total population has remained stable at 78 % over the past ten years (BMAS, 2017, p. 77). This and the improved situation on the labour market is reflected in surveys not only in a growing level of life satisfaction, but also in a fall in inequality as regards life satisfaction levels (Felbermayr et al, 2017).

The regular Report on Poverty and Wealth thus supports the efforts of science to **make the population aware of the real facts.** These awareness-raising efforts should be stepped up.

829. Similarly, it is not useful to translate the problems of other economies – and the solution approaches that may make sense there – to Germany's situation without careful reflection. For example, the increase in income inequality in many developed countries up to the 2000s triggered a discussion on the promotion of **inclusive growth** (European Commission, 2017; IMF, 2017; OECD, 2017). Fol-

lowing the same basic theme, the Federal Ministry for Economic Affairs and Energy developed a ten-point plan for Germany in the spring (BMWi, 2017). It is based on the idea – which is not backed up by statistical distribution analyses – that redistribution by the tax and transfer system alone can no longer achieve changes in market outcomes that are sufficient in terms of social policy; rather, it needs to be supplemented by further interventions.

830. In addition, it is argued that a further reduction of income inequality in Germany would lead to an increase in economic growth. The proponents of this argument base their line of thought on the alleged insight that an increase in income inequality weakens economic growth not only in emerging or developing countries, but also in developed economies (OECD, 2015a; IMF, 2017). However, the **growth effects of income inequality** estimated with macro-econometric models are extremely sensitive to the assumptions made (GCEE Annual Report 2015 items 502 ff.). Studies whose model specifications are irrevocably based from the outset on this causal direction of action can certainly not make a meaningful contribution to this economic-policy debate. This applies, for example, to Albig et al. (2017), who claim that Germany's GDP is about € 40 billion lower as a result of the rise in income inequality.

Methodological weaknesses also characterize multi-country studies based on system GMM estimates, e.g. by Cingano (2014) and Ostry et al. (2014), in which the – naturally endogenous – inequality is instrumented by lagged values. The validity of these estimates is called into question anyway by instruments that are usually only weakly correlated with the endogenous variables (GCEE Annual Report 2015 box 17; Kolev and Niehues, 2016). Above all, however, the unrestricted transferability of an average value estimated within the framework of a regression model to the specific case of an individual economy is extremely problematic.

831. Finally, the debate on the inequality of net income is often mixed with the discussion on the **inequality of gross wages**. From a social-policy perspective, however, attention should focus primarily on **net income after taxes and transfer payments**, not on market income. Nevertheless, it is remarkable that the long-standing tendency for the inequality of monthly wages to increase also seems to be a thing of the past (GCEE Annual Report 2016 item 819; Felbermayr et al, 2016; Möller, 2016). Since the beginning of the current decade, the increase in hourly wages has been spread more evenly across different groups of employees than previously (Brenke and Kritikos, 2017). This is probably mainly due to the increase in employment and is remarkable in view of the polarization on the labour market, since employment in occupations with high and low wages has risen strongly compared to occupations with average remuneration levels. ↘ ITEM 747

3. An updated assessment

832. Against this background, the German Council of Economic Experts is updating its income analysis, contrasting in particular **market income** before taxes and

transfers with **net income** after taxes and transfers. The modified OECD equivalence scale is used for both types of income to enable a person-based analysis of the income ascertained at the household level (GCEE Annual Report 2016 items 798 f.). The actual object of analysis is ultimately the virtual individualized distribution of income. In order to be able to directly compare distributions over time, these are standardized relative to the median income. This means for each of the distributions shown that half of the people have a standardized income of up to one and the other half an income of more than one.

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The German Council of Economic Experts primarily uses the household survey of the German **Socio-Economic Panel (SOEP)** as the data source for its income analyses. The SOEP is a representative, voluntary periodic survey of households, which has been conducted annually for over three decades. Since the individual income data are collected retrospectively and subsequently processed, they are currently only available up until 2014. The **wage and income tax statistics** also provide information on the level, distribution and taxation of assessed and non-assessed income. Since tax year 2012, they have been compiled every year from data provided by the regional tax offices. Data are currently available for 2013. Furthermore, data from the European Community Statistics on Income and Living Conditions (EU-SILC) are also available for an international comparison. The **EU-SILC data set** contains Community statistics collected Europe-wide on income and living conditions and is a standard source of data for measuring poverty and living conditions in the EU Member States. Data from the permanent sample of households willing to be surveyed for the microcensus are used for Germany. Income distribution in Germany hardly differs at all between the different data sets. ↘ CHART 101 TOP LEFT

833. As shown in earlier analyses, the distribution of market income is spread much more broadly than that of net income. ↘ CHART 101 TOP LEFT This is a reflection of a **high degree of redistribution** via the tax and transfer system, which significantly reduces the inequality of income (GCEE Annual Report 2016 item 811). The median values of market and net income are, however, close together.

