People in the EU - statistics on demographic changes

Statistics Explained

Data extracted in November and December 2017
No update planned for this article

This is one of a set of statistical articles that forms Eurostat 's flagship publication People in the EU: who are we and how do we live? ; it presents a range of statistics that cover the characteristics of the demographic situation in the European Union (EU) .

A paper edition of the publication was released in 2015. In late 2017, a decision was taken to update the online version of the publication (subject to data availability). Readers should note that while many of the statistical sources that have been used in*People in the EU: who are we and how do we live?* have been revised since its initial 2015 release, this was not the case for the population and housing census, as a census is only conducted once every 10 years across the majority of the EU Member States. As a result, the analyses presented often jump between the latest reference period — generally 2015 or 2016 — and historical values for 2011 that reflect the last time a census was conducted.

Global population developments: setting the scene

Statistics on the structure of the EU's population and those measuring the change in the number of inhabitants have received growing attention from policymakers in recent decades, as it has become apparent that demographic developments — such as increasing life expectancy , falling fertility and migration — will play an increasing role in political, economic and social life.

The world's population has grown considerably in the last 60 years: according to the United Nations, the number of inhabitants increased from 2.5 billion in 1950 to pass 7 billion at the end of October 2011. As of mid-2017, the world's population was estimated to be 7.6 billion inhabitants, and is forecast to continue rising, albeit at a slower pace, with the number of global inhabitants projected to top 10 billion by 2055, rising to 11 billion by 2088.

China and India are the two most populous countries in the world, each accounting for slightly less than one fifth of the total number of inhabitants. The United Nations' projections foresee the population of India surpassing that of China by 2024. More generally, the vast majority of the world's population growth over the next 30 years is expected to take place in just nine (mainly poor and developing) countries — ordered by their expected contribution — India, Nigeria, the Democratic Republic of the Congo, Pakistan, Ethiopia, the United Republic of Tanzania, the United States of America, Uganda and Indonesia.</sesection>

EU population structure and historical developments

Against this background of rising global population, there has been a considerable slowdown in the pace of population expansion within the EU, a pattern that has been repeated in many other developed world economies. Aside from Japan, the EU is the world's most rapidly ageing region in the world.

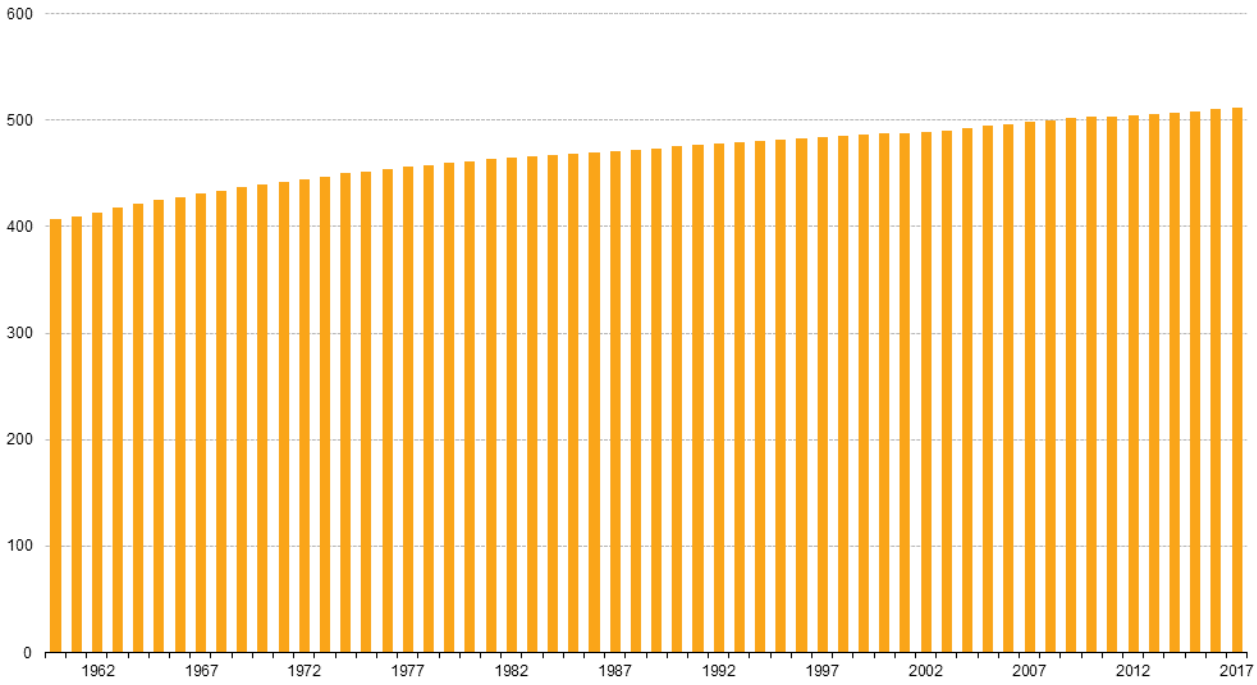
There were 511.8 million inhabitants in the EU-28 as of 1 January 2017. This equated to just less than 7 % of the world total, compared with a share that was almost twice as high some five decades earlier. The pace of population growth in the EU-28 is expected to slow further, such that within the next 30-40 years the total number of inhabitants in the EU-28 is projected to stagnate and is projected to decline after 2045. For more information on future demographic developments in the EU, please refer to an article on *Demographic challenges — population projections* .

The population of the EU-28 on 1 January 2017 was 1.5 million higher when compared with a year before. Population growth in the EU-28 during 2016 was slower than in 2015, when the EU-28's population had increased by 1.8 million inhabitants.

The number of inhabitants in the EU Member States on 1 January 2017 ranged from 82.8 million in Germany to 0.4 million in Malta. Germany, France, the United Kingdom and Italy together comprised more than half (54.0%) of the total EU-28 population on 1 January 2017.

The pace at which the EU's population was growing slowed considerably during the 1960s, 1970s and early 1980s

During the period 1960 to 2014, there was almost continuous growth in the EU-28's population, although that the rate of population change slowed considerably during the 1960s, 1970s and early 1980s, falling from 1.02 % growth in 1962 (equivalent to an absolute increase of 4.2 million inhabitants) to 0.21 % growth in 1983 and 1984. During the period 1980 to 2009, the demographic situation was characterised by much lower population growth and in 2010 the EU-28's population declined (a 0.04 % reduction, equivalent to a reduction of just over 200 thousand inhabitants). Thereafter, the total number of inhabitants in the EU-28 rose at a modest pace during the period 2011-2016, with annual population growth within the range of 0.2-0.4 % per annum (see Figure 1).



Note: population: as of 1 January. 1991, 1998, 2000, 2001, 2008, 2010-2012, 2014-2017: breaks in series. 2014-2017: estimates.
Source: Eurostat (online data code: demo_gind)

Figure 1: Total population, EU-28, 1960-2017(millions)Source: Eurostat (demo_gind)

The median age of the EU's population rose by almost six years during the period 1996 to 2016 . . .

The median age is the age that divides a population into two parts of equal size, such that there are as many persons who are older than the median age as there are persons that are younger. This indicator provides one measure for analysing ageing populations.

