

## AT A GLANCE

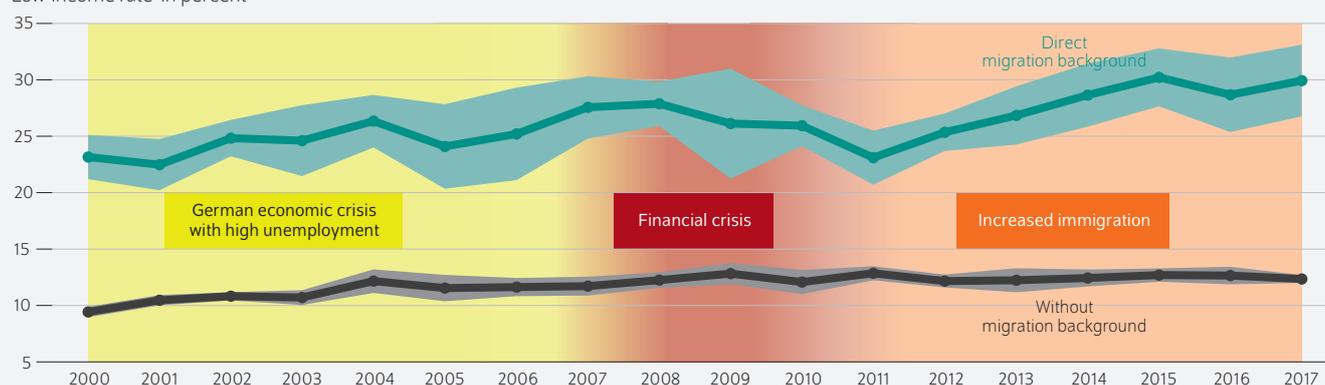
# Real incomes increasing, low-income rate decreasing in individual age groups

By Markus M. Grabka and Jan Goebel

- Household incomes have increased by 12 percent in real terms since 2000, lowest income decile also benefiting since 2015
- Household income inequality has been stagnating for over a decade
- Low-income rate has remained almost unchanged since 2013 but is declining in different age groups
- Rate is increasing up to 30 percent for individuals with a direct migration background; better labor market integration is required
- Economic stimulus packages and unemployment benefits could soften the negative effects of the coronavirus pandemic on income

### The low-income rate of the population without a migration background has remained unchanged for over a decade, but is rising in the population with a direct migration background

Low-income rate<sup>1</sup> in percent



<sup>1</sup> Individuals with less than 60 percent of the median disposable income.

Note: Only individuals in private households. Needs-adjusted annual income surveyed the following year, adjusted using the modified OECD scale.

Sources: SOEPv35; authors' own calculations.

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## FROM THE AUTHORS

*“Incomes in Germany have been rising across the board since 2013. One positive aspect of this development is that the low-income rate of households with children and adolescents in the population without a migration background is decreasing.”*

— Markus M. Grabka —

## MEDIA



Audio Interview with Markus M. Grabka (in German)  
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# Real incomes increasing, low-income rate decreasing in individual age groups

By Markus M. Grabka and Jan Goebel

## ABSTRACT

The number of employed persons in Germany has grown by over five million since 2000, in part due to an increase in immigration. This development is reflected in private household income, which has increased by 12 percent over the same period. Since 2013, all income groups have been benefiting from this increase and in 2015, the lowest income decile began benefiting as well. Disposable income inequality and the low-income rate are stagnating, but the trends differ depending on migration background. In the native population, the low-income rate has not changed since 2008 and for some age groups, it has even declined. Over the course of the most recent wave of immigration, the rate increased significantly to around 30 percent for persons with a direct migration background, although the first effects of refugees' integration into the labor market are just now being seen. Therefore, immigrants still require support integrating into the labor market.

Germany has faced three major challenges since 2000. The first, lasting until 2005, was a high, growing unemployment rate. Following that was the financial crisis of 2007–2008, and beginning in 2010, there was a significant increase in the number of immigrants to integrate. While between 2000 and 2005 income inequality increased significantly, the last two challenges lead to no major changes in income inequality. In 2020, Germany was faced with a fourth challenge in the form of the coronavirus pandemic. Amidst the economic and social uncertainty caused by the pandemic, a comparison of the effects of these previous challenges, especially those of the financial market crisis, is helpful. The financial crisis caused a decline in real GDP of over five percent, making it the worst economic slump since World War II.<sup>1</sup> The German Council of Economic Experts assumes the coronavirus pandemic will cause an economic slump to this degree.<sup>2</sup> Whether the decrease is greater depends largely on the duration of the necessary restrictions to public life.