834. According to the SOEP data, the distribution of standardized net income in Germany changed only marginally between 1994, 2004 and 2014. However, both the lower and higher income have moved slightly farther apart. ↘ CHART 101 TOP RIGHT This suggests that income inequality has risen in the observed period. This rise in net-income inequality is attributable to an increase up to 2005. However, **income inequality has not increased significantly since 2005** (GCEE Annual Report 2016 item 812; BMAS, 2017).

835. Germany's level of income inequality is about **average by international comparison**. The distribution of income in Germany has a broader spread than in Sweden or France. By contrast, income distribution has a broader spread in the United Kingdom, Italy and Spain. ↘ CHART 101 BOTTOM

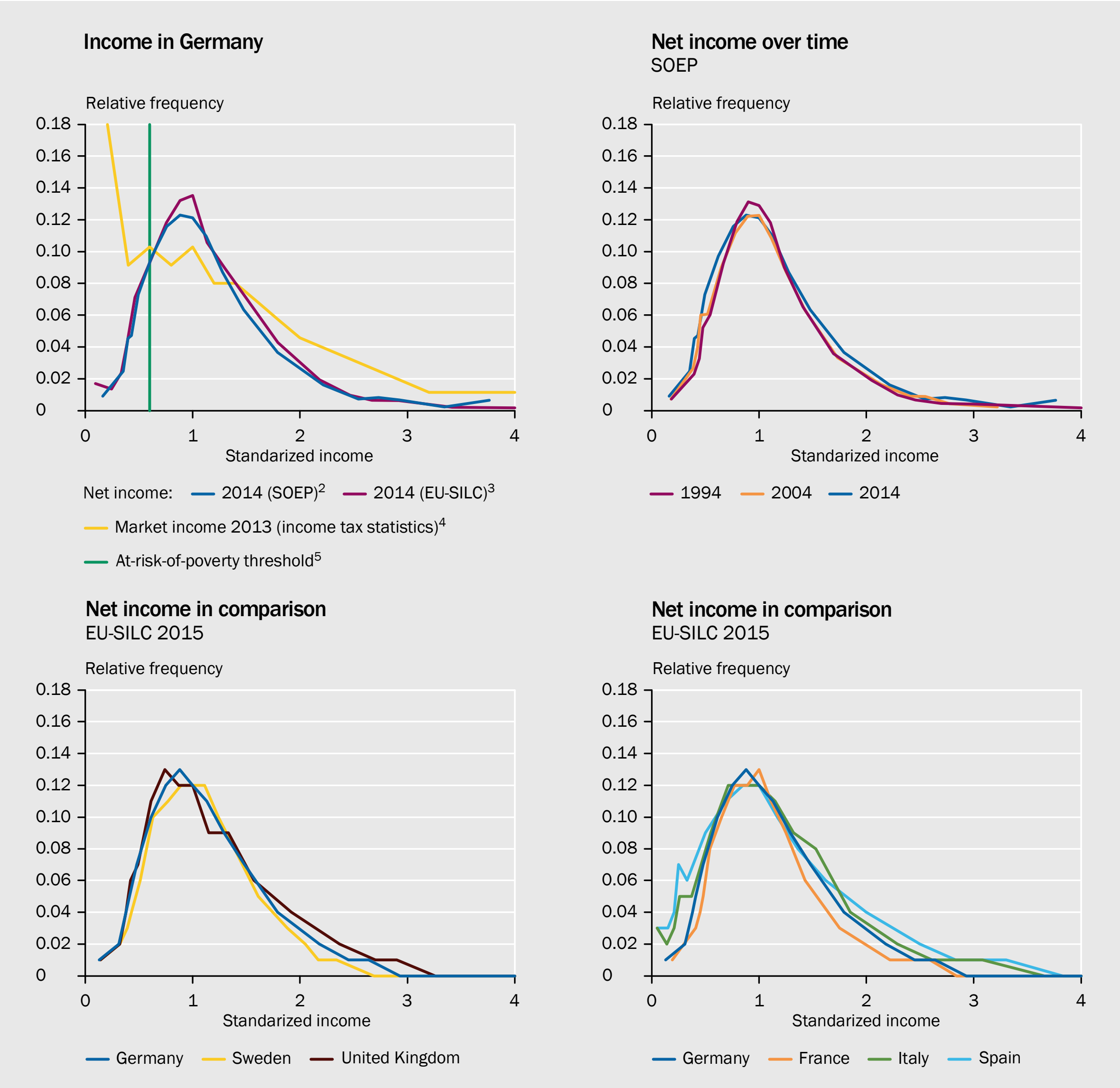
836. Measures of relative poverty can be calculated from the income distribution. According to the SOEP, Germany's **at-risk-of-poverty rate** was 16 % in 2014. The at-risk-of-poverty rate typically describes the income distribution at a point where it is steep. It is therefore sensitive even to slight changes in its spread. ↘ CHART 101 TOP LEFT Societal changes influence the risk of poverty in this

context. Developments such as smaller households, immigration, but also the strong **increase in student numbers** over the last few years have probably contributed to the increase in the at-risk-of-poverty rate.