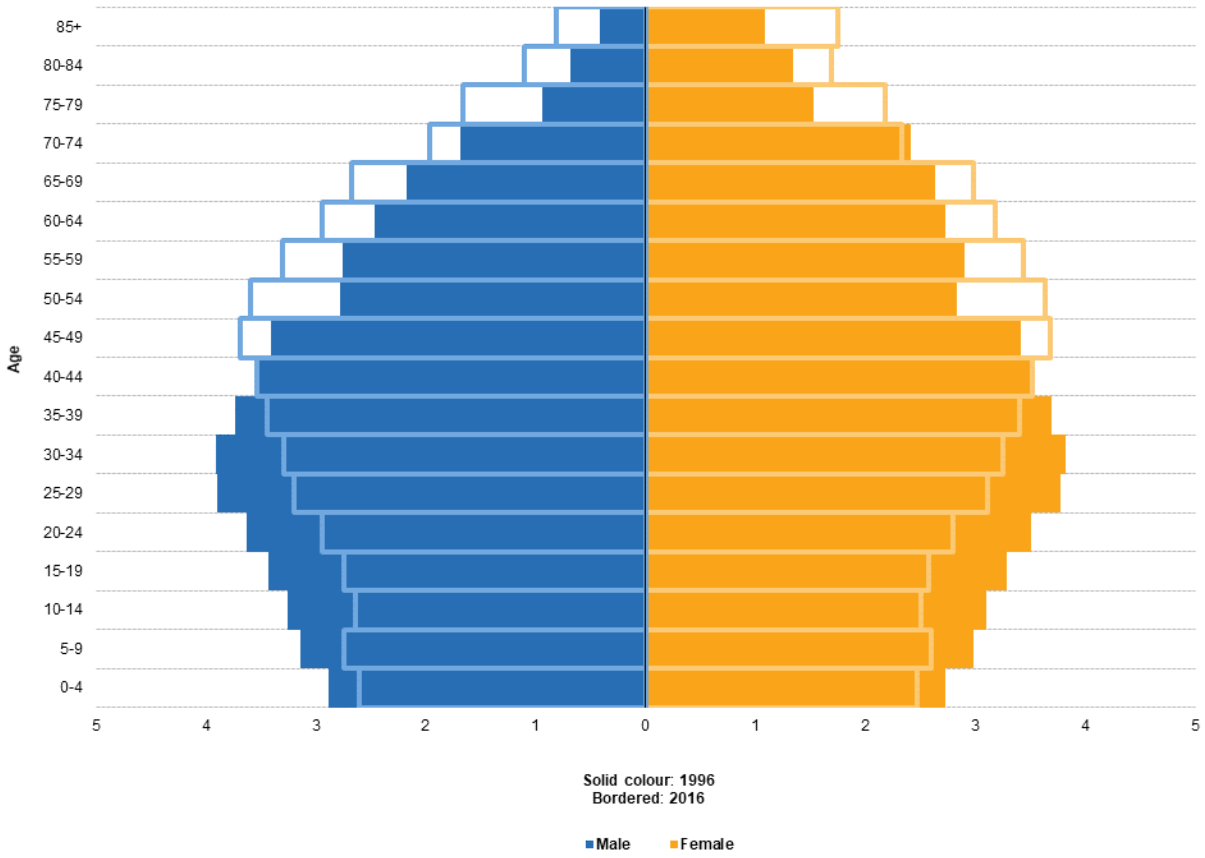
In 1996, the median age of the EU-27's population was 36.8 years, while some 20 years later, the median age in the EU-28 was almost six years higher, at 42.6 years; over the same period the median age in every EU Member State also increased.

In 2016, the median age across the EU Member States ranged from a high of 45.8 years in Germany down to 36.6 years in Ireland. This gap (9.2 years) between the highest and lowest median ages could be contrasted with results of a similar analysis for 1996, when the difference was 7.8 years, ranging from a high of 38.9 years in Italy down to a low of 31.1 years in Ireland.

. . . with its population composed of a lower proportion of young people and more elderly persons

Figure 2 provides further evidence of the process of population ageing that is underway in the EU. The two pyramids (one in solid colours and the other shown by outlines) provide a comparison of the structure of the EU's population in 1996 and 2016, with the five-year age band recording the highest share of total population moving from those aged 30-34 years in 1996 to those aged 45-49 years in 2016.

Indeed, Europeans are living longer and healthier lives: increasing life expectancy may be linked to medical advances and greater health awareness. This development is evident in the rising share of elderly persons in the EU's population, as shown by the growing size of the bars at the top of the age pyramid for 2016; this is sometimes referred to as 'ageing at the top' of the population pyramid. The EU is also experiencing historically low fertility rates, below the natural replacement level (an average of 2.1 children per woman in developed world economies). With fewer children being born, the relative share of young people in the EU's population has decreased, as witnessed through the narrowing of the pyramid base between 1996 and 2016; this process is known as 'ageing at the bottom' of the population pyramid.



Note: as of 1 January. 1996: EU-27. 2016: estimates. Break in series.
Source: Eurostat (online data code: demo_pjangroup)

Figure 2: Population structure, by age and sex, EU-28, 1996 and 2016(% of total population)Source: Eurostat (demo_pjangroup)

Population change in the EU

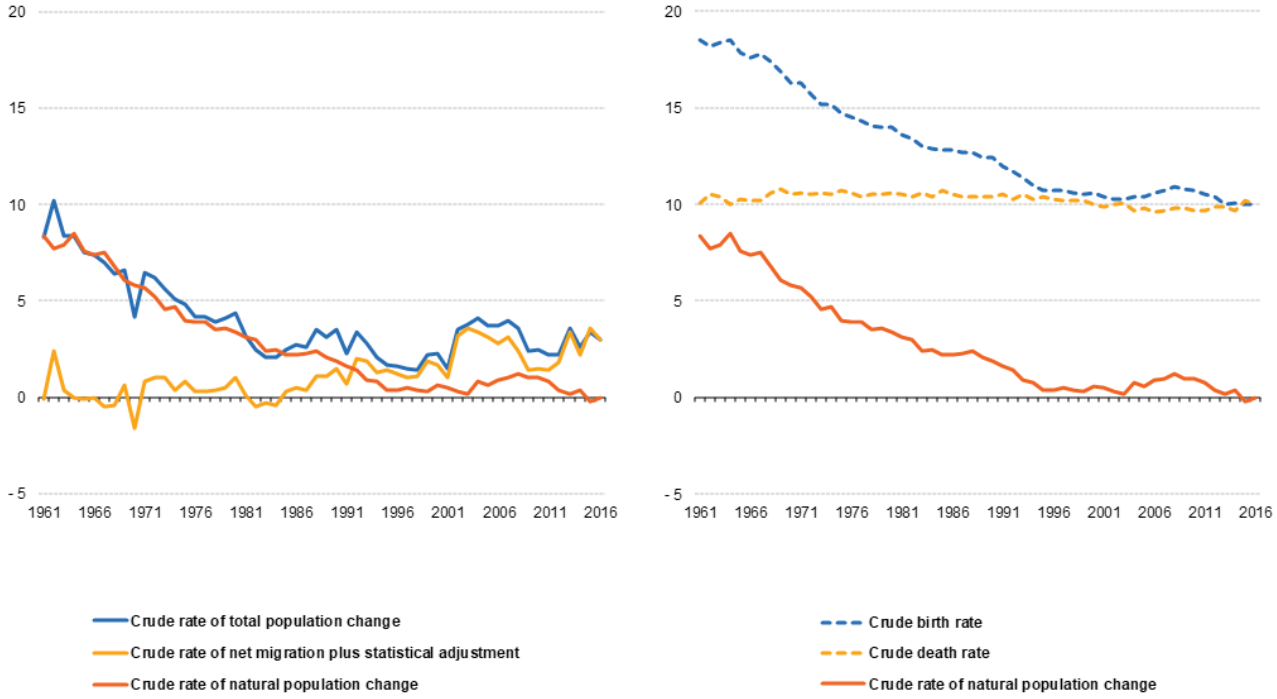
Population change occurs as a result of two factors:

- the difference between the number of births and the number of deaths — otherwise known as the natural change in population ;
- the difference between immigration and emigration , or the number of people coming into an area minus the number of people leaving the same area — otherwise known as net migration .

Natural population change had a diminishing role in EU demographic developments from the 1990s onwards as births and deaths became broadly balanced

During the last 50 years there was a considerable change in the composition of the EU-28's population change (see Figure 3). In the 1960s, 1970s and 1980s, natural population change accounted for the vast majority of the overall change in total population, with the crude birth rate considerably higher than the crude death rate .

