

# Demographic facts and trends in Germany, 2010-2020

Report by the Federal Institute for Population Research (BiB)

#### **Forewords**



Our private, social and economic lives have been in the grip of the novel coronavirus and its effects for months now. This situation, which is so unfamiliar to all of us, has once again demonstrated the importance of responsible policy action based on scientific evidence. Despite the wide range of opinions, one insight has become firmly established in the public perception: scientifically based findings are essential for reliable, forward-looking and intelligent policy action. Entities responsible for making policy are well-advised to draw on the expertise of qualified specialists. This applies to the COVID-19 pandemic and to other major issues such as climate change and demographic change as well.

The Federal Institute for Population Research performs a function at the interface between scientific research on the one hand and policy advising on the other. This function is more important today than ever before. A few weeks into the first lockdown, the Federal Institute published a brochure on parents during the coronavirus pandemic. It contained the latest research findings on the current situation and received a great deal

of media attention. In addition, the Federal Institute is responsible for the editorial content of the joint federal and state demography portal, which promotes active discussion among practitioners and those in public administration and the research community. The Federal Ministry of the Interior, Building and Community has relied on expertise from the Federal Institute for many of its initiatives.

The present report by the Federal Institute offers impressive evidence of how intensively researchers have monitored demographic change in recent years. The broad range of subjects covered is striking: the report addresses international migration and regional disparities within Germany as well as issues related to fertility, population ageing and population projection. A special section on COVID-19 and the resulting mortality completes the report with a look into the future.

Actively managing demographic change is one of the greatest challenges of our time. Particularly in the current circumstances, institutions like the Federal Institute for Population Research need the resources, attention and cooperation among each other to be able to work together and jointly develop guidance for policy-makers and the public. This is the only way to manage constant and dynamic demographic change successfully. Scientific research will thus continue to make a valuable contribution to this important policy task in the months and years to come.

Prof. Dr Ursula Staudinger

Rector of TU Dresden and Chairwoman of the Board of Trustees of the Federal Institute for Population Research





In public discourse, demographic facts and trends are often dramatised and coloured by value judgements, resulting in influential demographic narratives: higher rates of fertility and population growth are frequently seen as forecasting a "population explosion", while falling fertility and growth rates have been and continue to be regarded as signs of a "demographic crisis". Terms such as population ageing suggest that there is such a thing as a "normal" or "proper" population size or demographic structure; they imply that demographic developments are linear and consistent, whereas in reality most such developments are volatile and diverse.

Precisely because of their tendency to exaggerate demographic challenges, such narratives perform the important function of attracting the attention of the public and policy-makers. For the same reason, however, they do not serve as good guides for long-term policy with demographic components. Population-oriented policy which is intended to have a decisive impact on demographic change should not be guided by exaggerations, nor should policy-makers be discouraged by their limited ability to steer demo-

graphic developments in the short term. Population-oriented policy needs time to have a visible effect; it also requires coordinated action at federal, state and local level. This is the path German policy-makers have taken over the past ten years.

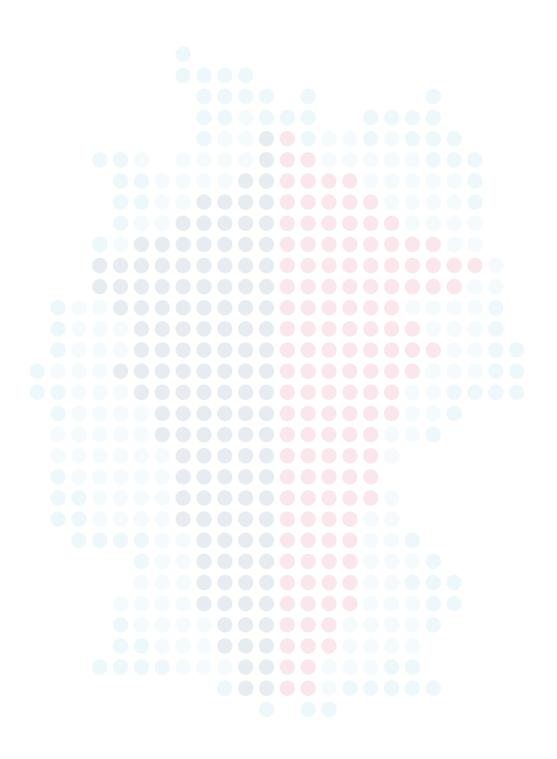
Demographic change is driven by changes in the size, composition and geographic distribution of populations, which in turn arise out of changes in fertility, mortality and migration. Populations are never static; on the contrary, demographic change is always in motion everywhere. Both regionally and globally, demographic change is a permanent process that is constantly changing speed and direction and that usually displays wide regional and socio-structural variations.

Objective scientific observation of demographic trends often produces a highly differentiated picture. With regard to the situation in Germany, we can see many demographic challenges, but no scenarios which would indicate that demographic factors are threatening our future.

With this in mind, this compilation of facts from the Federal Institute for Population Research, part of the Federal Ministry of the Interior, Building and Community's summary of demographic policy, offers information reflecting the diversity and complexity of demographic developments in Germany over the past decade. By doing so, it provides the foundation for evidence-based policy on demographic change. Viewing the demographic facts of recent years, we can clearly see that issues such as immigration, population ageing and regional disparities constantly generate new questions and challenges for the science of demography, for population-oriented policy and for public discourse on dealing with the future impacts of demographic change. Demography is a question that will continue to arise in ever-changing forms.

Prof. Dr Norbert F. Schneider

Director, Federal Institute for Population Research





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### Introduction

A look at demographic facts and trends in the Federal Republic of Germany provides a picture of demographically induced challenges and the associated opportunities for shaping the future. To this end, the Federal Ministry of the Interior, Building and Community presented a three-part demographic policy résumé for the 19th legislative period. This report by the Federal Institute for Population Research represents the scientific element of this résumé by presenting demographic development since 2011 and providing a differentiated retrospective and outlook.

Five developments in particular need to be monitored and identified in this context:

- Since the 1990s, the demographic situation has developed much differently than was expected according to population projections at the time. In particular, the population did not shrink as expected.
- Recent findings regarding the consequences of demographic ageing for society as a whole and on how to deal with these
  consequences suggest that coping with the ageing process is a complex task, but one that can be well managed in many
  areas
- Although the birth rate in Germany has increased slightly over the last decade, the fertility rate of women living in Germany remains at a low level.
- Immigration to Germany developed at an unexpected pace over the last decade and contributed significantly to the increase in the number of people living in Germany.
- Demographic trends below the national level are very heterogeneous. Many regions are developing against the national trend. Some benefit from demographic change while others face significant challenges.



## Population trends in Germany



### Key messages:

- Germany's population has grown to record numbers over the past decade. Never before have so many people lived in Germany as do now.
- Population growth during this period is mainly due to high net immigration rates.
- The future decline in the population will start later than initially expected and will be slower than previously forecast.
- Regional disparities in population growth remain high.

### 1.1 Population size and forecast

Looking at the development of the number of people living in Germany, we first see that the population level at the end of 2019 exceeded several projections from the 2000s (Fig. 1).1 Whilst the 83 million population mark was exceeded in Germany for the first time in 2018, population growth continued in 2019.<sup>2,3</sup> The first half of 2020 saw a slight decline in population by 0.05%.4

The 14th coordinated population projection from 2019 takes the unexpected population dynamics of previous years into account. Its results hence differ from those of earlier projections, on the one hand, with regard to the point in time from which Germany's population will no longer grow but shrink and, on the other hand, with regard to the extent and pace at which the population will shrink.

According to the earlier projections, the shrinkage process has probably already begun. In contrast, variant 2 of the 13th coordinated population projection from 2015 saw 2020 as the last year of German population growth for the time being. In the corresponding variant of the 14th coordinated population projection, this turning point has now been moved a few years forward to the year 2024.

The projections differ more with regard to the expected shrinkage rates. Variant 2 of the 13th coordinated population projection hence shows a 3.7% decline in population from its peak over the following 20 years. However, variant 2 of the 14th coordinated population projection only sees a 2.7% decline over the same period. According to this variant of the latest projection, Germany's population would have fallen back by 2060 to about the level recorded by Germany as a whole in the early 1970s.

Germany's population will therefore decline, but at a much more moderate pace than assumed just a few years ago. The resulting consequences will most likely be far less dramatic than feared in the late 1990s.

<sup>1.</sup> In each case, reference is made to the second variant of the respective population projection as an example. Variant 2 assumes moderate development of the three central variables, i.e. birth rate, life expectancy and migration.

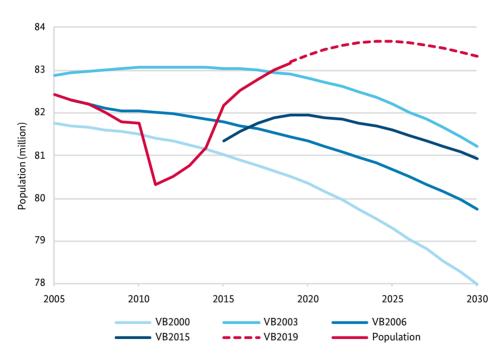
<sup>2</sup> Federal Statistical Office press release No. 244, 27 June 2019.

<sup>3</sup> Federal Statistical Office press release No. 223 of 19 June 2020.

<sup>4</sup> Federal Statistical Office press release No. 404 of 13 October 2020



Fig. 1: Population status and population projections (VB) in comparison, 2005 to 2030



The diagram shows in each case the 2nd variant of the respective VB value, except for VB2003 where the 5th variant is shown; Data sources: Federal Statistical Office, different projections, diagram: Federal Institute for Population Research

### 1.2 Population composition and development

The deviation of the actual population trend from its projection, at least in the short term, raises the following question: What are the root causes of this unexpected dynamism and what does this imply for the future development of Germany's population and its projections?

Changes in population numbers between two points in time result from the balance of births and deaths and from the balance of inbound and outbound migration. The birth deficit and the death surplus (the so-called natural population trend) have remained relatively stable in relation to each other over the past decade (Fig. 2). Although around 85,000 more people died in Germany in 2019 than in 2009, there were also around 113,000 more births in Germany in 2019 than in 2009. Although the natural population balance, which has been negative since 1973, continued to show a deficit of about 161,000 people in 2019, it has moved somewhat away from its previous low of more than 200,000 in 2013.