837. Far fewer people are exposed to a permanent risk of poverty than to a one-off risk (Office for National Statistics, 2016; BMAS, 2017). For example, only 9 % of people were below the at-risk-of poverty threshold both in 2014 and in two of the three previous years. These findings are not surprising, since the economic situation changes during the life cycle as a person switches from training, labour-market participation and retirement. However, the phenomenon of **poverty entrenched over several generations**, which is not documented in greater detail here, has not been satisfactorily resolved to date; it requires much more targeted social-policy approaches than greater redistribution through taxes and transfers (Cremer, 2016).

↘ CHART 101

Distribution of equivalence-weighted income[1]



1 – At 2010 prices. 2 – Standardized median = €19,812. 3 – Standardized median = €19,733. 4 – Standardized median = €20,220. 5 – According to SOEP: at-risk-of-poverty threshold 2014 = €11,887 (60 % of median net income), at-risk-of-poverty rate 2014 = 15.8 %.

Sources: EU-SILC, Federal Statistical Office, SOEP v32, own calculations

838. The fight against the root causes of the remaining poverty risks represents a major challenge. A **low level of qualification** is probably an important factor, as is divorce or a lack of language skills if a person has a migration background.

Measures that interfere directly in the distribution of market outcomes, like the minimum wage, are of little help in reducing the risk of poverty, since possible unemployment and pressures caused in the household context have already been effectively addressed by the tax and transfer system. On the other hand, higher levels of basic security benefits, which directly affect net income, would reduce the incentives to take up work and can therefore only be used sparingly. Therefore, the only effective counter-measures could be more targeted interventions, such as **integrating single parents into the labour market** or raising housing benefits compared to the basic security benefits rates (ALG II).

II. A DEEPER LOOK AT THE INCOME DISTRIBUTION

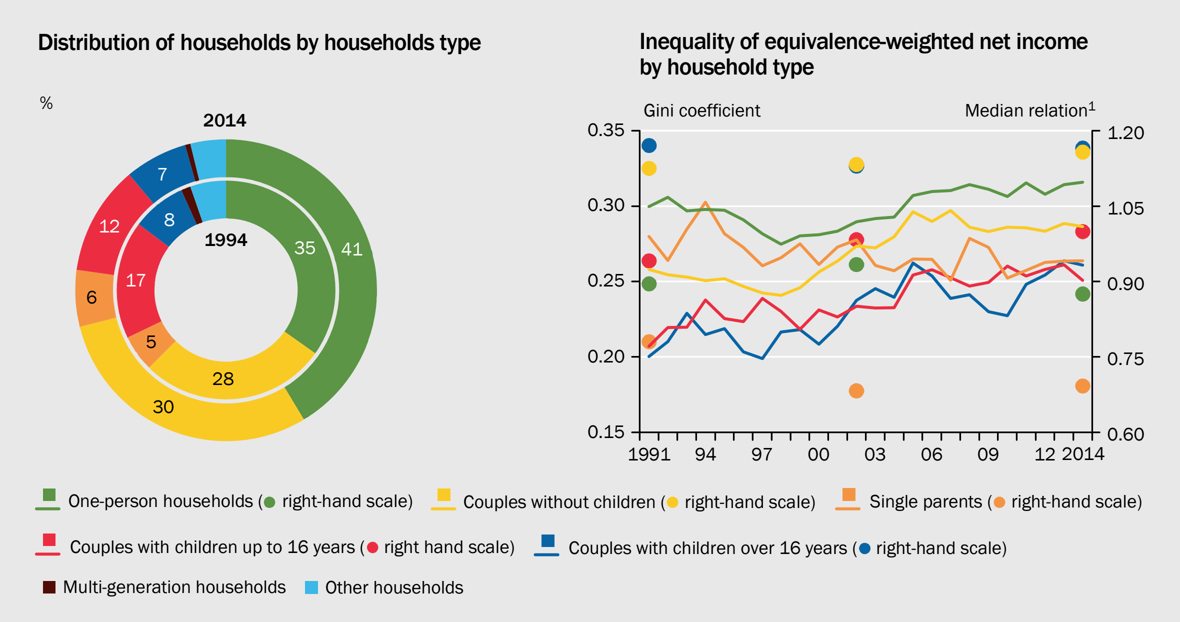
839. An **analysis of the income distribution stratified by different sections** of the population shows that many apparent disparities in income distribution are due to demographics and to the related composition of the labour force. For example, analyses conducted by the German Council of Economic Experts have shown the importance of changes in the dimensions of age, education and professional experience for the wage distribution (GCEE Annual Report 2014 box 23; Klemm and Weigert, 2014).