However, from the 1990s onwards, the role of net migration became increasingly important as a driver of EU population change, as births and deaths became broadly balanced (implying a low rate of natural population change). Indeed, from 2012 to 2016, net migration plus statistical adjustment contributed more than 80 % to total population growth in the EU-28, compared with less than 20 % from natural population change.

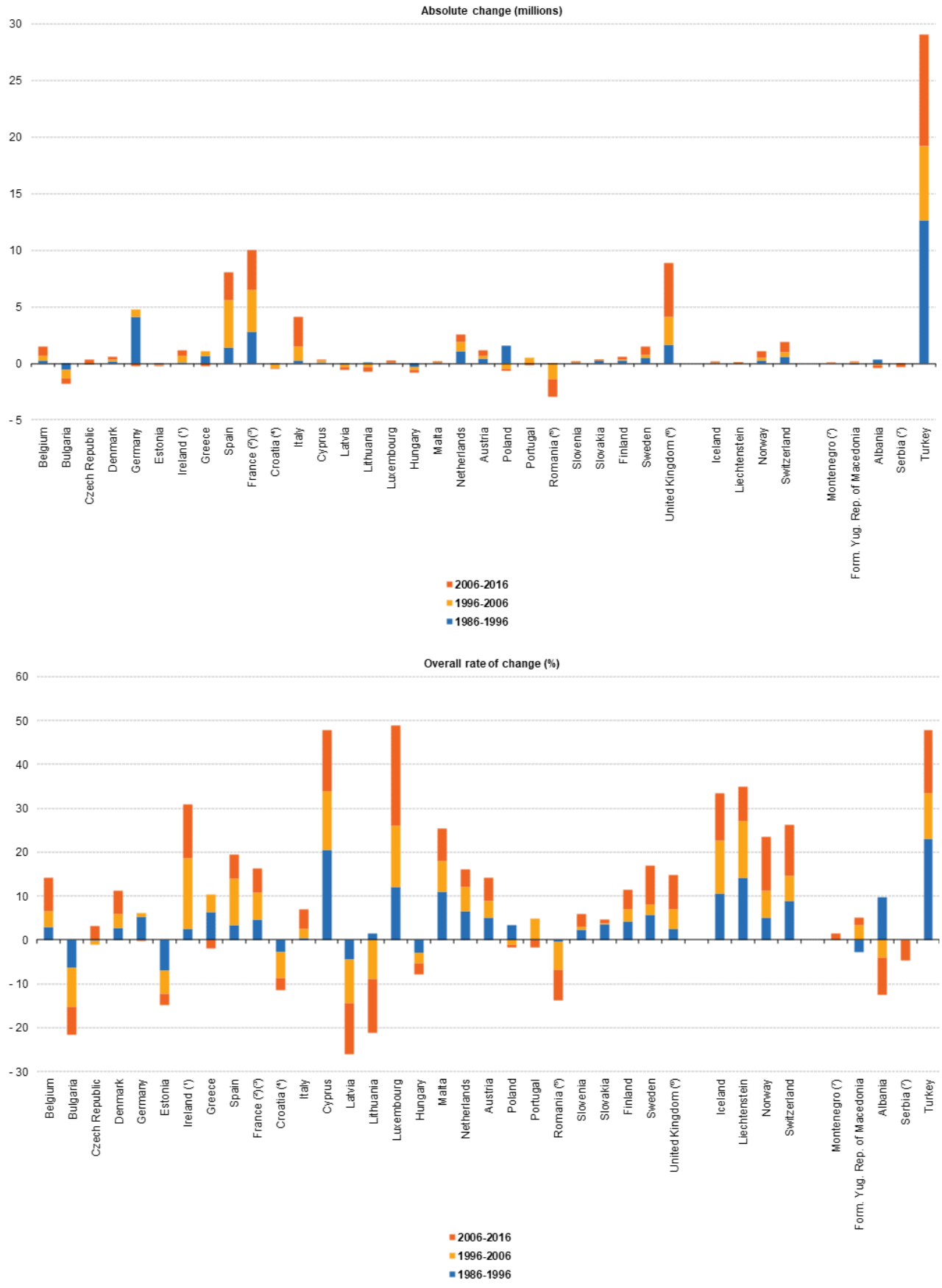


Note: 1991, 2000, 2001, 2008, 2010-2012, 2014-2016, breaks in series. 2013-2016: estimates.
Source: Eurostat (online data code: demo_gind)

Figure 3: Crude rates of population change, EU-28, 1961-2016(per 1 000 inhabitants)Source: Eurostat (demo_gind)

This overall pattern of modest growth of the EU-28 population, driven increasingly by changes in migratory flows, hides a range of demographic situations among the EU Member States. Between 2006 and 2016, the population of 10 EU Member States fell. In absolute terms, by far the biggest reduction was recorded in Romania (-1.5 million inhabitants). During the same period, the highest overall increases in population numbers were recorded in the United Kingdom (a gain of 4.8 million inhabitants), France (3.5 million), Italy (2.6 million) and Spain (2.4 million).

Figure 4 shows the absolute change in the number of inhabitants over the last three decades for which data are available, and also provides information on the rate of population change for the same three periods. Between 2006 and 2016, the highest population growth rates were recorded in Luxembourg (where the overall increase in the number of inhabitants was 22.8 %), Cyprus (14.0 %) and Ireland (12.3 %), while the biggest contractions were registered in the Baltic Member States of Latvia (-11.6 %) and Lithuania (-12.2 %).



Note: as of 1 January. Breaks in series.
(1) 2014-2015: provisional.
(2) 1986-1996: metropolitan France.
(3) 2015-2016: provisional.
(4) 1986-2000: estimates.
(5) 2014-2015: estimates.
(6) 2015-2016: estimates.
(7) 1986-1996 and 1996-2006: not available.
Source: Eurostat (online data code: demo_pjan)

Figure 4: Population change, 1986-2016Source: Eurostat (demo_pjan)

During the period 2006-2016, natural population growth accounted for the majority of the population increase recorded in Ireland, France, the Netherlands and Slovakia ...

Analysing the components of population change at a national level, it is possible to use a typology based on eight different groups (overall population growth or population decline, each accompanied by one of four measures that cover the relative importance of natural population change and/or net migration), see Table 1.

During the period 1 January 2006 to 1 January 2016, at least 70 % of the increase in the number of inhabitants in Ireland, France and Slovakia could be attributed to natural population change (more births than deaths). By contrast, the majority — at least 70 % — of the increase in the populations of Germany, Italy, Austria, the Czech Republic, Luxembourg, Sweden, Denmark, Malta and Belgium could be attributed to positive net inward migration. In Italy there was a negative natural population change (with almost 700 thousand more deaths than births during the period 2006 to 2016), but this was more than offset by positive net inward migration, which accounted for 127 % of the total population change. Finland and the United Kingdom were each characterised by population growth that was somewhat more balanced, and although the majority of their population growth was attributed to positive net inward migration, they also recorded relatively high natural population growth.

... while deaths outnumbered births in Hungary, where positive net inward migration rebalanced, to some degree, the size of the population

Among the 10 EU Member States that recorded a decline in their total number of inhabitants during the period 1 January 2006 to 1 January 2016, Poland was unique insofar as it was the only Member State that recorded a natural increase in its population, which was exceeded by the negative level of net inward migration (in other words, there were more emigrants than immigrants). Hungary reported a natural decrease in population, which was re-balanced, to some degree (but not fully), by positive net inward migration. The eight remaining EU Member States were characterised as having a negative natural population change that was compounded by negative net inward migration. As noted above, the largest overall decline among the Member States was recorded in Romania, where approximately one third of the reduction in the number of inhabitants could be attributed to natural decrease, while two thirds was accounted for by negative net inward migration.

