

A CHANGING POPULATION

Assumptions and results of
the 14th coordinated
population projection



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Tel.: +49 (0) 611 / 75 48 66

Fax: +49 (0) 611 / 75 39 69

Contact form: www.destatis.de/contact

Information for journalists:

Press Office

Tel.: +49 (0) 611 / 75 34 44

Fax: +49 (0) 611 / 75 39 76

Contact form: www.destatis.de/contact

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Central Information Service

Tel.: +49 (0) 611 / 75 24 05

Fax: +49 (0) 611 / 75 33 30

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1 Introduction

This brochure was created to accompany the Federal Statistical Office's press conference held on 27 June 2019 under the title "A changing population: results of the 14th coordinated population projection". It provides an overview of the key results and assumptions of the 14th population projection, a coordinated effort of the statistical offices of the Federation and the Länder. The focus of the brochure is on demographic developments in Germany. The results relating to regional trends are set out in the publications entitled "Bevölkerungsentwicklung in den Bundesländern bis 2060" (see Appendix 4)¹.

Population projections provide basic information regarding potential future demographic trends for political, social and economic decision-making processes. They reveal the effects that present structures and currently identifiable changes will have on the future population. They are therefore an indispensable basis for political and economic action. The Federal Government draws on the results of the coordinated population projections to present and illustrate demographic change (Demographic Strategy 2011 and Demographic Policy Stocktake 2017). They provide the basis for a whole range of more detailed forecasts.

The 14th coordinated population projection is based on population figures for 2018² and covers the period up to 2060. It uses 21 variant projections to describe potential future population trends, making it possible to illustrate future developments that can be identified from today's perspective and to judge the impact of individual demographic components – namely fertility, mortality and migration – on future population trends. The 14th coordinated population projection also includes nine model calculations for analytical purposes which illustrate development scenarios that are rather unrealistic (see Appendix 1).

Changes in the population generally occur slowly but the impact of the structures that develop as a result of these changes can be felt long into the future. For this reason, the 14th coordinated population projection does not paint a completely new picture of Germany's demographic future compared with the previous population projection. Despite more recent developments – particularly the very high level of immigration in recent years – the judgements made about the primary implications of the demographic change still hold true.

Nevertheless, changes in the starting population needed to be taken into account for the new projection and the assumptions used to date had to be revised. Across all demographic components, there have been new trends in recent years, the significance of which is still unknown. The greater uncertainty that this has created has been reflected in the broader range of possible developments assumed. In addition to variants based on a shrinking population, the 14th coordinated population projection also includes further options in which the population figure

¹ In-depth analyses of regional disparities will be published at a later date in the *Wirtschaft und Statistik* scientific journal.

² The data for 2018 that have been included in the calculation relate to the annual average population based on the figure as at 31 December 2017 and an estimated figure as at 31 December 2018. The final results as at 31 December 2018 had not yet been made available at the time of writing this brochure.

is largely stable or even growing. The impact these broader assumptions have on population ageing is however very limited. The trend in population ageing is essentially outlined by the existing age structure of the population.

Official population projections do not claim to forecast future developments. They help to explain how the size and structure of the population could be expected to develop under certain demographic conditions. The assumptions on fertility, mortality and migration are based on both analyses of past trends over time and across Länder and hypotheses regarding the further development of trends that can be identified from today's perspective (cf. Chapter 6). The further a projection is taken into the future, the more difficult it becomes to predict the trends of major variables, however. For this reason, long-term projections should be regarded as models.

The current 14th coordinated population projection provides data both for Germany as a whole and its individual Länder. The results are based on coordinated assumptions and identical methods of computation. This brochure presents selected results for Germany. Further explanations on the projection for the individual Länder can be found in the relevant volumes of tables. The detailed results can be downloaded from the internet (see Appendix 4).

Acknowledgements

The Federal Statistical Office invited a team of experts on population projections to advise on its population projections from an academic perspective. The team consists of scientists as well as experts conducting projections of their own. In this context, these persons also present and discuss aspects of their own work. The assumptions of the 14th coordinated population projection were discussed by this team of experts. The Federal Statistical Office would like to thank the following experts for their valuable support in compiling the 14th coordinated population projection:

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2 Informational value of long-term population projections

The aim of long-term population projections is to show the effects that present structures and currently identifiable changes will have on future population development in the medium to long-term. Since demographic processes take place only very slowly and the full extent of their impact only becomes evident many decades later, a population projection is only able to fulfil its purpose if the period that it covers is of a sufficient duration. Although the nature of the projection becomes more hypothetical as the length of time that has elapsed since the baseline year increases, it does enable the medium and long-term effects of the observed trends to be revealed and quantified. This in turn means that society is able to identify potentially problematic changes and, where necessary, to counteract them in good time.

If new trends or, in particular, countermeasures mitigate or even offset the foreseeable effects, the actual development of the population will inevitably be different to what has been projected. The population projections are therefore useful in particular when they send out the right signals and not necessarily when, in an ex-post analysis, they have predicted the future with a high degree of accuracy. The findings of the population projections were vital for the key political developments of the past 15 years, such as the discussion on increasing the retirement age, the introduction of parental allowance and the expansion of childcare as well as the public debate regarding the trend in birth rates.

The coordinated population projections comprise several variants. These variants are the result of a combination of deterministic (clearly quantified) assumptions on demographic components. They represent different options of future development. While this points on the one hand to the uncertainties inherent in a projection, on the other it allows users to make a conscious choice from the variants depending on the current demographic situation and the time frame observed. Moreover, it is always possible to identify the assumption on which a particular trend is based.

However, no population projection can make allowances for structural changes that are triggered by unforeseeable events. New trends, the lasting effect of which is only established at a later point in time, can also change the future development of the population. As a result, the projections need to be continually updated.

A comparison of the results from the 10th and 11th coordinated population projections, based on the years 2001 and 2005, with the statistically proven population for 2017 clearly illustrates the strengths and weaknesses of the population projections.

The strength of these projections is the high degree of accuracy as regards changes in the age structure and in the relationship between the roughly defined age groups. There is a clear difference between the age structure in 2001 (the areas shaded in grey in Figure 1) and the age structure of the population in 2017. Between 2001 (or 2005) and 2017, there were sharp fluctuations in migration. Statistical corrections to the population figures were also made as a result of the 2011 Census. Nevertheless, in their range of assumptions, the two previous population projections accurately

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Figure 1

Comparison of the actual development between 2001 and 2017 with the results of the 10th and 11th coordinated population projections (CPP)¹



¹ 10th coordinated population projection, variant 8 (assumptions: 1.4 children per woman; life expectancy at birth in 2060 82.6 years for boys and 88.1 years for girls; net migration 200,000 persons). 11th coordinated population projection, variant 4-W2 (assumptions: increase to 1.6 children per woman by 2025; life expectancy at birth in 2060 85.4 years for boys and 89.8 years for girls; net migration 200,000 persons).

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depict the changes in age structure that have taken place. For women aged 44 or over (born in 1973 or earlier), the projected and the statistically recorded cohort sizes are virtually identical, while for men they are very close.

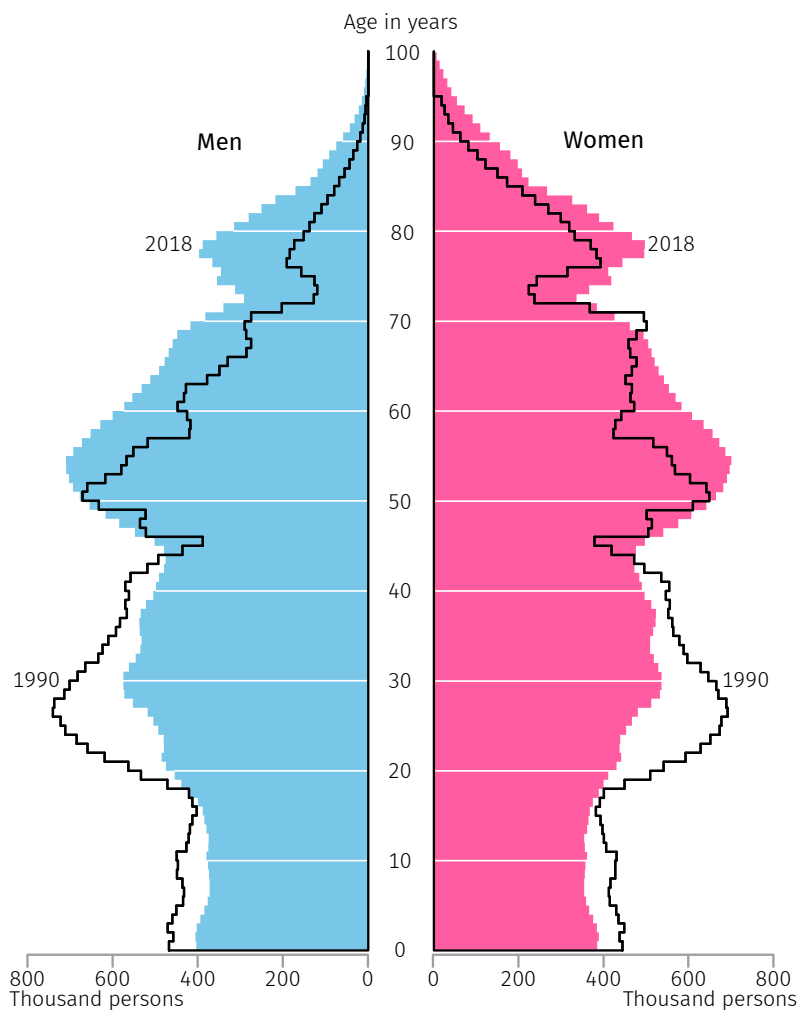
The weaknesses are exposed in particular if unforeseeable changes occur at the time of the projection with a high degree of intensity. In Figure 1, this is illustrated in the deviations between the projected and empirical values for younger cohorts below 44 years of age. The changes in migration and the birth rate affect the population in this age group to a greater extent than is the case for older cohorts. This clearly shows that the projections were unable to predict the rise in the number of births from 2012 onwards and the high level of immigration around 2015. Whereas variances in early childhood (between the ages of 0 and 6) are evident among both sexes, the impact of the high level of net immigration has been particularly strong among young men (between the ages of 18 and 25). Among young women, the variances between the projection and the statistical result are smaller.

3 A changing population: baseline situation in 2018

Population ageing has long since ceased to be an issue for the future and is already at an advanced stage in Germany. In 2018, the baseline year for the 14th coordinated population projection, the average age of the population in Germany stood at 44 years, five years more than in 1990, the year of German reunification (39 years). The ageing of the large birth cohorts between 1955 and 1970, which are part of the baby boom generation (Figure 2), demonstrates these changes particularly clearly. In 1990, these cohorts were aged between 20 and 35 and represented the largest age group. This remains the case today, even though they are now of mature working age and will enter retirement age over the next two decades. Between 1990 and 2018, the number of people aged 70 or over increased from eight to 13 million. At the same time, the population pyramid has become more symmetrical, which means that the size of the female (right-hand side) and male (left-hand side) cohorts have converged. In the older age-groups, it is clearly noticeable that not only women, but now also men, reach an advanced age.

Figure 2

Age structure of the population in 2018 compared with 1990



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As a result of the extremely sharp increase in immigration since 2014, on balance a total of 2.6 million predominantly young people came to Germany (in this case: between 2014 and 2017³: 37% of them were aged under 20 and 53% were aged between 20 and 39. In particular, this immigration counteracted population decline. Without net immigration, such a decline would have been inevitable on account of negative natural population change, whereby the number of deaths exceeds the number of births. However, immigration also strengthened the young cohorts and helped to reduce the age of the labour force potential. By contrast, the trend had virtually no impact on the ageing of the population as a whole, the main determinants of which are the advancement of the baby boom generation to old age and the increase in life expectancy.

In the baseline year for the 14th coordinated population projection, the population is thus characterised on the one hand by the increase in the number of people in the younger cohorts, and on the other hand by population ageing that is at a markedly advanced stage. Compared to the baseline period, the future changes in the population size and age structure are therefore likely to be less dramatic than in previous projections. The starting point for the population projections based on the 1990s and 2000s was a much younger population at the time. Furthermore, when the earlier projections were made, the change in the ageing process up to its current state was a development that then still lay in the future.

³ The results of the migration statistics for 2018, broken down by age, had not yet been made available at the time of writing this brochure.

4 Variants and model calculations of the 14th coordinated population projection – An overview

The 14th coordinated population projection for Germany comprises nine main variants (variants 1 to 9, see Chart 2 on page 16), twelve further variants (variants 10 to 21) as well as nine model calculations (models 1 to 9). A complete overview of all the variants and model calculations is provided in Appendix 1.

This system of projections and calculations, comprising a total of 30 variants, is obtained by combining different assumptions on fertility, life expectancy and Germany's balance of immigration and emigration (net migration). Chart 1 provides a brief description of the assumptions made on the three demographic components. These assumptions provide the basis for the variants considered here. More detailed information on all of the assumptions is provided in Chapter 6.

As several options are possible regarding the development of demographic components, on account of the current baseline situation, three assumptions each were made at the recommendation of the team of experts. Combining these assumptions produced 27 variants. Together with the three additional model calculations, this is a very high number of calculations. In order to aid orientation and facilitate access to all results, the content of the different variants was classified. This helps in terms of correctly grading the influence of the individual components and assumptions and in assessing the range of potential developments.

Chart 2 covers the nine main variants. **Variants 1 to 3** show the development in the population that would result in the event of moderate changes in fertility and life expectancy and varying levels of net immigration. For all three variants, the assumption was made that the annual fertility rate will stabilise at the level of 1.55 children per woman and the completed fertility per woman will increase to 1.6 children (G2), while life expectancy at birth will increase by 6 and almost 5 years respectively, to 84.4 years for boys and 88.1 years for girls (L2) in 2060.

- In variant 1, annual net migration will decrease on a continuous basis between 2018 and 2030 and remain constant thereafter at around 111,000. Between 2019 and 2060, immigration to Germany would exceed emigration from the country by an average of 147,000 people per year (W1). This equates to the average net migration figure for the period from 1955 to 1989.
- In variant 2, net migration will decrease on a continuous basis between 2018 and 2026 and remain constant thereafter at around 206,000. Between 2019 and 2060, immigration to Germany would exceed emigration from the country by an average of 221,000 people per year (W2). This equates to the average net migration figure for the period from 1955 to 2018.
- In variant 3, net migration will decrease very gradually between 2018 and 2030 and remain constant thereafter at around 300,000. Between 2019 and 2060, immigration to Germany would exceed emigration from the country by an average of 311,000 people per year (W3). This equates to the average net migration figure for the period from 1990 to 2018.

Variants 4 and 5 show the range of potential ageing. The underlying assumptions demonstrate either a strong degree of ageing (variant 4) or a relatively young population (variant 5).

- Variant 4 assumes that the long-term fertility trends will prevail again and that the birth rate will fall to 1.4 children per woman (G1), whereas life expectancy will increase sharply (by nearly eight years for newborn boys and by more than six years for newborn girls, L3) and fewer people will migrate to Germany (net migration of 147,000 people per year on average, W1).
- Variant 5, by contrast, assumes that the current increase in fertility will continue for some time to come and that the birth rate will rise to 1.7 children per woman (G3), whereas the slower increase in life expectancy observed in recent years will continue (by 2060, it will increase by around four years for newborn boys and by more than three years for girls, L1). These trends will be accompanied by a high level of immigration: net migration will remain very high at 311,000 people per year on average (W3).

Variants 6 and 7 reveal the effects of the different fertility trends. Both variants are based on the same assumptions on life expectancy (L2) and migration (W2). Variant 6 assumes that fertility will fall (G1), whereas variant 7 assumes that it will increase (G3).

In addition, **variants 8 and 9** show how the varying increase in the level of life expectancy affects the population trend. They are based on the same assumptions made for fertility (G2) and migration (W2). Variant 8 assumes a slight rise in life expectancy, the first signs of which have become apparent in recent years (L1). Variant 9 assumes a sharp increase in life expectancy (L3).

The other combinations from the assumptions made were divided into two groups. Out of a total of 27 combinations, twelve are regarded as further variants of the 14th coordinated population projection and are described in Appendix A. Six combinations were classified as model calculations since these represent options that are not very realistic from the current perspective. These include combinations involving declining fertility in connection with a permanently high level of net migration, as well as a sharp increase in fertility in connection with rapidly declining net migration (model calculations M1 to M6).

Chart 1: Assumptions of the 14th coordinated population projection

Demographic components		Trend	Target values	
Fertility	2017		Annual fertility rate/ completed fertility per woman	Average age of woman at birth
		By 2060:	1.57/1.5 children per woman	31.2 years
	Assumption G1	Decrease to the long-term level	1.43/1.4 children per woman	Increase to 32.8 years
	Assumption G2	Moderate development	1.55/1.6 children per woman	Increase to 32.6 years
	Assumption G3	Increase	1.73/1.7 children per woman	Increase to 32.5 years
Life expectancy	Life table 2015/2017		Life expectancy at birth (years)	Further life expectancy at age 65 (years)
		By 2060:	Boys 78.4 Girls 83.2	Men 17.8 Women 21.0
	Assumption L1	Slight increase	Boys 82.5 Girls 86.4	Men 20.4 Women 23.2
	Assumption L2	Moderate increase	Boys 84.4 Girls 88.1	Men 21.8 Women 24.5
	Assumption L3	Sharp increase	Boys 86.2 Girls 89.6	Men 23.2 Women 25.9
Net migration	2018		Annual net immigration (persons)	In the period from 2019 to 2060:
	Assumption W1	Average for the years 1955 to 1989	386,000 Decrease to 110,500 in 2030, constant thereafter	6.2 million persons in total; 147,000 persons on average per year
	Assumption W2	Average for the years 1955 to 2018	Decrease to 206,000 in 2026, constant thereafter	9.3 million persons in total; 221,000 persons on average per year
	Assumption W3	Average for the years 1990 to 2018	Slight decrease to 300,000 in 2030, constant thereafter	13.1 million persons in total; 311,000 persons on average per year

Chart 2: Main variants of the 14th coordinated population projection

Variant	Description	Assumptions		
		Fertility (children per woman)	Life expectancy at birth	Net migration (average number of persons per year)
Variant 1 G2-L2-W1	Moderate development with low net migration	Stable fertility rate at 1.55 children per woman (G2)	Moderate increase to 84.4 years for boys and 88.1 years for girls (L2)	Ø 147,000 (W1)
Variant 2 G2-L2-W2	Moderate development in fertility, life expectancy and migration			Ø 221,000 (W2)
Variant 3 G2-L2-W3	Moderate development with high net migration			Ø 311,000 (W3)
Variant 4 G1-L3-W1	Relatively old population	Decrease to 1.4 children per woman (G1)	Sharp increase to 86.2 years for boys and 89.6 years for girls (L3)	Ø 147,000 (W1)
Variant 5 G3-L1-W3	Relatively young population	Increase to 1.7 children per woman (G3)	Slight increase to 82.5 for boys and 86.4 years for girls (L1)	Ø 311,000 (W3)
Variant 6 G1-L2-W2	Impacts of low fertility	Decrease to 1.4 children per woman (G1)	Moderate increase to 84.4 years for boys and 88.1 years for girls (L2)	Ø 221,000 (W2)
Variant 7 G3-L2-W2	Impacts of high fertility	Increase to 1.7 children per woman (G3)	Moderate increase to 84.4 years for boys and 88.1 years for girls (L2)	Ø 221,000 (W2)
Variant 8 G2-L1-W2	Impacts of a slight increase in life expectancy	Stable fertility rate at 1.55 children per woman (G2)	Slight increase to 82.5 years for boys and 86.4 years for girls (L1)	Ø 221,000 (W2)
Variant 9 G2-L3-W2	Impacts of a sharp increase in life expectancy	Stable fertility rate at 1.55 children per woman (G2)	Sharp increase to 86.2 years for boys and 89.6 years for girls (L3)	Ø 221,000 (W2)

5 Results

5.1 Developments in the size of Germany's population

At the end of 2018, around 83 million people lived in Germany. Germany's population is currently growing thanks to a positive difference between immigration to and emigration from the country, a trend which looks set to continue for a number of years. In the long term, however, the population is expected to decrease.

Following German unification, the population grew from 79.8 million in 1990 to 81.6 million in 2002, primarily as a result of immigration from former socialist countries in Europe and the former Soviet Union. This was followed by a fall in net migration and a decline in the population to 80.2 million in 2010. From 2011, the population increased once again, slowly at first and then sharply from 2014 onwards as net immigration intensified.

Without net immigration, the population would have long since been in decline as the number of deaths has exceeded the number of births in every year since 1972, thus making the natural population change negative. In the long term, the effect of this fundamental cause of population decline will be even stronger than in the past. This is because, in the course of the projection period, the large birth cohorts (i.e. people who are currently in their late 40s to early 60s) will move towards old age when death rates are naturally highest. As a result, the number of deaths will rise to more than one million and the gap between births and deaths will grow bigger. Discounting net immigration and with fertility and life expectancy developing at a moderate rate, the birth deficit between 2018 and 2054 would increase from 167,000 to 530,000 and then decrease slightly by 2060. However, in future too, this figure is likely to be more or less reduced as a result of net immigration.

The results of the main variants of the 14th coordinated population projection show that the population will continue to grow until at least 2024 before starting to decrease from no later than 2040 onwards. If fertility and life expectancy were to develop at a moderate rate, the population would rise to 83.7 million by 2024 before falling to 78.2 million (variant 2, G2-L2-W2) or 74.4 million (variant 1, G2-L2-W1) by 2060 (Figure 3A). Based on a permanently high level of net migration, the population will not reach a record high of 84.4 million until the start of the 2030s, after which it will return to its 2018 level of 83.0 million (variant 3, G2-L2-W3). This shows that the assumptions on net migration have a strong impact on population numbers, with a range of nine million in total in 2060.