The following analyses take this a step further and, on the basis of the SOEP, systematically analyse the development of income inequality according to the socio-economic dimensions of age, gender, education and migration background. In this context, one dimension is examined at a time, but without checking for other influencing factors, so that no partial effects can be deduced. The analyses are again based on the concept of **equivalence-weighted net household income** and contrast this income measure with the respective **gross wage**. The underlying assumption of equivalence weighting is that the income is distributed evenly within a household.

1. Change in household types

840. The distribution of the different household types in society changed significantly in the period from 1994 to 2014. ↘ CHART 102 LEFT For example, according to the SOEP, the average household size has dropped from 2.2 to 2.0 persons per household. This is due to a smaller number of family households with children up to 16 (down from 17 % to 12 %) and a rising number of single-person households (up from 35 % to 41 %) and couples without children (up from 28 % to 30 %). Accordingly, the **advantages of common economic activity** have

↘ CHART 102
Inequality in the household context



1 – Median net income of the respective sub-population in relation to the median net income of the total population.

Sources: SOEP v32, own calculations

been **used less frequently** within households over time; there has been a trend towards individualization. As in the case of increases in leisure time and non-monetary wage components, which are being demanded more and more frequently in collective agreements, this can be interpreted not least as a reflection of the general increase in welfare.

In the course of these changes, the inequality of single-person households is significantly higher than, for example, for cohabiting couples with or without children and for single parents. ↘ CHART 102 RIGHT Yet the median income in couple households – with or without children – is higher than that of single-person households or single parents. The trend toward smaller households thus contributes to rising inequality.

841. Findings stating that the prospects of **participation in societal and economic life** have worsened for low-income households since 1998 need to be put into perspective against this background. Participation includes, for example, expenditure on leisure time, entertainment and culture, as well as on hotel and restaurant services. According to a recent study conducted by the Bertelsmann Foundation, low-income single persons and single parents are especially affected here (Sachs et al, 2017). For these household types, expenditure on basic needs has increased more than their average net income; at the same time, the proportion of net income spent on societal participation has fallen by 2 and 3 percentage points, respectively.

Above all, higher housing costs mean that many households had less income available for societal participation in 2013 than in 1998. On the other hand, households today are smaller and have more average living space per inhabitant (Federal Statistical Office, 2016b). This is reflected not least in the fact that households today are willing to spend more money on housing. Fixed household costs like rent are more rarely spread over several shoulders than in the past.

2. Socio-economic differences in inequality and mobility

842. The inequality of net income differs significantly between different sections of the population. In order to quantify these differences, the data originally collected at the household level are first converted into virtual income at the individual level using equivalence scales. The respective **distribution of individualized income** is then described within the respective **sub-population** of individuals and in comparison with the overall distribution. The **Gini coefficient**, the most widespread distribution measure, is used to describe the shape of distribution in the sub-population. ↘ CHART 103 TOP The Gini coefficient takes a value of one at the largest possible degree of inequality (one person earns the entire income), and a value of zero in the case of absolute equality. To compare the respective position of the distributions, the **median relation** of each group is also shown, i.e. the ratio of the median of the respective sub-population to the median of the population as a whole. ↘ CHART 103 MIDDLE