This study updates previous DIW Berlin studies on personal income inequality and low-income rate in Germany from 2000 to 2017.<sup>3</sup> It is based on the most currently available income data of the Socio-Economic Panel (SOEP)<sup>4</sup> collected by DIW Berlin in partnership with Kantar (Box).<sup>5</sup> The microlevel data is supplemented by macrolevel data

**1** Markus M. Grabka, "Income and Wealth inequality after the financial crisis—the case of Germany," *Empirica. Journal of European Economics* 42, no. 2 (2015): 371–390.

**2** Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung, *Die Gesamtwirtschaftliche Lage angesichts der Corona-Pandemie. Sondergutachten* (in German; available online, accessed on April 1, 2020).

**3** For a description of long-term income inequality since 1991, cf. Markus M. Grabka, Jan Göbel, and Stefan Liebig, "Wiederanstieg der Einkommensungleichheit – aber auch deutlich steigende Realeinkommen," *DIW Wochenbericht*, no. 19 (2019): 343–353 (in German; available online, accessed March 27, 2020. This applies to all other online sources in this report unless stated otherwise).

**4** SOEP is an annual representative survey of private households. It began in West Germany in 1984 and expanded its scope to include the new federal states in 1990; cf. Jan Goebel et al., "The German Socio-Economic Panel (SOEP)," *Journal of Economics and Statistics* 239, no. 29 (2018): 345–360.

**5** The respective income year is identified in this study in accordance with the conventions in the German Federal Government's Report on Poverty and Wealth (Bundesministerium für Arbeit und Soziales, *Lebenslagen in Deutschland* (2013)) and the appraisal of the German Council of Economic Experts (for example, the 2016/2017 Annual Report). The SOEP collects annual income information in retrospect—for the previous calendar year—but weighted according to the population structure at the time of the survey. Hence the data for 2017 presented here were collected in the 2018 survey wave.

from the Federal Statistical Office on the workforce and private consumption.

### Stark increase in workforce and private consumption since 2010

For the German population, earned income continues to be the most important financial source for their subsistence in quantitative terms. The development of employed persons since 2000 can be divided into two phases (Figure 1): Initially, between 2000 and 2005, the number declined slightly due to the increasing unemployment rate at the time. Beginning in 2006, a phase of almost continual employment growth began that even the global financial crisis in 2009 was unable to affect significantly. Thus, the number of employed persons was 13 percent higher in 2019 than in 2000. According to federal statistics, this is an increase of over 5.2 million employed persons.<sup>6</sup> When observing the core labor force only,<sup>7</sup> this is still an increase of 3.7 million employed persons. These 3.7 million workers are comprised of around 2.3 million additional standard employees as well as 1.5 atypical employees<sup>8</sup> and a decrease of around 165,000 in contributing family workers. This means that, compared to 2000, significantly more individuals are able to at least partly finance their subsistence from gainful employment.

The improved situation on the labor market is reflected in the aggregated real private consumption of private households, which has also developed positively according to federal statistics. After stagnating until 2009, private consumption has since increased markedly, parallel to employment. In 2019, it was 14 percent higher than in 2000.<sup>9</sup> The financial market crisis in 2009 had limited effects on the labor market and real private income—so mild, in fact, that they barely made themselves noticeable in the aggregated figures over the long term.

### Real income growth following employment growth

This two-phase development is also reflected in the household income of private households according to the SOEP data. This data includes information on all individuals in a private household, regardless of whether they have drawn a market income or not. If not, they are assigned a value of zero in the calculations.

<sup>6</sup> Statistisches Bundesamt, *Bevölkerung und Erwerbstätigkeit (Inländer) Deutschland in 1000. Ergebnisse der Erwerbstätigenrechnung im Rahmen der Volkswirtschaftlichen Gesamtrechnungen (2020)* (in German; available online).

<sup>7</sup> The core labor force includes employees between the ages of 15 and 64 who are not in school, training, military service, civilian service, or voluntary service.

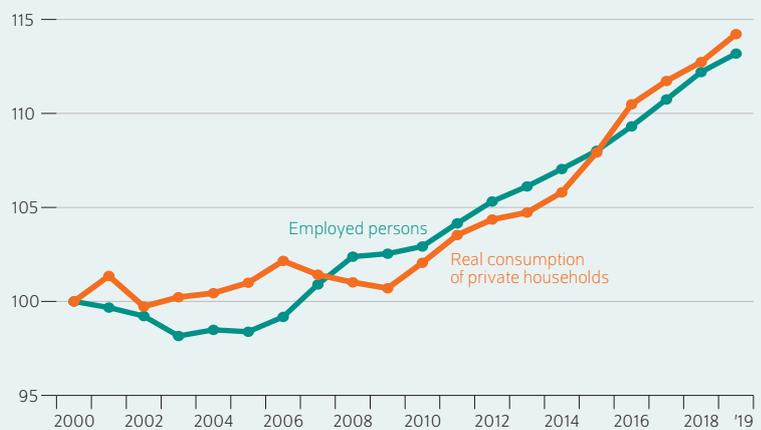
<sup>8</sup> "Atypical employed persons" refer to around one million part-time workers who work fewer than 20 hours per week.