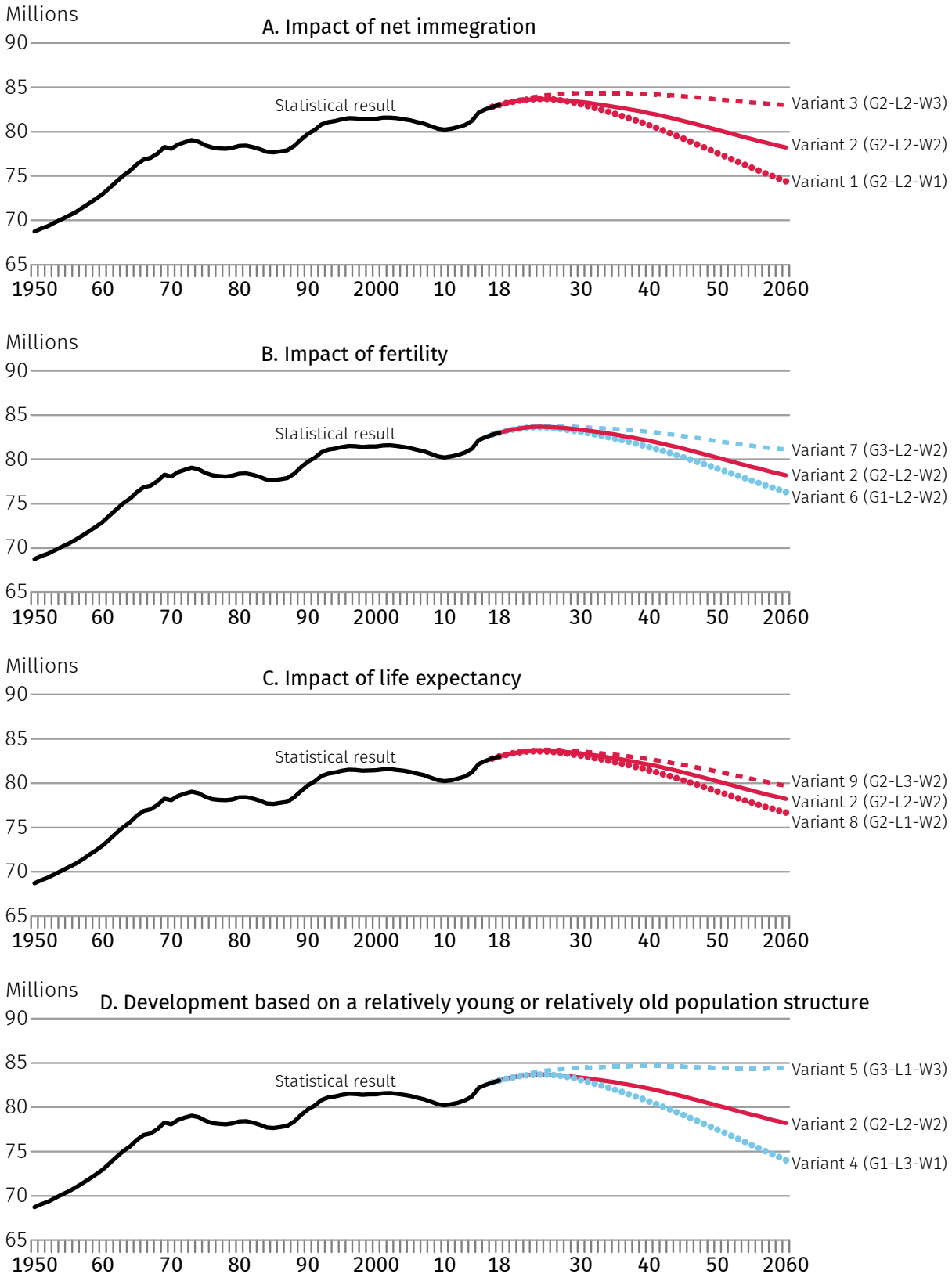
Assuming that fertility will rise (variant 7, G3-L2-W2), the population figure in 2060 will be three million higher than if the birth trend is moderate (variant 2, G2-L2-W2; Figure 3B). A falling birth rate instead would reduce the population by a figure of two million (variant 6, G1-L2-W2). With a range of five million, the influence of fertility on the population figure is less than that of net immigration.

The assumptions regarding life expectancy have even less of an effect on the population figure than the assumptions on fertility. If life expectancy were to increase slightly (variant 8, G2-L1-W2), the population in 2060 would be 1.5 million lower than if the increase were moderate (variant 2, G2-L2-W2), but would be 1.5 million higher in the event of a sharp rise in life expectancy (variant 9, G2-L3-W2; Figure 3C).

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Figure 3
Change in population numbers
 From 2019, results of the 14th coordinated population projection



See Charts 1 and 2 for explanations on the variants and abbreviations.

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Should a scenario arise in which fertility increases, life expectancy increases to a lesser degree and net immigration remains very high on a permanent basis (variant 5 “relatively young population”, G3-L1-W3), the pace of the ageing process will be slowed. In this case, the population will rise to 84.6 million by 2040. The subsequent fluctuation will only be minor in nature and the population in 2060 will total 84.5 million (Figure 3D).

However, if the opposite were the case – i.e. declining fertility, a sharp increase in life expectancy, low net immigration (variant 4 “relatively old population”, G1-L3-W1) – ageing would be particularly rapid and the population would decline on a continuous basis after 2024. The population would then fall to 74.0 million by 2060.

5.2 Changes in the age structure

For a long time now, the current population structure has deviated from the ‘classic’ population pyramid. An age structure in the shape of a pyramid means that the youngest birth cohorts at the base of the pyramid are at the same time the strongest cohorts in terms of size. By contrast, the strength of older cohorts diminishes more and more rapidly over time as a result of mortality. In 1910, for instance, the age structure of the German Reich had the form of a pyramid (Figure 4). With falling mortality and the subsequent decline in fertility, the age structure of industrial societies underwent a number of transformations at the end of the 19th century and during the first third of the 20th century. Added to this were the consequences of two world wars, the Spanish flu pandemic and the global economic crisis, which caused deep indentations in the age structure of the population in 1950. The current 2018 population structure is dominated by large cohorts representing the baby boomers currently aged between their late 40s and mid-60s. Over the next few decades, these large cohorts will gradually enter old age at the upper end of the pyramid, before finally getting smaller and smaller. These will be replaced by smaller birth cohorts. As a result, the relations between the different age groups will change significantly from their current state.

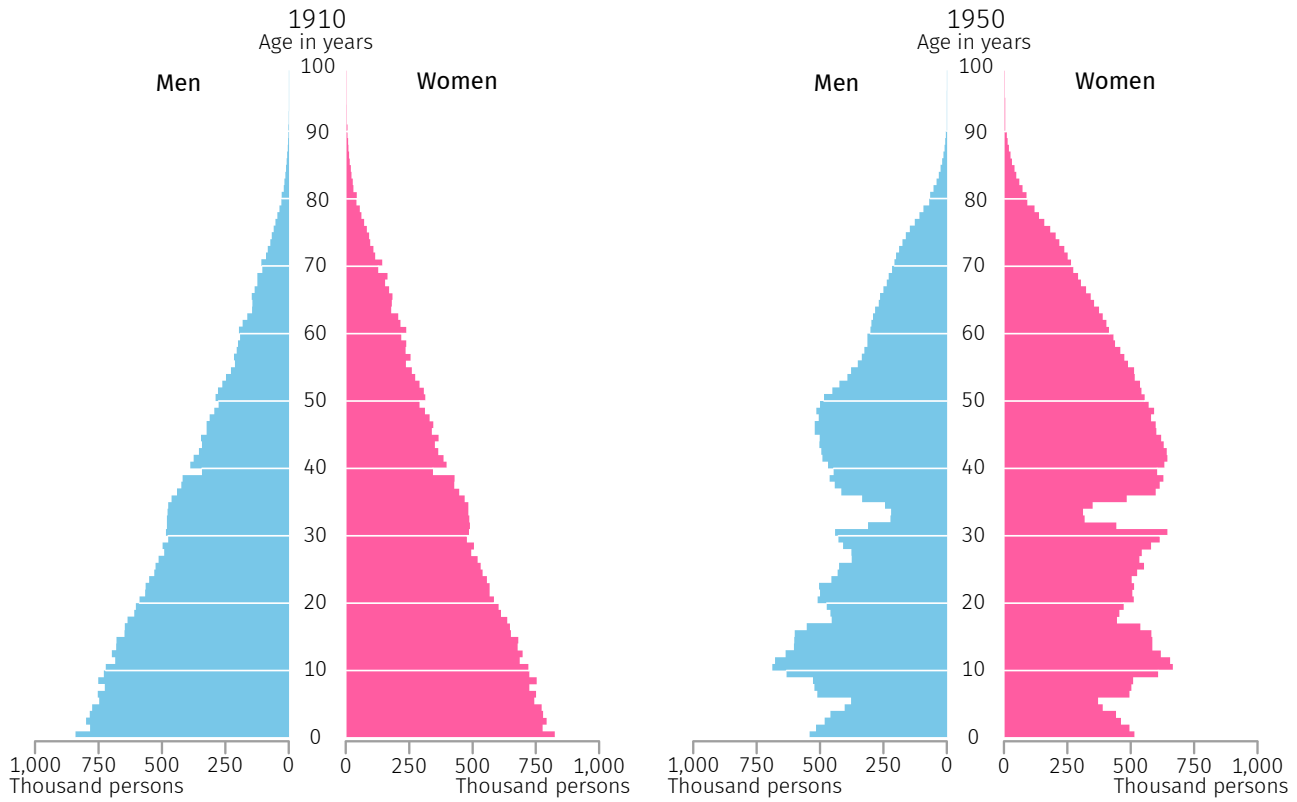
A changing population

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Figure 4

Age structure of the population in Germany

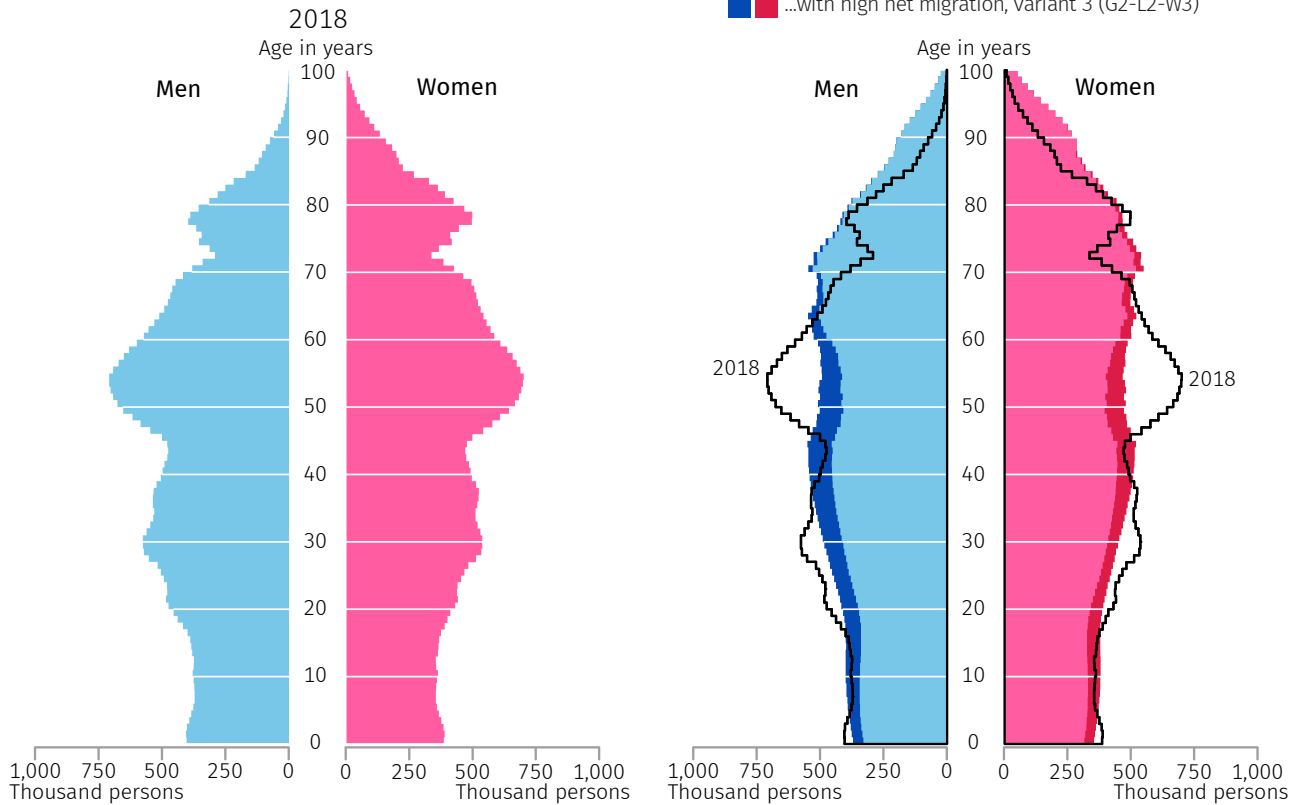
2060: results of the 14th coordinated population projection



2018 und 2060: moderate development...

...with low net migration, variant 1 (G2-L2-W1)

...with high net migration, variant 3 (G2-L2-W3)



See Charts 1 and 2 for explanations on the variants and abbreviations.

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5.2.1 Number of young people aged up to 18 years

In 1990, the total number of children and adolescents aged up to 18 was 16.3 million. By the mid-1990s, this figure had risen to 16.8 million, before falling steadily through to 2013, when it totalled 13.9 million. Between 2014 and 2018, the number increased by 530,000 to 14.4 million people as a result of the increase in net immigration and a higher number of births.

The number of young people aged up to 18 is expected to continue rising through to the start of the 2030s. Thereafter, its development may vary, influenced by births and net immigration. A stabilisation of this figure at the level of 14 to 15 million (variant 7, G3-L2-W2) would only be possible in the event of increasing fertility. In order to rise to 16.4 million, permanently high net migration of 311,000 people per year on average (variant 5, G3-L1-W3) would also be required. However, if fertility were to develop at a moderate rate or fall, the number of young people would decrease once again after 2030 and total around 13.4 million (variant 2, G2-L2-W2) or 12.2 million (variant 6, G1-L2-W2) in 2060.

The development of the school-age population (6-18 age group) will follow a similar path. There were 9.7 million people in this age group in 2018. This figure will increase further by the early 2030s and amount to between 10.4 and 10.9 million in 2030 (Figure 5). Its further development will depend on the future level of births and migration. In the event of increasing fertility, the school-age population will fall slightly between 2030 and 2050, before recovering and ending up at around 11.3 million in 2060, assuming that there is a permanently high level of net migration (variant 5, “relatively young population”, G3-L1-W3), or 10.4 million if net migration is moderate (variant 7, G3-L2-W2). In the event of moderate demographic changes, it will fall to 9.1 million between 2033 and 2050 and remain relatively stable thereafter (variant 2, G2-L2-W2). However, if fertility falls in the projection period, the number of children and adolescents will also drop once again over the long term, to below 9 million from 2045 onwards (variant 6, G1-L2-W2). In 2060, the number of children and young people of school age will therefore range between 8.5 million and 11.3 million.

The number of children under the age of 6 will be determined by birth trends and to a lesser extent be influenced by immigration. The range of future changes is therefore smaller than in the 6-18 age group. At the start of the 2020s, the number of children under the age of 6 is expected to decrease, primarily as a result of the reduction in the number of potential mothers at the key child-bearing age. However, rising fertility and/or high net immigration may moderate and delay this decline somewhat.

From the figure of 4.7 million in 2018, the number of under 6-year-olds is likely to continue rising until either 2022 (where fertility remains stable or falls) or 2025 (where fertility increases). If fertility increases and net immigration remains permanently high, the figure will continue to remain stable and will rise to as high as 5.1 million from the mid-2040s onwards (variant 5, “relatively young population”, G3-L1-W3). Even in the event of moderate net immigration, the number of under 6-year-olds in 2060 will total 4.8 million, slightly higher than the baseline figure (variant 7, G3-L2-W2).

If, on the other hand, fertility is moderate or decreases, the number of children under the age of 6 is expected to decrease sharply. Between 2023 and 2045, it will fall to 4.1 million (variant 2, G2-L2-W2) or 3.8 million (variant 6, G1-L2-W2) before then fluctuating only slightly around the respective level reached.

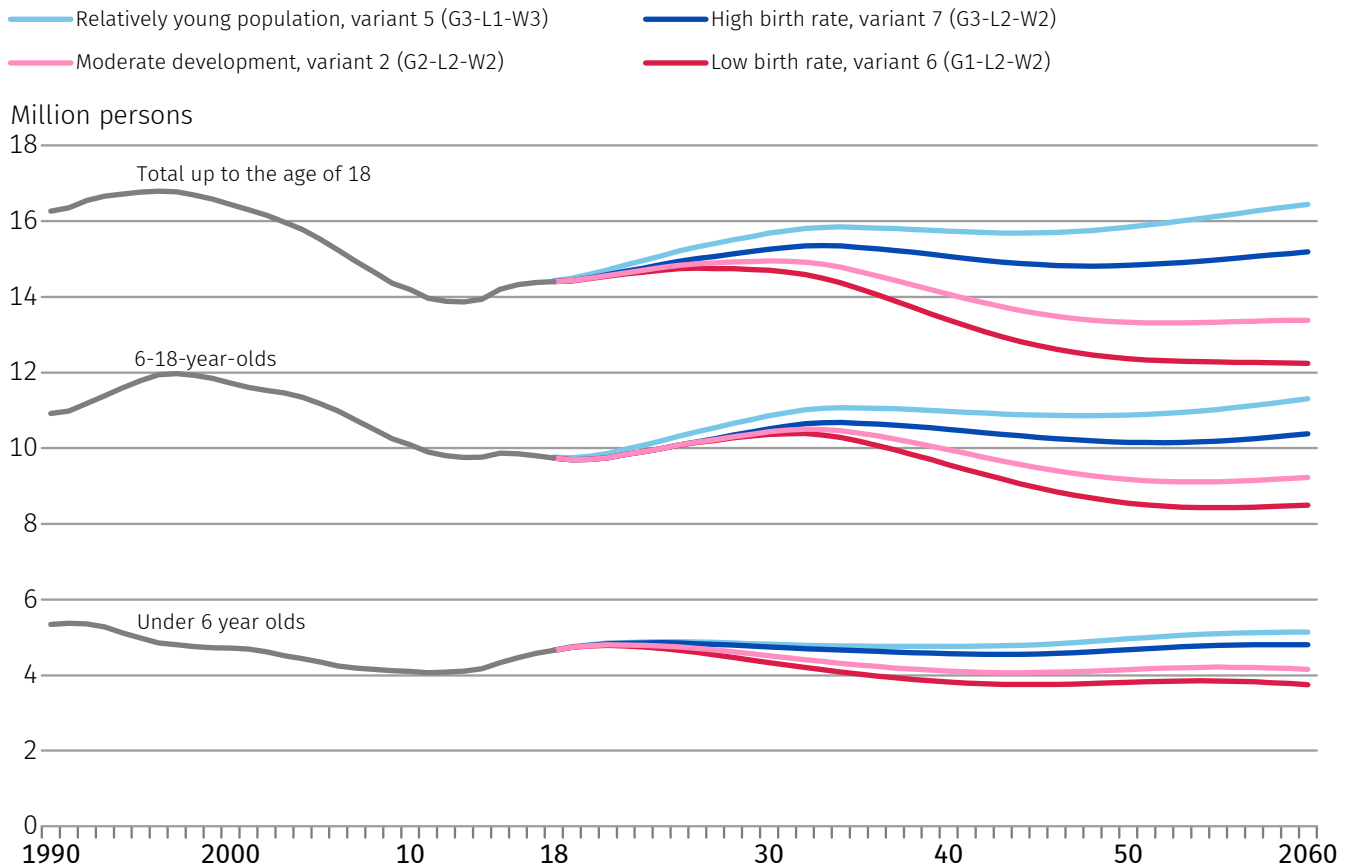
A changing population

Assumptions and results of the 14th coordinated population projection

Figure 5

Children and adolescents up to the age of 18

From 2019, results of the 14th coordinated population projection



See Charts 1 and 2 for explanations on the variants and abbreviations.

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5.2.2 Number of people of working age (20 to 66 years)

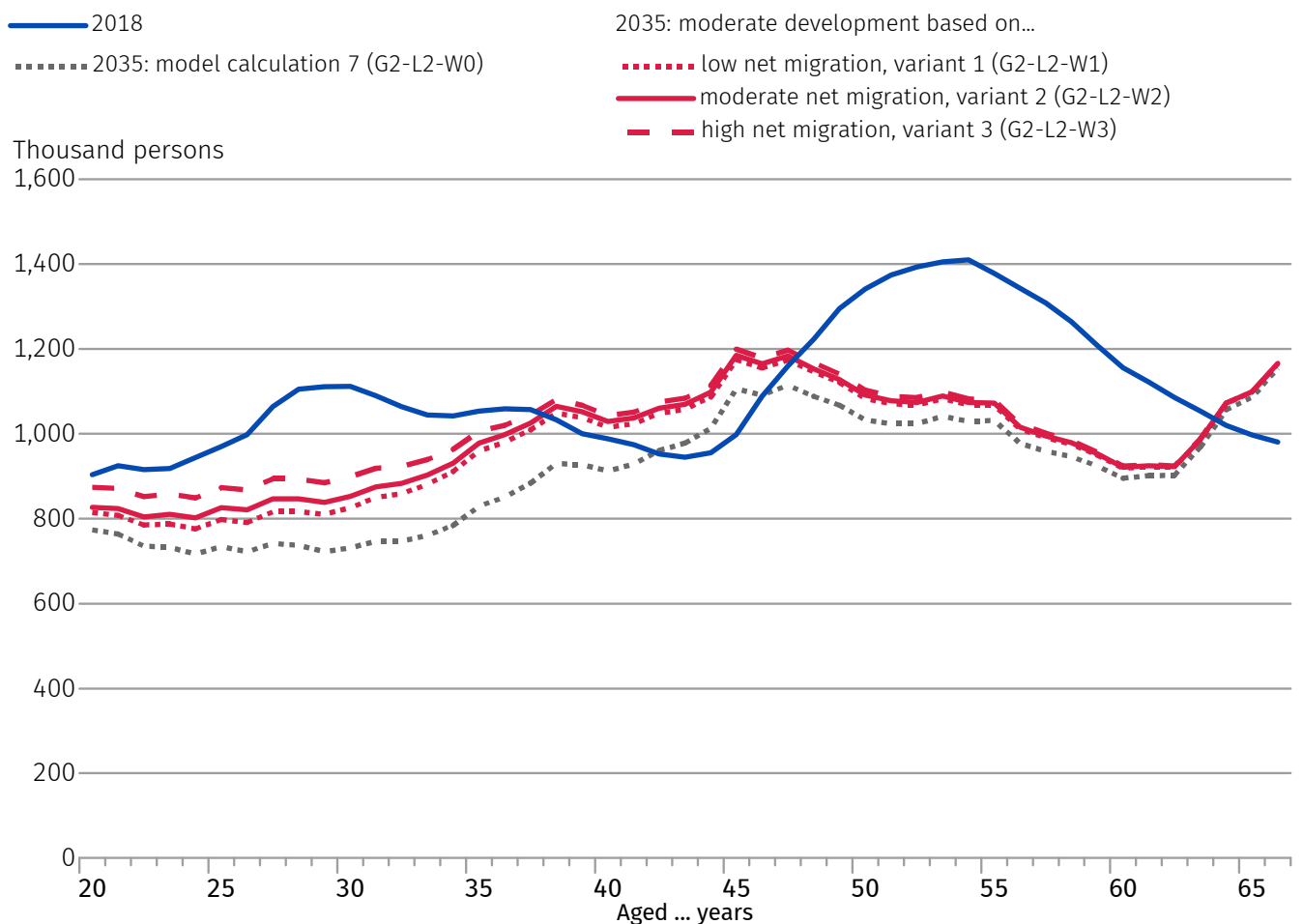
In 2018, the population of working age (defined here as the age between 20 and 66) stood at 51.8 million. Only in the mid-1990s, when it hit a post-war record of 53.2 million in 1995, was the number of 20 to 66-year-olds greater. Since the start of the 1990s, Germany has been profiting from a demographic dividend, as it is called, which is expected to continue until the start of the 2020s. This was created by the large birth cohorts – people born between the end of the 1950s and the end of the 1960s – advancing to working age.