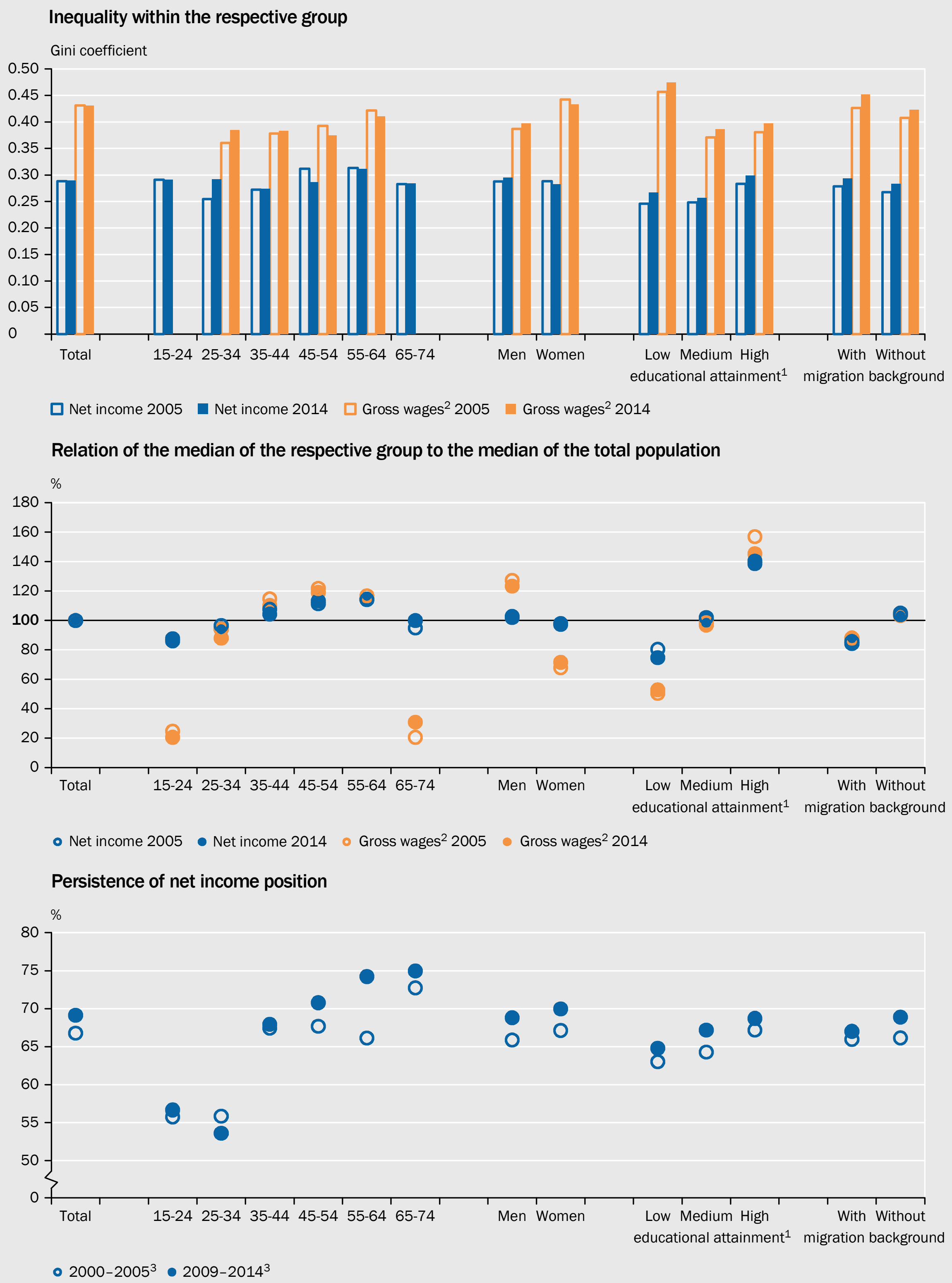
Since the equivalence weighting used to calculate the individual income data not only covers the effect of the tax and transfer system, but also assumes that households share the benefits of common economic activity without considering individual roles or the distribution of power within the household, corresponding **analyses of gross wages** (which are not identical to the individual market income) are added to the information on the distribution of net income. Income from self-employment is disregarded in this context.

Finally, the **persistence of the income position** of each sub-group of the population is shown; this is defined as the likelihood of remaining in the same or the neighbouring of ten income classes within three years. ↘ CHART 103 BOTTOM The results show that the income positions in Germany have become relatively entrenched (GCEE Annual Report 2016 item 814). In the period from 2011 to 2014, 69 % of the workforce remained in their respective income class or moved one class up or down at most. Since 1991, income mobility measured in this way has declined by about seven percentage points (GCEE Annual Report 2016 chart 106 right).

843. The first subdivision of the population takes account of different **age groups**. This reveals, for example, that in 2014 the inequality of net income in the 55 to 64 age group was greater than among 25- to 34-year-olds, because the employment histories of the older group were longer and of different degrees of success. ↘ CHART 103 TOP

The age groups' position in the distribution of net income, which can be recognized via the relative median, follows the pattern of a **life cycle**. ↘ CHART 103 MIDDLE The equalization of relative income via family ties is likely to play a particularly significant role for young people.

↘ CHART 103
Inequality and persistence of equivalence-weighted income by socio-economic characteristics



1 – Low educational attainment: neither apprenticeship nor high school diploma; medium educational attainment: high school diploma or apprenticeship; high educational attainment: tertiary degree. 2 – Only persons in employment. For ages 15–24 and 65–74, not enough observations for reliable calculation of the Gini coefficient. 3 – Persistence of the net income position (remaining in the same or a neighbouring income tenth after three years) in the relevant population group, averaged over the periods 2000–2003, 2001–2004, 2002–2005, and over the periods 2009–2012, 2010–2013, 2011–2014.

Sources: SOEP v32, own calculations

In the context of this analysis, it is impossible to say whether the equalization of the provision of monetary resources goes beyond the common home and includes – as implicitly assumed – cultural participation, for example. All relevant estimates of inequality and the poverty risks faced by children or older people are based on this assumption, however (BMAS, 2017).

844. The 55 to 64 age group reveals a particularly high **inequality of gross wages**. ↘ CHART 103 TOP There are far fewer employed persons in the 15 to 24 and 65 to 74 age groups than in the other age groups, so that no statistically reliable statement can be made about wage inequality here. There are differences in wage levels between the age groups. Usually, remuneration increases with age, since employed people increasingly gain work experience and raise their productivity level. ↘ CHART 103 MIDDLE Based on the principle of **seniority wages**, companies and employees often conclude an implicit contract which rewards many years of service for the company with wage increases that exceed individual productivity growth (Lazear, 1979, 1981; Zwick, 2012).