<sup>9</sup> Adjusted for purchasing power, consumption per capita of private households in Germany is 18.9 percent above the EU average. Cf. Statistisches Bundesamt, "Pro-Kopf-Konsumausgaben 2018 in Deutschland nominal 30 Prozent höher als im EU-Durchschnitt," Press release no. 089 (March 12, 2020) (in German). The general improved situation in Germany is also reflected in the average headline indicators of current well-being. According to these indicators, Germany is one of the countries that have shown above-average improvements since 2010 after already beginning at a high level. Cf. OECD, *How's Life? 2020: Measuring Well-being* (Paris: OECD Publishing, 2020) (available online).

Figure 1

### Relative development of employed persons and real consumption of private households

Change in percent, standardized: 2000 = 100



Note: In 2015 prices. Results of the Federal Statistical Office's *Erwerbstätigenrechnung* as a part of the national accounts (*Volkswirtschaftliche Gesamtrechnungen, VGR*). Preliminary results for 2016 to 2019.

Source: Federal Statistical Office of Germany.

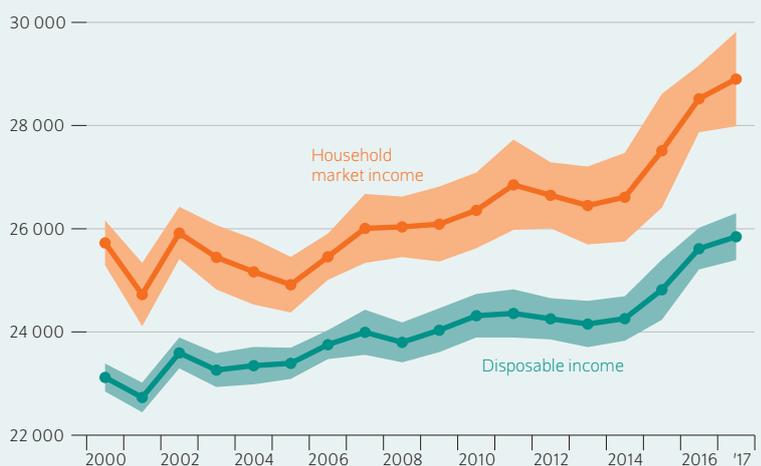
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The number of employed persons as well as private consumption have developed positively since around 2009.

Figure 2

### Real household market income and disposable income

Average in euros



Note: Real income in 2015 prices, only individuals in private households included. Needs-adjusted annual income surveyed the following year, market household income includes a fictive employer's contribution for civil servants, adjusted using the modified OECD scale. The shaded areas indicate the 95-percent confidence band.

Sources: SOEPv35; authors' own calculations.

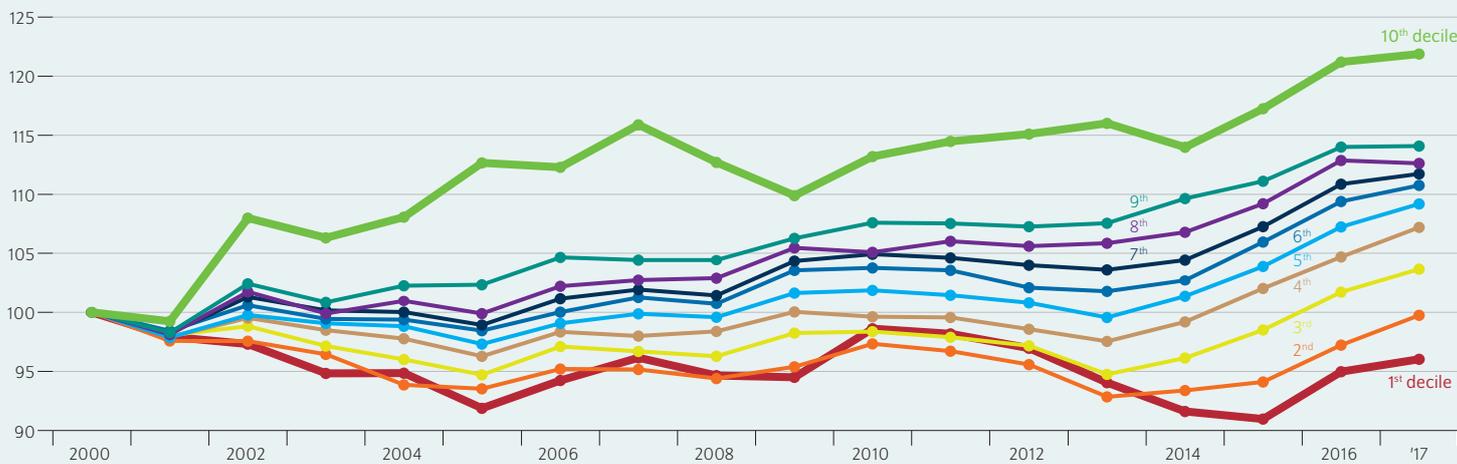
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On average, disposable household income has increased by almost 12 percent since 2000.