Demographic drivers	EU Member States, EFTA countries and candidate countries
Growth due:	
only to natural change	Montenegro, the former Yugoslav Republic of Macedonia, Albania
more to natural change	Ireland, France, the Netherlands, Slovakia, Iceland, Turkey
more to net migration (and adjustment)	Belgium, the Czech Republic, Denmark, Spain, Cyprus, Luxembourg, Malta, Austria, Slovenia, Finland, Sweden, the United Kingdom, Liechtenstein, Norway, Switzerland
only to positive net migration (and adjustment)	Germany (*), Italy
Decline due:	
only to natural change	Hungary, Serbia
more to natural change	Bulgaria, Croatia, Portugal
more to net migration (and adjustment)	Estonia, Greece, Latvia, Lithuania, Romania
only to negative net migration (and adjustment)	Poland

Note: based on data from 1 January 2006 to 1 January 2016. Breaks in series. Ireland, Spain, France, Cyprus, Malta, Austria, Liechtenstein and Switzerland: including provisional data. Germany, Greece, Portugal, Romania, the United Kingdom and Albania: including estimates.
(*) Evolution between 2011 and 2016 may be attributed to a methodological break in 2011.
Source: Eurostat (online data code: demo_gind)

Table 1: Contribution of natural change and migration to population change, 2006-2016Source: Eurostat (demo_gind)

Childbirth

Most of the EU's population growth in the 1960s and 1970s was due to natural population increase, in other words, the number of births outstripping the number of deaths. The gradual decline in the number of births in the EU may be attributed to women/couples choosing to have fewer children and to the postponement of childbirth (which may, at least in part, be linked to increasing educational and labour market opportunities for women). Indeed, it is now relatively commonplace for Europeans to have no children or a relatively small family composed of a single child or two children.

The total number of births includes both live births and stillbirths. A live birth is the birth of a child that shows any sign of life. A stillbirth is the expulsion or extraction from the mother of a dead foetus after the time at which it would normally be presumed capable of independent extra-uterine existence (outside the uterus or

womb); this is commonly taken to be after 24 or 28 weeks of gestation.

The crude birth rate is the ratio of the number of live births during the year to the average population in that year; the value is expressed per 1 000 inhabitants. Historically, the crude birth rate has been a leading factor in determining population growth: it reflects both the level of fertility and the age structure of the population.

The number of live births in the EU-28 peaked in 1964 at 7.8 million; thereafter, the number of births began to gradually fall, passing below 7 million in 1972, below 6 million in 1986, and reaching almost 5 million in 2002. There was a brief period (2003 to 2008) when the number of live births in the EU-28 started to rise again, returning to 5.5 million by 2008. This came to an end with the onset of the global financial and economic crisis — as the number of births tends to decrease during periods of economic hardship — and was followed by a resumption of the pattern of declining numbers of births to a relative low of just under 5.1 million live births in 2013, after which the number of live births stabilised and remained at 5.1 million during the period 2014-2016.

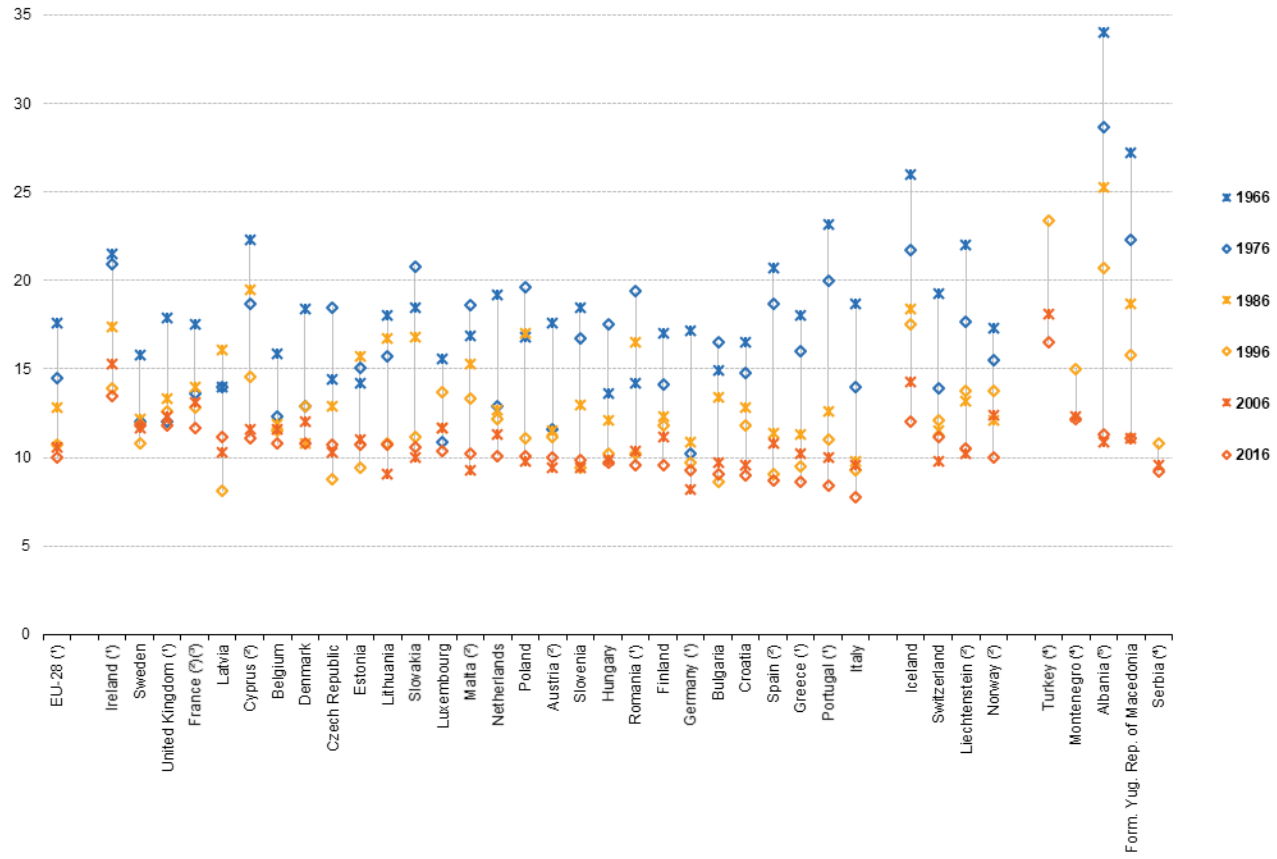
The EU-28's crude birth rate peaked at 18.5 live births per 1 000 inhabitants in 1964, but had fallen to 10.0 live births per 1 000 inhabitants by 2013; during the next three years, the EU-28 crude birth rate remained at this level.

Over the last 50 years the biggest reductions in crude birth rates were recorded in southern and eastern EU Member States

Figure 5 presents developments for the crude birth rate across the EU Member States during a 50-year period. In 2016, the highest crude birth rates were recorded in Ireland, Sweden, the United Kingdom and France. By contrast, the lowest birth rates — no more than 10.0 live births per 1 000 inhabitants — were principally recorded in a number of southern and eastern EU Member States, as well as in Germany, Finland and Austria.

The overall pattern of declining birth rates in the EU-28 was repeated for each of the EU Member States during the period 1966 to 2016. As birth rates across the EU fell they tended to converge: for example, the birth rates of Portugal, Cyprus, Spain and Malta fell rapidly from initially high levels. By contrast, there was a relatively small change in crude birth rates between 1966 and 2016 in Luxembourg, Hungary and Sweden.

An analysis of the development of crude birth rates during the period 2006 to 2016 shows that there is some evidence to suggest there has, in a few EU Member States, been a departure from the pattern of persistently declining rates. Indeed, the crude birth rate rose between 2006 and 2016, principally in Lithuania, Germany, Latvia, Malta, Austria, Slovakia, Slovenia and the Czech Republic. By contrast, birth rates continued to fall in the majority of the Member States, with some of the largest contractions recorded among southern Member States that already had some of the lowest birth rates in 2006, for example, Spain, Italy, Greece and Portugal. The crude birth rate also fell at a rapid pace (during the most recent decade for which data are available) in Finland, Luxembourg, the Netherlands and Denmark, such that their latest crude birth rates were close to the EU-28 average in 2016.