1.000
800
600
200
2009
2011
2013
2015
2017
2019
Births
Deaths

Fig. 2: Births and deaths in Germany, 2009 to 2019

Data source: Federal Statistical Office, diagram: Federal Institute for Population Research



The unexpected population growth in Germany was therefore mainly driven by the evolution of immigration to Germany. Without positive net migration to compensate for the negative natural population balance, the population would have been declining for more than 40 years. This was the case, for example, in the mid-1980s and between 2003 and 2010. While the inbound migration balance was only marginally positive in the late 2000s, it showed an average surplus of 458,000 people per year between 2009 and 2019. During this period, the number of people moving to Germany exceeded the number of people who left the country by around five million. If a distinction is made between inbound and outbound migrants by nationality, it is noticeable that this surplus of inbound migrants is again pre-

dominantly attributable to the immigration of non-German nationals, as the migration balance of German nationals was consistently negative between 2009 and 2019 and in aggregate amounted to more than 500,000 persons.

With regard to the migration movements of non-German nationals, 2015 was a very special year when Germany saw extraordinarily high numbers of both asylum seekers and internal migrants within Europe, with more than two million foreign nationals coming to Germany (Fig. 3). However, the immigration balance had already shown an increasing trend in previous years. Since 2016, the number of immigrants has declined again, but the migration balance is still higher than at the beginning of the decade.

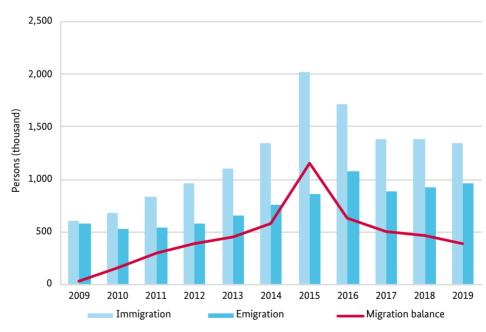


Fig. 3: Immigration, emigration and migration balance of foreigners, 2009 to 2019

Data source: Federal Statistical Office, diagram: Federal Institute for Population Research

As a result of increased immigration and comparatively high fertility rates among women of foreign nationality, both the absolute and relative number of foreigners living in Germany has reached a new high: In 2019, just over ten million foreigners lived in Germany, accounting for 12.4% of the country's total population. The vast majority (85%) of the foreign population immigrated to Germany themselves.1

Changes in migration flows are often abrupt and generally difficult to predict. They are therefore not explicitly considered in population projections. Implicitly, however, they are included in the assumptions concerning the level of annual immigration balances. In this way, the effect of an isolated, very high immigration balance, as was seen in 2015, would be integrated into the projection by assuming above-average immigration balances over several years. Consequently, the respective variants of the 14th coordinated population projection is based on higher immigration balances than earlier projections.

The outlook for the continued ageing of society is relatively robust in view of this dynamic migration trend. The 2nd variant of the 14th coordinated population projection shows that by 2035 (Fig. 4) both the share of the very old (80 years and older) and the share of the population aged between 67 and 79 in the total population will rise to new record highs. On the other hand, the share of people between 20 to 66 will decline. The share of children and adolescents in the population will remain largely stable.

7% 8% 13% 17% 2019 2035 0 to 19 years 20 to 66 years ■ 67 to 79 years ■ 80 years and older

Fig. 4: Population in Germany by age group 2019 and 2035

Data source: 14th coordinated population projection, variant 2, diagram: Federal Institute for Population Research

<sup>1</sup> Federal Statistical Office press release No. 279 of 28 July 2020.



Population trends below federal level continue to be unevenly distributed across Germany (Fig. 5). While the population in the two south German states of Bavaria and Baden-Württemberg was more than 5% higher in 2019 than in 2011 and Berlin's population even grew by around 10%, the east German states of Saxony-Anhalt and Thurin-

gia as well as Saarland in west Germany recorded shrinking populations compared to 2011. However, the population figures of the federal states of Mecklenburg-Vorpommern and Saxony stabilised, while the state of Brandenburg even saw a significant increase in population.

Berlin Hamburg Baden-Württemberg Bavaria Hesse Bremen Schleswig-Holstein Lower Saxony Brandenburg Rhineland-Palatinate North Rhine-Westphalia Saxony Mecklenburg-Vorpommern Saarland Thuringia Saxony-Anhalt -2% 12% -4% 2% 4% 8% 10% Population decrease/increase

Fig. 5: Change in the population of the federal states between 2011 and 2019

Data source: Federal Statistical Office, calculations and diagram: Federal Institute for Population Research

The geographic differences in population changes are even more differentiated at district level (Fig. 6). Although many large cities and their immediate surroundings experienced strong population growth, the population of the densely populated Ruhr region and other areas has been declining on average in recent years. The east-west difference has narrowed over time, but some east German districts contin-

ued to shrink at double-digit rates. Overall, volatile developments dominate at district level and with regard to settlement types (large cities, densely populated suburban areas, medium-sized cities and rural districts). Only a few regions experienced stable growth over the last 25 years, and only a few have shrunk permanently.

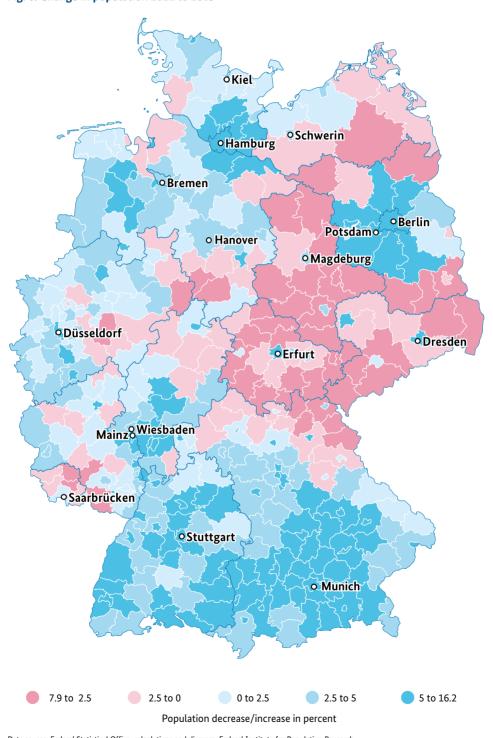


Fig. 6: Change in population 2011 to 2019

Data source: Federal Statistical Office, calculations and diagram: Federal Institute for Population Research © GeoBasis-DE/BKG (2019)



Demographic population structure analyses typically focus on a population's age and gender structure. This restriction means that key parameters are omitted. In the future, it will be necessary to additionally consider other parameters of a population's structure. For example, developments in the educational structure of a population are vitally important for its social and economic future. Positive developments

can be observed here for Germany (Fig. 7). Between 2009 and 2018, for instance, the share of the population aged 15 and over qualifying to study at a third-level increased by more than eight percentage points, while the share of lower secondary school leavers fell by more than nine percentage points.

45% 40% 35% 30% 25% 20% 15% 10% 5% 0% 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 Elementary school leaving certificate Secondary school leaving certificate Without general school leaving certificate University of applied sciences or university entrance qualification

Fig. 7: Population aged 15 and over by school-leaving qualification, 2009 to 2018

Difference from 100%: still attending school, graduation from polytechnic secondary school, no indication of the type of qualification. Data source: Federal Statistical Office, diagram: Federal Institute for Population Research



Ageing and society



#### Key messages:

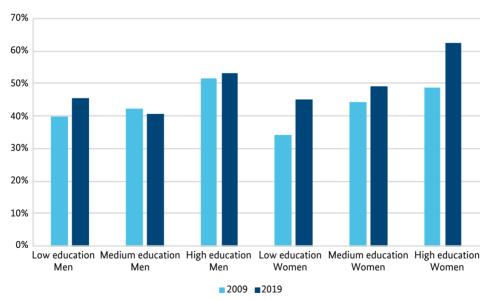
- Age and ageing are not only biological conditions, but are also determined by cultural notions and society-based institutions and can thus also be shaped at political level.
- Purely age-related measures are becoming less meaningful as age and ageing change.
- The impact of ageing on the labour market has so far been less pronounced than widely expected due to increased employment of women and older workers.
- Regional differences in demographic ageing continue to be high.
- Taking care of the very old and dealing with societal and regional differences will be the biggest new challenge of ageing.

### 2.1 Ageing in times of increased life expectancy

When the challenges facing Germany as a result of demographic change are addressed in the public debate, this usually refers to the ageing process in society at national level. However, there is no one-size-fits all definition of the concept of ageing, but this can vary over time. This is indicated by Fig. 8, showing the shares of men and women aged 65 to 74 who rate their health as good to very good. This assessment is differentiated in each case according to

level of education and age. The assessment of health for both genders and all education levels can be seen to improve between 2009 and 2019. This means that people aged between 65 and 74 currently rate their health to be better than they did a decade ago. One of the reasons for this change seems to be an increase in the subjectively perceived quality of life at this age.

Fig. 8: Percentage of men and women aged 65 to 74 who rate their health as good to very good, by education, 2009 and 2019



Data source: Eurostat (2020b), diagram: Federal Institute for Population Research



However, differences between education levels largely remain, also because highly educated women state a comparatively large improvement in their assessment of health. This suggests continued disparity in how the population aged between 65 and 74 perceives the process of ageing in terms of health. These subjective assessments are supplemented by objective challenges for the future. If the societal challenges of the ageing process in the 2020s are specifically focussed on the labour market, the pension system and the revenue side of the healthcare system, the 2030s are also likely to see significant increases in overall demand for healthcare and long-term care services.

The number of older people aged 65 and over in Germany will continue to increase significantly in the 2020s as the baby boomers enter retirement age. This effect is driven both by the size of these baby boomer birth cohorts and by their higher life expectancy compared to older cohorts; for example, the remaining life expectancy of persons aged 65 is currently 17.9 years for men and 21.1 years for women. Together with the smaller cohorts coming up due to lower birth rates, the share of the population of working age (defined here as 20 to 66 years) is therefore expected to fall from around 65% at present to below 60% over the next decade.

The parameter used to map ageing of the population directly influences the result obtained when weighting the ageing process. Looking at the development of the median age - i.e. the age that divides the population into two equal groups, so that 50% are younger and 50% are older - one can conclude that the ageing process of the German population is relatively advanced. The median age increased from 35.6 years in 1975 to 45.9 years in 2020. Based on variant 2 of the 14th coordinated projection by the Federal Statistical Office, it will increase by just 1.5 more years to 47.4 years by 2035 and to 48.3 years by 2040. The biggest part of this increase has therefore already taken place in the past. This could suggest that the societal consequences of ageing should already be fully visible today. However, this would ignore the fact that the development of the median age hides shifts in the age structure within the elderly population, i.e. the expected continued increase in the population aged 70 and over and especially in the very elderly population aged 80 and over. In these groups, the proportion of people aged 70 and over is expected to increase from the current 16% of the total population to 23% in 2040, when more than one in five of Germany's population will be aged 70 and over. The increase in the share of the population aged 80 and over will be correspondingly delayed and is expected to peak in the middle of the 21st century when just under one in eight people will be very old.