Figure 3

**Development of disposable household income by decile**

Change in percent, standardized: 2000 = 100



Note: Real income in 2015 prices, only individuals in private households included. Needs-adjusted annual income surveyed the following year, adjusted using the modified OECD scale.

Sources: SOEPv35; authors' own calculations.

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With the exception of the first decile, income has been increasing in real terms since 2013. This increase began for the lowest income group in 2015.

Thus, the average needs<sup>10</sup> and inflation-adjusted annual household gross market income<sup>11</sup> of individuals in private households stagnated between 2000 and 2009. From 2010 to 2017, real growth increased by ten percent (Figure 2). This increase is primarily due to the increase in employment described earlier, as in addition to increasing real wages,<sup>12</sup> the number of employed persons within private households increased.

The disposable household income, the total of all incomes after taxes (income, social security contributions, transfers), is also increasing. Here, the increases are more evenly spread over time: Disposable household income grew by four percent in the first phase (2000 to 2009) and by six percent in the second phase (2010 to 2017).

Sorting the population by income level and dividing the results into ten groups of equal size creates ten deciles.<sup>13</sup> This is normalized to the decile-specific average in 2000 to be able to describe the development in percentage terms (Figure 3). The following pattern results: Aside from the uppermost decile, which experienced a strong increase, the real disposable household income in the other deciles only

slightly changed from 2000 to 2013. Since then, the real disposable income has been increasing over all income groups.<sup>14</sup> According to the most current calculations, the lowest decile began experiencing this increase in 2015,<sup>15</sup> the year the statutory minimum wage was introduced, from which this income group profited the most.<sup>16</sup>

In the top decile, real incomes grew disproportionately until 2007, when they began growing somewhat more slowly. Beginning in 2014, they began to increase more strongly again. At the current margin, incomes in the top decile are thus about 22 percent higher in real terms than in 2000. The growth in the lower deciles is around 13 percent for the seventh, eighth, and ninth deciles; about ten percent for the fifth decile; and four percent for the third decile.

Since 2000, the lowest decile has been the only decile in the negatives, at minus four percent. In addition to the

<sup>10</sup> Cf. the term *Äquivalenzeinkommen* in the DIW Berlin Glossary (in German; available online).

<sup>11</sup> Market income equals the sum of capital and earned income, including private transfers and private pensions, before taxes, social security contributions, and monetary social benefits.

<sup>12</sup> Since 2007, the real wage index has markedly increased in ten out of twelve years. In the other two years, the index stagnated, cf. Statistisches Bundesamt, *Verdienste und Arbeitskosten* (2019).

<sup>13</sup> The lowest decile indicates the income situation of the poorest ten percent of the population and the top decile, the richest. It should be noted that the decile a person belongs to can change over time if their income position changes due to income mobility.

<sup>14</sup> However, the overall positive trend in real income growth across the population neglects the fact that the welfare trend differs for tenant and homeowner households. Thus, over the long term, the living costs for homeowner households have either stayed the same or have even fallen as a result of falling interest rates for mortgage loans while tenant households, especially in urban areas, do not necessarily have to have more income available for private consumption when housing costs have been taken into account.

<sup>15</sup> The average income in the first income decile differs in 2016 from the 2019 study (cf. Grabka, Goebel, and Liebig, "Wiederanstieg der Einkommensungleichheit – aber auch deutlich steigende Realeinkommen"). This is because weighting was revised to include additional information to better take immigrants into account and there has also been a change in refugees' income generation. This applies to households with refugees in which adult persons were surveyed by SOEP for the first time. They were excluded from the analysis because there is no data on the previous year's income for first-time respondents, on which the data in this report is based.

<sup>16</sup> Cf. Alexandra Fedorets et al., "Lohnungleichheit in Deutschland sinkt," *DIW Wochenbericht*, no. 7 (2020): 91–97 (in German; available online).

Box

**Assumptions for income measurement**

The evaluations presented in this study are based on the currently available survey wave of the longitudinal Socio-Economic Panel (SOEP) study and rely on annual income data. In each survey year (*t*), all income components (market income derived from the sum of all capital and earned income, including private transfers and private pensions) were added together for the prior calendar year (*t-1*). Further, income from statutory pensions and social transfers (welfare, housing allowance, child benefit, support from the employment office, etc.) was taken into account and ultimately, with the help of a simulation<sup>1</sup> of tax and social security payments, net annual income could be calculated. Because German tax law is highly complex, the model could not be used to simulate all special tax regulations, and hence we assume that the income inequality measured in the SOEP is underestimated.