Note: ranked on the crude birth rate for 2016. Breaks in series.
(1) 2016: estimate.
(2) 2016: provisional.
(3) 1966-1986: metropolitan France.
(4) 1966-1986: not available.
(5) 2015 instead of 2016. 2015: estimate.
Source: Eurostat (online data code: demo_gind)

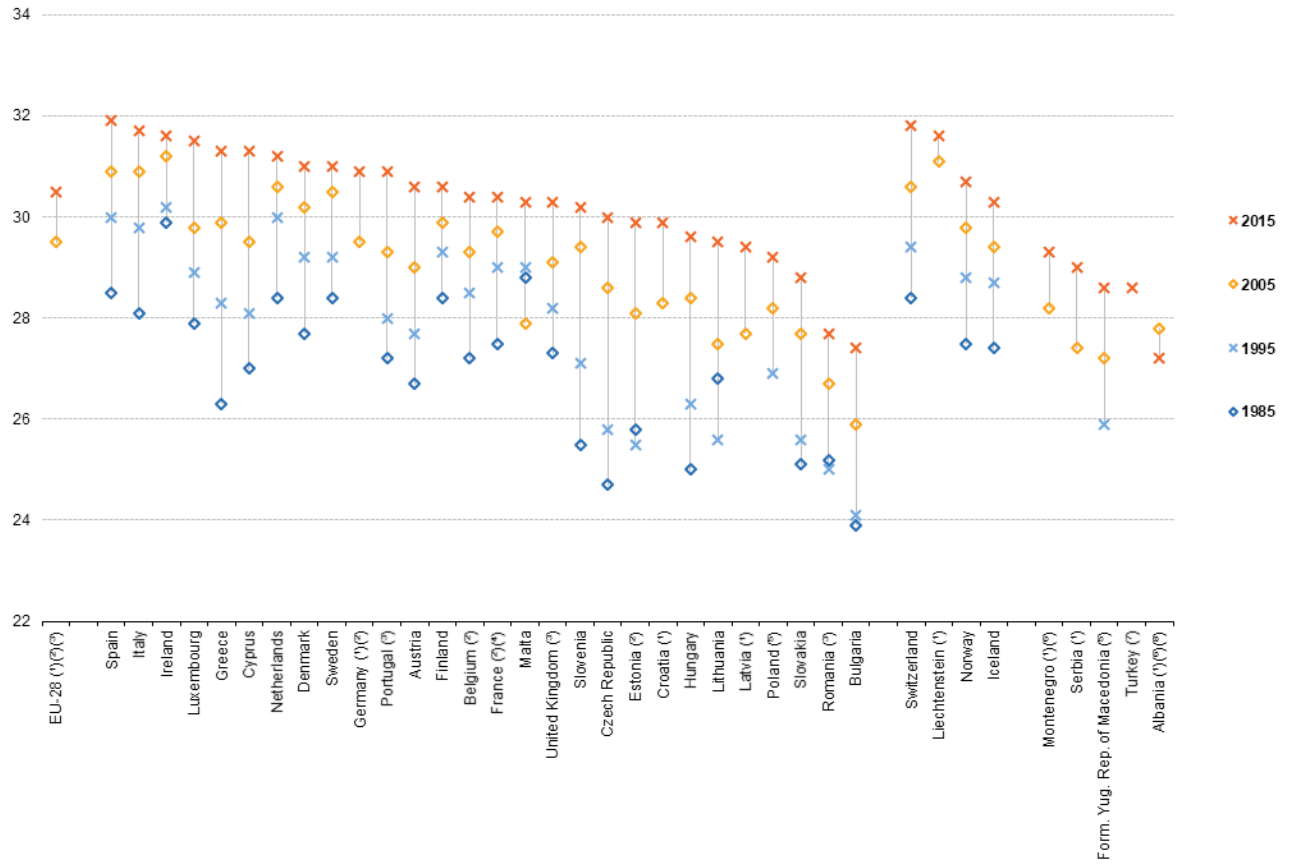
Figure 5: Crude birth rates, 1966-2016(per 1 000 inhabitants)Source: Eurostat (demo_gind)

Comparing data for 2005 and 2015, childbirth was increasingly postponed in every one of the EU Member States ...

The decline in the number of births may, at least in part, be explained by women delaying childbirth: between 2005 and 2015, the mean age of women at childbirth in the EU-28 rose by 1.0 year, to reach 30.5 years.

The vast majority of women in the EU-28 give birth to either one or two children and larger families have become increasingly scarce. Within the EU-28, some 81.8 % of the live births in 2015 were first or second children, while births of third children accounted for 12.2 % of the total and those of fourth or subsequent children for 5.9 %. Across the EU Member States in 2015, the highest proportion of births ranked fourth or subsequent among the total number of births was recorded in Finland (9.7 %), followed by Ireland (9.3 %) and the United Kingdom (9.2 %). By contrast, the fourth or subsequent children accounted for less than 3.0 % of all births in Spain and Portugal.

Figure 6 illustrates the increase in the mean age of women at childbirth in the EU Member States. During the period 1985 to 2015, the postponement of childbirth was most apparent in three eastern and one southern EU Member State, as the average age of women at childbirth rose by 5.3 years in the Czech Republic, by 5.0 years in Greece, by 4.7 years in Slovenia and by 4.6 years in Hungary. By contrast, the average age of women at childbirth rose, between 1985 and 2015, by no more than two years in Malta and Ireland.



Note: ranked on the mean age of women at childbirth for 2015.
(1) 1985 and 1995: not available.
(2) 2005-2015: break in series.
(3) 2015: estimate.
(4) 1986 and 1996: metropolitan France.
(5) 1986: not available.
(6) 2014 instead of 2015.
(7) 1985, 1995 and 2005: not available.
(8) 2014: estimate.
Source: Eurostat (online data code: demo_find)

Figure 6: Mean age of women at childbirth, 1985-2015(years)Source: Eurostat (demo_find)