Whereas the baby boom generation reduced the age of the labour force potential significantly in the 1990s, it is now contributing to its ageing. More than 50% of the working-age population is now aged 45 or over. Once the large cohorts retire over the next 20 years or so, the labour force potential will shrink (Figure 6). If net immigration is discounted, it would decrease by nine million people by 2035 (model calculation M7, G2-L2-W0). On balance, 530,000 people aged 20 to 66 would have to migrate to

Germany every year from 2019 to 2035 in order to cushion these losses. In this case, average annual total net migration would be greater than in the period from 2016 to 2018.

Based on those variants of the 14th coordinated population projection which assume a moderate development in fertility and life expectancy, the population of working age will, by 2035, decrease respectively by 4.4 million if there is a permanently high level of net immigration (variant 3, G2-L2-W3), 5.4 million if net immigration is moderate (variant 2, G2-L2-W2) and 6.0 million if net immigration is low (variant 1, G2-L2-W1).

Figure 6
Working-age population in 2018 and 2035
 2035: results of the 14th coordinated population projection



See Charts 1 and 2 for explanations on the variants and abbreviations.

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Irrespective of the respective level that it has reached by 2035, the working-age population is likely to enter a decade-long period of stabilisation thereafter (Figure 7, Table 1). From the mid-2040s onwards, however, the working-age population will once again contract, albeit at a much weaker rate. In 2060, the number of people aged 20 to 66 is expected to range from 40 million (variant 1, G2-L2-W1) to 46 million people (variant 3, G2-L2-W3).

With a retirement age of 65, the labour force potential in all of the variants above would be smaller by approximately two million people in 2060.

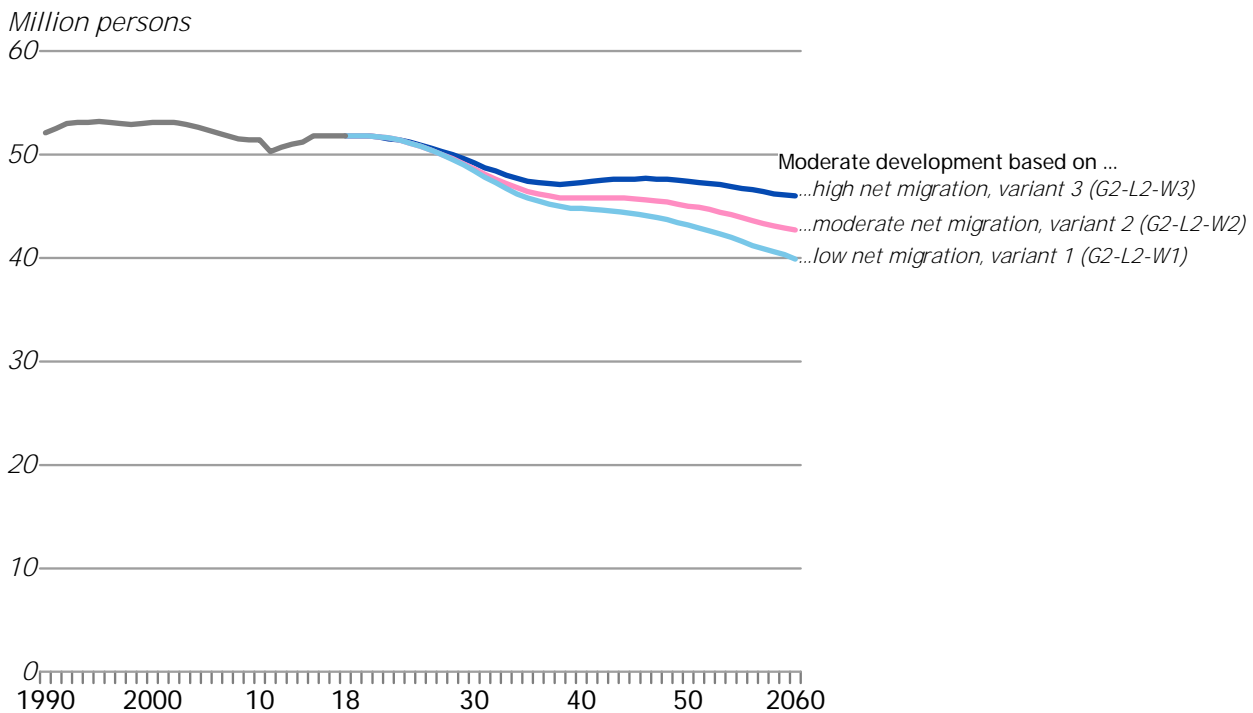
Table 1 Number of working-age people from 20 to 66 years

	Moderate development in fertility and life expectancy and varying degrees of net migration			Relatively old population	Relatively young population
	Variant 1 G2-L2-W1	Variant 2 G2-L2-W2	Variant 3 G2-L2-W3	Variant 4 G1-L3-W1	Variant 5 G3-L1-W3
	Million persons				
2018 ...	51.8	51.8	51.8	51.8	51.8
2035 ...	45.8	46.4	47.4	45.9	47.4
2060 ...	40.0	42.7	46.0	39.4	46.9

Figure 7

Working-age population between 20 and 66 years

From 2019, results of the 14th coordinated population projection



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5.2.3 Number of senior citizens aged 67 years or over

The number of people aged 67 or over rose by 54% between 1990 and 2018, from 10.4 million to 15.9 million. Over the next 20 years, this figure will grow by a further five to six million people to at least 20.9 million. How this age group will develop in future is essentially predetermined by the current age structure. The influence on this trend of births and migration will play a very minor role. The mortality trend, by contrast, will have a greater impact, albeit primarily on older age groups and only towards the end of the projection period (Figure 8).

Different variants of the 14th coordinated population projection deliver very similar development trends for people aged 67 to 79. The number of people in this age group will remain relatively stable until 2021, at more than 10 million. Thereafter, however, it will rise sharply to more than 14 million by 2037. The large cohorts will then gradually reach the age of 80 and switch to the 80-plus age group. This explains why the number of people in the 67 to 79 age bracket will fall to 11 million or just under between 2038 and 2050, before climbing only slightly, to more than 12 million, in 2060.

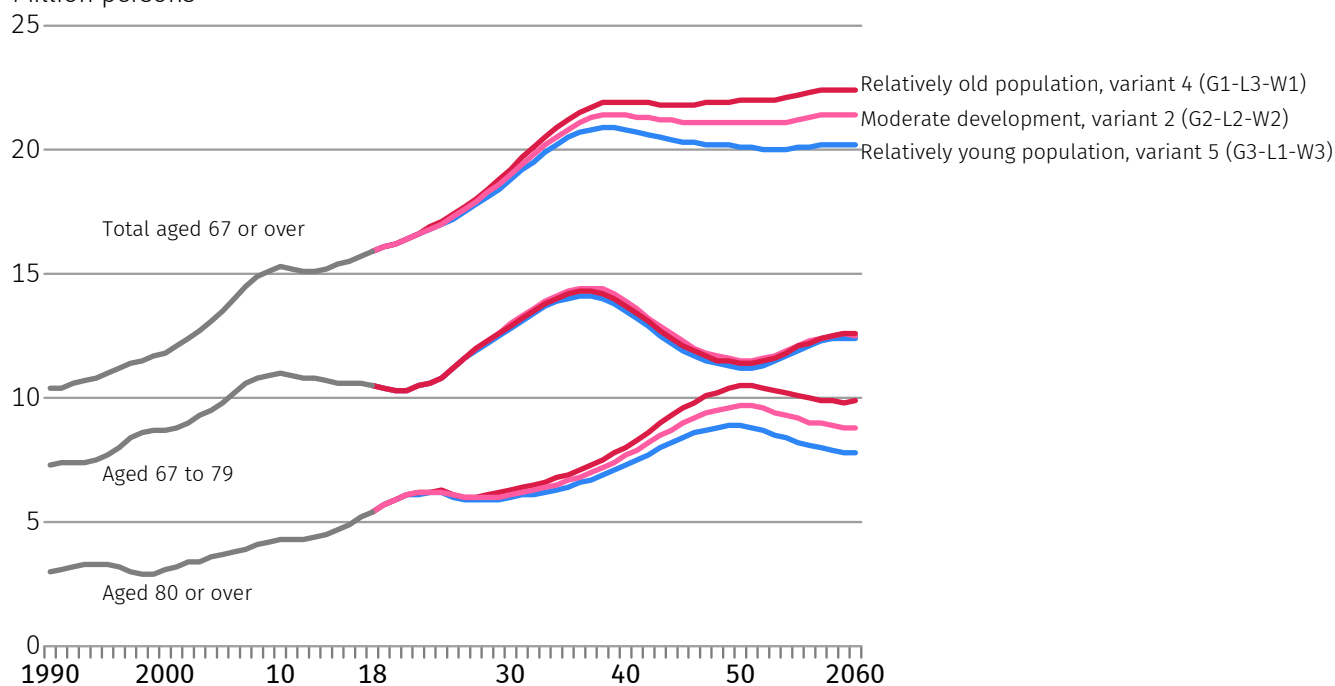
The number of people aged 80 or over will increase over the next few years, rising from 5.4 million in 2018 to 6.2 million by 2022, after which it will remain at this level until the start of the 2030s. However, the 20 years that follow will see this figure grow continuously to between 8.9 million (variant 5, G3-L1-W3, “relatively young population”) and 10.5 million (variant 4, G1-L3-W1, “relatively old population”) in 2050, depending on the assumed trend in life expectancy. Under each variant, the number of people aged 80 or over will fall by around one million between 2050 and 2060, due to mortality in the large birth cohorts.

Figure 8

Population aged 67 or over

From 2019, results of the 14th coordinated population projection

Million persons



See Charts 1 and 2 for explanations on the variants and abbreviations.

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5.2.4 Population structure by age group

In 2018, children and young people under 20 accounted for 18% of the total population, while people of working age (20 to 66) and people aged 67 or over accounted for 62% and 19% respectively.

The share of under-20s is likely to remain stable at approximately 18% until the start of the 2030s, and then increase to 21% by 2060 – based on a relatively young age

structure (variant 5, G3-L1-W3 “relatively young population”) (Figure 9). If the development in the demographic components (fertility, life expectancy and net migration) is moderate, the share of under-20s will stabilise at 18% (variant 2, G2-L2-W2). If ageing is more pronounced, however, it will decrease to 16% in 2060 (variant 4, G1-L3-W1, “relatively old population”).

In all variants of the projection, the share of the working-age population (defined here as the age between 20 and 66) will fall significantly over the next 20 years, and is expected to total 55 to 56% in 2037. By 2060, the share of the working-age population will remain at the respective level reached, regardless of whether development is based on a relatively young age structure (variant 5, G3-L1-W3) or whether there is a moderate development in the demographic components (variant 2, G2-L2-W2). Where the age structure is relatively old, the figure will fall further by 2060, to 53% (variant 4, G1-L3-W1).

Conversely, the share of people aged 67 or over will increase in all main variants of the 14th coordinated population projection. A particularly sharp rise, to between 25% (variant 5, G3-L1-W3) and 27% (variant 4, G1-L3-W1), is to be expected by 2040. Thereafter, the share of people in this age bracket will only stabilise at the level of 24% if the age structure is relatively young. In all other variants it will increase, albeit at a much slower rate than in the period during which the large birth cohorts entered this age group. In 2060, it will then vary between 24% and 30% (variant 4, G1-L3-W1).

In particular, the share of people aged 80 or over will increase between 2040 and 2060, at which point it will stand at between 9% and 13%.

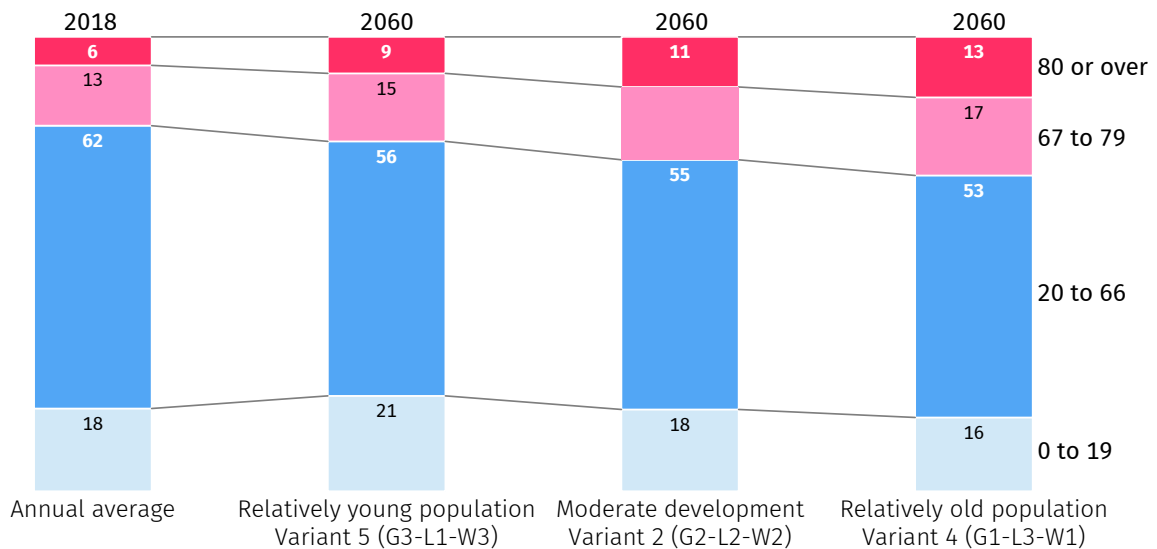
In all variants of the 14th coordinated population projection, the average age of the population will increase from the current figure of 44 years to at least 45 years in the event of a development with a relatively young age structure (variant 5, G3-L1-W3) and a maximum figure of 50 years if the population is relatively old (variant 4, G1-L3-W1) in 2060.

Figure 9

Population by age group in 2018 and 2060

2060: results of the 14th coordinated population projection

Percent



Deviations of 100% are due to rounding.

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5.2.5 Young-age, old-age and total dependency ratios

The age-group dependency ratios show the extent to which the working-age population must – in the broadest sense – care for both younger and older people. On the one hand, the young-age dependency ratio reflects the ratio of younger people who are regarded as dependents in the process of their development, education and training to the working-age population. And on the other hand, the old-age dependency ratio is the ratio between the population of retirement age – that is the group of potential recipients of benefits from the pension insurance scheme or other old-age security systems – and the people of working age. The two ratios add up to the total dependency ratio.

Aside from the assumptions made regarding the development in the demographic components, the age structure of today's population will continue to determine these ratios for a long time. For instance, the transition of the large birth cohorts from working age to old age on the one hand, and the progression of the small young cohorts to working age on the other hand, will lead to an increase in both the young-age and old-age dependency ratios by the mid-2030s (Figure 10).

From the mid-2030s onwards, the differences in the assumptions regarding the demographic components will increasingly have an effect on the dependency ratios. The range in the future development of these components is shown by variant 5, where the population is relatively young (G3-L1-W3), and by variant 4, where the population is relatively old (G1-L3-W1). By way of comparison, variant 2 (G2-L2-W2), which assumes a moderate development of the demographic components, is also used.

The young-age dependency ratio is presently 29. This means that for every 100 persons of working age (defined here as the age between 20 and 66), there are currently 29 people under 20 years of age. Over the course of the projection period, this figure will increase to between 33 and 35 by 2035. Based on a development with a relatively young age structure, the young-age dependency ratio will then gradually move towards 37 in 2060 (variant 5, G3-L1-W3). In those variants which reflect moderate development or with a relatively old age structure, the young-age dependency ratio will decrease slightly between 2035 and 2045, before then rising to 33 (variant 2, G2-L2-W2) or 31 (variant 4, G1-L3-W1) in 2060.

The old-age dependency ratio will increase sharply through to 2038, from its current figure of 31 to 44 where development is based on a relatively young age structure (variant 5, G3-L1-W3), to 47 based on a moderate development (variant 2, G2-L2-W2), or to 49 where development is based on a relatively old age structure (variant 4, G1-L3-W1). Assuming a relatively young population, the old-age dependency ratio will thereafter even fall slightly by 2060, to 43. In the moderate development scenario, it will initially stagnate at 47 before rising to 50 between 2045 and 2060. In the event of a relatively old population, however, the sharp increase in the ratio recorded prior to 2038 will ease off thereafter, although the ratio will rise on a continuous basis to 57 in 2060.

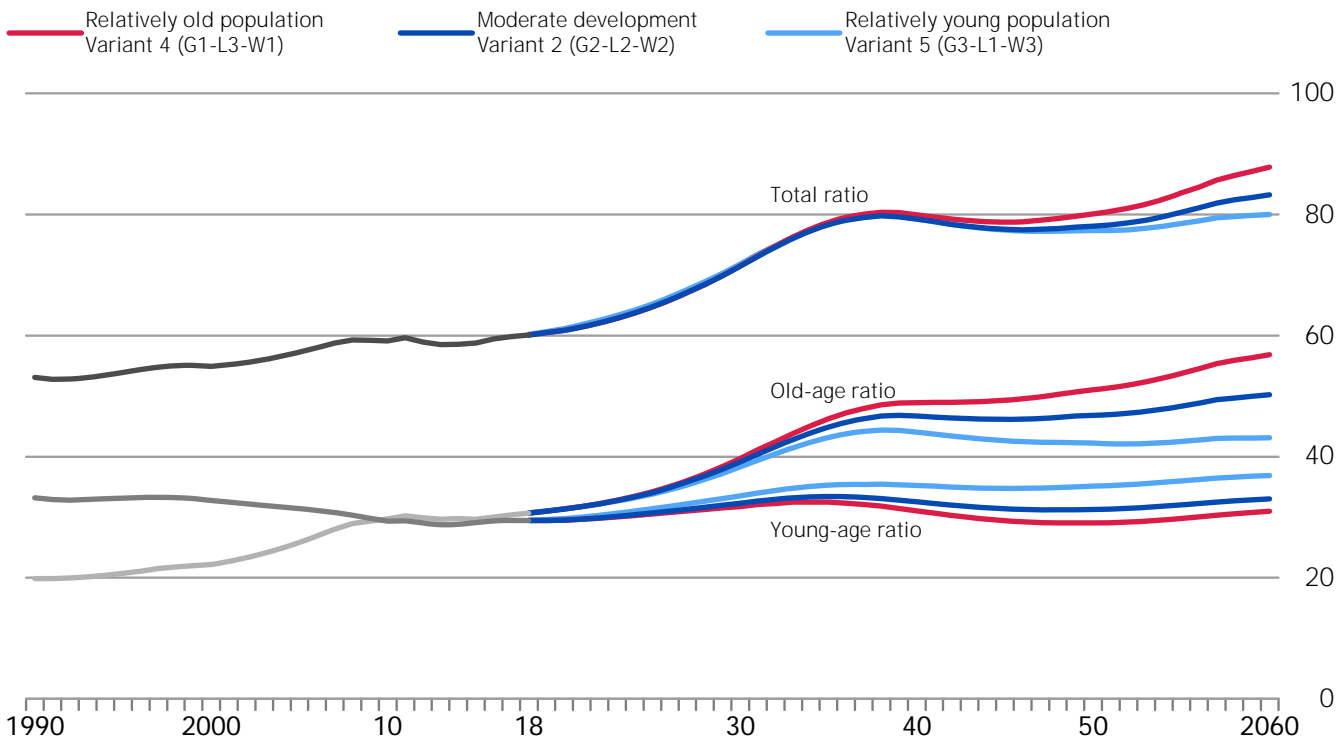
The development of the total dependency ratio shows that the potential burden placed on the population of working age will increase significantly, until at least the end of the 2030s, regardless of the assumptions made. Whereas in 2018, the baseline year for the projection, the number of potential benefit recipients per 100 people of working age stood at 60, this will have already risen to 80 by 2038.

Should fertility rise in future, net immigration remain high over the long term and life expectancy increase at a lesser rate, this ratio will decrease only slightly after 2038 before ultimately rising once again to 80 (variant 5, G3-L1-W3) in 2060. Otherwise, the total dependency ratio will climb further by 2060, to 83 assuming moderate development (variant 2, G2-L2-W2), and to 88 if the population structure is relatively old (variant 4, G1-L3-W1).

Figure 10

Young-age, old-age and total dependency ratios with age limits of 20 and 67 years¹

From 2019, results of the 14th coordinated population projection



¹ Young-age dependency ratio: number of people under 20 per 100 people aged between 20 and 66 years;
 old-age dependency ratio: number of people aged 67 years or over per 100 people aged between 20 and 66 years;
 total dependency ratio: number of people under 20 years of age and people aged 67 years or over per 100 people aged between 20 and 66 years.