In the spirit of the international literature,<sup>2</sup> fictive (net) income components related to owner-occupied homes (imputed rent) were also added to income. The EU Commission specifies that EU-wide income distribution calculations must be based on the European Union Statistics on Income and Living Conditions (EU-SILC), including non-monetary income components from low-cost rental units (social housing, low-cost private or company housing, households without rental payments), and we adopted this approach in this study as well.

In line with international standards, the income situations of households of different sizes and compositions are made comparable by converting the total income of households into an equivalent income. We converted household incomes using a scale generally accepted in Europe and recommended by the OECD. Every household member was assigned an equivalent income calculated in this manner, under the assumption that all household mem-

bers benefit from their shared income equally. In the process, the head of household receive a weight of one; the other adults in the household and children 14 and over a weight of 0.5. Children under 14 receive a weight of 0.3.<sup>3</sup> We thus assumed a cost degression in larger households.

In all population surveys, taking missing information from individual respondents into consideration properly presents a specific challenge, particularly in the case of income. In the SOEP data analyzed here, missing information is replaced using elaborate, cross-sectional, and longitudinal imputation methods.<sup>4</sup> This also applies to missing values for individual household members refusing to answer any questions in households otherwise willing to participate in the survey. In these cases, we applied a multi-stage statistical method to six individual gross income components (earned income, pensions, and transfer benefits in the case of unemployment, training/university, maternity leave/parental allowance/parental benefit and private transfers).<sup>5</sup> The process included newly imputing all missing values in retrospect after each new data collection period, since new information from surveys can be used to add the data missing from prior years. This can lead to changes in earlier analyses.

To avoid method effects in the times series for the indicators calculated, the first survey wave of each SOEP sample was excluded from the calculations. Studies show that multiple adjustments in survey behavior occur during the first two survey waves, and they are not due to varying willingness to participate.<sup>6</sup>

<sup>1</sup> Cf. Johannes Schwarze, "Simulating German income and social security tax payments using the GSOEP. Gross-national studies in aging," *Syracuse University Project Paper*, no. 19 (1995).  
<sup>2</sup> See Joachim R. Frick, Jan Goebel, and Markus M. Grabka, "Assessing the distributional impact of 'imputed' rent and 'non-cash employee income' in micro-data," in *Comparative EU statistics on Income and Living Conditions: Issues and Challenges. Proceedings of the EU-SILC conference*, ed. European Communities (Helsinki: EUROSTAT, November 6–8, 2006): 116–142.

<sup>3</sup> See Brigitte Buhmann et al., "Equivalence Scales, Well-being, Inequality and Poverty," *Review of Income and Wealth* 34 (1998): 115–142.  
<sup>4</sup> Joachim R. Frick and Marcus M. Grabka, "Item Non-response on Income Questions in Panel Surveys: Incidence, Imputation and the Impact on Inequality and Mobility," *Allgemeines Statistisches Archiv* 89, no. 1 (2005): 49–61.  
<sup>5</sup> Joachim R. Frick, Markus M. Grabka, and Olaf Groh-Samberg, "Dealing with incomplete household panel data in inequality research," *Sociological Methods and Research* 41, no. 1 (2012): 89–123.  
<sup>6</sup> Joachim R. Frick et al., "Using Analysis of Gini (ANOGI) for Detecting Whether Two Subsamples Represent the Same Universe. The German Socio-Economic Panel Study (SOEP) Experience," *Sociological Methods Research* 34, no. 4 (2006): 427–468.

development of the labor market and pensions in the early 2000s, one reason growth has been weak in the first decile is that many immigrants have moved into this decile. Between 2010 and 2017 alone, the foreign population increased from 3.9 to 10.6 million.<sup>17</sup> Due to language barriers and administrative hurdles (work permits, diploma recognition), it is no surprise that immigrants need time to integrate into the German labor market; in the first months and years after their arrival, they have high unemployment rates and, accordingly, low incomes.

**Market income inequality unchanged since 2002**

The Gini index is a standard measure of income inequality.<sup>18</sup> The higher the value between 0 and 1, the higher the measured inequality. In the period between 2000 and 2002, the Gini index of household market income in Germany rose from 0.44 to almost 0.46 and is now hovering around that value (Figure 4). This means that currently, the inequality in market incomes is currently returning to 2002 levels, with slight increases and decreases.

<sup>17</sup> Statistisches Bundesamt, *Ausländische Bevölkerung 2005, 2010 und 2014 bis 2018 nach Bundesländern* (2020) (in German; available online).

<sup>18</sup> Cf. the entry for the *Gini-Koeffizient* in the DIW Berlin Glossary (in German; available online).

Figure 4

**Household market and disposable income inequality**  
Gini index, scale of 0 to 1 (greatest inequality)



Note: Only individuals in private households. Needs-adjusted annual income surveyed the following year, market household income includes a fictive employer's contribution for civil servants, adjusted using the modified OECD scale. The shaded areas indicate the 95-percent confidence band.