The year 2005 is used for comparisons because income inequality has hardly changed in the overall population since then. The gap between the median wage in the youngest age group and the median of the population as a whole was greater in 2014 relative to 2005. In the highest age group, by contrast, this ratio has become smaller. ↘ CHART 103 MIDDLE The current controversial discourse on rising poverty in old age seems exaggerated in view of this **improved situation for older people**. Furthermore, there are considerable differences between the age groups in the mobility of income positions. Older people in employment show a higher persistence in their income position, while younger people are much more mobile. ↘ CHART 103 BOTTOM

845. The inequality of **net income among women** is approximately the same as that among men; the Gini coefficient is around 0.01 lower for women. ↘ CHART 103 TOP The ratio of median income is also quite similar. The key reason for these small differences lies in the **large-scale internal redistribution** of monetary resources **within households** that is **assumed** by equivalence weighting. Traditionally, men's contribution to household income has been larger, although this had fallen to less than two-thirds by 2013 (BIB, 2017). It cannot be conclusively clarified here whether there is a smaller or larger redistribution of resources within the family network than is assumed by equivalence weighting.

846. A look at the inequality of gross wages by gender shows the **different distribution of individual remuneration** and thus provides information about another facet of inequality. ↘ CHART 103 TOP The distribution of gross wages is significantly more unequal among women than among men, with a difference of 0.04 Gini points in 2014. The basic reasons for this discrepancy probably lie in the lower participation rate and the higher part-time rate of women compared to men.

The relative median position among women increased between 2005 and 2014, in other words their distance from the median wage of the overall population has become smaller. ↘ CHART 103 MIDDLE There are **minor differences in income mobility** between the sexes. ↘ CHART 103 BOTTOM However, this stems exclusively from the mobility of one-person households, since the mobility of the equivalence-weighted income of cohabiting partners is identical by definition.

847. The inequality of income differs significantly between different **levels of educational attainment**. ↘ CHART 103 TOP Income inequality is 0.04 or 0.03 Gini points lower among those with an intermediate education (high school diploma or apprenticeship) and among persons with low educational attainment (neither high school diploma nor completed apprenticeship) than among persons with a high-level (tertiary) education. It is striking in this context that income inequality in the two lower educational groups is much smaller than the average for the population as a whole.

This is because the **inequality between the three educational groups** is particularly large. ↘ CHART 103 MIDDLE It is thus possible that the generally observed rise in the number of graduations in higher education has increased income inequality in the population as a whole. Wage inequality is highest among the group of people without an apprenticeship or a high school diploma. ↘ CHART 103 TOP Unemployment is particularly high in this group, so that a relatively large number of people receive no wages at all (Hausner et al, 2015).

The relative median gap between the net income of people with low educational attainment and the overall population has tended to increase since 2005. ↘ CHART 103 MIDDLE It seems that this group is being **increasingly left behind** in the labour market. This suggests that attaining an educational qualification is more important than ever and should be given political priority.

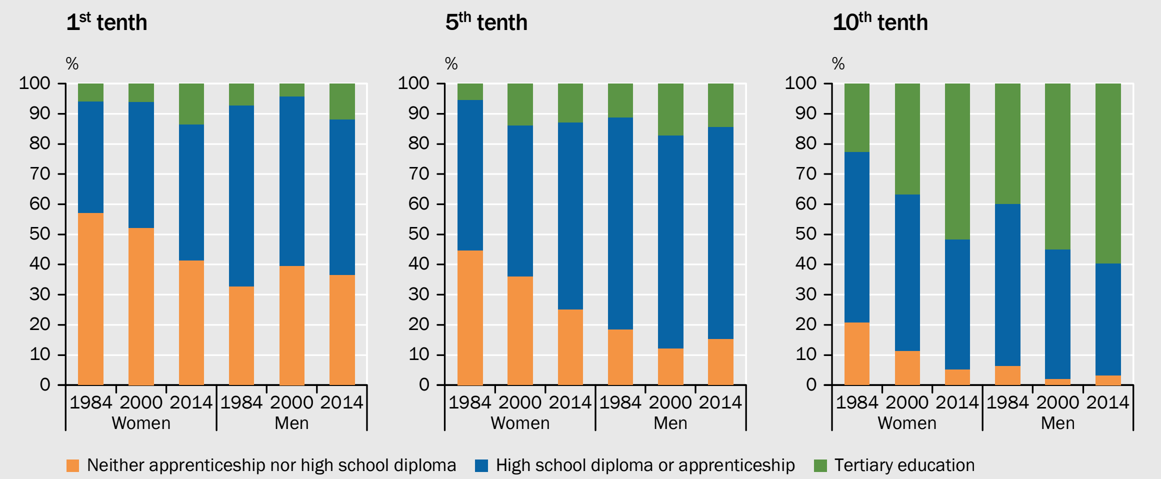
848. The figures for **persons with a migration background** show a slightly higher inequality of income and wages than for those without a migration background. ↘ CHART 103 TOP One reason for this is likely to be the lower participation rate of people with a migration background. The increase in immigration over the past decades influences the extent of income poverty among foreigners; the percentage of persons with a migration background rose from 18 % in 2005 to 23 % in 2016 (Federal Statistical Office, 2016c).