See Charts 1 and 2 for explanations on the variants and abbreviations.

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6 Assumptions regarding births, life expectancy and migration

The population projections of the Federal Statistical Office are based on the cohort component method with deterministic assumptions. With this approach, population developments are projected forward on a year-by-year basis with assumptions concerning fertility behaviour, life expectancy and migration factored into the projections. These assumptions will be explained separately in the following sections.

6.1 Births

The number of future births is contingent on two factors: the number of potential mothers and the relative fertility of women. The number of women of childbearing age is already known for the female cohorts (women and girls) currently living and any development in this number is largely determined by migration and births. The assumptions therefore focus on the development of the relative birth rate and are made directly for the age-specific birth rates, i.e. fertility among women at each individual age. The total fertility rate (also known as the annual birth rate) is obtained by adding together the age-specific birth rates. The total fertility rate is therefore a derived value which indirectly affects the size of the new cohorts in the projection period.

The assumptions regarding fertility are empirical in nature and are based on current birth statistics and microcensus data since 2008, collected from women on the birth of children. Both the long-term trends in fertility behaviour as well as more recent developments, such as the rise in births since 2012, were examined in order to derive the hypotheses for the 14th coordinated population projection.

6.1.1 Long-term and new trends in fertility

The situation in Germany as regards births has long been characterised by the following fertility trends:

- For a long time, the annual fertility rate remained low, at around 1.4 children per woman.
- The tendency among women to have children before the age of 30 declined steadily.
- Conversely, the increase in the fertility rate among women of older child-bearing age was unable to offset the decline in the fertility rate of women in younger child-bearing years. This led to a reduction in the completed fertility per woman (number of children born to a woman during her lifetime).
- More and more women remained childless throughout their lifetime.
- The distribution of mothers by number of children born has stabilised from the cohorts of the late 1940s onwards. On average, mothers in Germany had two children.
- The average time interval between births was more than three years.

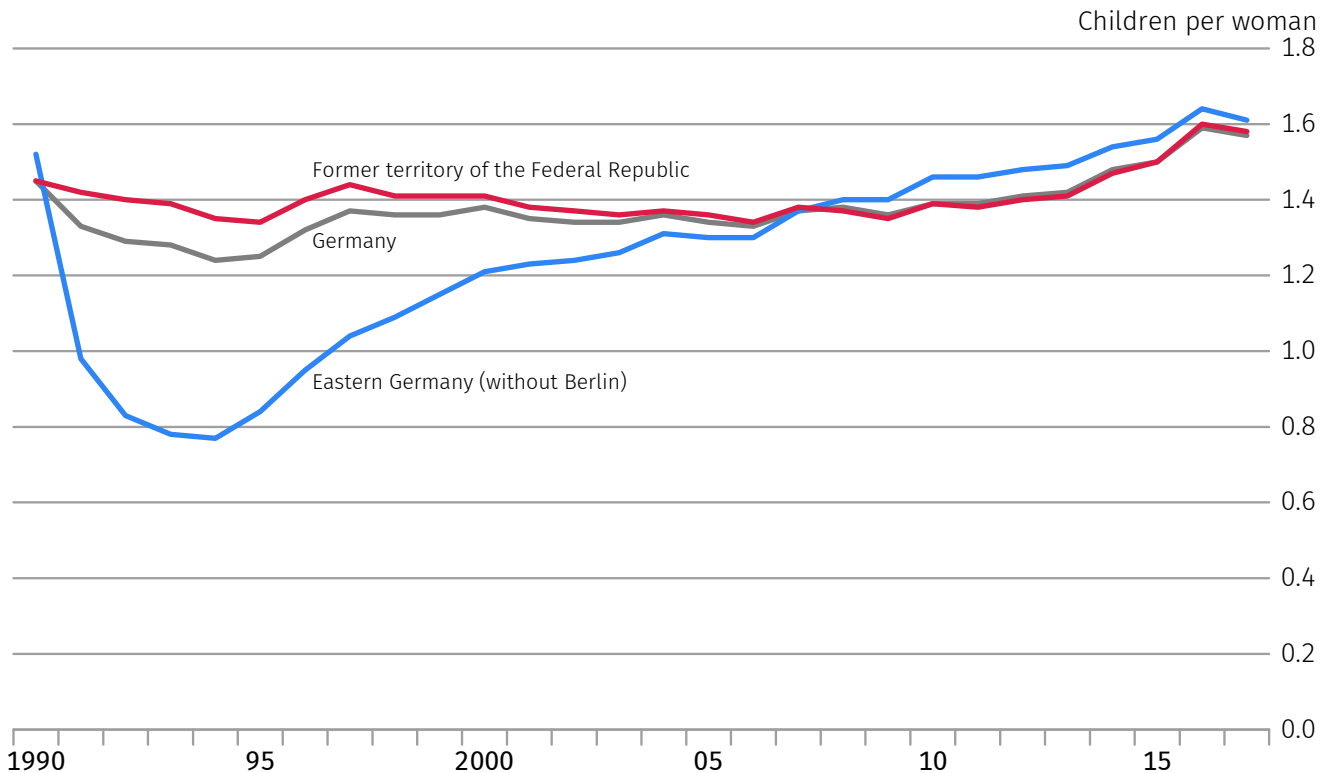
The current rise in fertility is a result of changes – apparent for a number of years already – in almost all of these long-term trends.

These changes took place against the background of socio-political and economic developments which have contributed to the creation of an environment that is generally more child-friendly:

- From the start of the 2000s, permanently low birth rates, increasing childlessness and the situation of families with children were the subject of intense debate at the socio-political level. This debate was initially born out of the concern regarding future negative effects of demographic developments on the stability of social security systems. This in turn led to a debate regarding the framework conditions in terms of family policy for reconciling work and family life.
- In order to make it easier for couples to fulfil their wish to have children, additional family policy measures were introduced from 2007. Parental allowance and parental allowance 'Plus' reduced the loss of earnings incurred by families as a result of a career break. Most notably, however, the increase in early childhood care improved the opportunities available to mothers to return to work sooner than in the past and to achieve a work-life balance.
- From the financial crisis, which peaked in 2008, Germany experienced steady economic growth as well as a continuous rise in employment. This gave many young couples the feeling of economic confidence that is important to many people when starting a family or deciding to have more children.

Considerable immigration from abroad also contributed to the increase in the birth rate. In the ten years from the mid-2000s, immigration was dominated by arrivals from southern Europe due to opportunities presented on the labour market, as well as from the countries that had joined the European Union (EU) in 2004. However, the nature of immigration changed with the arrival in Germany from 2014 onwards

Figure 11
Total fertility rate by territory



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of several hundred thousand people, primarily from Syria, Iraq and Afghanistan, in search of protection. This immigration impacted on the level of births to foreign women in Germany.

Between 2011 and 2017, the total fertility rate rose from 1.39 children per woman to 1.57 children per woman (Figure 11). In the new Länder, this figure was even as high as 1.61 children per woman in 2017. Here, the current increase in births is a continuation of the trend that began in the mid-1990s. For the former territory of the Federal Republic and Germany as a whole, however, the increase signifies a new trend and the end of the sustained period of stagnation.

The fertility among German women rose, especially among those aged between 30 and 39. In view of the fact that more and more women are not starting a family until they reach the age of 30 or older, the interval between the birth of the first, second and any subsequent child within this relatively small age range is shortening.

These changes helped to keep the fertility rate of **German women** stable when considered from the life course perspective (cohort fertility). The decline in completed fertility per woman which has persisted for more than 30 years will not continue among the birth cohorts from 1970 onwards. Once their child-bearing phase has come to an end, women born in the 1970s and 1980s will have more children on average than the 1968 and 1969 birth cohorts. Although stabilisation in terms of completed fertility per woman at around 1.5 (among German women) will be a rather moderate development, it implies the end of the declining trend.

The fact that this change is being brought about in particular by the generation of women born after 1970 needs to be viewed within the context of the framework conditions. Over the past decade, these women were at the most important age in terms of their fertility, between their late 20s and late 30s. Most women of this age have completed their education and training and many have already become established professionally. By the end of their 20s, they had even fewer children than the 1960s cohorts with their comparatively low birth rates. At the same time, the heated debate regarding necessary changes to the situation of families with small children and the compatibility of parenthood and working life that was ongoing from the mid-2000s, is something that they experienced directly. They witnessed the introduction of parental allowance and the expansion of early childhood care and were the first generation of women to benefit directly from these measures. In light of the good economic situation and low unemployment, these factors helped to create a favourable environment in which to fulfil the wish to have children.

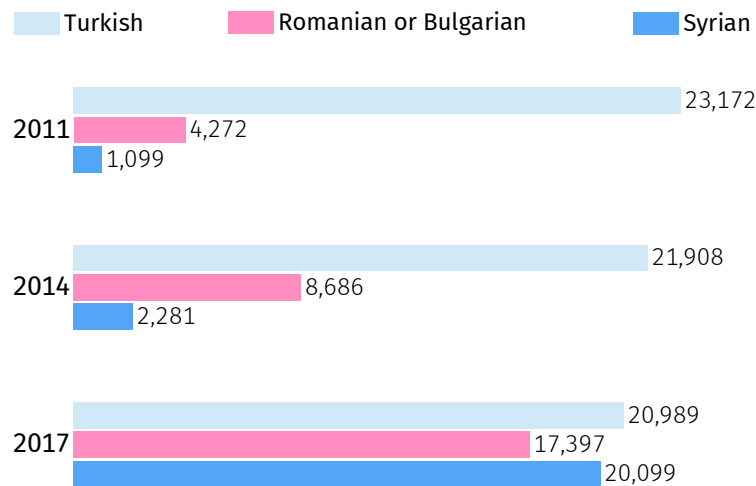
The assumptions made for German women are based on analyses of cohort fertility. In terms of the future fertility trend, these assumptions show a likely increase in completed fertility among women from the 1970s and 1980s birth cohorts, to around 1.6 children per woman. However, several different options are possible thereafter (cohort fertility will remain stable, increase or decrease), since the future fertility behaviour of women and girls who are currently still very young is unknown. Nevertheless, the range of possible changes among German women that are currently identifiable is relatively limited given the robust patterns of behaviour that they demonstrate, such as starting a family at an increasingly older age and a relatively high level of childlessness. As a result, in terms of the assumptions regarding the future level of fertility, foreign women play an important role

In 2017, the total number of potential mothers stood at 17.1 million, of whom 2.7 million, or 16%, had **foreign citizenship**. Between 2011 and 2017, the increase in births totalled 122,000, of which 71,000 (59%) were to foreign mothers. During this period, the number of babies with a foreign mother increased by 64%. Measured

against all births, this share rose from 17% to 23%. A key contributing factor to the increase in births was the rise in immigration of women from countries with traditionally high fertility rates from 2014 onwards. As a result, the number of potential mothers with foreign citizenship climbed from 2.2 million in 2013 to 2.7 million. The fertility of this group also rose, from 1.8 children per woman in 2011 to 2.2 children per woman in 2017.

In addition to the generally favourable framework conditions that benefited both German and foreign women, the nature of immigration and the female migrants' countries of origin played a particular role. Since 2014, immigration has been characterised by people seeking protection, primarily those from Syria, Afghanistan and Iraq, as well as by the arrival of people from the EU accession states of Romania and Bulgaria. Freedom of movement for workers from the latter two countries has applied in Germany since 1 January 2014. Figure 12 shows the number of births in 2011, 2014 and 2017, broken down by selected citizenships. Whereas the number of children born to Turkish mothers decreased, births to women of another citizenship rose. In the case of women from Syria, Romania and Bulgaria, the number of births even increased several times over.

Figure 12
Births by citizenship of mother



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An increase in the number of births among “new” migrant groups in the country of destination is not unusual. A number of studies, from countries including France, Sweden, Italy and Germany, reveal that the fertility history of female migrants is heavily influenced by the point in time at which immigration occurs. Consequently, virtually all migrant groups, regardless of their country of origin, displayed rising birth rates in the first few years following their arrival in the country of destination. This “immediate post arrival” effect was particularly pronounced among women from North Africa and the Middle East. After a number of years, however, this effect waned.

In order to make assumptions regarding fertility, the influence of foreign women on fertility as a whole was quantified. To this end, the age-specific fertility rates of all women were compared with the fertility rates of German women. Since the impact of foreign women on the fertility rate of all women varied between 2011 and 2017, this resulted in the emergence of three different patterns (Figure 13).

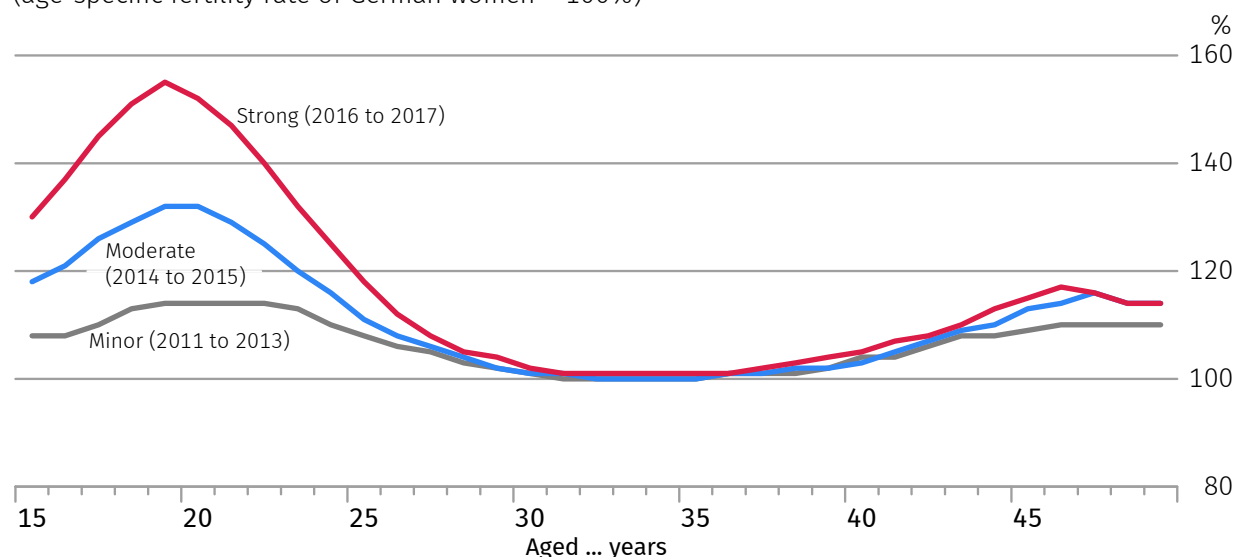
For all of the reference years, the influence of foreign women of a younger fertile age, between 17 and 24, was greatest. By contrast, between the ages of 25 and 45, this influence was either very minor or undetectable. Most births to German women occur between these ages. As they constitute the larger group here, German women determine the level of fertility. The influence of foreign women increased slightly again from the age of 45 onwards.

The factors formed on this basis were used to supplement the assumptions regarding the age-specific fertility rates of German women – based on cohort fertility – by the influence of foreign women.

Figure 13

Influence of foreign women on the age-specific fertility rates of all women

Ratio between the fertility rate of all women and the fertility rate of German women (age-specific fertility rate of German women = 100%)

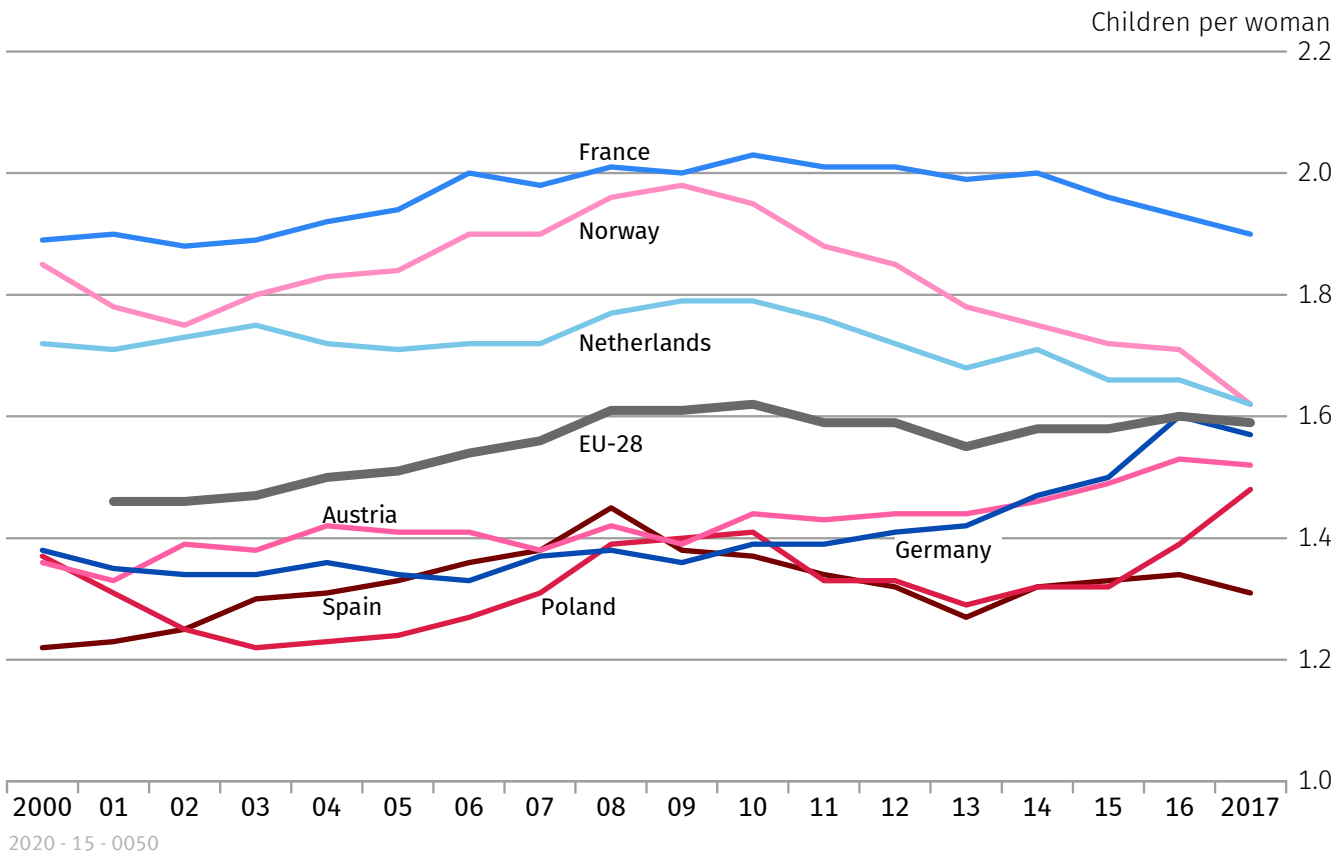


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Compared to the rest of Europe, the birth rate in Germany advanced to stand alongside other mid-ranking countries from 2016 onwards. At 1.6 children per woman, the total fertility rate in Germany was the same as the average for the 28 EU Member States in 2016. For many European countries, the convergence of annual birth rates has been evident for a number of years. Countries which until now have had relatively high fertility rates, such as France, Ireland, the United Kingdom, Norway, Finland and the Netherlands, are currently experiencing a decline in fertility. By contrast, in low fertility countries such as Austria, Switzerland, Poland or Romania (Figure 14), the birth rate is rising. Only in Italy, Spain and Portugal does the birth rate remain below 1.4 children per woman.

Figure 14

Total fertility rate from 2000 to 2017: EU-28 and selected European countries



6.1.2 Assumptions regarding fertility

Assumption regarding fertility G1 (decline):

The total fertility rate will decline gradually from 1.57 children per woman (2017) to 1.43 children per woman, with the average age at birth simultaneously increasing by 1.6 years. Here it is assumed that the influence of female immigrants on fertility will decrease rapidly and that the long-term trends towards a higher degree of childlessness and fewer third or subsequent children will reassert themselves after a number of years. This scenario would be conceivable, for example, if the economic situation and the situation on the employment market were to deteriorate. A dampening effect on fertility could also arise if family policy measures and family-friendly working time models were not developed further.

Assumption regarding fertility G2 (stabilisation):

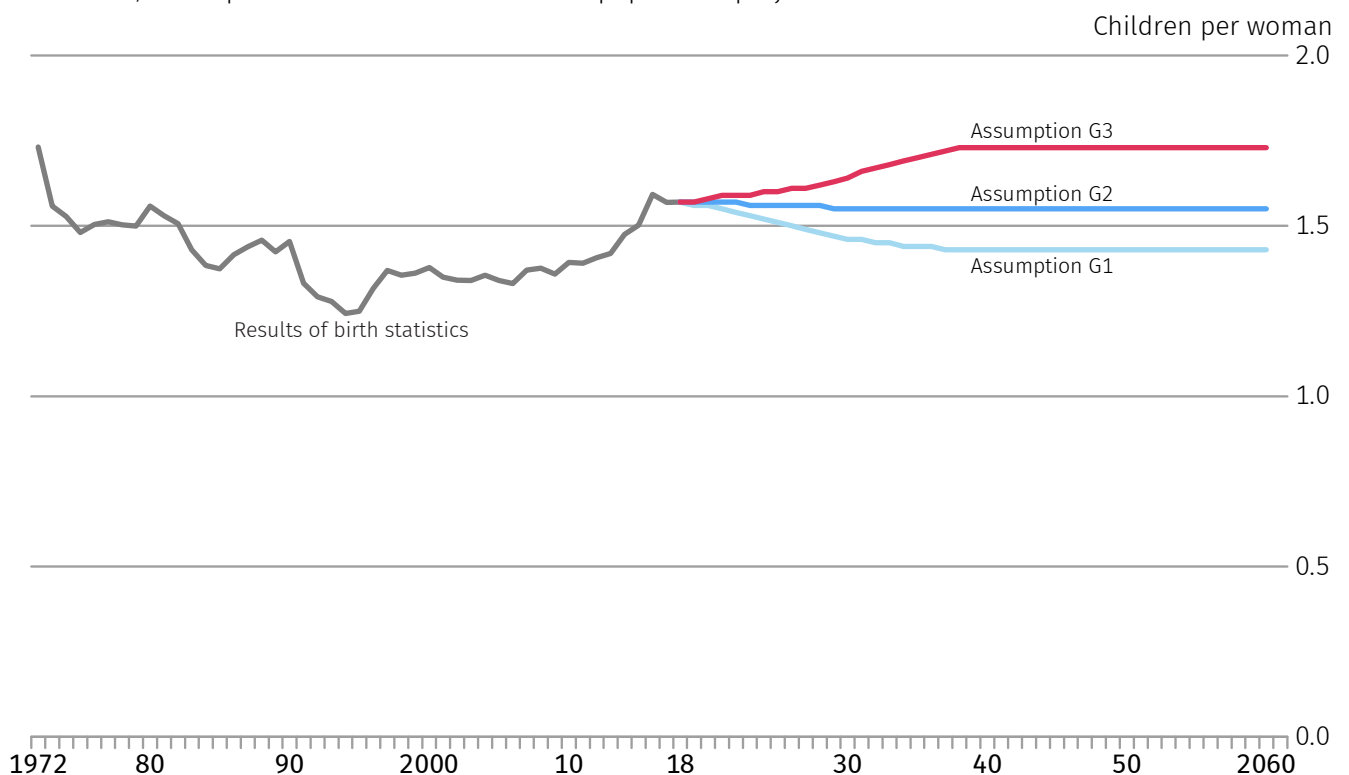
The total fertility rate will stabilise at 1.55 children per woman. The average age at birth will increase by 1.3 years in the projection period. This assumption will result in a moderate change in fertility compared to the long-term trend to date. The trends in the cohort fertility of German women were the determining factor in this assumption. In this regard, the long-term trends carried greater weighting than the trend of recent

years since it is assumed that the favourable framework conditions of the past decade will not, over the long term, act as an incentive to have more children. As a result, there will be no further intensification of the trend that is currently observable, namely of a strong ‘catching-up process’ in terms of births to women aged 30 or over. The influence of foreign women, especially on the fertility of all women in younger child-bearing years, will also wane and, from 2025 onwards, will fall to the level of 2011 to 2013. If childlessness remains stable at around 20%, completed fertility per woman will increase from its current level of just under 1.5 to over 1.6 children, where it will remain.