In contrast to projections of total population, projections of the number of older persons at national level can be made with a relatively high degree of reliability in the medium term. Changes in mortality take place at a comparatively low rate, and changes in the number of people due to international inbound or outbound migration hardly play a role for people over 70. This makes future developments relatively easy to predict, which can be helpful when it comes to managing the challenges posed by the ageing process.

Up to now, this document has presented nationwide developments in Germany, however, there are considerable regional differences in population distribution and development within Germany. Fig. 9 illustrates this by mapping the

share of the population aged 70 and over in the total population: At district level, this share varies between 7.8% and 17.7%. The root causes of regional disparities vary widely. Economically prosperous regions and university cities often have relatively young populations, a trend that is particularly increased by young people moving there. Among the regions with relatively old populations are areas that have undergone economic structural change in recent decades, leading to outbound migration by the young population (for instance, in parts of east Germany, the Saarland and the Ruhr area). However, other regions are highly attractive for retirees to move there (such as Baden-Baden, foothills of the Alps, coastal regions). The so-called 'urban exodus' of senior citizens seems to be decreasing (Engfer, 2018).



Kiel Schwerin **OHamburg** Bremen ○ Berlin Potsdamo o Hanover Magdeburg **Düsseldorf** Dresden erfurt ? ; ; Mainz Wiesbaden **Saarbrücken** ○Stuttgart Munich 11.3 to 15 15 to 16 16 to 27 17 to 18 18 to 23.9

Fig. 9: Share of population aged 70 and older by district, 2019

Data source: Federal Statistical Office, calculations and diagram: Federal Institute for Population Research © GeoBasis-DE/BKG (2019)

Share of population aged 70 and older by district in percent

### 2.2 Societal perspectives of ageing

Old-age dependency ratios are often used in addition to the median age in order to measure the extent and progression of ageing. It is used because people aged 65 and over are for the most part retired and hence 'dependent' on the working population, whilst people aged between 20 and 64 are in employment. The old-age dependency ratio therefore indicates the ratio of persons of retirement age (65 years and older) to 100 persons of working age.

Although useful for a purely demographic view, this parameter is not very useful when it comes to a more accurate assessment of the consequences of ageing for society, as Fig. 10 illustrates. It shows the development of the share of the old population versus the share of economically dependent persons. The share of economically dependent persons expresses the ratio of economically inactive persons aged 20 and over to 100 employed persons aged 20 and over. Fig. 10 shows that while the share has risen almost continuously over the past three decades, the share of economically dependent persons has been declining since the mid-2000s. The latter development is mainly due to a general increase in female workforce participation as well as to significant increases in employment among both men and women aged 55 and over. In other words, a rising old-age dependency ratio does not necessarily mean a higher share of economically inactive adults. While the oldage dependency ratio can be expected to increase further (to more than 50 persons aged 65 and over per 100 persons of working age by 2035, variant 2 of the 14th coordinated population projection), the further development of the economic dependency ratio also depends on workforce participation. The crucial factor for the development of the number of people in employment over the next 20 years will initially be the retirement of baby boomers.

When assessing future workforce participation in Germany, another aspect is important in conjunction with an expected decline in workforce potential: Particularly among women, but also among older employees, there is as yet untapped potential in the number of hours worked per week. If this were tapped into, the gaps created by the retirement of baby boomers could be largely filled (Klüsener et al., 2019).

Moreover, analyses and projections of ageing also refer to the term 'overageing'. However, this concept is problematic in that there is no definition of when a society is considered too old or 'overaged'. Similar to what has already been discussed for the term 'ageing', the use of this term refers purely to shifts in the age structure, ignoring the fact that a much more differentiated view is needed to assess the societal challenges caused by a growing share of older people. Biological age does not adequately address the question as to how society can cope with a changing age structure of its population. The characteristics of individuals and of the population as a whole, such as health status, education level, workforce participation, intergenerational cohesion, etc., determine the extent to which the different aspects of ageing present opportunities or challenges. In addition to the analysis of purely demographic trends, it is therefore necessary to take a look at the 'characteristics' and actions of the members of society.

It is, for example, undisputed that in a society with high human capital<sup>1</sup> both individuals and society as a whole can master the challenges of ageing in a very different way than a society with lower human capital. Past and continuing

<sup>1 &</sup>quot;The performance potential of the labour force (capacity for labour) resulting from training and education." Source: translated from Gabler Wirtschaftslexikon.



30
20
1991 1995 1999 2003 2007 2011 2015 2019

Non-employed persons per 100 employed persons
Share of old population (persons over 65 years per 100 persons aged 20 to 64 years)

Fig. 10: Development of the share of old population and economic dependency ratio, 1991 to 2019

Data sources: Federal Statistical Office and microcensus, calculations and diagram: Federal Institute for Population Research

increases in formal education levels of the population mean that the 'new old' will be better educated on average than today's older generations. Furthermore, as a result of the positive correlation between formal education level and health, older people will probably be healthier on average in the future than they are at present. It is already apparent in the so-called 'third age', i.e. the phase of life between 60 and 80 years of age, that central activities from earlier stages of life can increasingly be continued without major restrictions; at the same time, the diversity of life situations continues to increase with increasing age over the course of life (Mergenthaler et al., 2020).

However, health-related limitations increase with age, more so for women than for men. The need for long-term care is increasing, especially among people aged 80 and older, so that an increase in demand for healthcare and long-term care services can be expected. What's more, one major challenge for society when it comes to managing the

ageing process is that the average life expectancy of socially well-off groups of people is significantly higher than that of socially disadvantaged parts of the population (Kibele et al., 2013). This aspect is relevant, for example, for across-the-board pushing back of retirement age.

Finally, in the context of the labour market, increases in the formal education level of the population should also be mentioned. On the one hand, the average workforce participation rate and individual income increase with the level of education, while on the other, positive effects can be seen on per capita productivity, with positive effects on overall productivity. However, some model calculations also show that the positive effects of expected changes in education structure will be rather small for future economic growth in Germany and can only counteract the consequences of ageing to a limited extent (Kotschy and Sunde, 2018). Further research will be needed to draw a more reliable picture of future developments.



Fertility development



### Key messages:

- Women born since 1975 are again having more children on average, but at later age than earlier birth cohorts.
- More and more men are also becoming fathers at an older age.
- The frequently considered period fertility rate (TFR, total fertility rate) has significantly underestimated birth rates in Germany in recent decades.
- Women of foreign nationality currently have a clearly higher birth rate than women of German nationality.
- Both in Germany and in several other EU member states, the correlation between women's
  education and fertility rates is still negative.

### 3.1 Stabilisation of birth rates

In the 1950s and 1960s, the number of children born in Germany was still relatively high, and at the same time permanent childlessness was very low. People born in those years, now referred to as 'baby boomers', were very large cohorts, with as many as more than 1.3 million births in 1964. From the end of the 1960s, however, birth rates started to decline massively. The subsequent low birth rate lasted for over 40 years. Fig. 11 uses the example of cohort fertility to show the development of the average number of

children per woman by birth cohort. The 1969 birth cohort has a particularly low number of children, and the extent of the decline can be clearly seen in a comparison with the 1959 and 1949 cohorts, which had more children. The birth rates of the younger cohorts, however, suggest that the number of children is stabilising. The 1975 and 1979 birth cohorts again have a higher number of children between the ages of 35 and 45 than the 1969 cohort.

1.8 1949 1959 1.6 1969 1.4 Children per woman 1.2 1985 1.0 0.8 0.6 0.4 0.2 0.0 15 20 25 30 40 45 1959 1969 -**-**1975 — Age reached 1949

Fig. 11: Number of children per woman by birth year cohort in Germany, 2018

 ${\tt Data\ source: Federal\ Statistical\ Office,\ diagram: Federal\ Institute\ for\ Population\ Research}$ 



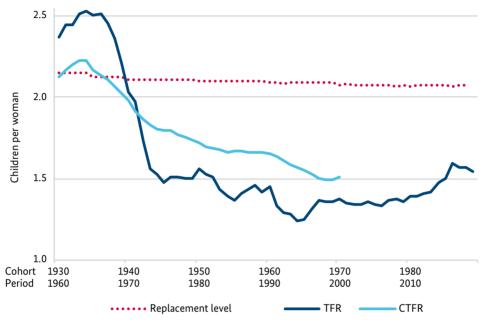


Fig. 12: Final number of children per woman (CTFR) and total fertility rate (TFR), 2019

Data source: Federal Statistical Office, diagram: Federal Institute for Population Research

It is striking that the women of the younger cohorts have their children more often at an older age than the older cohorts. In fact, the 1975 and 1979 cohorts do not overtake the 1969 cohort until they reach 35, while under the age of 30, they still have significantly fewer children. The 1985 cohort also seems to follow this trend.

This trend towards more children at an older age must also be taken into account when interpreting total fertility rate (TFR) and the final number of children per woman (CTFR, cohort total fertility rate). The total fertility rate shows how many children are born on average per woman for a given calendar year. The final number of children per woman, on the other hand, indicates the total number of children that women of a given birth cohort give birth to on average during their childbearing years. Unlike CTFR, TFR is already available for women under 49 years of age. It is therefore a frequently used indicator for mapping current birth trends.

Fig. 12 therefore shows both the fertility of a particular calendar year and the fertility of a particular birth cohort (see double captioning of the X axis). The 1964 TFR totalled 2.5, well above the replacement level, i.e. the number of children needed to replace one generation of parents with their children. Thereafter, however, TFR declined sharply, reaching its lowest value of 1.2 in the post-reunification period in 1994. Most recently, TFR initially rose significantly to a level of 1.59 births per woman in 2016, but since declined to 1.54 births per woman in 2019. TFR hence remains well below the replacement level of 2.1.

One problem with TFR is that it underestimates birth rates of ever-older mothers at the time of birth. However, this is central to considering the increase in births in recent years, as Fig. 11 has shown. Accordingly, cohort-oriented CTFR in Germany is currently higher than year-oriented TFR. The positive trend in births is hardly apparent here so far, the increase is minimal and only appears at the second decimal place for the 1969 cohort. The birth cohorts that are currently of particular interest (1970 to 1979) are still in the late fertile phase (39 to 48 years), so that Fig. 12 does not show a final number of children for these cohorts. However, it is already clear that women born in 1975 already have more children on average at the age of 36 than women born in 1969. The current figures hence suggest that the decline in cohort fertility has also been stopped.