While the percentage of Germans with low income – i.e. those who earn less than 67 % of median income – has remained unchanged at around 23 % to 24 % since 1983, the percentage of low-income persons who were born abroad has increased significantly from 23 % to 37 % (Grabka et al, 2016). However, the relative median of net income and gross wages of persons with a migration background has remained virtually unchanged compared to 2005. ↘ CHART 103 MIDDLE

3. Mobility and expansion of education

849. The expansion of education that began in the 1970s has had the effect that younger generations are now far better educated than their parents. This phenomenon runs through all income groups. For example, the percentage of people with a tertiary education has risen steadily in recent decades – from 10 % in 1984 to 19 % in 2014 according to SOEP data. However, the **increase in the number of higher educational attainment** varies in size across the distri-

↘ CHART 104
Shares of different education levels by income tenth



Sources: SOEP v32, own calculations

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bution of income. ↘ CHART 104 For example, the level of tertiary education in the lowest tenth of the income distribution has risen to only 13 % for women and 12 % for men, compared to 52 % or 60 % respectively in the top tenth.

As Gebel and Pfeiffer (2008) show, women in particular have increasingly improved their educational attainments in the course of these developments. By 2014, women had largely caught up with men. However, in the upper part of the income distribution there are still more men than women completing a tertiary education.

850. Since only the passing of a specific academic degree is shown here, educational attainment is only partially comparable over a long period of time. Since the level of education is already relatively high, in the future it will be difficult to repeat such a strong **expansion towards tertiary qualification** as was seen in the past. However, since the Bologna reform, there have been efforts to increase the number of tertiary qualifications. Since 2007, the number of students has grown by over 800,000. ↘ ITEM 751 This means the latest increase in student numbers was much higher than at the time of educational expansion in the 1970s and 1980s.

851. The increase in the level of education in recent decades can have an impact on **income mobility**. When people rise in the distribution of income by acquiring tertiary qualifications, they tend to remain in a higher income group for a comparatively long time on average (GCEE Annual Report 2016 item 814). The SOEP data reveal a negative correlation between higher educational attainment and income mobility. The increase in higher educational attainment caused by an educational expansion can thus contribute to a decline in income mobility.

III. STRENGTHENING EQUAL OPPORTUNITIES AND PARTICIPATION

852. The largely stable income inequality in the overall population stands in contrast to a perception of growing injustice. A more in-depth look at the income distribution reveals **different distributions in different socio-economic groups**. Changes in the structure of households have caused additional income differences over time. Ageing in society continues to potentially lead to higher income inequality in the population, because inequality among older people tends to be higher than among younger people. Such developments can only be influenced by political action in the long term, if at all. It is also unclear whether such intervention would be normatively justified. The focus of political action should rather be on ensuring **equal opportunities** and **broad societal participation**.

853. Furthermore, **low income mobility** is problematic unless it is caused by a change in the composition of the population. For example, the increased persistence of income positions seems to have consolidated core unemployment (BMF, 2017). It should be possible to achieve an improvement in income mobility – and thus in the equality of opportunity – above all via an improvement in the education, training and qualification of disadvantaged groups.

854. Income inequality varies considerably with different educational attainments. However, in Germany the highest level of education a person attains depends greatly on that of their parents; in other words, an especially large number of people achieve the same educational level as their parents (OECD, 2015b). There is thus a tendency towards an entrenchment of inequality over generations, which should be countered by **greater equality of opportunity**. This can be most effectively promoted by **early childhood education**, since the measures employed there are particularly efficient (Cunha and Heckman, 2007). In addition, investment in the nationwide development of child day-care centres and full-day childcare helps people improve their work/life balance. Much has been achieved in this field in the past few years; however, coverage and quality vary considerably between different Länder and municipalities in Germany (Bertelsmann Foundation, 2017; Schmitz et al, 2017).

A differing opinion

855. One member of the Council, Peter Bofinger, disagrees with the assessment by the majority of Council members on the **development of income distribution** in Germany. The majority of Council members note that "an intensive discourse on inequality is being held in this country", partly due to the fact "that perceptions deviate from the reality of the situation in several respects".