Source: SOEPv35.

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Household market income inequality has changed little since 2002.

Disposable income has undergone two distinct phases of growth. Between 2000 and 2005, disposable income inequality markedly rose from 0.255 to just under 0.29. Since then, it has remained around this value, reaching 0.29 in 2017. In an international comparison, Germany exhibits below-average income inequality and is at a similarly low level to Sweden.<sup>19</sup>

**Share of low-income earners has been stagnating since 2013**

The share of individuals whose income is less than 60 percent of the median net household income<sup>20</sup> is often referred to as the relative risk-of-poverty rate or the low-income rate.<sup>21</sup>

Using data from the SOEP sample, the low income threshold for a one-person household in 2017 was 1,168 euros net per month in nominal terms.<sup>22</sup> In 2000, 11 to 12 percent of the

population in Germany was beneath the threshold (Figure 5). This value increased to 16.4 percent by 2015 and has since stagnated. Official Microcensus data and data from the European Union Statistics on Income and Living Conditions (EU-SILC) from the Federal Statistical Office describe a comparable trend.<sup>23</sup>

**Low-income rate has not changed for the native population for 10 years**

Between 2010 and 2017, the foreign population living in Germany increased by over 50 percent. As this group often earns below-average incomes, an individual's migration background is taken into account when calculating the low-income rate. There are two subgroups: persons with direct migration backgrounds and persons without a migration background. Persons with an indirect migration background, those who were born in Germany to at least one parent with a direct migration background, are described for informational purposes. The low income threshold used is determined in each case based on the income distribution of the entire population.

Again, there are two phases of development for the native population (Figure 6). From 2000 to 2009, the low-income

<sup>19</sup> Cf. OECD Income Distribution Database (available online).

<sup>20</sup> The median is the value that separates the richer half from the poorer half of the population. Cf. the definition of the term *Medianeinkommen* in the DIW Berlin Glossary (in German; available online).

<sup>21</sup> The low-income rate is not the same as the low-wage rate. The low-wage rate only takes individual gross hourly wages into account. Thus, an individual who is earning a low wage can live together in a household with an individual who earns a high wage and is therefore not a part of the low-income rate.

<sup>22</sup> In comparison to the German Federal Statistical Office's system of social reporting in official statistics based on the Microcensus (see [www.amtliche-sozialberichterstattung.de](http://www.amtliche-sozialberichterstattung.de)), the risk-of-poverty threshold we use here is higher. As per international convention, we include the rental value of rental property used by owners as income in our income calculation. Cf. for further methodical differences in official social reporting, Markus M. Grabka, Jan Goebel, and Jürgen Schupp, "Höhepunkt der Einkommensungleichheit in Deutschland überschritten?" *DIW Wochenbericht*, no. 43 (2012): 3–15 (in German).

<sup>23</sup> The SOEP also provides an alternative indicator for measuring the low-income rate. It is the current net household income captured in the survey month. This income concept is virtually identical to that of the Microcensus. Since income components that are earned sporadically during the year tend to be underestimated and the rental value of owner-occupied homes is not taken into consideration, the low income threshold for monthly income in the SOEP and Microcensus is typically lower than it is for annual income.

rate of this group increased from just under ten percent to around 13 percent. Since then, the low-income rate has been stagnating and is currently at around 12 percent.

The situation is different for individuals with a direct migration background. Generally, the rate is markedly higher, around 25 percent. Until 2011, the low-income rate for this group stagnated. Over the course of the increase in immigration since 2010, it increased to almost 30 percent in 2017. It can be assumed that as immigrants increasingly integrate into the labor market, the low-income rate of this group will decline again.

For the entire period, the low-income rate of individuals with an indirect migration background was, on average, around three percentage points below the rate of individuals with a direct migration background.

### Low-income rate declining in some age groups since 2009

The two phases described in the development of the low-income rate are also found when grouped according to migration background and age (Figure 7).<sup>24</sup> In the native population, the low-income rate increased across all age groups between 2000 and 2009. The strongest increase was in young adults (18 to 34 year olds) by around six percentage points; this growth may have been due to increased access to higher education and an expansion of the low-wage sector.<sup>25</sup>

Beginning in 2009, the low-income rate began to sink in five of the nine age groups in the native population. This decline was strongest in the group of 10 to 17 year olds, which decreased by 3.5 percentage points. For younger children, the rate was still 2.4 percentage points. In their case, the improved situation on the labor market in the form of higher wages for their parents may have had a positive impact. For the 45 to 54 age group, the low-income rate declined by 1.7 percentage point. The 18 to 24 age group also showed a small decline. In contrast, for the 55+ age group, the low-income rate has been stagnating since 2009, and at almost three percentage points, the rate for the 75+ age group is declining. For the other age groups in the native population, there were only small changes compared to 2009. Overall, no increase in inequality can be observed following the increase in immigration beginning in 2010; in fact, inequality declined in the majority of age groups.