Assumption regarding fertility G3 (increase):

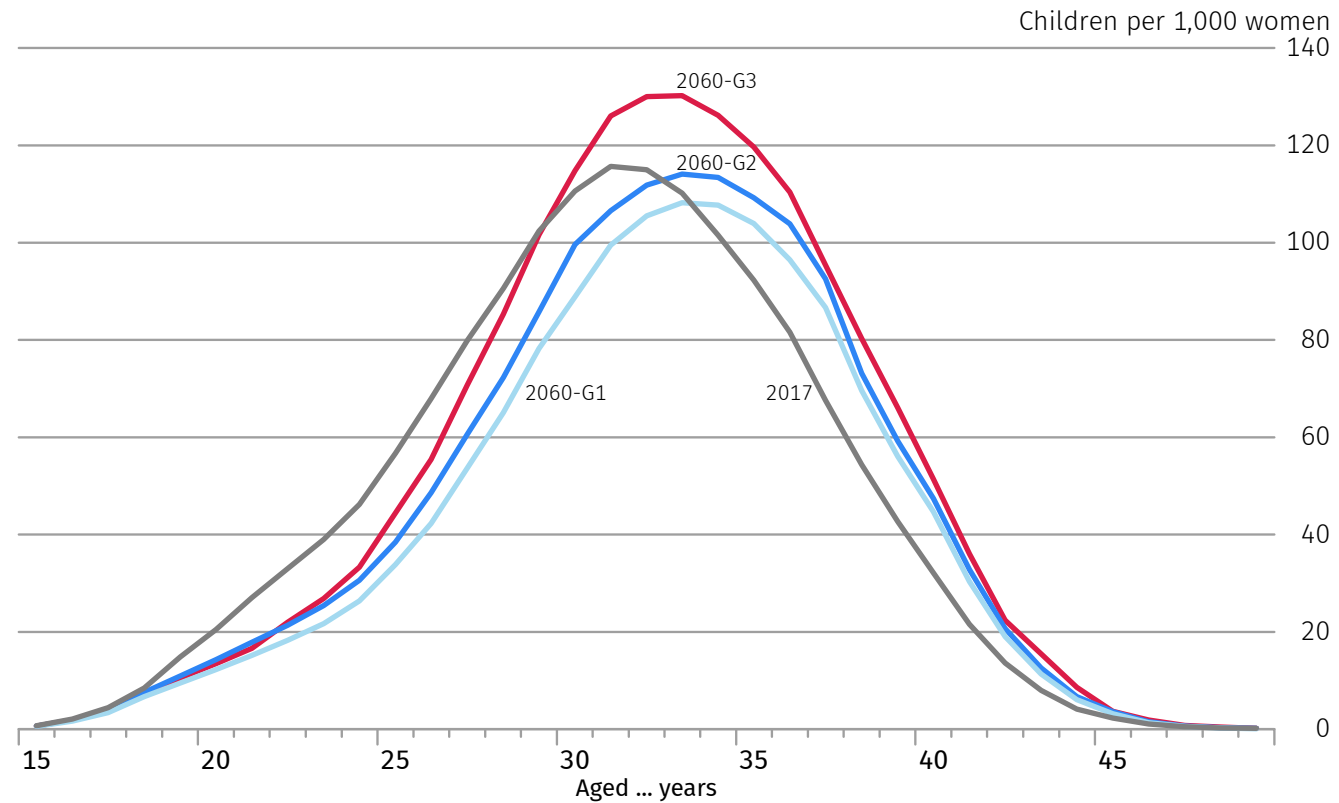
The total fertility rate will rise over the next 20 years to 1.73 children per woman, while the average age at birth will simultaneously increase by 1.3 years, before remaining at this level. This assumption shows what the effects of the current changes in fertility, broken down by calendar year, would be if they were to determine the future development. The accompanying rise in completed fertility per woman to 1.7 children would only be possible if there were to be a substantial change in fertility behaviour. For instance, the rate of childlessness would have to fall from its current level of 21% to at least 15% and/or the number of third-born or subsequent children as a proportion of total births would have to increase at the same time. First, any such trend presupposes that economic and socio-political framework conditions will have a favourable impact on family planning. Second, it would require the level of children born to immigrants to remain stable at a high level and counterbalance the decline in fertility of women under 30.

Figure 15
Trends in the total fertility rate by calendar year
 From 2018, assumptions of the 14th coordinated population projection



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Figure 16
Age-specific fertility rate: 2017 and 2060
 2060: assumptions of the 14th coordinated population projection



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6.2 Life expectancy

6.2.1 Changes in mortality and life expectancy

The level of mortality and average life expectancy are recorded regularly using what are called period life tables. The average life expectancy shows how many years newborn male or female children can expect to live if the mortality risk observed at the time of their birth continues to apply during the individual years of age of their entire life. With regard to persons who have reached a certain age, for example 65 years, the number of further years they can expect to live is expressed as the average remaining life expectancy.

An almost continuous rise in life expectancy has been tracked in Germany for around 145 years. In the German Reich, average life expectancy at birth in 1871/1881 was 35.6 years for men and 38.4 years for women. According to the results of the life table for 2015/2017, men and women can now expect to reach 78.4 and 83.2 years of age respectively. The life expectancy at birth for both sexes has therefore more than doubled since the end of the 19th century. This development initially involved a sharp decline in the mortality rate among children and infants. However, survivorship has since also improved greatly for older persons. In 1871/1881, a 65-year-old man had an average remaining life expectancy of 9.6 years, while a woman of the same age could expect to live for another 10.0 years. According to the life table for 2015/2017, these values are 17.8 years (+8.3 years) and 21.0 years (+11.0 years) respectively for 65-year-old men and women. The increase in life expectancy in this age segment has been particularly pronounced since around 1970.

Slowdown in the rise in life expectancy

Since around 2010, life expectancy has been increasing at a slower rate than in the preceding decades. Following a long period in which the annual rise in life expectancy at birth ranged between 0.2 and 0.4 years, the increases among both sexes now stand at roughly 0.1 years. At the same time, a similar slowdown in the increase or even a temporary fall in life expectancy can be seen in many other countries – for example in the USA, France, Sweden, the Netherlands and the United Kingdom. Whereas this trend is directly attributed to the misuse of opioids in the case of the USA (opioid crisis), there is currently no clear pattern of explanation for the other countries. Also discussed is a connection with the global financial and economic crisis of 2008/2009 which, in some cases, resulted in heavy burdens being placed on health systems due to spending cuts in a number of countries. In Germany, the rare accumulation of severe flu outbreaks in recent winters is the primary consideration in explaining the slowdown in the increase in life expectancy. Nevertheless, this slowdown remains an open research question in which further hypotheses are currently being examined.

Chart: Life expectancy at birth in years for selected countries

	Life expectancy at birth, 2016		Difference relative to Germany	
	boys	girls	boys	girls
Belgium	79.0	84.0	+0.6	+0.8
Denmark	79.0	82.8	+0.6	-0.4
Germany ¹	78.4	83.2	X	X
Finland	78.6	84.4	+0.2	+1.2
France	79.5	85.7	+1.1	+2.5
Greece	78.9	84.0	+0.5	+0.8
Ireland	79.9	83.6	+1.5	+0.4
Iceland	80.4	84.1	+2.0	+0.9
Italy	81.0	85.6	+2.6	+2.4
Japan ²	81.0	87.1	+2.6	+3.9
Luxembourg	80.1	85.4	+1.7	+2.2
Netherlands	80.0	83.2	+1.6	0.0
Norway	80.7	84.2	+2.3	+1.0
Austria	79.3	84.1	+0.9	+0.9
Poland	73.9	82.0	-4.5	-1.2
Portugal	78.1	84.3	-0.3	+1.1
Sweden	80.6	84.1	+2.2	+0.9
Switzerland	81.7	85.6	+3.3	+2.4
Spain	80.5	86.3	+2.1	+3.1
Czech Republic	76.1	82.1	-2.3	-1.1
Turkey	75.4	81.0	-3.0	-2.2
United Kingdom	79.4	83.0	+1.0	-0.2
United States ²	76.1	81.1	-2.3	-2.1
EU (28 countries)	78.2	83.6	-0.2	+0.4

Data source (except for Germany, United States and Japan): Eurostat (2019)

¹ Data source: Life table 2015/2017.

² Data source: World Bank (2019).

Life expectancy compared with other countries

Compared with other countries, Germany does not occupy a leading position despite the long-term increase in life expectancy witnessed. In Europe, for example, Italy, Norway, Sweden and Spain, as well as our neighbours Belgium, France, Luxembourg, Switzerland and Austria, have a higher life expectancy at birth than Germany according to Eurostat data for both sexes for 2016. Men and women in France, Italy, Luxembourg, Norway, Spain and Switzerland can expect to live at least one year more compared to their counterparts in Germany. In Switzerland, men already have a life expectancy at birth of 81.7 years (and therefore 3.3 years more than in Germany). In 2016, women in Spain already had a life expectancy of 86.3 years, and can therefore expect to live for 3.1 years more than women in Germany.

Potential for a further increase in life expectancy

In the long term, the improvement in survivorship is largely attributable to progress in medical care, better hygiene and nutrition, improvements in the housing situation and to better working conditions and increasing material wealth. How life expectancy develops in future will also continue to depend on how these primary variables evolve. One way in which to identify specific potential for a further increase in life expectancy is refer to the Global Burden of Disease Study, an international comparative study. The study reveals four health-related indicators in particular where the figures recorded by other countries are currently much better than those for Germany: smoking prevalence, alcohol consumption, suicide mortality and overweight in children.

Smoking is considered to be the most relevant health risk and the leading cause of premature mortality in Germany. Smoking rates among adolescents and young adults have been in decline for some time thanks to preventive measures. Over the course of the next few decades, this trend may, in principle, lead to a fall in the number of smoking-related deaths and, consequently, to an increase in life expectancy. However, in the short term, smoking-related deaths may continue to rise among women in particular, due to the increase in the proportion of female smokers in recent decades. In light of this trend, it is also quite probable that the life expectancy of men and women will continue to converge in future.

Alcohol consumption figures have been declining gradually since 1980, leading to a reduction in mortality due to alcohol-related causes. This trend too may, in future, contribute to a further increase in life expectancy. The potential for improvement appears to be considerable, given that annual per capita consumption in Germany of roughly 10 litres of pure alcohol currently remains well above the international average.

Although suicide mortality has fallen sharply in recent decades, this trend has nevertheless stagnated since around 2008. As a result, no further signs of improvement in this area are apparent, at least not at present. In other countries, however, suicide mortality is much lower in some cases. This is an indication that suicide mortality may become even less important in terms of a factor influencing life expectancy, at least over the long term.

Overweight in children and adolescents is regarded as a serious health problem, which has significant implications through to adulthood. The results of various studies show that the proportion of overweight children and adolescents in Germany

is currently stagnating, following a period of growth. If preventive measures in this area ensure that overweight in children, adolescents and adults too declines in future, the potential for a further increase in life expectancy will likewise exist.

6.2.2 Assumptions regarding life expectancy

In the light of past developments in Germany and the notably higher life expectancy already enjoyed in a number of neighbouring European countries, it is assumed that life expectancy will continue to increase in future. Compared to earlier generations, improved living conditions, falling smoking rates and a decline in alcohol consumption, as well as further improvements in medical care, will in all likelihood lead to a further rise in life expectancy in the future.

In total, the 14th coordinated population projection involves three assumptions regarding the development of life expectancy through to 2060. The life table for 2015/2017 serves as a basis in this respect. The three assumptions are based on a continuous increase in life expectancy. In future years, that rise will increasingly depend on the older age groups. As the mortality risk is already very low in the young age groups, improvements in conditions would barely have any impact on the trend in total life expectancy.

With the aim of defining the individual assumptions, the mortality risks of men and women were examined in each age cohort in order to identify both long-term and short-term trends in the past and to arrive at a projection by means of extrapolation into the future. For each age cohort, a long-term trend for the period since 1970/1972 and a short-term trend since 2010/2012 were included in the analysis.

Compared to the two assumptions on the development of life expectancy made in the 13th coordinated population projection in 2015, assumptions L2 and L3 of the current projection display slightly lower figures for life expectancy in 2060 – this is attributed to the slower rate of increase recorded in recent years. Having been added to the list of variants, assumption L1 illustrates the consequences that would result from a continued increase at a lesser rate, since it is not possible to estimate at present whether this development is a short-term phenomenon or a long-term trend.

Assumption L1 regarding life expectancy (slight increase):

According to assumption L1 of a “slight increase” in life expectancy, the average life expectancy at birth will be 82.5 years for men and 86.4 years for women in 2060. This is equivalent to an increase of 4.2 years and 3.2 years respectively, on the level of life expectancy in Germany in 2015/2017. The difference in life expectancy between men and women will fall from 4.8 years to 3.9 years by 2060. 65-year-old men and women can expect to live a further 20.4 and 23.2 years respectively, equivalent to 2.6 more years for men and 2.2 more years for women than in 2015/2017. Assumption L1 of a slight increase in life expectancy is based on the short-term trend observed since 2010/2012. It is assumed that the trend towards a relatively slow rise in life expectancy, which has only recently been observed, will continue through to 2060.

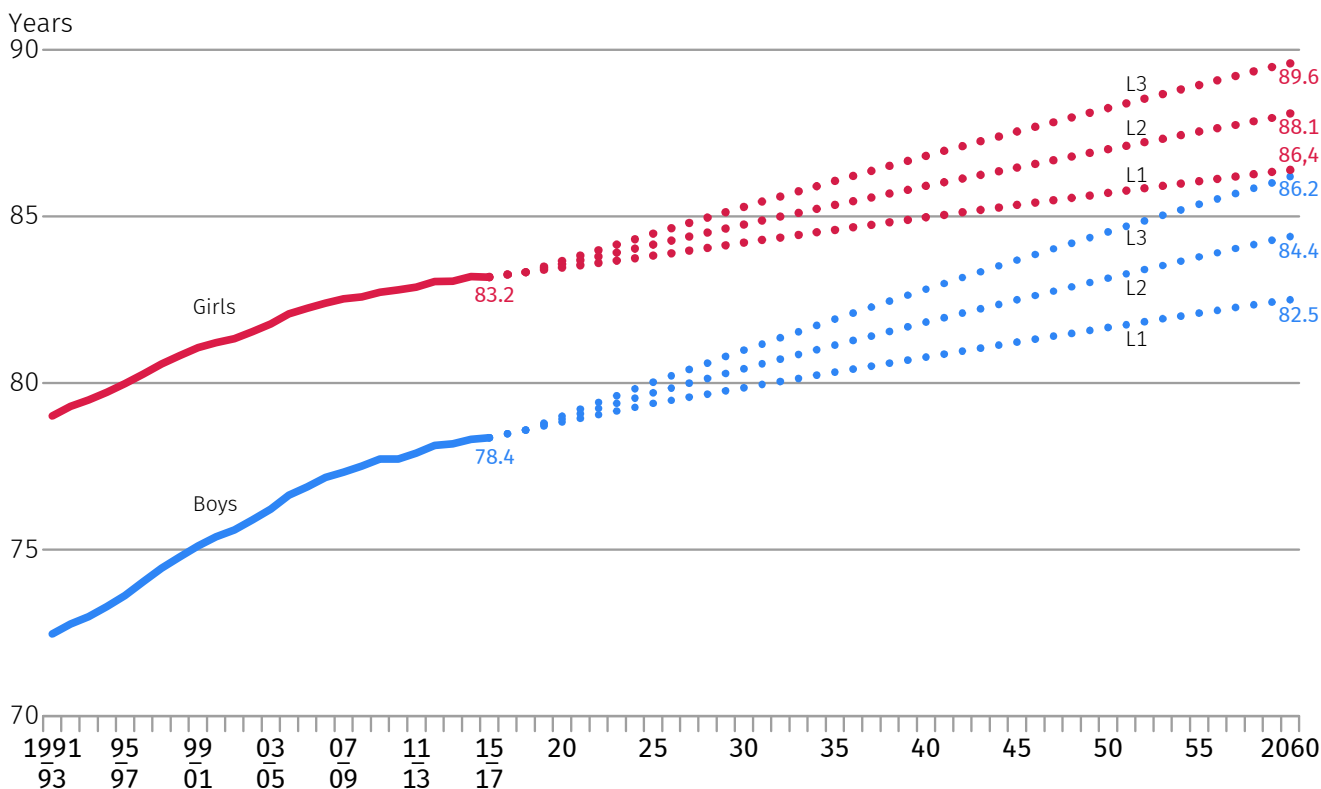
Assumption L2 regarding life expectancy (moderate increase):

Under assumption L2 of a “moderate increase” in life expectancy, men will have an average life expectancy at birth of 84.4 years and women of 88.1 years in 2060. This corresponds to an increase of 6.1 years for men and 4.9 years for women compared to the life table for 2015/2017. The difference in life expectancy between men and women will fall accordingly, from 4.8 to 3.7 years. In the last projection year, 65-year-old men and women can expect to live 21.8 and 24.5 more years respectively. Assumption L2 of a moderate increase in life expectancy is based on a combination of the long-term trend observed since 1970/1972 and the short-term trend recorded since 2010/2012.

Assumption L3 regarding life expectancy (sharp increase):

Assumption L3 of a “sharp increase” is that average life expectancy at birth is 86.2 years for men and 89.6 years for women. This equates to 7.8 more years for men and 6.4 more years for women compared against figures for 2015/2017. The difference in life expectancy between men and women will fall from 4.8 to 3.5 years. 65-year-old men and women can expect to live 23.2 and 25.9 more years respectively. Assumption L3 of high life expectancy is based on trends observed since 1970/1972. A necessary condition for this assumption is that the improvements in the medical care system and the resulting reduction in the mortality risk of older age groups largely continue along the same lines until 2060 as they have during the last 45 years.

Figure 17
Trends in life expectancy at birth
From 2017, assumptions of the 14th coordinated population projection



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Chart 3: Assumptions on the future trend in life expectancy through to 2060
Years

	Life expectancy at birth				Change on 2015/2017		
	2015/2017	2060			2060		
		L1	L2	L3	L1	L2	L3
Men	78.4	82.5	84.4	86.2	+4.2	+6.1	+7.8
Women	83.2	86.4	88.1	89.6	+3.2	+4.9	+6.4
Difference ¹ ...	4.8	3.9	3.7	3.5	-0.9	-1.2	-1.4

	Remaining life expectancy at age 65				Change on 2015/2017		
	2015/2017	2060			2060		
		L1	L2	L3	L1	L2	L3
Men	17.8	20.4	21.8	23.2	+2.6	+4.0	+5.4
Women	21.0	23.2	24.5	25.9	+2.2	+3.5	+4.9
Difference ¹ ...	3.2	2.9	2.8	2.7	-0.3	-0.4	-0.5

¹ Discrepancies may occur due to rounding.

6.3 Migration

6.3.1 Baseline situation

In addition to births and deaths, another factor which influences the future population size and age structure is net migration – defined as Germany’s balance of immigration and emigration. The net migration trend depends, on the one hand, on the potential number of migrants and on the migratory pressure in the regions of origin, factors which may fluctuate considerably as a result of certain political, economic, demographic and ecological reasons. On the other hand, the extent to which Germany is perceived as an economically attractive and stable country, as well as its migration policy, act as a lever for immigration and emigration. Decisions made at European Union level, including on further EU expansion, rules on free movement as well as international treaties regulating migration flows, all play a major role. These influencing factors make it very difficult to forecast future trends.

Viewed over the long term, net migration fluctuated greatly (Figure 18). This was due to various reasons, including the needs of the domestic labour market, the number of persons seeking protection, the absorption of ethnic German repatriates as well as EU agreements. Each wave of immigration has stemmed from different countries of origin. As a rule, every marked increase in net immigration was followed by counter-movements which reduced immigration. These included policy provisions as well as the effect of changes in the economic situation. The following considerations were key to defining individual assumptions regarding the balance of external migration:

1. The labour force potential in Germany is currently ageing at a noticeable rate. In the next two decades, large cohorts will leave the working-age population and the labour force potential is expected to get smaller. It remains to be seen whether the need for labour will decrease as digitalisation advances.
On the other hand, the ageing baby boom generation and increasing life expectancy will lead to a rise in the number of people in need of long-term care. Since many people of this generation do not have children of their own (roughly one in five women born in the mid-1960s is childless), the need for long-term care staff will grow.