With regard to the future development of births, the number of potential mothers of childbearing age between 15 and 49 will probably decrease significantly, even if the birth rate remains stable in the long term. Fig. 13 shows the number of women under 50 in Germany both in 2019 and in 2035. In 2019, the cohorts of girls aged under 15 were clearly smaller in number than the cohorts of women aged 20 and over. By the time this young generation will be of central childbearing age in 2035, births will be falling simply because of the declining number of potential mothers. This is suggested by the gap between the 2019 and 2035 curves for women aged 20 to 40 in Fig. 13. The projection for 2035 already assumes moderate inbound migration of women. (Pötzsch, 2018)

700
600

500
200
100
7, year 1, year 1, year 1, year 1, 3, year 1, 5, year 1, 5, year 1, 5, year 1, 1, year 1, year

Fig. 13: Women by age in Germany in 2019 and 2035, respectively

Data source: Federal Statistical Office, diagram: Federal Institute for Population Research



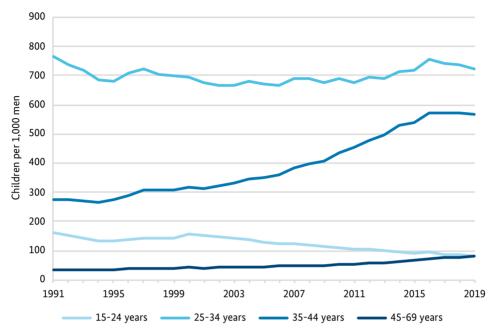


Fig. 14: Male fertility by age group 1991 to 2019

Source: Pötzsch et al. (2020), diagram: Federal Institute for Population Research

Parallel to the trend among the female population to become mothers at an older age, men in Germany are too increasingly becoming fathers at an older age. Fig. 14 shows that men aged between 25 and 34 are still the most likely to become fathers. However, compared to the 1990s, significantly more men aged 35 to 44 are now becoming fathers, while men aged 45 to 69 are also becoming fathers more frequently, with a slowly increasing trend. In contrast, the number of children of younger men aged 15 to 24 has decreased.

### 3.2 Causes of the increase in the birth rate

What causes of the slight increase in fertility can be identified? The positive birth trend in recent years may have been supported by several factors (Pötzsch, 2018). One example is the good overall economic situation which has improved the financial security of families. Another major factor influencing the fertility level in Germany and favouring the increase in fertility is the high level of inbound migration. While inbound migration from EU member states to Germany, primarily from south and east Europe, has been relevant for Germany's fertility rate since the mid-2000s, fertili-

ty has also been increasingly influenced by births in families that have migrated to Germany as refugees since 2014. A look at the development of TFR according to the mother's nationality clearly explains the influence of migrants or refugees. Overall TFR increased by 0.15 children per woman between 2011 and 2019. The number of children per woman of German nationality increased by 0.1 from 1.33 to 1.43, while the birth rate of mothers of foreign nationality rose even more sharply from 1.58 to 2.06 and thus by 0.48 children per woman (Fig. 15).

2.6 2.4 2.2 Children per woman 2.0 1.8 1.6 1.4 1.2 1.0 2000 2003 2006 2009 2012 2015 2018 German women Foreign women

Fig. 15: Total fertility rate of German and foreign women, 2000 to 2019

Data source: Federal Statistical Office, diagram: Federal Institute for Population Research



The birth rate (TFR) of foreign women also depends on their country of origin, with a growing share of women from countries with high birth rates leading to an overall increase in the birth rate of foreign women in Germany. TFR is a period-based figure that measures fertility in a given calendar year regardless of the influence of the age structure of women. The sharp increase in female protection seekers in 2015 and 2016 from the Middle East and Africa, regions with a high birth rate, is therefore largely responsible for the rise in the number of births in Germany. The illustration clearly shows the steep increase in TFR of foreign women during this period. Women from Syria, Afghanistan, Kosovo and Iraq had a significantly higher birth rate between 2015 and 2016 (3.5 to 4.6 children per woman on average) than the average birth rate of all foreign women (2.1 children per woman) (Pötzsch, 2018). It is at present not possible to reliaby predict the extent to which this higher birth rate will continue in the next generation of women with a refugee background.

The level of education also plays a central role in the development of fertility behaviour among women living in Germany, in particular, for the timing of births, childlessness rates and the number of children.

The first noteworthy observation is that the mother's age at the birth of the first child continues to rise both for female academics and for women in Germany as a whole. Overall, the average age at first birth in 2018 was 30, and this figure is even higher for female academics. Around one quarter of women in this group even become mothers after their 35th birthday (Bujard and Diabaté, 2016). This significantly reduces the remaining biological window of opportunity for women to have children. Due to increasing age, this is referred to as a recuperation process, i.e. a catching up of initially postponed births. In comparison, the share of 'late

births' is significantly lower in the case of women without a university degree. Late career entry due to longer education periods, economic insecurity and increased demands on parenthood are just some of the reasons for postponing births. As a result, highly educated women in particular have their children at an age when the risk of infertility increases with each year, reducing prospects of still becoming a mother (Federal Institute for Population Research, 2018). Reproductive treatments can only help to a certain extent because chances of success are relatively low and because treatments are expensive and stressful for those affected.

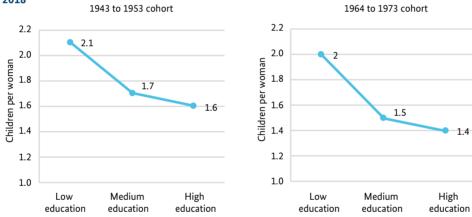
Female academics are still the most likely of all women to remain permanently childless. Around 24% of women with a university degree and 20% of women with an intermediate level of education were childless in 2016, whereas childlessness is much less common among women with a low level of education. However, a slight decline in childlessness is observed among the younger highly educated cohorts of women. While the proportion of childless women with a university degree born between 1959 and 1963 still totalled 28%, it has fallen to 26% for women born between 1969 and 1973 (Federal Statistical Office, 2019). This is all the more relevant as the share of female academics in the population has risen significantly, i.e. relatively few women today have only a low level of education.

Distinguishing women by their level of education also shows that almost one third of all women aged between 45 and 49 with a low education in Germany had three or more children in 2016, whereas only 14% and 13% of women with medium and high education, respectively, had a corresponding number of children (Federal Statistical Office, 2019; own calculations).

An analysis of education-specific fertility patterns over time can shed light on a possible change in the relationship between fertility and education. Fig. 16 represents a comparison of the average number of children per woman by education level between the 1943 to 1953 and 1964 to 1973 birth cohorts. In this respect, this comparison includes birth cohorts in which fertility still declined significantly (see Fig. 12). Women of all education levels in the younger 1964 to 1973 birth cohorts have fewer children per woman than women in the older 1943 to 1953 birth cohorts. How-

ever, the relationship between fertility and education has remained remarkably stable across birth cohorts. Low-educated women in both cohorts analysed have by far the largest number of children (1964 to 1973: 2 and 1943 to 1953: 2.1, respectively). Women with a medium level of education, on the other hand, have on average only 1.5 and 1.7 children. Very close to this is the number of children of highly educated women with 1.4 and 1.6 children, respectively.

Fig. 16: Average number of children per woman by education level (ISCED 2011) of woman, 2018



Data source: 2018 microcensus, calculations and diagram: Federal Institute for Population Research

A further analysis of the average final number of children by education level<sup>1</sup> in different European countries shows striking country-specific patterns (Fig. 17). In Germany, as already shown, the number of children decreases with the level of education, with low educated women having significantly more children than women with middle or higher levels of education. The same pattern can be observed in Hungary and Slovakia, but at a higher level of the number of children (not shown). A similar pattern also exists in France and Spain, although the difference between women with low education and women with middle education is

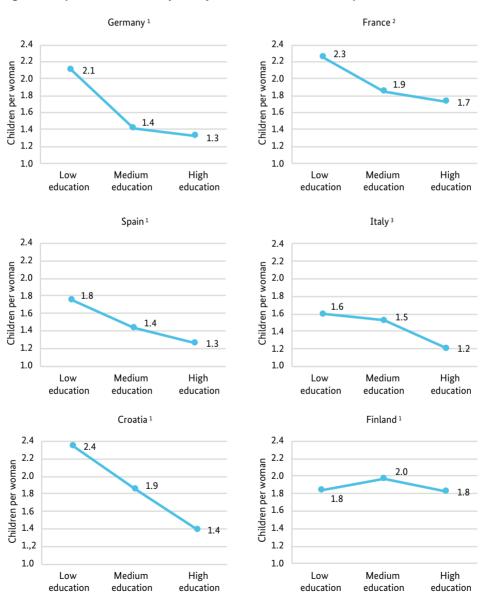
much smaller in these countries. Italian female academics have by far the lowest number of children (1.2 children per woman) among the countries shown here. In contrast, the number of children of women with medium and low education levels is very close (1.5 vs. 1.6). Croatia stands out with a pronounced linear relationship between education and the number of children. Per education group, the average number of children per woman decreases by 0.5. A similar pattern can be observed in Serbia (not shown). Finland is the only country shown here where highly educated women do not have the lowest number of children. A bell-shaped pattern emerges here, with women of low and high

<sup>1</sup> The level of education is measured according to the International Standard Classification of Education 1997 (ISCED).



educational levels having slightly fewer children on average, while women of middle educational levels have the highest number of children on average. Furthermore, the difference between the education groups is relatively small.

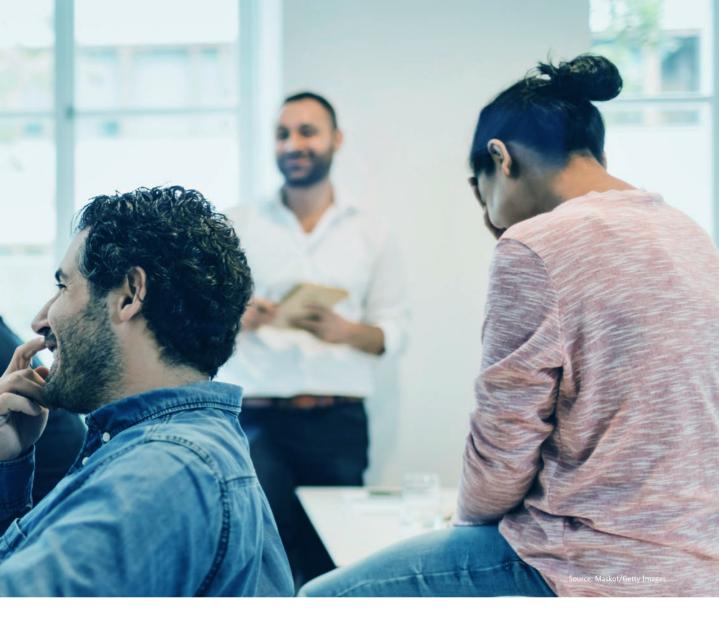
Fig. 17: Completed cohort fertility rate by education for selected European countries, 2017



Notes: Birth cohorts 1: 1971; 2: 1966 to 1970; 3: 1966 to 1968 Source: Cohort fertility and education database, calculations and diagram: Federal Institute for Population Research



International migration



# Key messages:

- Migration to Germany has risen sharply over the past decade.
- Immigration has become much more diverse in terms of countries of origin and forms of residence.
- Temporary and circular migration have gained in importance both for migrants in Germany and for migrants leaving Germany.