The development is different for individuals with a migration background. First, the low-income rate is higher in all age groups than in the native population. Additionally, the trends are different. The low-income rate first declined markedly for children between 2000 and 2009 before strongly increasing beginning in 2010 over the course of the increase in immigration. For children with a direct migration background,

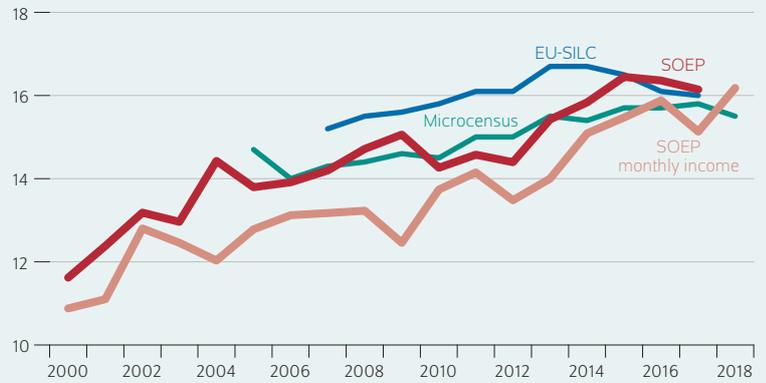
<sup>24</sup> The low-income rate of persons with an indirect migration background is not shown in order to better represent the results.

<sup>25</sup> Alexandra Fedorets et al., "Lohnungleichheit in Deutschland sinkt"

Figure 5

### Development of the low-income rate<sup>1</sup> in Germany since 2000

Share in percent



1 Individuals with less than 60 percent of the median disposable income.

Note: Only individuals in private households. SOEP annual income: needs-adjusted annual income surveyed the following year. SOEP monthly income: needs-adjusted household income of the previous month. Adjusted using the modified OECD scale.

Sources: SOEPv35; Microcensus and EU-SILC data; Federal Statistical Office, *Sozialberichterstattung der amtlichen Statistik* (2020) (in German); authors' own calculations.

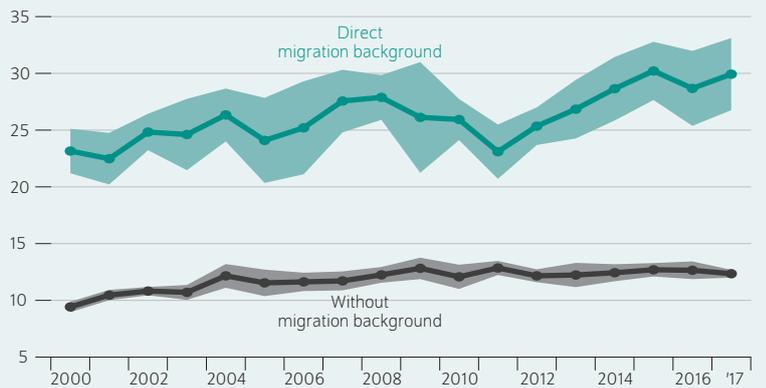
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Since 2015, the share of low-income earners has stabilized at 15 to 16 percent.

Figure 6

### Low-income rate<sup>1</sup> according to migration background

Share in percent



1 Individuals with less than 60 percent of the median disposable income.

Notes: Only individuals in private households. Needs-adjusted annual income surveyed the following year, adjusted using the modified OECD scale. The shaded areas indicate the 95-percent confidence band.

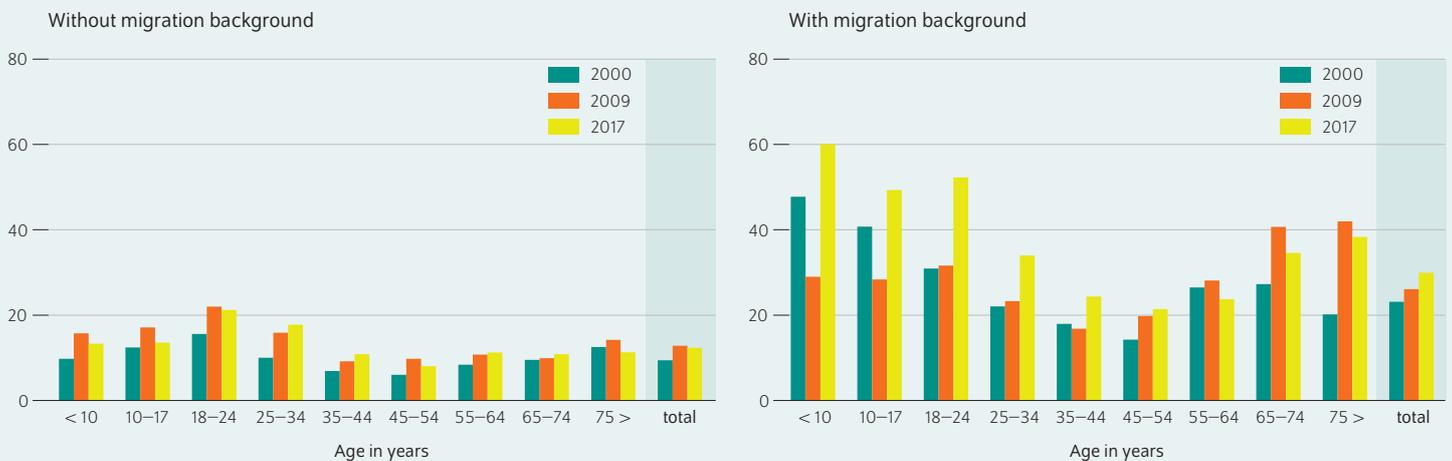
Sources: SOEPv35; DIW Berlin calculations.