. . . while fertility rates remained below the natural replacement rate

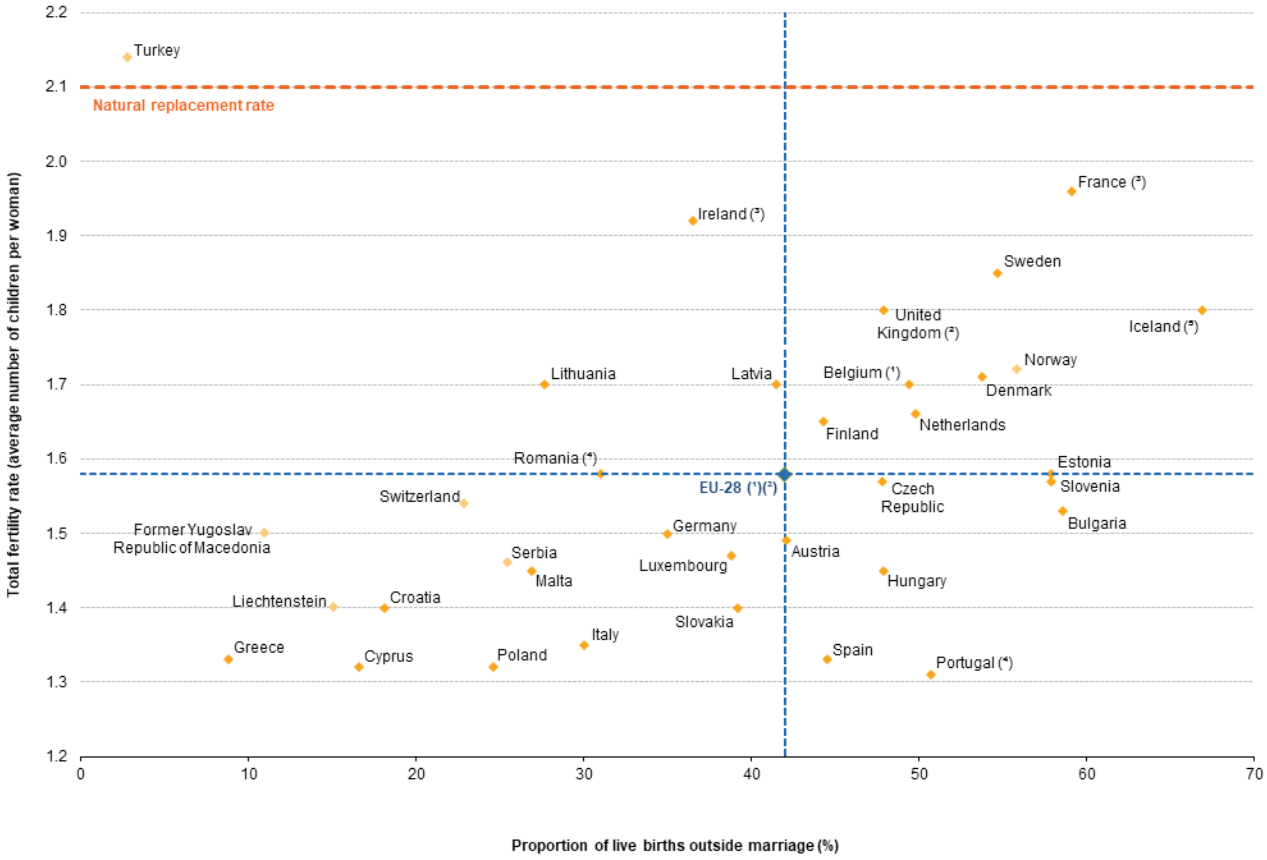
The total fertility rate is the mean number of children that would be born alive to a woman during her lifetime if she were to conform to the age-specific fertility rates for a given year throughout her childbearing years. Demographers suggest that a fertility rate of 2.1 is required in developed world economies to maintain a constant population (in the absence of any migration); this rate is often referred to as the natural replacement rate. As shown above, Europeans have been having considerably fewer children in recent decades; in 2015, the EU-28's total fertility rate was 1.58 children per woman.

All of the EU Member States recorded fertility rates in 2015 that were below the natural replacement rate (see Figure 7). Some of the highest fertility rates were found in the western and northern EU Member States: France and Ireland had rates of just less than 2.00 live births per woman, followed by Sweden (1.85), the United Kingdom (1.80) and Denmark (1.71). By contrast, the fertility rate was less than 1.40 children per woman in five southern EU Member States (Portugal, Cyprus, Greece, Spain and Italy) and in Poland.

Figure 7 shows that the EU Member States with the highest fertility rates tended to record some of the highest shares of live births outside of marriage. These patterns may be explained, at least to some degree, by changing attitudes to flexible family norms and increased gender equality, the balance in government policies between providing child support and encouraging traditional family values, and the impact of religious and family values on everyday lives.

Four different groups of countries can be broadly identified in Figure 7. The first group is composed of France,

the United Kingdom, the Nordic Member States (as well as Iceland and Norway), Belgium and the Netherlands, where both the total fertility rate and the proportion of live births outside marriage were above the EU-28 average (top-right quadrant). Most of the southern EU Member States — Portugal and Spain were the exceptions — were in the opposite quadrant (bottom-left), with their fertility rates and the proportion of live births outside marriage below the EU-28 average; they were joined by Luxembourg, Germany, Poland, Slovakia and Croatia, as well as Liechtenstein, Switzerland, the former Yugoslav Republic of Macedonia and Serbia. The third group of countries (bottom-right quadrant) also had fertility rates that were close to or below the EU average, but had a higher than average proportion of births outside marriage. This group was composed of the four remaining eastern EU Member States (Slovenia, Bulgaria, the Czech Republic and Hungary), as well as Portugal and Spain. The smallest group of countries, in the top-left quadrant, includes Ireland, Latvia and Lithuania, as well as Turkey; in these countries, fertility rates were above average but the proportion of births outside marriage was below average. The remaining Member States, namely Estonia, Austria and Romania were situated between two of these groups of countries, with one or other of the indicators having a value very close to the EU average.



(1) 2014 instead of 2015 for proportion of live births outside marriage.
(2) Estimates.
(3) Total fertility rate: provisional.
(4) Total fertility rate: estimate.
(5) Live births outside marriage: 2012.
Source: Eurostat (online data code: demo_find)

Figure 7: Live births outside marriage and total fertility rate, 2015Source: Eurostat (demo_find)

Foreigners and foreign-born populations

Humans have always moved across the planet, from the beginnings of mankind, through tribal and religious migrations, empire building, colonialism and slavery, to more modern forms, which are often based on increased mobility, the search for work, a desire to improve living standards (economic migration), and to escape conflict or oppression (asylum). Today, immigration is one of the most contentious issues in the EU: while some regions are characterised as having built vibrant, diversified and inclusive migrant communities, migrant integration constitutes an important challenge in others. For more information, please refer to an article on *Native diversity*

— residents' origin .

Net inward migration (the number of immigrants minus the number of emigrants) in the EU increased rapidly at the start of the 1990s and has been the principal driver of EU population change since then (Figure 3). Migratory flows in the EU can be considered to operate at three different levels: inter-regional migration (flows within the same Member State), intra-EU migration (flows between EU Member States) and extra-EU migration (flows between non-member countries and the EU). Within individual EU Member States, there are examples of considerable population movements between regions (for example, from southern Italy to northern Italy, or from eastern Germany to western Germany). Within the EU, the free movement of individuals is enshrined in law as one of four fundamental freedoms. Examples of recent migratory patterns include the flow of people leaving some Member States following their accession to the EU in 2004 or 2007, or migrants leaving those economies most seriously affected by the global financial and economic crisis. For more information concerning inter-regional and intra-EU migration, please refer to an article on *Changing places — geographic mobility* .

Migration from non-member countries is generally restricted (quotas) or employer-driven, in other words, migrants need to have a job offer before they can enter the host economy. International migrants have the potential to increase economic output, often filling skilled posts where there is a lack of qualified labour, for example, in the health sector, or various disciplines linked to science, technology, engineering or mathematics or filling unskilled posts that members of the native workforce are unwilling to fill for the pay that is offered. Some EU Member States are characterised by higher levels of non-economic international migration, principally concerned with family reunification, study or humanitarian reasons.

Migrants tend to leave regions that are characterised by low standards of living, or peripheral and rural regions with relatively few job opportunities in order to seek work in urban areas (often this involves moving to capital cities). The age profile of migrant populations tends to be younger than average, and therefore has the potential to lower the median age of the population, increase the proportion of working-age people and raising fertility rates. While recipient regions may benefit from these aspects of immigration, those regions characterised by outward migration are likely to see the share of the elderly within their total population rise.