# 4.1 Immigration to Germany

Immigration to Germany strongly influences the development of population size as well as age and social structure. Overall, immigration to Germany over the last decade has not only increased in volume, it has also become more diverse in terms of its regions of origin and hence more global in character. Relatively low inbound migration in the early 2000s has been followed by a renewed increase in annual migration gains since 2009. As shown in Fig. 18, this was initially mainly due to immigration from other Europe-

an countries. In 2015, the highest migration gain to date was recorded with 1.14 million people, which was caused, among other things, by high inbound migration from Syria, Afghanistan and Iraq, which is reflected by the steep increase in Germany's net migration with the Asian continent as shown in Fig. 18. Germany's net migration gains with regard to the African continent remain at a comparatively low level, but also grew strongly in percentage terms, especially in 2015.

600 500 400 Persons (thousand) 300 200 100 -100 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 Europe (including Turkey) -Africa America Australia and Oceania

Fig. 18: Germany's net migration by continent, 2000 to 2019

Data source: Federal Statistical Office, diagram: Federal Institute for Population Research



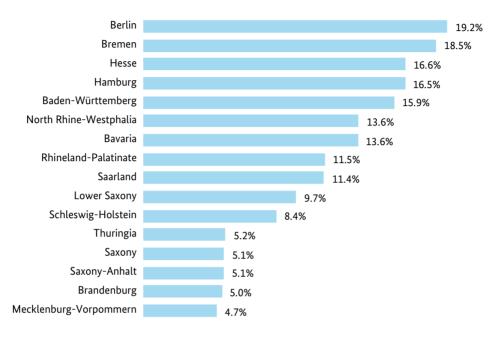


Fig. 19: Percentage of foreigners by federal state, 2019

Data source: Federal Statistical Office, calculations and diagram: Federal Institute for Population Research

Clear regional differences exist in terms external migration. Cities and the south of Germany are seeing significantly more inbound migration than rural regions in the east. Accordingly, the shares of foreigners in total population continue to differ greatly between the east and west German states, as shown in Fig. 19. While the share of foreigners in all east German states was around 5% in 2019, it ranged between 10% and 20% in most west German states.

The above figures on inbound migration to Germany raise the question of what a migration gain of 1.14 million people in 2015 means for Germany. Is the inbound migration of recent years unique for Germany, or does it reflect a global trend? These important questions can be answered by looking at inbound migration to Germany in a global context. For a long time, it was hardly possible to compare migration flows at global level due to limited data availability. While the collection of data stock on foreign-born persons is relatively widespread worldwide and carried out according to similar criteria, the collection of data on dynamic migration flows is unfortunately not standardised

and also limited to fewer than 50 predominantly European countries. It has therefore not been possible up to now to answer the simple question of how many people migrated to another country in recent years. Based on stock data from the United Nations, it could only be determined that around 220 million people were not living in their country of birth in 2013.

Thanks to the development of complex estimation models, it is now possible to quantify global migration patterns and to compare countries (Abel and Sander, 2014; Azose and Raftery, 2019). The result, both surprising and contrary to popular belief, showed that global migration flows have remained largely stable since 1995. For example, the percentage of the world's population that migrates to another country within five years has been in the order of one percent since 1995. Global migration occurs primarily within world regions and/or between neighbouring regions. Migration between continents is concentrated in two corridors, i.e. from Asia to North America and from the Americas to Europe, whilst migration from Latin America to south

Europe has decreased significantly since the economic crisis there during the early 2010s. Migration from Africa to Europe is much less significant in the global context. What's more, the volume of migration between sub-Saharan countries is significantly higher than migration from Africa to Europe.

A look at the most important countries of origin of foreign nationals in Germany reveals a mixture of continuity and change (Table 1). In 2000, both the 'traditional' countries of origin of foreign workers and asylum seekers from the former Federal Republic of Yugoslavia and its former member states were among the most strongly represented countries of origin of foreigners in Germany. In 2009, the importance of east European non-EU states, such as Russia

2000

and Ukraine, increased. In 2019, the two south European EU member states of Romania and Bulgaria had become important European countries of origin for foreigners in Germany. However, the number of Polish citizens living in Germany has also more than doubled compared to 2009. Interestingly, the two 'guest worker' countries of origin, i.e. Italy and Greece, were also more strongly represented in Germany with a total of more than one million nationals living in Germany, probably as a result of the high unemployment rates in south European EU member states in the 2010s. With a total of more than one million citizens, Syria and Afghanistan were among the most important countries of origin of foreigners in Germany for the first time in 2019, due to the high number of asylum seekers from these countries.

9

10

Afghanistan

Russian Federation

134 850

125.617

2019

263 420

260.395

Table 1: The ten most frequent countries of origin of foreigners in Germany

9

10

Netherlands

Ukraine

Rank Country Rank Country Rank Country Persons Persons Persons Turkey 1,998,534 1 Turkey 1,658,083 1 Turkey 1,472,390 2 Yugoslavia, Fed. Republic 662,495 2 Italy 517,474 2 Poland 862,535 Italy 619,060 3 Poland 398,513 3 Syria 789,465 4 Greece 365,438 4 Greece 278,063 4 Romania 748,225 5 Poland 301,366 5 Croatia 221,222 5 Italy 646.460 6 Croatia 216,827 6 Russian Federation 189,326 6 Croatia 414,890 7 Austria 187,742 7 Austria 7 174,548 Greece 363,650 8 Bosnia and Herzegovina 156,294 8 154,565 8 360.170 Bosnia and Herzegovina Bulgaria

2009

Data source: Federal Statistical Office, diagram: Federal Institute for Population Research

133 726

129,471

9

10

Portugal

Spain



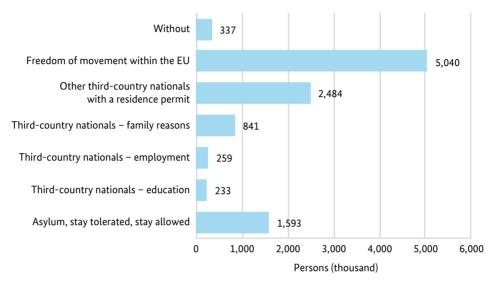


Fig. 20: Foreigners in Germany by residence permit/status, 2019

Data source: Federal Statistical Office, calculations and diagram: Federal Institute for Population Research

Fig. 20 compares internal migration within the EU for Germany with inbound migration of persons from so-called third countries. At the end of 2019, around five million citizens of other EU member states were living in Germany. Approximately the same number of people from third countries were living in the country with or without a residence permit. While more than 800,000 people from third countries were staying in Germany for family reasons, less

than half a million were living in Germany for the purpose of education or employment. Around one and a half million foreigners had been granted asylum status, were tolerated or had a residence permit. Statistically, there were more than 300,000 foreigners in Germany at the end of 2019 who did not have residence status and were therefore obliged to leave the country.

Looking at asylum migration without any of the other reasons for immigration, one clearly sees that the number of asylum applications filed has risen continuously since 2009 (Fig. 21). In 2013, more than 100,000 people had already applied for asylum for the first time; in 2015, the number finally increased more than fourfold, reaching almost 442,000 and rising further to more than 722,000 in 2016 (Federal Office for Migration and Refugees, several years). The trend of asylum applications thus shows a time lag compared to the development of official immigration figures. This is because a large part of the asylum applications filed or to be filed in 2015 when asylum immigration reached a record high could only be recorded and processed in the following year, i.e. in 2016.

Since then, however, the number of new asylum seekers arriving in Germany has fallen sharply again (Brücker et al. 2016). In 2017, fewer than 200,000 asylum applications were filed, and the number fell even further in the following year (Federal Office for Migration and Refugees, several years).

The main countries of origin of asylum seekers in 2015 and 2016 were Syria, Afghanistan and Iraq, which together accounted for 50% and 68% of all asylum applications, respectively. Approximately two thirds of all asylum applications were made by men (2015: 69.1%; 2016: 65.7%). Furthermore, 71.1% (2015) and 73.8% (2016) of asylum seekers were younger than 30 years. Around one third were minors (2015: 31.1%; 2016: 36.2%) (Federal Office for Migration and Refugees, several years).

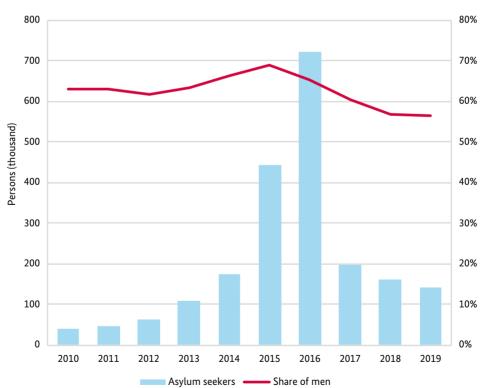


Fig. 21: Number of asylum applications in Germany by year and gender, 2010 to 2019

Data source: Eurostat (2020a), calculations and diagram: Federal Institute for Population Research



# 4.2 From permanent to temporary: changing migration patterns

As economic globalisation proceeds, the forms of migration are also changing from permanent to temporary. Whilst permanent migration, i.e. the permanent transfer of the centre of one's life to another country, dominated in the past, a variety of migration forms have developed in recent decades. In Europe, the temporary nature of migration has intensified in the wake of the economic and financial crisis and the EU's eastward enlargement. This means that people migrate several times during their lifetime and gather experience with living in different countries.

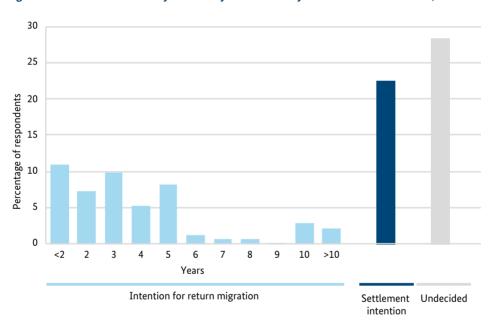
In the field of labour migration, a new migration pattern of circular migration has also emerged, i.e. repeated, often seasonal migration between the country of origin and the country of destination. This includes mainly seasonal workers, but also groups like students and domestic workers. However, there are hardly any data available that could be used to empirically explore the diversity of these new forms of migration. A study by the Federal Agency for Migration and Refugees (BAMF), based on data from the Central Register of Foreign Nationals (AZR) from 2010, concludes that a considerable share of foreigners from third countries living in Germany can be regarded as circular migrants. It suggests that around 11% of immigrants from third countries have already left Germany at least once and then moved back. With a share of around 22%, labour migrants show the highest degree of circularity.