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The share of low-income earners among the native population has not changed since 2009 but is increasing among those with a direct migration background.

Figure 7

**Low-income rate<sup>1</sup> according to migration background and age**  
Share in percent



<sup>1</sup> Individuals with less than 60 percent of the median disposable income.

Note: Only individuals in private households. Needs-adjusted annual income surveyed the following year, adjusted using the modified OECD scale.

Sources: SOEPv35; DIW Berlin calculations.

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The share of low-income earners in the native population is primarily decreasing for children and young adults since 2009. In contrast, for those with a migration background, the share is only decreasing for those 55 and older.

the rate was a good 50 percent in 2017. For the 18 to 44 age group, the rate stagnated initially in the first period before markedly increasing in the second. Between 2000 and 2009, there was a small increase in the 45 to 54 age group initially before the rate stagnated at that level. For individuals over 65 with a direct migration background, the low-income rate markedly increased during the first phase before slightly decreasing in the second. Overall, since 2000, the low-income rate has markedly increased over all age groups of those with a direct migration background; the 55 to 64 age group is the only age group that experienced a slightly lower low-income rate compared to 2000. Presumably, this age group profited from an increase in employment in particular and from an increase in the retirement age, therefore requiring this group to work longer.<sup>26</sup>

**Conclusion: Increase labor market integration for immigrants**

The German economy has coped well with both the financial and economic crisis from 2008/2009 and the rise in immigration from 2010. In addition, thanks to immigration, the number of employed persons has grown by over five million since 2000. This increase in employment is also reflected in the net income of private households, which has grown on average by a good 12 percent in real terms since 2000. Beginning in 2013, real income increases began across the distribution, and since 2015, even in the lowest income decile.

However, income inequality has been stagnating for over ten years. Despite rising incomes, however, it has still not fallen below the level of 2005; at that time, the economic crisis and unemployment had significantly increased inequality between 2000 and 2005.

The low-income rate has remained stable since 2013, but it is markedly higher for individuals with migration backgrounds. The trend also differs depending on if one has a migration background or not:

While in the autochthonous population as a whole the low-income rate has remained virtually unchanged since 2008 over the course of the increase in immigration and is even declining in different age groups, the corresponding rate for individuals with a direct migration background increased significantly to around 30 percent.

Due to language barriers and administrative hurdles (work permits, diploma recognition) in particular, immigrants require time to integrate into the labor market; in the first months and years after their arrival, they have high unemployment rates and, accordingly, low incomes. In the meantime, the first successes in integrating refugees into the labor market<sup>27</sup> are becoming apparent, but in view of the high low-income rate of individuals with a direct migration background, further measures, such as job and language training,

<sup>26</sup> We did not perform an analysis of the low-income rate according to age groups for individuals with an indirect migration background.

<sup>27</sup> Herbert Brücker, Yuliya Kosyakova, and Eric Schuß, "Fünf Jahre seit der Fluchtmigration 2015. Integration in Arbeitsmarkt und Bildungssystem macht weitere Fortschritte," *IAB-Kurzbericht 4* (2020) (in German).

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are still required for labor market integration. Integration can and must succeed, as Germany is facing a foreseeable decline in labor force potential.<sup>28</sup>

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**28** Bernd Fitzenberger, the director of the IAB, in an interview with *Die Welt*, cf. Christine Haas, "Nicht einfach zu erreichen, dass jährlich 400,000 Zuwanderer kommen," *Die Welt*, November 3, 2019 (in German; available online).

The results also show that the financial market crisis of 2008–2009 did not have any long-term negative effects on employment and private consumption. Economic stimulus packages and unemployment benefits cushioned the worst and such measures are being used in the 2020 coronavirus pandemic. If the constraints imposed by the current crisis do not last too long, these measures could help mitigate the negative effects on income distribution of private households to a limited extent.

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