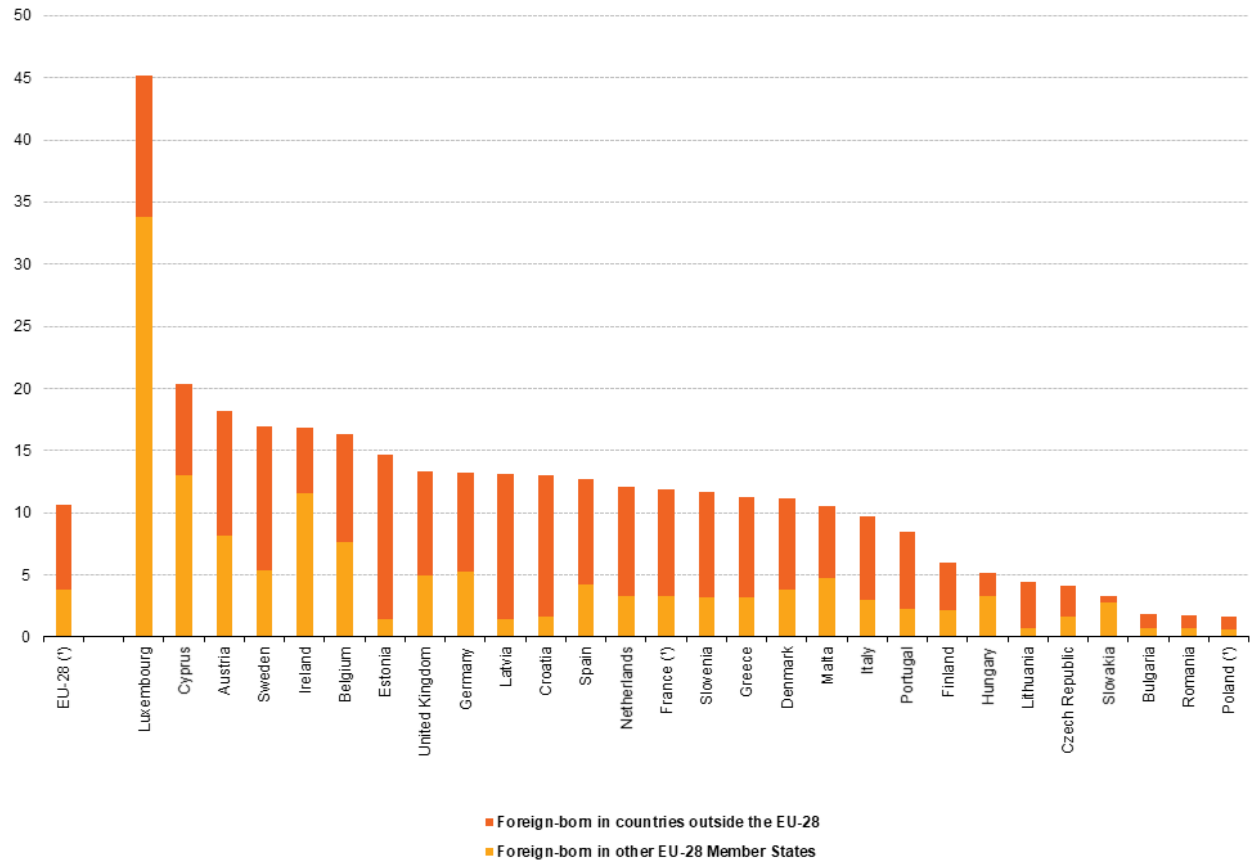
At the start of 2016, foreign-born populations from outside the EU were almost twice as large as those from other EU Member States

When referring to foreign populations, an important distinction should be made between people who were born in a foreign country and those who are foreign citizens . As citizenship can change over time, it is considered useful to analyse this information by country of birth, as shown in Figure 8, which presents data on the stock of foreign-born persons living in the EU-28.

In absolute terms, the largest numbers of foreign-born people living in the EU Member States on 1 January 2016 were found in Germany (10.9 million), the United Kingdom (8.7 million), France (7.9 million), Spain (5.9 million) and Italy (also 5.9 million), considerably ahead of the Netherlands which had the sixth highest number of foreign-born inhabitants, at 2.1 million.

Foreign-born people living in the EU-28 accounted for 10.7 % of the total population on 1 January 2016, with the share of people born outside the EU almost twice as high (6.9 %) as that for people living in an EU-28 Member State other than the one where they were born (3.8 %). Luxembourg had, by far, the highest proportion of its population made up of people born abroad (45.2 %), followed by Cyprus (20.4 %) and Austria (18.2 %), while those born in a foreign country accounted for approximately one in six persons in Sweden, Ireland and Belgium. By contrast, there were six Member States where the foreign-born population accounted for less than 5 % of the total number of inhabitants; these included Lithuania, the Czech Republic and Slovakia, while Bulgaria, Romania and Poland had shares of less than 2 %.

There are considerable differences in the composition of the foreign-born populations of the EU Member States. On 1 January 2016, less than 20 % of the foreign-born populations of Estonia, Latvia, Lithuania and Croatia were from other EU-28 Member States. By contrast, Slovakia, Luxembourg, Ireland, Cyprus and Hungary were the only EU Member States to report that more than half of their foreign-born populations were composed of people from other EU-28 Member States.



Note: ranked on total share of foreign-born population (from both EU Member States and countries outside the EU-28).
(') Provisional.
Source: Eurostat (online data code: migr_pop3ctb)

Figure 8: Foreign-born population, 1 January 2016(% share of total population)Source: Eurostat (migr_pop3ctb)

In 2015, almost 70 % of the migrants arriving in Luxembourg were citizens of other EU Member States . . .

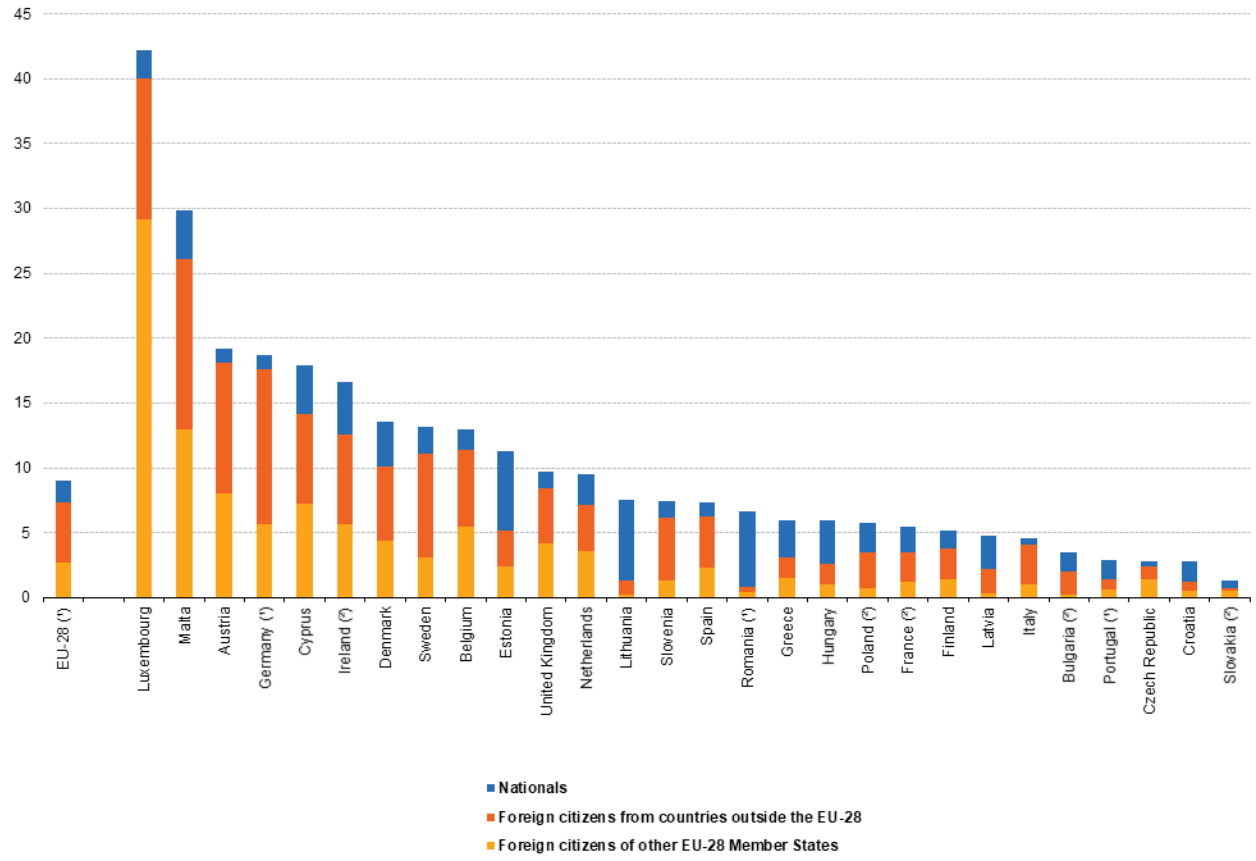
In 2015, there were an estimated 2.4 million immigrants arriving in the EU-28 from countries outside the EU, while there were 1.4 million migrants from other EU-28 Member States (in other words, people who moved from one EU Member State to another) and about 860 thousand nationals returning home. Thus, about 4.7 million people in total immigrated to one of the EU-28 Member States in 2015, while an estimated 2.8 million people emigrated from one of the EU-28 Member States.