The overall importance of temporary and circular international migration has increased in recent decades. This applies all the more to the international mobility of populations from industrialised countries. Over the past decade,

an average of 180,000 Germans moved abroad each year. Of these, only around one in five plans to leave Germany forever, while 49% expect to return to Germany within the next few years. Further analyses show (Fig. 22) that the status of internationally mobile Germans during their lifetime plays an important role in explaining their intentions to stay. In principle, the inclination to stay abroad permanently increases with age, while internationally mobile younger people tend to plan temporary stays abroad. However, the education level and employment status of migrants are far more important than age. Especially people with an academic degree mainly plan to stay abroad for a limited period of time. It appears that this group of people uses the stay abroad to acquire additional qualifications, which can be used to foster their further professional career after returning to Germany. Close interactions also exist between the intention to stay and the partnership and family context. Temporary stays abroad are closely correlated with a family not moving abroad and staying in Germany. On the other hand, a partner who comes from the destination country of internationally mobile Germans, as well as the existence of close friends in the destination country significantly increase the probability of a permanent stay abroad. Clear differences can also be seen between target countries. Permanent intentions to stay are found especially in neighbouring countries and other economically developed countries, whereas temporary stays are more likely to be planned in countries with a lower level of economic development. The importance of temporary stays abroad is also reflected in the number of persons returning to Germany from abroad. 60% of this group state that their last stay abroad did not exceed a maximum of five years.



Fig. 22: Planned duration of stays abroad by internationally mobile German nationals, 2019



Source: Ette et al. (2021), diagram: Federal Institute for Population Research



Internal migration



# Key messages:

- Migration within Germany is largely determined by people of a younger age.
- The migration balance between east and west German states has been almost balanced for several years.
- At present, there are signs of a new phase of suburbanisation.
- Commuter mobility has increased in recent decades.

# 5.1 Migration in general and between federal states

In Germany and other highly developed countries, migratory movements strongly influence population development and the age structure of regions. Fig. 23 illustrates the differences in the extent to which the districts in Germany recorded inbound and outbound migration in relation to their number of inhabitants in 2019 and how these differences are distributed across Germany. Regional differences in living conditions (for instance, labour and housing markets, education opportunities) are the starting point for many migration decisions.

The migration statistics of all inflows and outflows across municipal borders within a year serve as the central basis for analysing internal migration. Based on the spatial classification of the Federal Office for Building and Regional Planning (BBSR), each of the 401 German districts can be assigned to one of four categories, i.e. large urban district, urban district, rural district and sparsely populated rural district. Table 2 shows the definitions of these district categories, as well as the number of districts belonging to each category (Milbert, 2015).

Table 2: Definition of the spatial boundaries according to the Federal Office for Building and Regional Planning and their number

Category	Large urban districts	Urban districts	Rural districts with beginning concentration	Sparsely populated rural districts
Definition	Urban districts with more than 100,000 inhabi- tants	More than 50% inhabitants in large and medium-sized cities and a population density of at least 150 inhabitants per square kilometre	More or less than 50% of inhabitants living in large and medium-sized cities and a population density between at least 100 inhabitants per square kilometre and less than 150 inhabitants per square kilometre	Less than 50% of inhabitants living in large and medium-sized cities and a population density of less than 100 inhabitants per square kilometre
Number	66	137	102	96

Source: Milbert (2015), diagram: Federal Institute for Population Research



Kiel Schwerin **OHamburg** Bremen ∘Berlin Potsdamo Hanover Magdeburg Düsseldorf Dresden ○ Erfurt Mainz Wiesbaden Saarbrücken Stuttgart Munich 7.5 to 0.2 0.2 to 0 0 to 0.2 0.2 to 0.4 0.4 to 1.58

Fig. 23: Net internal migration at district level in Germany, 2019

Difference between inbound and outbound migration within Germany per 100 inhabitants

Data source: Federal Statistical Office and federal-state statistical offices, ongoing spatial monitoring campaign of the Federal Office for Building and Regional Planning (BBSR), calculations and diagram: Federal Institute for Population Research

Internal migration is a demographic variable that significantly affects population trends and age structures at district and federal state level. In 2019, just over 2.8 million people changed their place of residence across district boundaries. This means that around 3% of the population living in Germany was mobile. This share of mobile citizens fluctuated only slightly between 1991 and 2019, and at around 4% was only insignificantly higher in 2015 and 2016 However, this was due to greater mobility of foreigners whose share had increased as a result of stronger international immigration in these years. That being said, Germany is a moderately mobile country compared to the more mobile north European countries, such as Finland or Denmark, and less mobile south European countries, such as Spain or Italy. However, the share of the population moving across district boundaries each year varies by age. Young adults in particular are mobile due to a more frequent occurrence of disruptive events in their biography (for instance, starting training or studies, entering the labour market). While about 10% of the group aged between 18 and 24 and 10% of the group aged between 25 and 29 moved across district boundaries in 2019, the share was 4% for those aged between 30 and 49 and just 1% for those aged 50 and over. Migration in Germany is hence largely determined by younger people. Internal migration also includes circular migration movements of people back to their original places of origin, for instance, after completing their education or after retirement. However, the share of these circular migrations in total internal migration cannot be determined due to incomplete migration biographies. The average migration distance within Germany totalled around 65km. This figure was even higher at the beginning of the 1990s and around the turn of the millennium, at more than 72km, partly due to the higher volume of migration between east and west Germany.

Around 39% of the 2.8 million people moving in 2019 moved to another federal state. In this context, migration contributes to differences in population development between the federal states. In 2019, the federal states of Brandenburg (+16,300), Schleswig-Holstein (+7,200), Saxony (+4,300), Mecklenburg-Vorpommern (+3,800), Bavaria (+3,300), Rhineland-Palatinate (+2,500) and Hamburg (+140) recorded positive migration balances compared

to the rest of Germany, thus gaining population through internal migration. On the other hand, internal migration was negative in Baden-Württemberg (8,900), Berlin (6,900), North Rhine-Westphalia (5,700), Thuringia (3,800), Hesse (3,300), Lower Saxony (3,200), Saxony-Anhalt (2,800), Bremen (1,900) and Saarland (1,200).

As can be seen from Fig. 23, migration balances at district level vary significantly in relation to population size. More than half of all districts record positive migration balances. When broken down according to different spatial types, we see that 33% of large urban districts, 69% of urban counties, 67% of rural district and 75% of sparsely populated rural districts recorded positive migration balances in 2019. However, positive migration balances are found for a much smaller share of sparsely populated districts in the east German federal states (61%) than in the west (82%). In the case of urban districts, on the other hand, positive internal migration balances were recorded by a higher share of east German (44%) federal states compared to the west (32%).

In addition, migration between the east and west German federal states is particularly relevant for regional population development. Disregarding Berlin due to its special role as a formerly divided city, approximately 3.7 million people moved from the east German federal states to the west between 1991 and 2017. During the same period, however, only 2.5 million people moved the west German federal states to the east, resulting in a population loss of 1.2 million for the east German federal states over the entire period.

Fig. 24 shows that since 1991 and following a peak in 2001, outbound migration from the east German federal states has declined significantly, whereas inbound migration from the west German federal states has remained largely constant. Overall, net migration between the east and west German federal states can currently be described as balanced. Between 2017 and 2019, the west German federal states even recorded slightly positive migration balances. The federal states of Brandenburg, Saxony and Mecklenburg-Vorpommern, in particular, are benefiting from this current development, while Saxony-Anhalt and Thuringia continue to show a negative migration balance for migration between the east German federal states and the west.

<sup>1</sup> Comparisons of the share of the mobile population between different countries are based on modelling by Bell et al. (2015).



Persons (in thousands)

200

150

100

Migration loss, East Germany

50

1991

2000

2009

2018

Moves from East to West

Moves from West to East

Fig. 24: Migration between the former federal territory and the new (eastern) federal states (without Berlin), 1991 to 2019

Data source: Federal Statistical Office, statistical offices of the federal states, diagram: Federal Institute for Population Research

These statistical trends are in part due to the return migration of people who once left the east German federal states. However, these circular migration movements can currently only be traced for employees in jobs subject to social security contributions on the basis of the employment history of the Institute for Employment Research (IAB), with the caveat that only older evaluations are available in these cases. These evaluations suggest that the return rate of east German employees increased significantly between 2000 and 2010 (Nadler and Wesling, 2013).

Despite this positive migration trend across all age groups, the east German federal states are still experiencing outbound migration among people aged between 18 and 29 (educational migrants and labour market entrants). In 2019, this led to a net migration loss of a good 5,400 people in this age group for the east German federal states (excluding Berlin). In the case of family migrants (aged under 18 and between 30 and 49) and for people aged 50 and over, on the other hand, the east German federal states saw a net migration gain of 2,500 and 4,000, respectively. A comparison of migration behaviour of men and women shows that women initially accounted for higher outbound migration from the east to the west German federal states. Since 2005, however, men have been moving to the west more frequently, resulting in a migration surplus of men over women in 2019. Migration from the east to the west German federal states, on the other hand, is characterised by a slight surplus of men, which also continued in 2019.

# 5.2 Development of urban-rural migration and commuter mobility

Migration between rural, urban and suburban areas is particularly important. Fig. 25 shows the net migration rates of German citizens for different spatial types over the period from 1991 to 2018.¹ Net migration rates provide information on how much population a district gains or loses relative to its population. A net migration rate of 1% means that a region has a migration gain of one person per 100 inhabitants.

As can be seen in Fig. 25, a phase of so-called suburbanisation set in after German reunification. Suburbanisation is the process of population and job migration from the core city to the surrounding area. From 1991 to 1999, this process was particularly marked by developments in the east German federal states, whereas it had already begun earlier in the west. During this period, it was specifically rural areas that recorded population gains, while urban districts suffered migration losses. From 2000 to 2004, neither rural nor urban areas experienced significant migration losses or gains. From 2005 onwards, the previous phase of suburbanisation was replaced by a new phase of urbanisation, which lasted until 2011, after which net migration rates of large urban districts began to fall again. In 2014, large urban districts again experienced negative net migration rates, while rural districts saw positive rates. This trend suggests a new phase of suburbanisation.

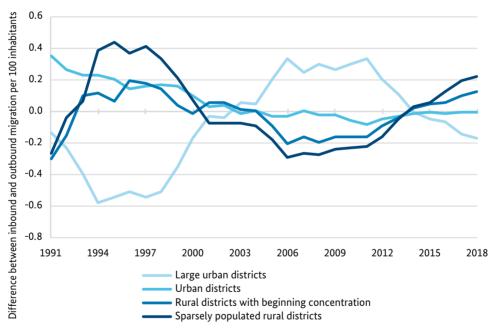
Migration patterns for the different spatial types also vary across ages. People aged between 18 and 29 are particularly likely to move to large urban districts, whereas urban and rural districts see negative net migration rates for this population group. The situation is different for family migrants (aged under 18 and between 30 and 49) and people aged 50 and over; people in these two groups migrate more frequently to rural and less frequently to urban districts. It is also clear that, on average, more women than men move from rural to urban districts. All in all, it can be stated that it is mainly the migration of young adults both between the west and the east German federal states and between urban and rural areas that has a clear influence on population development and the age structure at regional level.