The assumption under this scenario is therefore of a migration policy that is also geared towards the need for workers. Evidence of this comes in the form of the Skilled Immigration Act, which is currently in the process of being adopted by the German parliament.

2. Flashpoints in the Middle East and Central Asia (in particular Syria and Yemen at present), an intensification of the conflict with Iran as well as the unstable political situation in several African countries (current examples include Libya, Mali, Nigeria, Sudan, Somalia, Congo) mean that immigration by persons seeking protection is likely to remain on the agenda in the medium term.

At the same time, in the wake of the high level of immigration in 2015, measures were taken that were designed to limit the influx of persons seeking protection. The EU agreement with Turkey plays a crucial role in this regard. Among the provisions of Asylum Packages I and II that were adopted by the Federal Government were the placing of restrictions on family reunification, the declaration of other states as safe countries of origin as well as the more rigorous implementation of rules governing deportation.

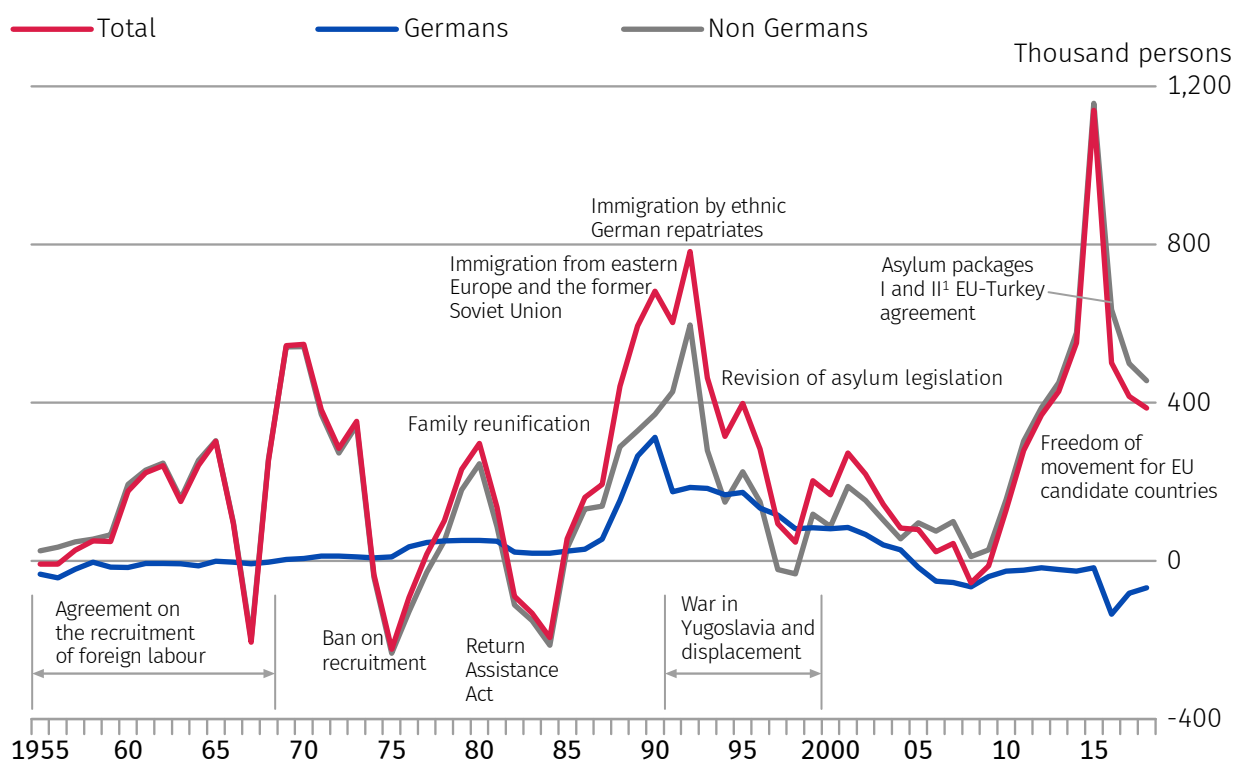
3. The majority of immigration to Germany continues to be from other European countries. Between 2010 and 2013, immigrants from Europe accounted in some instances for well over 70% of total net migration of non-Germans. This figure declined in 2015 and 2016, albeit only temporarily, due mainly to immigration from Syria. In 2017, the share of immigrants from Europe totalled 63%, and rose to 64% in 2018.

At present, the primary European countries of origin are Romania, Poland and Bulgaria as well as the countries of the Western Balkans (Croatia, Bosnia and Herzegovina, Serbia and Kosovo). Italy, Greece, Hungary, Spain, the United Kingdom and Ukraine also featured among the top 20 countries of origin in 2018. In the countries of eastern and southern Europe in particular, there will be fewer and fewer people of active migration age over the coming years as the populations here are ageing rapidly. According to a projection by the United Nations (2019 revision), the number of people in the 20-39 age group is likely to fall by 23% in eastern Europe and 11% in southern Europe between 2020 and 2035. This means that the external migration potential from these regions could decrease as young people will be needed to work in the domestic labour market.

4. From the current perspective, the extremely high net immigration of 2015 will not become a permanent condition. The net migration figures from individual countries will, however, remain extremely volatile.

In the period from 2016 to 2018, there was a continuous decline in net migration. For non-Germans, the figure fell by 61% in total between 2015 and 2018. The fall in net immigration from Syria (-91%) and Iraq (-80%) was particularly sharp. Net immigration from the EU shrank by 39%. On balance, the number of people migrating to Germany from what in recent years have been the primary EU countries of origin was also down: Romania (-28%), Bulgaria (-34%) and Poland (-67%). Net migration from Turkey and India, on the other hand, did increase.

Figure 18
Balance of migration across Germany's borders



1 Restrictions in family reunification, Western Balkans declared as a safe region of origin.

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6.3.2 Assumptions regarding the external migration balance

Three assumptions on the trend in net migration are made in the 14th coordinated population projection. All three scenarios assume that net migration in the projection period will be lower than in the baseline year of 2018 (386,000 persons). The decline will be linear in nature until 2026 or 2030 respectively. Under each assumption, the level of net migration included in the projection for the period after 2026 or 2030 remains constant. The assumed values are interpreted as multi-year averages; in all likelihood, the actual net migration levels will also be subject to great variation in future.

Under each assumption, average net immigration over the entire projection period from 2019 to 2060 corresponds to a specific reference period from the past. Although there will be no repeat in the future of migratory movements from the past, such movements do show the range within which net migration might vary under different scenarios. This range is regarded as a hypothetical corridor for how migration will develop in future.

Assumption W1 regarding net migration (low net migration)

Assumption W1, "low net migration", defines the lower limit to the future trend in net immigration. Under this scenario, net migration will fall from 386,000 in 2018 to around 111,000 in 2030 and remain constant thereafter.

Between 2019 and 2060, immigration to Germany would, on balance, total six million people, equating to an average of 147,000 per year.

The reference period for assumption W1 is from 1955 to 1989. During this period prior to German reunification, there were essentially three characteristic trends: 1) the recruitment of foreign workers as a result of the economic upswing of the 1950s and 1960s; 2) a restriction in immigration due to the oil crisis of the 1970s; and 3) rapidly rising immigration from eastern Europe due to the process of transformation in socialist countries. Net migration during this period averaged 147,000 people per year.

Assumption W2 regarding net migration (moderate net migration)

Under assumption W2, “moderate net migration”, net migration between 2018 and 2026 will fall to 206,000 and remain constant thereafter. Over the entire period from 2019 to 2060, immigration to Germany would, on balance, amount to nine million people, equating to an average of 221,000 per year. This assumption reflects a whole range of different conditions in Germany and abroad which, when combined, determine migration. Assumption W2 is based on the reference period from 1955 to 2018 and covers more than six decades of migration, with all its fluctuations. During this period, net migration ranged from –224,000 in 1975 to +1,139,000 in 2015. Net immigration totalled 14 million people, equivalent on balance to an average of 221,000 people per year.

Assumption W3 regarding net migration (high net migration)

Assumption W3, “high net migration”, defines the upper limit to the assumed future trend in migration. Under this scenario, net migration will fall more slowly than in assumptions W1 and W2 and will remain at a permanently high level of 300,000 from 2030 onwards. Between 2019 and 2060, immigration to Germany would, on balance, total 13 million people, equating to an average of 311,000 per year. This level of net migration would require a permanently high level of immigration from other countries outside of Europe.

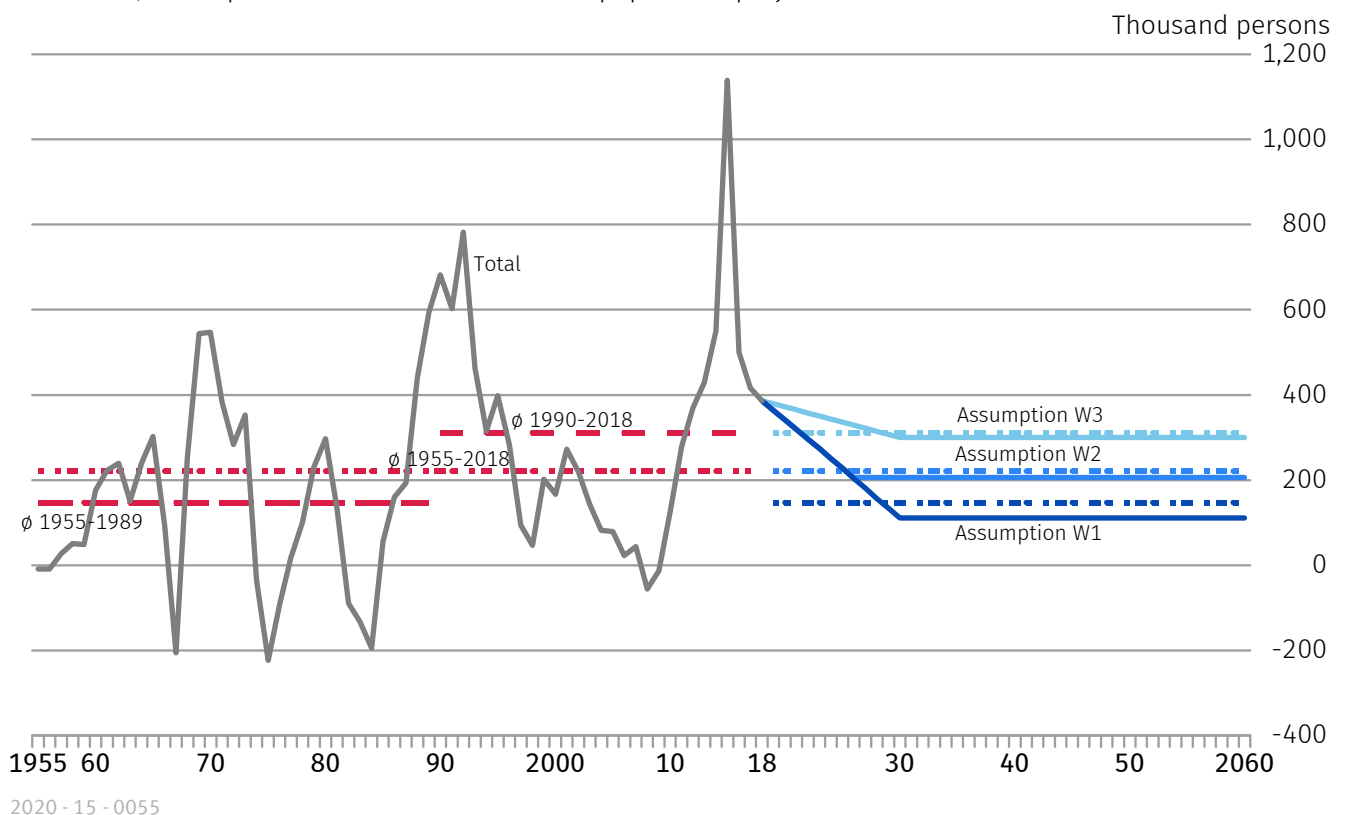
Assumption W3 is based on the reference period from 1990 to 2018. In the period following reunification, Germany experienced two extraordinarily strong waves of immigration. During the period between these waves, the fluctuations in migration were relatively minor. However, the migration situation as a whole has been determined by the high level of net immigration, and has resulted in a substantial migration surplus of nine million people in total within 28 years. Annual net migration averaged 311,000.

The first wave of immigration, from the end of the 1980s to the mid-1990s, consisted of ethnic German repatriates and foreigners from eastern Europe, states of the former Soviet Union and from war-torn Yugoslavia. The peak of net migration during this period came in 1992, at a figure exceeding 780,000. Between 1997 and 2010, net migration was in most cases low. Thereafter, immigration rose from the countries that had joined the EU in 2004 and 2007, in particular Poland, Romania and Bulgaria, as well as from areas of conflict and crises in Iraq, Afghanistan and finally Syria. The combination of immigration by persons seeking protection and people arriving from eastern Europe led to the highest level of net migration recorded to date, at 1.1 million in 2015. Since 2016, net migration has been decreasing.

Figure 19

Balance of migration across Germany's borders

From 2019, assumptions of the 14th coordinated population projection



The structure of net migration in terms of sex and age is based on the empirical age distribution among immigrants and emigrants, which is particularly stable among foreigners. On average, persons immigrating to Germany are younger than those leaving the country. The population in Germany gets younger as a result. Broken down by sex and age, distribution varied depending on the assumed level of net migration. For assumption W1, distribution is based on the immigration and emigration structures in the years 2004 and 2010; for assumption W2, distribution is based on the migration structures in the years 2011 to 2013; and for assumption W3, distribution is based on the migration structures in 2014 and 2017. In all three cases, however, the assumption is that immigrants are younger on average than emigrants and that the majority of the, on balance, young people that have come to the country are aged between 18 and 30.

Furthermore, two additional model assumptions have been made for analytical purposes. In one scenario, it is assumed that there is no external migration (assumption W0), while the second model assumes a constant level of net migration of 386,000 persons, which is in line with that of the baseline year of 2018.

List of variants and model calculations

Appendix 1

Variant (combination of assumptions)	Description
Main variants	
1 – G2-L2-W1	Moderate development in fertility and life expectancy with low net migration
2 – G2-L2-W2	Moderate development in fertility, life expectancy and net migration
3 – G2-L2-W3	Moderate development in fertility and life expectancy with high net migration
4 – G1-L3-W1	Relatively old population
5 – G3-L1-W3	Relatively young population
6 – G1-L2-W2	Impacts of low fertility
7 – G3-L2-W2	Impacts of high fertility
8 – G2-L1-W2	Impacts of a smaller increase in life expectancy
9 – G2-L3-W2	Impacts of a sharper increase in life expectancy
Further variants	
10 – G1-L1-W1	Minimum population
11 – G3-L3-W3	Maximum population
12 – G1-L2-W1	Declining fertility, moderate development in life expectancy, low net migration
13 – G2-L1-W1	Slight increase in life expectancy and low net migration
14 – G2-L3-W1	Sharp increase in life expectancy and low net migration
15 – G1-L1-W2	Declining fertility and slight increase in life expectancy
16 – G1-L3-W2	Declining fertility and sharp increase in life expectancy
17 – G3-L1-W2	Increasing fertility and slight increase in life expectancy
18 – G3-L3-W2	Increasing fertility and sharp increase in life expectancy
19 – G2-L1-W3	Slight increase in life expectancy and high net migration
20 – G2-L3-W3	Sharp increase in life expectancy and high net migration
21 – G3-L2-W3	Increasing fertility and high net migration
Model calculations	
M1 – G3-L1-W1	Increasing fertility, low net migration, slight increase in life expectancy
M2 – G3-L2-W1	Increasing fertility, low net migration, moderate increase in life expectancy
M3 – G3-L3-W1	Increasing fertility, low net migration, sharp increase in life expectancy
M4 – G1-L1-W3	Declining fertility, high net migration, slight increase in life expectancy
M5 – G1-L2-W3	Declining fertility, high net migration, moderate increase in life expectancy
M6 – G1-L3-W3	Declining fertility, high net migration, sharp increase in life expectancy
M7 – G2-L2-W0	Moderate development in fertility and life expectancy, no external migration
M8 – GR-L2-W0	Birth rate at replacement level, no external migration
M9 – Gk-Lk-Wk	Status-quo: constant fertility, life expectancy and net migration

Bibliography

Appendix 2

Births

Andersson, G. (2004). Childbearing after migration: Fertility patterns of foreign-born women in Sweden. *International Migration Review*, 38(2), pages 364–392

Andersson, G./Neyer, G. (2004). Contemporary research on European fertility: Perspectives and developments. Edited Special Collection 3 of Demographic Research

Bonin, Holger/Fichtl, Anita/Rainer, Helmut/Spieß, C. Katharina/Stichnoth, Holger/Wrohlich, Katharina. *Lehren für die Familienpolitik – Zentrale Resultate der Gesamtevaluation familienbezogener Leistungen*. Zentrum für Europäische Wirtschaftsforschung (ZEW) 2013

Bujard, Martin. Wirkungen von Familienpolitik auf die Geburtenentwicklung. In: Niephaus, Yasemin/Kreyenfeld, Michaela/Sackmann, Reinhold (editors). *Handbuch Bevölkerungssoziologie*, Wiesbaden 2016

Kulu, Hill/Milewski, Nadja (2007). Family change and migration in the life course: An introduction. *Demographic Research*, 17(19), pages 567–590

Milewski, Nadja. First child of immigrant workers and their descendants in West Germany: Interrelation of events, disruption, or adaptation? In: *Demographic research 2007*, Volume 17, Article 29, page 859 ff. [doi:10.4054/DemRes.2007.17.29]

Mussino, Eleonora/Strozza, Salvatore (2012). The fertility of immigrants after arrival: The Italian case. *Demographic Research*, Volume 26, Article 4, pages 99-130

Pöttsch, Olga (2018). Aktueller Geburtenanstieg und seine Potenziale. In: *Wirtschaft und Statistik 3/2018*, pages 72-89

Sobotka, Tomáš/Lutz, Wolfgang (2011). Wie Politik durch falsche Interpretationen der konventionellen Perioden-TFR in die Irre geführt wird: Sollten wir aufhören, diesen Indikator zu publizieren? *Comparative Population Studies – Zeitschrift für Bevölkerungswissenschaft*, Volume 35, 3 (2010), pages 665-696

Toulemon, Laurent. Fertility among immigrant women: new data, a new approach. In: *Population & Societies No. 400*. April 2004, page 1 ff. Available at: www.ined.fr

Life expectancy

Bomsdorf, Eckard/Trimborn, Michael (1992). Sterbetafel 2000 – Modellrechnungen der Sterbetafel. In: *Zeitschrift für die gesamte Versicherungswissenschaft*, Volume 81, page 457 ff.

Eurostat (2019). Life expectancy by age and sex [demo_mlexpec]

Gesundheitsberichterstattung des Bundes (2015). *Gesundheit in Deutschland 2015*

GBD 2017 SDG Collaborators (2018). Measuring progress from 1990 to 2017 and projecting attainment to 2030 of the health-related Sustainable Development Goals for 195 countries and territories: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, Volume 392, pages 2091–2138. DOI: 10.1016/S0140-6736(18)32281-5

Ho, Jessica Y/Arun S. Hendi (2018). Recent trends in life expectancy across high income countries: retrospective observational study. *BMJ* 2018; 362 :k2562

Mons, Ute/Brenner, Hermann (2017). Demographic ageing and the evolution of smoking-attributable mortality: the example of Germany. In: *Tobacco Control*, Volume 26, pages 455–457. DOI: 10.1136/tobaccocontrol-2016-053008

Nowossadeck, Enno/von der Lippe, Elena /Lampert, Thomas (2019). Entwicklung der Lebenserwartung in Deutschland – Aktuelle Trends. In: *Journal of Health Monitoring*, page 41 ff.

Statistisches Bundesamt (2018). Sterbetafel 2015/2017 - Methoden- und Ergebnisbericht zur laufenden Berechnung von Periodensterbetafeln für Deutschland und die Bundesländer

Swiss Re Institute (2018). Verbesserung der Sterblichkeit: Vergangenheit verstehen und Zukunft antizipieren. *Swiss Re sigma* No. 6/2018

World Bank (2019). Life expectancy at birth, female (years) [SP.DYN.LE00.FE.IN] and Life expectancy at birth, male (years) [SP.DYN.LE00.MA.IN]

Wiedemann, Angela/Wegner-Siegmundt, Christian/Luy, Marc (2015). Ursachen und Trends der Geschlechterdifferenz in der Lebenserwartung in Deutschland. *Zeitschrift für Allgemeinmedizin*, Volume 91 (12). DOI: 10.3238/zfa.2015.0494–0498

Migration

Bundesamt für Migration und Flüchtlinge: Migrationsbericht 2016/2017 (2019)

Deutscher Bundestag, Online Dienste (2019). Kritik an Plänen zur Fachkräfteeinwanderung aus Nicht-EU-Staaten. *Fachkräfteeinwanderungsgesetz*

Die Bundesregierung (2019). Asylpaket II in Kraft. Kürzere Verfahren, weniger Familiennachzug. The Act entered into force on 17 March 2016.

European Council (2019). International Summit. Meeting of heads of state or government with Turkey, 29 November 2015

Sander, Nikola (2014): Internal Migration in Germany, 1995–2010. New Insights into East-West Migration and Re-urbanization. Comparative Population Studies, Volume 39(2), pages 217–246

United Nations – Department of Economic and Social Affairs (2019). World Population Prospects: The 2017 Revision

General

Bonin, Holger et al. (2014). Familienpolitische Maßnahmen in Deutschland – Evaluationen und Bewertungen. Vierteljahreshefte zur Wirtschaftsforschung, Volume 83 (2014), Issue 1, pages 5–11

Bujard, Martin (2015). Ziele der Familienpolitik. Bundeszentrale für politische Bildung

Bundesministerium des Inneren (2011). Jedes Alter zählt – Demografiestrategie der Bundesregierung.

Bundesministerium des Inneren (2017). Jedes Alter zählt - Eine demografiepolitische Bilanz der Bundesregierung zum Ende der 18. Legislaturperiode.