856. The line of argument put forward by the majority of Council members centres on the finding that **the distribution of net income** has remained broadly stable **since 2005**. It is important to bear in mind that the **fringes of the income distribution** have continued to diverge since 2005. In the period from 2005 to 2014, household income in the first and second deciles rose by 3.0 % and 0.65 % respectively. In the eighth and ninth deciles, the increase amounted to 7.5 % and 7.0 % respectively. Grabka and Goebel (2017) also cite the **90:10 percentile ratio** as an indication of a further divergence of distribution on the fringes after 2005. This indicator describes the ratio between the income of the lowest-earning person in the highest decile and that of the highest-earning person from the lowest income decile. In the 1990s, this indicator had a value of about three and rose to 3.5 in 2005. Examining the years since 2011, Grabka and Goebel identify a further statistically significant increase – to the highest value of 3.65 in 2014.

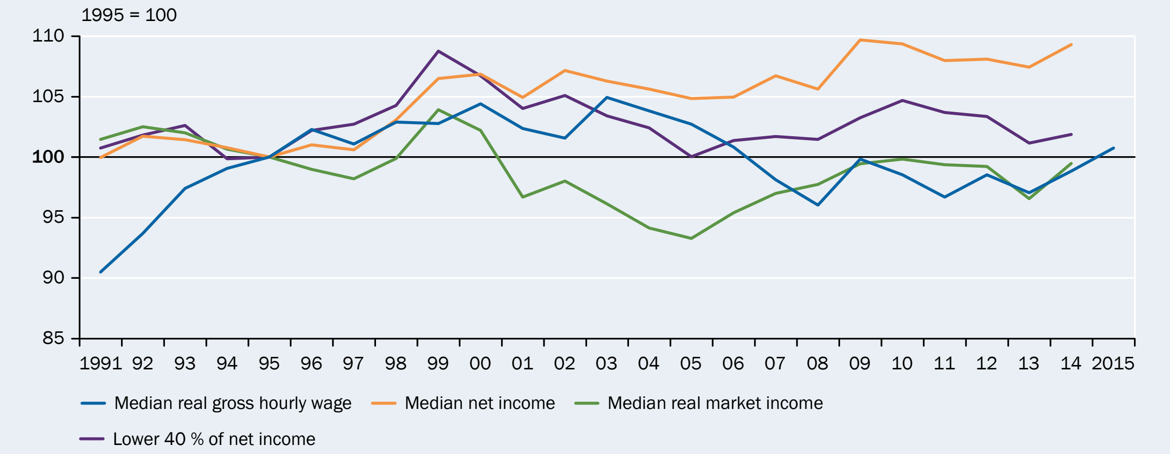
857. The finding that the inequality of income has increased further since 2005 is also supported by the **higher poverty risk** since then (item 825). As Grabka and Goebel (2017) illustrate on the basis of a comparison between the years 2004 and 2014, this development affected people of all age groups from 18 to 65, irrespective of whether they earned an individual income or not. The higher number of students (item 850) can therefore only partly explain the general increase in the risk of poverty. Changes in living conditions have no doubt also contributed to this development (items 840 ff.). From a social-policy perspective, however, the decisive issue is that more and more people are affected by a risk of poverty, even if this has been caused not by economic, but by personal factors.

858. Overall, it is not unproblematic to use **2005** of all years – **a year with an extremely high level of unemployment** – as a reference point for the long-term development of income inequality. Even if the income distribution has not changed since then, this would not be a reason to give the all-clear. The question would rather be why the massive improvement in the employment situation has not made any contribution to correcting the unusual diverging of income distribution that took place in the period from 1999 to 2005.

859. The majority of Council members regard measures which, like the **minimum wage**, interfere directly in the distribution of market outcomes as being of little help in reducing the risk of poverty, since possible unemployment and pressures caused by the household context are already effectively addressed by the tax and transfer system. Yet it is important to bear in mind that the **more even distribution of hourly wages across different groups of employees**, which could be observed especially in 2014 and 2015, may be due, at least in part, to the general minimum wage and to the industry-specific minimum wages agreed in advance of its introduction for temporary work (2012), the hairdressing trade (2013) and the meat trade (2014).

860. The majority's finding of a "divergence of perception from the statistical evidence base" in the discussion on income distribution can therefore only be partly shared. This applies all the more if one takes into account that the **material situation for comparable households and employees** has hardly im-

↘ CHART 105
Different indicators of income development



Sources: Federal Statistical Office, SOEP v32, own calculations

proved in many cases since the mid-1990s. The bottom 40 % of household net income, the median gross hourly wage and the median household market income were no higher in 2014 or 2015 (gross wages) than in 1995. The median household net income increased by 9 % over a period of two decades. ↘ CHART 105

This finding is quite compatible with the fact that the **income of individual households has improved during their members' life cycles.** But this alone does not explain why the unfavourable development of income cannot be perceived by the public. For example, many parents will not find it difficult to see that their children no longer manage to become materially better off in their professional lives than the previous generation.

861. Overall, therefore, it is certainly worth holding an intensive discourse in a situation where Germany's impressive economic growth from 1995 to 2015, which led to an increase in the gross domestic product of around one third, has been unable to contribute to an **increase in prosperity for all**.

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