In addition to these migrations between the different spatial types, a further change in the patterns of regional mobility can be observed in Germany and other industrial nations. While moves are stagnating (see chapter 5.1), more and more people are opting for longer commuting distances to work (Rüger et al., 2018; Federal Institute for Population Research, 2018). There are two main reasons for commuting: on the one hand, to take advantage of professional opportunities in remote locations without having to move. On the other hand, to be flexible in the choice of residence without having to change jobs.

<sup>1</sup> The German population is used for this evaluation because the high level of international migration to Germany in 2014 to 2016 distorts the migration statistics. However, evaluations based on migration of the German and foreign population lead to the same conclusions.



Fig. 25: Migration for different spatial types, 1991 to 2018 (German nationals, net migration rates)

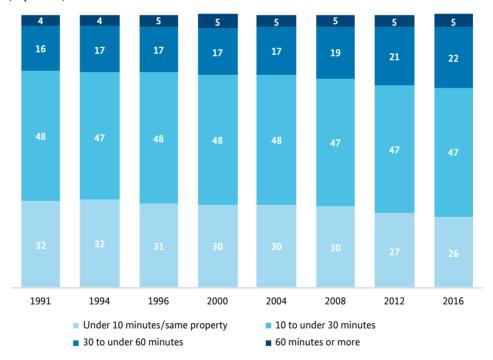


Data source: Federal Statistical Office and federal-state statistical offices, ongoing spatial monitoring campaign of the Federal Office for Building and Regional Planning (BBSR), calculations and diagram: Federal Institute for Population Research

Fig. 26 shows that in 2016 more than one in four employed persons in Germany needed 30 minutes or more for a simple commute to work, which corresponds to around eleven million employed persons. At the beginning of the 1990s, this figure was still one in five, or just under eight million employed persons. One in twenty workers commuted one hour or more in 2016. An increase can also be seen in commuting distances. In 2016, around 18% of employed persons travelled 25 kilometres or more for a one-way commute. This is around seven percentage points more than in 1991. Commuting has increased for both women and men over the period under review, with women travelling shorter distances on average than men.

The distance to work for commuters in urban regions is on average shorter than in rural regions, but at the same time the travel time required is longer in cities than in the country. In 2016, 16% of the urban workforce had a one-way commute of at least 25 kilometres, compared to 21% in the country. On the other hand, 29% of employees in urban areas took 30 minutes or more for a single commute, compared to 23% in rural areas. This is probably due to higher traffic density in cities with congestion and overloaded public transport.

Fig. 26: Time spent commuting to the workplace (one-way) in Germany, 1991 to 2016 (in percent)



Data source: Microcensus, calculations and diagram: Federal Institute for Population Research





# Special contribution: COVID-19 and mortality



Source: Jasmin Merdan/Moment/Getty Images

On 11 March 2020, the World Health Organization (WHO) classified the spread of the novel coronavirus SARS-CoV-2 as a pandemic. Germany is also affected by this. The long-term demographic consequences of the SARS-CoV-2 pandemic are not yet foreseeable. However, it is undisputed that the risk of contracting severe COVID-19 and possibly dying is much higher in old age. The analysis of mortality as a result of the SARS-CoV-2 pandemic hence shows a strong demographic component (Dowd et al., 2020). In Germany, deaths are also highly concentrated (85%) in the population aged 70 years and older (as of 20 October 2020, source: Robert Koch Institute (RKI), 2020).

In order to better understand the mortality caused by the pandemic, it is first necessary to clarify the terminology used to describe different measures of mortality (Backhaus, 2020). These measures are not always strictly separated from each other in the public debate, but are sometimes even used synonymously, although they must be differentiated from each other by definition.

In its simplest form, the case fatality rate is the ratio of confirmed deaths from COVID-19 disease to confirmed infections with the SARS-CoV-2 virus. Due to the high share of asymptomatic or mild infections that are often not detected by testing, only a relatively small proportion of all infections with the novel coronavirus are therefore included in the calculation of case fatality rates.

The infection fatality rate, on the other hand, is the ratio of confirmed deaths from COVID-19 disease to all infections with the SARS-CoV-2 virus. The number of infections that have already occurred within the general population can be estimated using representative antibody tests. Since at least approximately all infections with the novel coronavirus are included in the calculation of the infection mortality rate, this rate is significantly lower than the case mortality rate. While it is estimated to total 0.68% on average for the population, it rises steeply with age and is higher for men than for women. Furthermore, the infection mortality rates estimated to date vary significantly between different countries and regions. (Meyerowitz-Katz and Merone, 2020; Mallapaty, 2020)

Finally, the mortality rate or death rate is the ratio of the number of people who die of a disease in a given period to the population over the same period. The mortality rate of COVID-19 will therefore only be definitively and meaningfully known once the pandemic is over. If the further spread of the SARS-CoV-2 virus in the population is successfully contained or stopped, the mortality rate will again be significantly lower than the infection mortality rate.

The concept of excess mortality is also often used to assess for a short term period the severity of infection and hence mortality within a pandemic-hit population. Excess mortality occurs when, within a population or population group, more deaths are recorded during a clearly defined period of time than would be expected in comparison to the average mortality for the same time of the year. In an ongoing publication, the Federal Statistical Office publishes current death figures for 2020 as well as comparative figures from previous years up to and including 2016 (Federal Statistical Office, 2020). It should be noted that the death figures for 2019 and 2020 are purely a count of death notification cases received from the registry offices, without usual statistical processing, plausibility checks or completeness verification.

As it currently stands, there were 8% more deaths in the month of April in 2020 than the average of the previous four years. Fig. 27 shows the weekly progression of deaths in 2020 compared to the 2016 to 2019 period and compared to confirmed COVID-19 deaths in Germany. The increase in deaths beginning with calendar week 11 of 2020 (deviating from the average of previous years) runs parallel with the increase in COVID-19 deaths beginning the same calendar week.

Overall, the Federal Statistical Office recorded 7,486 more deaths in calendar weeks 13 to 18 of 2020 than the average for the same calendar weeks in the previous four years. At the same time, 7,083 deaths from COVID-19 were reported to the Robert Koch Institute. The statistics of COVID-19 deaths can therefore explain the recorded increased mortality quite well. However, in addition to deaths directly related to COVID-19 infection, there may also be deaths

<sup>1</sup> Federal Statistical Office press release No. 194 of 29 May 2020



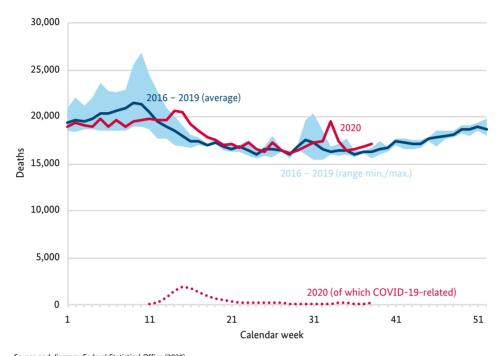


Fig. 27: Weekly number of deaths in Germany, 2016 to 2020

Source and diagram: Federal Statistical Office (2020)

that are indirectly related to the pandemic. For example, the provision of hospital capacity for COVID-19 patients and the resulting failure to provide treatment elsewhere may also result in deaths that would have been avoidable in the absence of the pandemic.

In regional terms, the increased mortality trend has so far been dominated by three federal states. The number of deaths exceeded the average of the four previous years by 18% in Bavaria, 16% in Baden-Württemberg and 5% in North Rhine-Westphalia. In a European comparison, the extent of the increased mortality in Germany has so far been relatively low and is at the level of a strong influenza wave in previous years. Crucial to this was the successful slowing of the spread of SARS-CoV-2 in the German population in spring 2020. At present, there are no significant or confirmed effects of the pandemic on the demographic situation in Germany.



# Conclusion and outlook



Overall, some of Germany's demographic trends over the past decade have proven to be unexpectedly volatile, while others have taken a different course than expected ten years ago. In light of this, the following developments deserve special mention.

- According to current projections, the decline in population will be slower and smaller than previously expected.
- With a moderate further rise in the median age of the population, especially the share of very old people will increase. The further shift in age structure does not mean, according to what we know today, that people are older for longer. Instead, increased life expectancy is primarily associated with the extension of middle adulthood in many cases beyond the age of 70.
- Fertility among the younger cohorts is stabilising at a slightly higher, albeit still relatively low level, with the age of mothers and fathers continuing to increase. The share of permanently childless women seems to have peaked and does not seem to be increasing any further. Among female academics, a certain reversal can be seen in the sense of a slight decline in permanent childlessness.
- Overall, inbound migration has increased significantly in volume and become more diverse in terms of countries of origin and forms. Migration increasingly does not mean the permanent transfer of the centre of life from one country to another. Instead, it is increasingly accompanied by commuter migration and episodic stays, often in the sense of developing two centres of life in the country of origin and the country of residence. Regional disparities in Germany remain considerable. The target regions for inbound migrants continue to be the western federal states and the large cities. In the rural regions of east Germany, the share of foreign residents remains very low, often below two percent.
- Patterns of internal migration have also changed. They
  can no longer be explained by the previously familiar
  east-west or urban-rural patterns. The east-west migration pattern is currently balanced and a considerable
  trend towards suburbanisation has been observed for
  around five years.

 Differences between regions are still pronounced in the early 2020s.

The simple, often linear extrapolation of demographic trends, which was considered to be certain just one or two decades ago, must therefore be viewed with growing scepticism. Mere demographic numerical ratios and highly aggregated averages are of limited value, as these developments and recent findings have shown. They often assume a degree of stability and homogeneity that does not exist. The '65-year-olds' of 2020 are only comparable to a limited extent with the 65-year-olds in 1990. On average, people today remain healthy, active and independent for longer than they did just a few decades ago. Health, remaining life expectancy and employment patterns are just some of the parameters that have changed collectively over time and are likely to continue changing. It is not only the number of people, but also their behaviour that will determine the demographic and social future. Statistical measures, such as the share of the old population, should be viewed with caution since they cannot adequately account for heterogeneity and volatility. Similar problems of comparability over time exist when considering fertility trends. It can be seen that the current value of the birth rate is still strongly influenced by the older birth cohorts with a particularly low number of children, whereas a look at the number of children of the younger birth cohorts suggests a slight increase in fertility. Greater differentiation is also needed when considering immigrants who cannot be regarded as a homogeneous group; their demographic behaviour is too different, depending on their origin, and their prospects and intentions to stay are too heterogeneous, depending on their motives for migrating. Finally, it should not be underestimated that aggregated data conceal the sometimes significant regional disparities even though these have a considerable impact on Germany's demographic and social future. Many regions are developing against the general trend and many of these developments are highly volatile over time. Districts which are currently seeing growth previously went through very different processes of growth or contraction. Regional and socio-structural differences in the demographic processes described above remain considerable and create unequal starting positions that must be taken into account in order to master demographic challenges.