Bundesministerium für Arbeit und Soziales (2003). Rürup-Bericht; Nachhaltigkeit in der Finanzierung der Sozialen Sicherungssysteme. Article no. C 318

Kommission für Nachhaltigkeit in der Finanzierung der Sozialen Sicherungssysteme (Rürup-Kommission). Nachhaltigkeit in der Finanzierung der Sozialen Sicherungssysteme (Rürup-Bericht 2003). Bundesministerium für Gesundheit und Soziale Sicherung (editors)

Pöttsch, Olga (2016). (Un-)Sicherheiten der Bevölkerungsvorausberechnungen. In: Wirtschaft und Statistik 4/2016

Pöttsch, Olga (2018). Die Vorausberechnung ist keine Zukunftsvision (interview). Bundeszentrale für politische Bildung

Tables showing selected results

Appendix 3

Development of Germany's population by 2060 ¹

Variant 1: Moderate development in fertility and life expectancy with low net migration

Birth rate of 1.55 children per woman; life expectancy at birth in 2060: 84.4 years for boys/88.1 years for girls;
average net migration: 147,000 persons per year (G2-L2-W1)

Age from ... to under ... years	Year (31 December)					
	2018 ¹	2020	2030	2040	2050	2060
Age limits of 20 and 60 years						
Population						
1,000						
Total	82,902	83,365	83,088	80,722	77,578	74,393
under 20 years	15,254	15,298	15,645	14,581	13,446	13,348
20 to under 60 years ...	44,413	43,947	39,598	38,133	35,647	33,268
60 years and older	23,235	24,120	27,845	28,009	28,485	27,776
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	18.8	18.1	17.3	17.9
20 to under 60 years ...	53.6	52.7	47.7	47.2	46.0	44.7
60 years and older	28.0	28.9	33.5	34.7	36.7	37.3
2018 = 100						
Total	100	100.6	100.2	97.4	93.6	89.7
under 20 years	100	100.3	102.6	95.6	88.1	87.5
20 to under 60 years ...	100	99.0	89.2	85.9	80.3	74.9
60 years and older	100	103.8	119.8	120.5	122.6	119.5
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 60-year-olds, there are						
under 20-year-olds	34.3	34.8	39.5	38.2	37.7	40.1
60-year-olds and older ...	52.3	54.9	70.3	73.5	79.9	83.5
Together	86.7	89.7	109.8	111.7	117.6	123.6
Age limits of 20 and 65 years						
Population						
1,000						
Total	82,902	83,365	83,088	80,722	77,578	74,393
under 20 years	15,254	15,298	15,645	14,581	13,446	13,348
20 to under 65 years ...	49,849	49,776	45,803	42,993	41,154	38,093
65 years and older	17,799	18,291	21,640	23,149	22,978	22,952
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	18.8	18.1	17.3	17.9
20 to under 65 years ...	60.1	59.7	55.1	53.3	53.0	51.2
65 years and older	21.5	21.9	26.0	28.7	29.6	30.9
2018 = 100						
Total	100	100.6	100.2	97.4	93.6	89.7
under 20 years	100	100.3	102.6	95.6	88.1	87.5
20 to under 65 years ...	100	99.9	91.9	86.2	82.6	76.4
65 years and older	100	102.8	121.6	130.1	129.1	128.9
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 65-year-olds, there are						
under 20-year-olds	30.6	30.7	34.2	33.9	32.7	35.0
65-year-olds and older ...	35.7	36.7	47.2	53.8	55.8	60.3
Together	66.3	67.5	81.4	87.8	88.5	95.3
Age limits of 20 and 67 years						
Population						
1,000						
Total	82,902	83,365	83,088	80,722	77,578	74,393
under 20 years	15,254	15,298	15,645	14,581	13,446	13,348
20 to under 67 years ...	51,826	51,824	48,405	44,765	43,164	39,995
67 years and older	15,821	16,243	19,038	21,377	20,968	21,050
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	18.8	18.1	17.3	17.9
20 to under 67 years ...	62.5	62.2	58.3	55.5	55.6	53.8
67 years and older	19.1	19.5	22.9	26.5	27.0	28.3
2018 = 100						
Total	100	100.6	100.2	97.4	93.6	89.7
under 20 years	100	100.3	102.6	95.6	88.1	87.5
20 to under 67 years ...	100	100.0	93.4	86.4	83.3	77.2
67 years and older	100	102.7	120.3	135.1	132.5	133.0
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 67-year-olds, there are						
under 20-year-olds	29.4	29.5	32.3	32.6	31.1	33.4
67-year-olds and older	30.5	31.3	39.3	47.8	48.6	52.6
Together	60.0	60.9	71.7	80.3	79.7	86.0

¹ 2018: Estimated annual average. From 2020, results of the 14th coordinated population projection.
Discrepancies in totals are due to rounding.

Development of Germany's population by 2060 ¹

Variant 2: Moderate development in fertility, life expectancy and net migration

Birth rate of 1.55 children per woman; life expectancy at birth in 2060: 84.4 years for boys/88.1 years for girls;
average net migration: 221,000 persons per year (G2-L2-W2)

Age from ... to under ... years	Year (31 December)					
	2018 ¹	2020	2030	2040	2050	2060
Age limits of 20 and 60 years						
Population						
1,000						
Total	82,902	83,365	83,341	82,091	80,200	78,213
under 20 years	15,254	15,298	15,704	14,908	14,086	14,101
20 to under 60 years ..	44,413	43,947	39,795	39,133	37,382	35,638
60 years and older	23,235	24,120	27,841	28,051	28,732	28,474
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	18.8	18.2	17.6	18.0
20 to under 60 years ..	53.6	52.7	47.8	47.7	46.6	45.6
60 years and older	28.0	28.9	33.4	34.2	35.8	36.4
2018 = 100						
Total	100	100.6	100.5	99.0	96.7	94.3
under 20 years	100	100.3	102.9	97.7	92.3	92.4
20 to under 60 years ..	100	99.0	89.6	88.1	84.2	80.2
60 years and older	100	103.8	119.8	120.7	123.7	122.5
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 60-year-olds, there are						
under 20 year-olds	34.3	34.8	39.5	38.1	37.7	39.6
60-year-olds and older ..	52.3	54.9	70.0	71.7	76.9	79.9
Together	86.7	89.7	109.4	109.8	114.5	119.5
Age limits of 20 and 65 years						
Population						
1,000						
Total	82,902	83,365	83,341	82,091	80,200	78,213
under 20 years	15,254	15,298	15,704	14,908	14,086	14,101
20 to under 65 years ..	49,849	49,776	46,001	44,022	42,990	40,702
65 years and older	17,799	18,291	21,635	23,162	23,123	23,410
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	18.8	18.2	17.6	18.0
20 to under 65 years ..	60.1	59.7	55.2	53.6	53.6	52.0
65 years and older	21.5	21.9	26.0	28.2	28.8	29.9
2018 = 100						
Total	100	100.6	100.5	99.0	96.7	94.3
under 20 years	100	100.3	102.9	97.7	92.3	92.4
20 to under 65 years ..	100	99.9	92.3	88.3	86.2	81.7
65 years and older	100	102.8	121.6	130.1	129.9	131.5
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 65-year-olds, there are						
under 20 year-olds	30.6	30.7	34.1	33.9	32.8	34.6
65-year-olds and older ..	35.7	36.7	47.0	52.6	53.8	57.5
Together	66.3	67.5	81.2	86.5	86.6	92.2
Age limits of 20 and 67 years						
Population						
1,000						
Total	82,902	83,365	83,341	82,091	80,200	78,213
under 20 years	15,254	15,298	15,704	14,908	14,086	14,101
20 to under 67 years ..	51,826	51,824	48,603	45,801	45,032	42,682
67 years and older	15,821	16,243	19,034	21,383	21,082	21,430
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	18.8	18.2	17.6	18.0
20 to under 67 years ..	62.5	62.2	58.3	55.8	56.1	54.6
67 years and older	19.1	19.5	22.8	26.0	26.3	27.4
2018 = 100						
Total	100	100.6	100.5	99.0	96.7	94.3
under 20 years	100	100.3	102.9	97.7	92.3	92.4
20 to under 67 years ..	100	100.0	93.8	88.4	86.9	82.4
67 years and older	100	102.7	120.3	135.2	133.2	135.4
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 67-year-olds, there are						
under 20 year-olds	29.4	29.5	32.3	32.5	31.3	33.0
67-year-olds and older ..	30.5	31.3	39.2	46.7	46.8	50.2
Together	60.0	60.9	71.5	79.2	78.1	83.2

¹ 2018: Estimated annual average. From 2020, results of the 14th coordinated population projection.
Discrepancies in totals are due to rounding.

Development of Germany's population by 2060 ¹

Variant 3: Moderate development in fertility and life expectancy with high net migration

Birth rate of 1.55 children per woman; life expectancy at birth in 2060: 84.4 years for boys/88.1 years for girls;
average net migration: 311,000 persons per year (G2-L2-W3)

Age from ... to under ... years	Year (31 December)					
	2018 ¹	2020	2030	2040	2050	2060
Age limits of 20 and 60 years						
Population						
1,000						
Total	82,902	83,409	84,347	84,238	83,642	83,012
under 20 years	15,254	15,400	16,158	15,615	15,111	15,368
20 to under 60 years ..	44,413	43,888	40,369	40,561	39,663	38,793
60 years and older	23,235	24,121	27,820	28,063	28,868	28,851
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.5	19.2	18.5	18.1	18.5
20 to under 60 years ..	53.6	52.6	47.9	48.1	47.4	46.7
60 years and older	28.0	28.9	33.0	33.3	34.5	34.8
2018 = 100						
Total	100	100.6	101.7	101.6	100.9	100.1
under 20 years	100	101.0	105.9	102.4	99.1	100.7
20 to under 60 years ..	100	98.8	90.9	91.3	89.3	87.3
60 years and older	100	103.8	119.7	120.8	124.2	124.2
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 60-year-olds, there are						
under 20 year-olds	34.3	35.1	40.0	38.5	38.1	39.6
60-year-olds and older ..	52.3	55.0	68.9	69.2	72.8	74.4
Together	86.7	90.0	108.9	107.7	110.9	114.0
Age limits of 20 and 65 years						
Population						
1,000						
Total	82,902	83,409	84,347	84,238	83,642	83,012
under 20 years	15,254	15,400	16,158	15,615	15,111	15,368
20 to under 65 years ..	49,849	49,717	46,567	45,478	45,347	44,010
65 years and older	17,799	18,293	21,622	23,145	23,184	23,634
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.5	19.2	18.5	18.1	18.5
20 to under 65 years ..	60.1	59.6	55.2	54.0	54.2	53.0
65 years and older	21.5	21.9	25.6	27.5	27.7	28.5
2018 = 100						
Total	100	100.6	101.7	101.6	100.9	100.1
under 20 years	100	101.0	105.9	102.4	99.1	100.7
20 to under 65 years ..	100	99.7	93.4	91.2	91.0	88.3
65 years and older	100	102.8	121.5	130.0	130.3	132.8
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 65-year-olds, there are						
under 20 year-olds	30.6	31.0	34.7	34.3	33.3	34.9
65-year-olds and older ..	35.7	36.8	46.4	50.9	51.1	53.7
Together	66.3	67.8	81.1	85.2	84.4	88.6
Age limits of 20 and 67 years						
Population						
1,000						
Total	82,902	83,409	84,347	84,238	83,642	83,012
under 20 years	15,254	15,400	16,158	15,615	15,111	15,368
20 to under 67 years ..	51,826	51,765	49,165	47,262	47,412	46,032
67 years and older	15,821	16,244	19,024	21,361	21,119	21,612
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.5	19.2	18.5	18.1	18.5
20 to under 67 years ..	62.5	62.1	58.3	56.1	56.7	55.5
67 years and older	19.1	19.5	22.6	25.4	25.2	26.0
2018 = 100						
Total	100	100.6	101.7	101.6	100.9	100.1
under 20 years	100	101.0	105.9	102.4	99.1	100.7
20 to under 67 years ..	100	99.9	94.9	91.2	91.5	88.8
67 years and older	100	102.7	120.2	135.0	133.5	136.6
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 67-year-olds, there are						
under 20 year-olds	29.4	29.7	32.9	33.0	31.9	33.4
67-year-olds and older ..	30.5	31.4	38.7	45.2	44.5	47.0
Together	60.0	61.1	71.6	78.2	76.4	80.3

¹ 2018: Estimated annual average. From 2020, results of the 14th coordinated population projection.
Discrepancies in totals are due to rounding.

Development of Germany's population by 2060 ¹

Variant 4: Relatively old population

Birth rate of 1.4 children per woman; life expectancy at birth in 2060: 86.2 years for boys/89.6 years for girls;
average net migration: 147,000 persons per year (G1-L3-W1)

Age from . . . to under . . . years	Year (31 December)					
	2018 ¹	2020	2030	2040	2050	2060
Age limits of 20 and 60 years						
Population						
1,000						
Total	82,902	83,364	83,071	80,652	77,458	74,027
under 20 years	15,254	15,289	15,399	13,912	12,495	12,213
20 to under 60 years . .	44,413	43,948	39,611	38,154	35,442	32,634
60 years and older	23,235	24,127	28,061	28,586	29,521	29,180
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.3	18.5	17.2	16.1	16.5
20 to under 60 years . .	53.6	52.7	47.7	47.3	45.8	44.1
60 years and older	28.0	28.9	33.8	35.4	38.1	39.4
2018 = 100						
Total	100	100.6	100.2	97.3	93.4	89.3
under 20 years	100	100.2	100.9	91.2	81.9	80.1
20 to under 60 years . .	100	99.0	89.2	85.9	79.8	73.5
60 years and older	100	103.8	120.8	123.0	127.1	125.6
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 60-year-olds, there are						
under 20 year-olds	34.3	34.8	38.9	36.5	35.3	37.4
60-year-olds and older . .	52.3	54.9	70.8	74.9	83.3	89.4
Together	86.7	89.7	109.7	111.4	118.6	126.8
Age limits of 20 and 65 years						
Population						
1,000						
Total	82,902	83,364	83,071	80,652	77,458	74,027
under 20 years	15,254	15,289	15,399	13,912	12,495	12,213
20 to under 65 years . .	49,849	49,777	45,828	43,034	40,981	37,493
65 years and older	17,799	18,298	21,844	23,706	23,982	24,320
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.3	18.5	17.2	16.1	16.5
20 to under 65 years . .	60.1	59.7	55.2	53.4	52.9	50.6
65 years and older	21.5	21.9	26.3	29.4	31.0	32.9
2018 = 100						
Total	100	100.6	100.2	97.3	93.4	89.3
under 20 years	100	100.2	100.9	91.2	81.9	80.1
20 to under 65 years . .	100	99.9	91.9	86.3	82.2	75.2
65 years and older	100	102.8	122.7	133.2	134.7	136.6
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 65-year-olds, there are						
under 20 year-olds	30.6	30.7	33.6	32.3	30.5	32.6
65-year-olds and older . .	35.7	36.8	47.7	55.1	58.5	64.9
Together	66.3	67.5	81.3	87.4	89.0	97.4
Age limits of 20 and 67 years						
Population						
1,000						
Total	82,902	83,364	83,071	80,652	77,458	74,027
under 20 years	15,254	15,289	15,399	13,912	12,495	12,213
20 to under 67 years . .	51,826	51,825	48,436	44,815	43,008	39,414
67 years and older	15,821	16,250	19,236	21,925	21,955	22,399
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.3	18.5	17.2	16.1	16.5
20 to under 67 years . .	62.5	62.2	58.3	55.6	55.5	53.2
67 years and older	19.1	19.5	23.2	27.2	28.3	30.3
2018 = 100						
Total	100	100.6	100.2	97.3	93.4	89.3
under 20 years	100	100.2	100.9	91.2	81.9	80.1
20 to under 67 years . .	100	100.0	93.5	86.5	83.0	76.1
67 years and older	100	102.7	121.6	138.6	138.8	141.6
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 67-year-olds, there are						
under 20 year-olds	29.4	29.5	31.8	31.0	29.1	31.0
67-year-olds and older . .	30.5	31.4	39.7	48.9	51.0	56.8
Together	60.0	60.9	71.5	80.0	80.1	87.8

¹ 2018: Estimated annual average. From 2020, results of the 14th coordinated population projection.
Discrepancies in totals are due to rounding.

Development of Germany's population by 2060 ¹

Variant 5: Relatively young population

Birth rate of 1.7 children per woman; life expectancy at birth in 2060: 82.5 years for boys/86.4 years for girls;
average net migration: 311,000 persons per year (G3-L1-W3)

Age from ... to under ... years	Year (31 December)					
	2018 ¹	2020	2030	2040	2050	2060
Age limits of 20 and 60 years						
Population						
1,000						
Total	82,902	83,411	84,422	84,639	84,434	84,487
under 20 years	15,254	15,410	16,467	16,635	16,717	17,323
20 to under 60 years ...	44,413	43,888	40,355	40,537	39,923	39,764
60 years and older	23,235	24,113	27,599	27,467	27,795	27,400
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.5	19.5	19.7	19.8	20.5
20 to under 60 years ...	53.6	52.6	47.8	47.9	47.3	47.1
60 years and older	28.0	28.9	32.7	32.5	32.9	32.4
2018 = 100						
Total	100	100.6	101.8	102.1	101.8	101.9
under 20 years	100	101.0	108.0	109.1	109.6	113.6
20 to under 60 years ...	100	98.8	90.9	91.3	89.9	89.5
60 years and older	100	103.8	118.8	118.2	119.6	117.9
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 60-year-olds, there are						
under 20 year-olds	34.3	35.1	40.8	41.0	41.9	43.6
60-year-olds and older ...	52.3	54.9	68.4	67.8	69.6	68.9
Together	86.7	90.1	109.2	108.8	111.5	112.5
Age limits of 20 and 65 years						
Population						
1,000						
Total	82,902	83,411	84,422	84,639	84,434	84,487
under 20 years	15,254	15,410	16,467	16,635	16,717	17,323
20 to under 65 years ...	49,849	49,715	46,541	45,433	45,569	44,937
65 years and older	17,799	18,286	21,413	22,571	22,149	22,227
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.5	19.5	19.7	19.8	20.5
20 to under 65 years ...	60.1	59.6	55.1	53.7	54.0	53.2
65 years and older	21.5	21.9	25.4	26.7	26.2	26.3
2018 = 100						
Total	100	100.6	101.8	102.1	101.8	101.9
under 20 years	100	101.0	108.0	109.1	109.6	113.6
20 to under 65 years ...	100	99.7	93.4	91.1	91.4	90.1
65 years and older	100	102.7	120.3	126.8	124.4	124.9
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 65-year-olds, there are						
under 20 year-olds	30.6	31.0	35.4	36.6	36.7	38.5
65-year-olds and older ...	35.7	36.8	46.0	49.7	48.6	49.5
Together	66.3	67.8	81.4	86.3	85.3	88.0
Age limits of 20 and 67 years						
Population						
1,000						
Total	82,902	83,411	84,422	84,639	84,434	84,487
under 20 years	15,254	15,410	16,467	16,635	16,717	17,323
20 to under 67 years ...	51,826	51,764	49,133	47,206	47,614	46,935
67 years and older	15,821	16,237	18,821	20,798	20,104	20,229
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.5	19.5	19.7	19.8	20.5
20 to under 67 years ...	62.5	62.1	58.2	55.8	56.4	55.6
67 years and older	19.1	19.5	22.3	24.6	23.8	23.9
2018 = 100						
Total	100	100.6	101.8	102.1	101.8	101.9
under 20 years	100	101.0	108.0	109.1	109.6	113.6
20 to under 67 years ...	100	99.9	94.8	91.1	91.9	90.6
67 years and older	100	102.6	119.0	131.5	127.1	127.9
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 67-year-olds, there are						
under 20 year-olds	29.4	29.8	33.5	35.2	35.1	36.9
67-year-olds and older ...	30.5	31.4	38.3	44.1	42.2	43.1
Together	60.0	61.1	71.8	79.3	77.3	80.0

¹ 2018: Estimated annual average. From 2020, results of the 14th coordinated population projection.
Discrepancies in totals are due to rounding.

A changing population
Assumptions and results of the 14th coordinated population projection

Development of Germany's population by 2060 ¹

Variant 6: Impacts of low fertility

Birth rate of 1.4 children per woman; life expectancy at birth in 2060: 84.4 years for boys/88.1 years for girls;
average net migration: 221,000 persons per year (G1-L2-W2)

Age from . . . to under . . . years	Year (31 December)					
	2018 ¹	2020	2030	2040	2050	2060
Age limits of 20 and 60 years						
Population 1,000						
Total	82,902	83,356	83,092	81,391	78,954	76,321
under 20 years	15,254	15,289	15,455	14,217	13,090	12,907
20 to under 60 years . .	44,413	43,947	39,795	39,124	37,133	34,940
60 years and older	23,235	24,120	27,841	28,051	28,732	28,474
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.3	18.6	17.5	16.6	16.9
20 to under 60 years . .	53.6	52.7	47.9	48.1	47.0	45.8
60 years and older	28.0	28.9	33.5	34.5	36.4	37.3
2018 = 100						
Total	100	100.5	100.2	98.2	95.2	92.1
under 20 years	100	100.2	101.3	93.2	85.8	84.6
20 to under 60 years . .	100	99.0	89.6	88.1	83.6	78.7
60 years and older	100	103.8	119.8	120.7	123.7	122.5
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 60-year-olds, there are						
under 20 year-olds	34.3	34.8	38.8	36.3	35.3	36.9
60-year-olds and older . .	52.3	54.9	70.0	71.7	77.4	81.5
Together	86.7	89.7	108.8	108.0	112.6	118.4
Age limits of 20 and 65 years						
Population 1,000						
Total	82,902	83,356	83,092	81,391	78,954	76,321
under 20 years	15,254	15,289	15,455	14,217	13,090	12,907
20 to under 65 years . .	49,849	49,776	46,001	44,013	42,741	40,004
65 years and older	17,799	18,291	21,635	23,162	23,123	23,410
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.3	18.6	17.5	16.6	16.9
20 to under 65 years . .	60.1	59.7	55.4	54.1	54.1	52.4
65 years and older	21.5	21.9	26.0	28.5	29.3	30.7
2018 = 100						
Total	100	100.5	100.2	98.2	95.2	92.1
under 20 years	100	100.2	101.3	93.2	85.8	84.6
20 to under 65 years . .	100	99.9	92.3	88.3	85.7	80.3
65 years and older	100	102.8	121.6	130.1	129.9	131.5
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 65-year-olds, there are						
under 20 year-olds	30.6	30.7	33.6	32.3	30.6	32.3
65-year-olds and older . .	35.7	36.7	47.0	52.6	54.1	58.5
Together	66.3	67.5	80.6	84.9	84.7	90.8
Age limits of 20 and 67 years						
Population 1,000						
Total	82,902	83,356	83,092	81,391	78,954	76,321
under 20 years	15,254	15,289	15,455	14,217	13,090	12,907
20 to under 67 years . .	51,826	51,824	48,603	45,792	44,783	41,984
67 years and older	15,821	16,243	19,034	21,383	21,082	21,430
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.3	18.6	17.5	16.6	16.9
20 to under 67 years . .	62.5	62.2	58.5	56.3	56.7	55.0
67 years and older	19.1	19.5	22.9	26.3	26.7	28.1
2018 = 100						
Total	100	100.5	100.2	98.2	95.2	92.1
under 20 years	100	100.2	101.3	93.2	85.8	84.6
20 to under 67 years . .	100	100.0	93.8	88.4	86.4	81.0
67 years and older	100	102.7	120.3	135.2	133.2	135.4
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 67-year-olds, there are						
under 20 year-olds	29.4	29.5	31.8	31.0	29.2	30.7
67-year-olds and older . .	30.5	31.3	39.2	46.7	47.1	51.0
Together	60.0	60.8	71.0	77.7	76.3	81.8

¹ 2018: Estimated annual average. From 2020, results of the 14th coordinated population projection.
Discrepancies in totals are due to rounding.