Demographic change has made biographies more dynamic, more fragile and more episodic. The classic three-stage model of biographies (education, activity, retirement), which continues to be the guiding principle of many social institutions, has had its day. In addition to the need for lifelong learning, greater consideration should be given to the fact that human activity does not end with retirement and that access to societal resources is now better than in the past. More consideration should also be given to the fact that even in middle adulthood there will always be longer periods of reduced workforce participation, be it for family or personal reasons. The increased diversity of biographies and life plans requires more flexible and individualised regulations and options. At the same time, flexibilisation is not a panacea for all areas of life and age, but must be thoroughly weighed up and managed in terms of its incentives, for example, with regard to a more flexible retirement age (Börsch-Supan et al., 2018) as well as increased, individually designable forms of 'sliding out' of working life instead of abrupt termination that is still the dominant form.

Dealing with the growing number of very old people will remain a challenge for social policy, both in terms of pensions, health services and, in particular, the financing and provision of healthcare workers and services.

The relatively favourable educational structure of the population in the Federal Republic of Germany is likely to prove generally helpful in coping with the country's demographic challenges, especially with regard to the development of the workforce potential.

The continuing challenge of integrating immigrants is closely linked to the aspect of education. In terms of education policy, this continues to affect the second and third generations of immigrants and also the refugees and their descendants who came to Germany in 2015/16. Competition for internationally mobile skilled workers will continue to intensify, an area where Germany could become even more competitive in attracting and retaining the right minds.

One particularly complex demographic challenge is how to deal with the pronounced regional disparities in Germany that are once again highlighted in this report. These disparities continue to exist in some respects between east and west German regions, but differences are also increasingly

becoming apparent between peripheral and urban regions in both east and west Germany. Regional strategies for the provision of services of general interest, which include civic engagement, offer a political approach to better cope with the geographically unevenly distributed demographic challenges.

In order to better observe, analyse and assess demographic trends in the future, researchers in the international arena will be able to draw on ever larger and more detailed data sets. In Germany, on the other hand, the situation with data and data availability is at times still lacking. The consequences of this for scientific policy advice are even worsened by high restrictions on access to data for the scientific community (Schneider et al., 2020). In this respect, Germany's science policy must be geared to the requirements of demographic research in the 21st century.

The warnings often voiced in the past about Germany's demography-induced decline have served their purpose in as far as considerable effort has been made in the last decade to develop strategies for adapting to and managing demographic change. These strategies have already borne fruit in many places. However, social and political responses to demographic change must certainly continue. Appropriate demography-oriented policy-making is an ongoing task for the decades to come.

## References and data sources

Abel, G. J., Sander, N. (2014), Quantifying Global International Migration Flows, Science, 343(6178), 1520-1522.

Azose, J. J., Raftery, A. E. (2019), Estimation of emigration, return migration, and transit migration between all pairs of countries, Proceedings of the National Academy of Sciences, 116(1), 116-122.

Backhaus, A. (2020), Common Pitfalls in the Interpretation of COVID-19 Data and Statistics, Intereconomics, 55(3).

Bell, M., Charles-Edwards, E., Ueffing, P., Stillwell, J., Kupiszewski, M., Kupiszewska, D. (2015), Internal Migration and Development: Comparing Migration Intensities Around the World, Population and Development Review 41(1), 33-58.

Börsch-Supan, A., Bucher-Koenen, T., Kutlu-Koc, V., Goll, N. (2018), Dangerous flexibility – retirement reforms reconsidered, Economic Policy, 33(94), 315-355.

Brücker, H., Tucci, I., Bartsch, S., Kroh, M., Trübswetter, P., Schupp, J. (2014), Neue Muster der Migration. Auf dem Weg nach Deutschland, DIW Weekly Report, 81, 1126-1135.

Brücker, H., Schewe, P., Sirries, S. (2016), Eine vorläufige Bilanz der Fluchtmigration nach Deutschland, Institute for Employment Research, Current Reports, 19/2016, Nuremberg.

Bujard, M., Diabaté, S. (2016), Wie stark nehmen Kinderlosigkeit und späte Geburten zu? Neue demografische Trends und ihre Ursachen, Der Gynäkologe 49(5), 393-404.

Federal Agency for Migration and Refugees (BAMF) (several years), Das Bundesamt in Zahlen. Asyl, Migration und Integration, Nuremberg.

Federal Agency for Migration and Refugees (BAMF) (2016/2017), Asylgeschäftsstatistik. Antrags, Entscheidungs und Bestandsstatistik 2015/2016, Nuremberg.

Federal Institute for Population Research (2018), Pendelmobilität in Deutschland. Potenziale nutzen – Belastungen reduzieren. Policy Brief.

Federal Institute for Population Research (2018), Reproduktionsmedizin und Familienplanung, Policy Brief.

Federal Institute for Population Research (2019), Kinderreiche Familien in Deutschland. Auslaufmodell oder Lebensentwurf für die Zukunft? Wiesbaden.



Dowd, J.B. et al. (2020), Demographic science aids in understanding the spread and fatality rates of COVID-19, Proceedings of the National Academy of Sciences, 117(18), 9696-9698.

Engfer, U. (2018), Ruhestandsmigration und Reurbanisierung, Raumforschung und Raumordnung | Spatial Research and Planning, 76(1), 35-49.

Ette, A., Sauer, L., Fauser, M. (2021), Settlement or Return? The Intended Permanence of Emigration from Germany Across the Life Course. In: Erlinghagen, M., Ette, A., Schneider, N. F., Witte, N. (eds.): The Global Lives of German Migrants. Consequences of International Migration Across the Life Course. Cham: Springer, 105-123.

Eurostat (2020a), Asylbewerber und erstmalige Asylbewerber nach Staatsangehörigkeit, Alter und Geschlecht – jährliche aggregierte Daten (gerundet) [migr\_asyappctza], as per: 1 September 2020)

Eurostat (2020b), Selbst wahrgenommene Gesundheit nach Geschlecht, Alter und Bildungsabschluss [hlth\_silc\_02], as per: 5 June 2020)

Kibele, E. U. B., Jasilionis, D., Shkolnikov, V. M. (2013), Widening socioeconomic differences in mortality among men aged 65 years and older in Germany, Journal of Epidemiology and Community Health, 67(5), 453-457.

Klüsener, S., Loichinger, E., Schneider, N. F., Sulak, H. (2019), Alterung und Arbeitsmarkt, Auswirkungen weniger dramatisch als vielfach befürchtet, Federal Institute for Population Research, Policy Brief.

Kotschy, R., Sunde, U. (2018), Can Education Compensate the Effect of Population Aging on Macroeconomic Performance? Economic Policy, 33(96), 587-634.

Mallapaty S. (2020), The coronavirus is most deadly if you are older and male - new data reveal the risks, Nature, 585(7823), 16-17, doi: 10.1038/d41586-020-02483-2.

Mergenthaler, A., Micheel, F., Schneider, N.F. (2020), Altes Eisen oder mitten im Leben? Lebenslagen, Lebensereignisse und Lebenspläne älterer Menschen in Deutschland, Konrad Adenauer Foundation, Berlin.

Meyerowitz-Katz, G., Merone, L. (2020), A systematic review and meta-analysis of published research data on COVID-19 infection-fatality rates, International Journal of Infectious Diseases, doi: https://doi.org/10.1016/j.ijid.2020.09.1464.

Milbert, A. (2015), Raumabgrenzungen – Methodik und Entwicklung der BBSR-Typen. In: Meinel, G., Schumacher, U., Behnisch, M., Krüger, T. (eds.): Flächennutzungsmonitoring VII. Boden – Flächenmanagement – Analysen und Szenarien. Berlin: Rhombos-Verlag, 2015, (IÖR-Schriften; 67), 173-179.

Nadler, R., Wesling, M. (2013), Zunehmende Rückwanderung von Arbeitskräften nach Ostdeutschland. In: Nationalatlas aktuell, 7 (12.2013) 11 [13.12.2013], Leipzig, Leibniz Institute for Regional Geography (IfL).

Pötzsch, O. (2018), Aktueller Geburtenanstieg und seine Potenziale, WISTA 3, Federal Statistical Office.

Pötzsch, O., Klüsener, S., Dudel, C. (2020), Wie hoch ist die Kinderzahl von Männern?, WISTA 5, Federal Statistical Office.

Robert Koch Institute (RKI) (2020), Täglicher Lagebericht des RKI zur Coronavirus-Krankheit-2019 (COVID-19), 20 October 2020, Update for Germany.

Rüger, H., Skora, T., Linde, M., Sulak, H., Waibel, S. (2018), Vereinbarkeit von beruflicher Pendelmobilität mit Familie in Deutschland. Die Folgen für Berufskarriere und subjektives Wohlbefinden. In: Staat und Wirtschaft in Hessen 2/2018, 37-45.

Schneider, N. F., Klüsener, S., Mueller, U. (2020), Sterblichkeit in Deutschland muss besser und schneller erfasst werden Lehren aus der COVID-19-Pandemie. BIB Working Paper.

Federal Statistical Office (2020), Sonderauswertung Sterbefälle, Fallzahlen nach Tagen, Wochen, Monaten, Altersgruppen und Bundesländern für Deutschland, as per: 15 October 2020. https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/sterbefallzahlen.html

Federal Statistical Office (2019), Bevölkerung im Wandel, Annahmen und Ergebnisse der 14. koordinierten Bevölkerungsvorausberechnung, Wiesbaden.

Federal Statistical Office (2019), Kinderlosigkeit, Geburten und Familien. Ergebnisse des Mikrozensus 2018, Wiesbaden. https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Haushalte-Familien/Publikationen/Downloads-Haushalte/geburtentrends-tabellenband-5122203189014.html

Federal Statistical Office (2015), Bevölkerung Deutschlands bis 2060, 13. koordinierte Bevölkerungsvorausberechnung, Wiesbaden.

Federal Statistical Office (2009), Bevölkerung Deutschlands bis 2060, 12. koordinierte Bevölkerungsvorausberechnung, Wiesbaden.

Federal Statistical Office (2006), Bevölkerung Deutschlands bis 2050, 11. koordinierte Bevölkerungsvorausberechnung, Wiesbaden.

Federal Statistical Office (2003), Bevölkerung Deutschlands bis 2050, 10. koordinierte Bevölkerungsvorausberechnung, Wiesbaden.







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