Development of Germany's population by 2060 ¹

Variant 7: Impacts of high fertility

Birth rate of 1.7 children per woman; life expectancy at birth in 2060: 84.4 years for boys/88.1 years for girls;
average net migration: 221,000 persons per year (G3-L2-W2)

Age from . . . to under . . . years	Year (31 December)					
	2018 ¹	2020	2030	2040	2050	2060
Age limits of 20 and 60 years						
Population						
1,000						
Total	82,902	83,375	83,652	83,115	82,075	81,119
under 20 years	15,254	15,308	16,016	15,921	15,650	15,985
20 to under 60 years	44,413	43,947	39,795	39,143	37,692	36,661
60 years and older	23,235	24,120	27,841	28,051	28,732	28,474
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	19.1	19.2	19.1	19.7
20 to under 60 years	53.6	52.7	47.6	47.1	45.9	45.2
60 years and older	28.0	28.9	33.3	33.7	35.0	35.1
2018 = 100						
Total	100	100.6	100.9	100.3	99.0	97.8
under 20 years	100	100.4	105.0	104.4	102.6	104.8
20 to under 60 years	100	99.0	89.6	88.1	84.9	82.5
60 years and older	100	103.8	119.8	120.7	123.7	122.5
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 60-year-olds, there are						
under 20 year-olds	34.3	34.8	40.2	40.7	41.5	43.6
60-year-olds and older	52.3	54.9	70.0	71.7	76.2	77.7
Together	86.7	89.7	110.2	112.3	117.7	121.3
Age limits of 20 and 65 years						
Population						
1,000						
Total	82,902	83,375	83,652	83,115	82,075	81,119
under 20 years	15,254	15,308	16,016	15,921	15,650	15,985
20 to under 65 years	49,849	49,776	46,001	44,033	43,301	41,725
65 years and older	17,799	18,291	21,635	23,162	23,123	23,410
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	19.1	19.2	19.1	19.7
20 to under 65 years	60.1	59.7	55.0	53.0	52.8	51.4
65 years and older	21.5	21.9	25.9	27.9	28.2	28.9
2018 = 100						
Total	100	100.6	100.9	100.3	99.0	97.8
under 20 years	100	100.4	105.0	104.4	102.6	104.8
20 to under 65 years	100	99.9	92.3	88.3	86.9	83.7
65 years and older	100	102.8	121.6	130.1	129.9	131.5
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 65-year-olds, there are						
under 20 year-olds	30.6	30.8	34.8	36.2	36.1	38.3
65-year-olds and older	35.7	36.7	47.0	52.6	53.4	56.1
Together	66.3	67.5	81.8	88.8	89.5	94.4
Age limits of 20 and 67 years						
Population						
1,000						
Total	82,902	83,375	83,652	83,115	82,075	81,119
under 20 years	15,254	15,308	16,016	15,921	15,650	15,985
20 to under 67 years	51,826	51,824	48,603	45,811	45,343	43,704
67 years and older	15,821	16,243	19,034	21,383	21,082	21,430
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	19.1	19.2	19.1	19.7
20 to under 67 years	62.5	62.2	58.1	55.1	55.2	53.9
67 years and older	19.1	19.5	22.8	25.7	25.7	26.4
2018 = 100						
Total	100	100.6	100.9	100.3	99.0	97.8
under 20 years	100	100.4	105.0	104.4	102.6	104.8
20 to under 67 years	100	100.0	93.8	88.4	87.5	84.3
67 years and older	100	102.7	120.3	135.2	133.2	135.4
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 67-year-olds, there are						
under 20 year-olds	29.4	29.5	33.0	34.8	34.5	36.6
67-year-olds and older	30.5	31.3	39.2	46.7	46.5	49.0
Together	60.0	60.9	72.1	81.4	81.0	85.6

¹ 2018: Estimated annual average. From 2020, results of the 14th coordinated population projection.
Discrepancies in totals are due to rounding.

A changing population
Assumptions and results of the 14th coordinated population projection

Development of Germany's population by 2060¹

Variant 8: Impacts of a smaller increase in life expectancy

Birth rate of 1.55 children per woman; life expectancy at birth in 2060: 82.5 years for boys/86.4 years for girls;
average net migration: 221,000 persons per year (G2-L1-W2)

Age from ... to under ... years	Year (31 December)					
	2018 ¹	2020	2030	2040	2050	2060
Age limits of 20 and 60 years						
Population 1,000						
Total	82,902	83,356	83,103	81,451	79,059	76,679
under 20 years	15,254	15,298	15,701	14,897	14,070	14,078
20 to under 60 years ..	44,413	43,947	39,782	39,100	37,330	35,574
60 years and older	23,235	24,112	27,621	27,454	27,659	27,027
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	18.9	18.3	17.8	18.4
20 to under 60 years ..	53.6	52.7	47.9	48.0	47.2	46.4
60 years and older	28.0	28.9	33.2	33.7	35.0	35.2
2018 = 100						
Total	100	100.5	100.2	98.2	95.4	92.5
under 20 years	100	100.3	102.9	97.7	92.2	92.3
20 to under 60 years ..	100	99.0	89.6	88.0	84.1	80.1
60 years and older	100	103.8	118.9	118.2	119.0	116.3
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 60-year-olds, there are						
under 20 year-olds	34.3	34.8	39.5	38.1	37.7	39.6
60-year-olds and older ..	52.3	54.9	69.4	70.2	74.1	76.0
Together	86.7	89.7	108.9	108.3	111.8	115.5
Age limits of 20 and 65 years						
Population 1,000						
Total	82,902	83,356	83,103	81,451	79,059	76,679
under 20 years	15,254	15,298	15,701	14,897	14,070	14,078
20 to under 65 years ..	49,849	49,775	45,976	43,967	42,902	40,595
65 years and older	17,799	18,284	21,426	22,587	22,088	22,006
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	18.9	18.3	17.8	18.4
20 to under 65 years ..	60.1	59.7	55.3	54.0	54.3	52.9
65 years and older	21.5	21.9	25.8	27.7	27.9	28.7
2018 = 100						
Total	100	100.5	100.2	98.2	95.4	92.5
under 20 years	100	100.3	102.9	97.7	92.2	92.3
20 to under 65 years ..	100	99.9	92.2	88.2	86.1	81.4
65 years and older	100	102.7	120.4	126.9	124.1	123.6
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 65-year-olds, there are						
under 20 year-olds	30.6	30.7	34.1	33.9	32.8	34.7
65-year-olds and older ..	35.7	36.7	46.6	51.4	51.5	54.2
Together	66.3	67.5	80.8	85.3	84.3	88.9
Age limits of 20 and 67 years						
Population 1,000						
Total	82,902	83,356	83,103	81,451	79,059	76,679
under 20 years	15,254	15,298	15,701	14,897	14,070	14,078
20 to under 67 years ..	51,826	51,823	48,571	45,735	44,925	42,551
67 years and older	15,821	16,236	18,831	20,819	20,065	20,050
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.4	18.9	18.3	17.8	18.4
20 to under 67 years ..	62.5	62.2	58.4	56.2	56.8	55.5
67 years and older	19.1	19.5	22.7	25.6	25.4	26.1
2018 = 100						
Total	100	100.5	100.2	98.2	95.4	92.5
under 20 years	100	100.3	102.9	97.7	92.2	92.3
20 to under 67 years ..	100	100.0	93.7	88.2	86.7	82.1
67 years and older	100	102.6	119.0	131.6	126.8	126.7
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 67-year-olds, there are						
under 20 year-olds	29.4	29.5	32.3	32.6	31.3	33.1
67-year-olds and older ..	30.5	31.3	38.8	45.5	44.7	47.1
Together	60.0	60.8	71.1	78.1	76.0	80.2

¹ 2018: Estimated annual average. From 2020, results of the 14th coordinated population projection.
Discrepancies in totals are due to rounding.

Development of Germany's population by 2060 ¹

Variant 9: Impacts of a sharper increase in life expectancy

Birth rate of 1.55 children per woman; life expectancy at birth in 2060: 86.2 years for boys/89.6 years for girls;
average net migration: 221,000 persons per year (G2-L3-W2)

Age from ... to under ... years	Year (31 December)					
	2018 ¹	2020	2030	2040	2050	2060
Age limits of 20 and 60 years						
Population						
1,000						
Total	82,902	83,373	83,573	82,708	81,294	79,696
under 20 years	15,254	15,298	15,708	14,916	14,098	14,116
20 to under 60 years ..	44,413	43,948	39,809	39,163	37,426	35,692
60 years and older	23,235	24,127	28,057	28,628	29,770	29,888
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.3	18.8	18.0	17.3	17.7
20 to under 60 years ..	53.6	52.7	47.6	47.4	46.0	44.8
60 years and older	28.0	28.9	33.6	34.6	36.6	37.5
2018 = 100						
Total	100	100.6	100.8	99.8	98.1	96.1
under 20 years	100	100.3	103.0	97.8	92.4	92.5
20 to under 60 years ..	100	99.0	89.6	88.2	84.3	80.4
60 years and older	100	103.8	120.8	123.2	128.1	128.6
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 60-year-olds, there are						
under 20 year-olds	34.3	34.8	39.5	38.1	37.7	39.5
60-year-olds and older	52.3	54.9	70.5	73.1	79.5	83.7
Together	86.7	89.7	109.9	111.2	117.2	123.3
Age limits of 20 and 65 years						
Population						
1,000						
Total	82,902	83,373	83,573	82,708	81,294	79,696
under 20 years	15,254	15,298	15,708	14,916	14,098	14,116
20 to under 65 years ..	49,849	49,777	46,026	44,072	43,067	40,792
65 years and older	17,799	18,298	21,840	23,719	24,129	24,788
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.3	18.8	18.0	17.3	17.7
20 to under 65 years ..	60.1	59.7	55.1	53.3	53.0	51.2
65 years and older	21.5	21.9	26.1	28.7	29.7	31.1
2018 = 100						
Total	100	100.6	100.8	99.8	98.1	96.1
under 20 years	100	100.3	103.0	97.8	92.4	92.5
20 to under 65 years ..	100	99.9	92.3	88.4	86.4	81.8
65 years and older	100	102.8	122.7	133.3	135.6	139.3
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 65-year-olds, there are						
under 20 year-olds	30.6	30.7	34.1	33.8	32.7	34.6
65-year-olds and older	35.7	36.8	47.5	53.8	56.0	60.8
Together	66.3	67.5	81.6	87.7	88.8	95.4
Age limits of 20 and 67 years						
Population						
1,000						
Total	82,902	83,373	83,573	82,708	81,294	79,696
under 20 years	15,254	15,298	15,708	14,916	14,098	14,116
20 to under 67 years ..	51,826	51,826	48,633	45,861	45,126	42,792
67 years and older	15,821	16,250	19,232	21,930	22,070	22,788
%						
Total	100	100	100	100	100	100
under 20 years	18.4	18.3	18.8	18.0	17.3	17.7
20 to under 67 years ..	62.5	62.2	58.2	55.4	55.5	53.7
67 years and older	19.1	19.5	23.0	26.5	27.1	28.6
2018 = 100						
Total	100	100.6	100.8	99.8	98.1	96.1
under 20 years	100	100.3	103.0	97.8	92.4	92.5
20 to under 67 years ..	100	100.0	93.8	88.5	87.1	82.6
67 years and older	100	102.7	121.6	138.6	139.5	144.0
Young-age, old-age, total dependency ratios						
Per one hundred 20 to under 67-year-olds, there are						
under 20 year-olds	29.4	29.5	32.3	32.5	31.2	33.0
67-year-olds and older	30.5	31.4	39.5	47.8	48.9	53.3
Together	60.0	60.9	71.8	80.3	80.1	86.2

¹ 2018: Estimated annual average. From 2020, results of the 14th coordinated population projection.
Discrepancies in totals are due to rounding.

Where can I find results for Germany and the Länder?

Appendix 4

The detailed results of the 14th coordinated population projection for Germany and the Länder are available for download at:

www.destatis.de/EN/Themes/Society-Environment/Population/Population-Projection/_node.html

1) As volumes of tables in Excel and PDF under the section 'Publications'

- Bevölkerung Deutschlands bis 2060 (main variants 1 to 9)
- Bevölkerung Deutschlands bis 2060 (variants 10 to 21)
- Bevölkerung Deutschlands bis 2060 (model calculations M1 to M9)

- Bevölkerungsentwicklung in den Bundesländern bis 2060 (variant 1)
- Bevölkerungsentwicklung in den Bundesländern bis 2060 (variant 2)
- Bevölkerungsentwicklung in den Bundesländern bis 2060 (variant 3)

2) GENESIS-Online database, code:

12421-0001
12421-0002
12421-0003
12421-0004

Animated population pyramid on the internet at
<https://service.destatis.de/bevoelkerungspyramide/#!l=en>

Appendix 5



Choose a variant

Birth rate: G1 G2 G3
 Life expectancy: L1 L2 L3
 Net migration: W1 W2 W3

Assumptions V2 - G2L2W2

Birth rate 2060: 1.55 children per woman
Life expectancy at birth 2060 in years: 84.4 for boys, 88.1 for girls
Average net migration: 221 000 persons per year

Age	Million	Pct.
67+	21.4	27%
20-66	42.7	55%
<20	14.1	18%
Total	78.2	100%

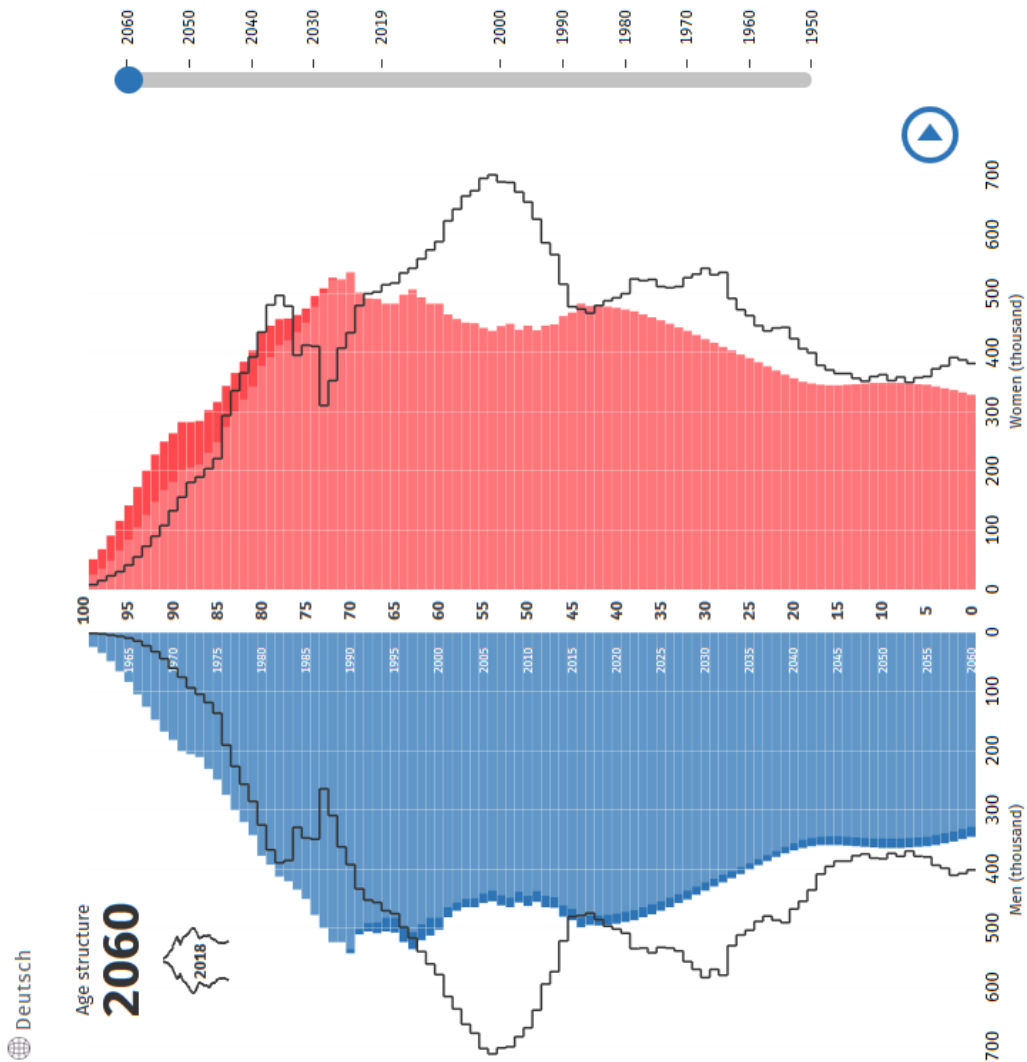
Young-age dependency ratio: 33 |
 Old-age dependency ratio: 50

Change age groups Lock age structure

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14th Coordinated Population Projection for Germany
 Variant 2: Moderate development of birth rate, life expectancy and net migration (G2L2W2)



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Glossary

Appendix 6

Age-specific fertility rate

The fertility rate can be determined for any age of women between 15 and 49 years. It is defined as the number of births to mothers of a given age in a calendar year in relation to the total female population of that age. Age-specific fertility rates calculated in this manner indicate the average number of children born to women of a given age.

Average age at birth

Average age of mothers who gave birth in the respective calendar year. In the context of the population projection, it is an age calculated on the basis of the age-specific fertility rates, irrespective of the order of birth of the child.

Basic migration

Basic migration assumes a certain level of emigration to other countries. Hence the same or a higher level of immigration is required to achieve a balanced or positive net migration. By taking basic migration into account, consideration is given to the fact that foreigners moving to Germany are generally younger than those leaving the country so the population gets younger to an extent even in the case of balanced net migration.

Birth deficit

The number of births is smaller than the number of deaths.

Births

Refers to the number of live births.

Childlessness

Childlessness refers to the share of childless women in the total of women of a given group. Childlessness is considered permanent for women aged 50 or over who have typically gone through their childbearing years. As the share of childless women in younger age groups may still change, it should be interpreted as reflecting the situation at a given instant in time.

Cohort

A group of people who experienced the same event at the same time. A birth cohort, for example, is a group of people who were born in the same calendar year.

Completed/cumulative fertility

The completed/cumulative fertility of a female cohort indicates the average number of children born to the women of the cohort during their life. As regards female cohorts who have reached the age of 49, fertility refers to the total number of

Federal Statistical Office 2019

children born to the women of the cohorts. This fertility rate is calculated for a cohort by adding up the age-specific fertility rates (source: statistics of births) determined for the cohort's individual years of age from 15 to 49.

Life expectancy

The average number of additional years a person of a certain age could expect to live according to the results of a life table. We speak of the average life expectancy at birth (i.e. at the age of 0 years) and remaining life expectancy at a certain age, e.g. at age 60 or 65.

Life table

A demographic model allowing a summary assessment of the development of the mortality of a population regardless of the population's size and age structure. Constructed separately for women and men, the life table shows how many people of a certain group will survive and die based on the calculated probability of death at individual years of age. In addition, the life table also provides information about the gender-specific life expectancy at individual years of age. A distinction is made between period life tables and cohort life tables. Period life tables quantify the development of mortality in a reporting period and do not make any assumptions as to how mortality conditions will change in the future. Therefore, they provide information on how many (additional) years a person could expect to live if he or she were subject to the mortality conditions of the reporting period for his or her entire life. Cohort life tables indicate the specific mortality experiences and the life expectancy of a specific birth cohort. Cohort life tables can only be finalised, however, once all the members of this specific birth cohort are deceased.

Median age

The median age divides the population into a younger and an older half.

Migration surplus

Migration surplus (positive net migration, net immigration) means that the number of immigrants exceeds the number of emigrants.

Mortality

Mortality is one of the two main components of natural population change. By mortality, we understand the number of deaths occurring over a certain period in relation to the population. In this context, total mortality or the mortality of sub-populations (breakdown by age or sex) can be studied.

Natural population change

This is the balance of births and deaths.

Net migration

The difference between immigration into Germany and emigration from Germany to other countries. In this context, it is possible to examine total net migration or migration broken down by age or sex.

Old-age dependency ratio

This is the ratio of the number of people of pension age (e.g. 65 years and older) to 100 persons of working age (e.g. 20 to 64 years).

Total fertility rate (TFR)

The total fertility rate (TFR) is defined as the average number of children a woman would have during her lifetime if the conditions in the reference year were characteristic of the whole period of her childbearing years (from 15 to 49). This number of children per woman is of a hypothetical nature as it shows the fertility rate for a modelled, rather than a concrete generation of women. The total fertility rate is determined by adding up the age-specific fertility rates of the reference year for all women aged between 15 and 49 years. It is not affected by the age structure of the female population.

Young-age dependency ratio

With the working age defined as between 20 and 64, the young-age dependency ratio is the ratio of the number of people aged between 0 and 19 to 100 persons of working age.

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Telephone: +49 (0) 611 / 75 48 66

Telefax: +49 (0) 611 / 75 30 69

E-mail: demografie@destatis.de