Figure 9 presents information on the rate of immigration, as measured by migrant flows in 2015, according to citizenship. Those EU Member States that had a relatively high proportion of foreign citizens were often the same Member States that received the highest number of immigrants (relative to their population size) in 2015. Luxembourg and Malta featured at the top of the ranking, with 42.2 and 29.9 immigrants per 1 000 inhabitants. At the other end of the scale, there were less than 3.0 immigrants per 1 000 inhabitants in Portugal, the Czech Republic, and Croatia, while this ratio fell to less than 2.0 immigrants per 1 000 inhabitants in Slovakia.

Almost seven tenths (69.1 %) of the immigrants arriving in Luxembourg in 2015 were citizens of other EU Member States; this was the highest proportion, by far, among any of the Member States. In fact, foreign citizens from other EU Member States accounted for less than half of the total number of immigrants in 2015 in each of the remaining 27 Member States — the next highest shares (40-50 % were recorded in the Czech Republic, Slovakia, Malta, the United Kingdom, Belgium, Austria and Cyprus. By contrast, less than 1 in 10 immigrants arriving in Latvia, Romania, Bulgaria and Lithuania in 2015 were citizens from one of the other EU Member States. A similar analysis shows that foreign citizens from countries outside of EU-28 accounted for 60-70 % of total immigration in Italy, Slovenia, Germany and Sweden, and for more than half of the total in Spain, Austria and Bulgaria.

. . . while nationals accounted for close to 90 % of the migrants arriving in Romania and Lithuania

Figure 9 also suggests that some forms of migration in the EU are temporary (or maybe even seasonal), as witnessed by migrants moving to the country of which they are nationals. In 2015, the relative share of nationals in the total number of immigrants was highest in Romania (87.0 %), Lithuania (83.1 %), Hungary (55.8 %), Croatia (55.4 %), Estonia (54.0 %), Latvia (52.7 %) and Portugal (50.0 %). These were the only EU Member States to report a share of nationals in all immigration that was at least 50.0 %. By contrast, nationals accounted for less than 10 % of all immigrants in 2015 in Luxembourg, Austria and Germany.



Note: ranked on total share of immigrants (foreign citizens and nationals).
(1) Estimates.
(2) Provisional.
Source: Eurostat (online data codes: migr_imm1ctz and migr_pop3ctb)

Figure 9: Immigrants, 2015(per 1 000 inhabitants)Source: Eurostat (migr_imm1ctz) and (migr_pop3ctb)

Country-specific events often play an important role in migratory patterns

The information presented in Figure 10 shows longer-term developments for crude rates of net migration (together with similar information on total population change and natural population change). Many of the figures show specific developments that have driven demographic and migratory patterns. For example, the fall of the Berlin Wall and reunification in Germany at the end of the 1980s/start of the 1990s, the accession of Lithuania to the EU in 2004, or the end of the housing bubble and the onset of global financial and economic crises in Ireland and Spain in 2007-2008.

(1) 2011: break in series. 2016: estimates.
(2) 2016: break in series. 2013-2016: provisional.
(3) 2016: provisional.
(4) 1960-1997: metropolitan France. 2014-2016: breaks in series. 2015-2016: provisional.
(5) 2000 and 2010: breaks in series.
(6) 2014-2016: estimates.
Source: Eurostat (online data code: demo_gind)

Figure 10: Crude rates of population change, selected Member States, 1960-2016(per 1 000 inhabitants)Source: Eurostat (demo_gind)

An ageing population

The preceding sections have already alluded to the on-going process of population ageing in the EU, both as a result of relative and absolute increases in age. This has been seen through changes in the EU-28's population structure, whereby the relative share of the elderly has risen as fertility rates have fallen and less young persons are born. There has also been an absolute increase in the number of elderly persons as a result of increased longevity (higher life expectancy). While the number of older people is growing and accounting for an ever-increasing share of the total population, at the same time, the homogeneity of this group is being altered, reflecting an increasingly diverse group of people, with a wide range of lifestyles, physical and mental capabilities. Many older people live in single-person households with or without close family support or in extended families, while others are admitted to institutional care.

Statistics on population ageing are monitored increasingly within political, economic, social and cultural contexts, for example: to analyse the effects of this phenomena on the sustainability of public finances and welfare provisions; with respect to active ageing, which has become a central pillar of policy development, providing greater opportunities for the elderly to continue working, volunteering, participating and contributing to society, with the dual purpose of increasing economic output and each individual's quality of life. For more information, please refer to an article on An ageing society — focus on the elderly .

There were just over 5 million deaths in the EU-28 in 2016

The number of deaths in the EU-28 has remained relatively stable, generally at just under 5 million each year since the 1970s, rising just above this level in 1985, 1993, 1995 and again in 2012, 2015 and 2016, when the total number of deaths in the EU-28 numbered 5.13 million. The EU-28 crude death rate — which measures the number of deaths per 1 000 inhabitants — was 10.0 in 2016.

The most commonly used indicator for analysing mortality is life expectancy at birth: this is the mean number of years that a person can expect to live, at birth, if subjected to current mortality conditions (age-specific probabilities of dying) throughout the rest of his/her life. Life expectancy can also be calculated at any specific age, and a commonly used measure is life expectancy at age 65.

Historically, life expectancy rose in Europe in advance of most other regions of the world, as a function of economic development, improved lifestyles and advances in healthcare and medicine. These changes have resulted in continuous and rapid increases in life expectancy at birth across the EU. Indeed, over the past five decades, life expectancy at birth has increased by about 10 years for both men and women and this development is expected to continue with an increasing share of very old persons (considered here as those aged 85 years and over) in the EU's population.

Life expectancy at birth in the EU-28 was estimated at 80.6 years in 2015 (see Table 2); 83.3 years for women and 77.9 years for men. This indicator is only available from 2002 onwards for the EU-28 as a whole, but even during this relatively short period there was an increase of 2.9 years, with a gain of 2.4 years for women and 3.4 years for men.

As people live longer, interest in the life expectancy of older generations has increased: Table 2 also shows life expectancy at age 65, by sex. In 2015, upon reaching the age of 65, men in the EU-28 could expect to live an additional 17.9 years on average, while women could expect to live an additional 21.2 years. Between 2002 and 2015, the increase in EU-28 life expectancy for men and women at the age of 65 was 2.1 and 1.7 years respectively.

Significant differences in life expectancy are observed between the EU Member States. In 2015, Romania and Bulgaria both recorded relatively low life expectancies at birth for men, each within the range of 71-72 years, with even lower male life expectancy at birth in two of the Baltic Member States, namely, Latvia (69.7 years) and Lithuania (69.2 years). By contrast, the highest male life expectancies at birth — 80 years or higher — were recorded in Luxembourg, Spain, Italy and Sweden (where the peak value of 80.4 years was registered). For women, the range was somewhat narrower, from less than 79 years in Romania and Bulgaria (where the lowest level was recorded at 78.2 years), to more than 85 years in France and Spain (where the peak value of 85.7 years was registered).

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Life expectancy at birth	78.5	78.9	79.1	79.4	79.6	79.9	80.2	80.3	*80.5*	*80.9*	*80.6*
Male	75.4	75.8	76.0	76.3	76.6	76.9	77.3	77.4	*77.7*	*78.1*	*77.9*
Female	81.5	82.0	82.2	82.3	82.6	82.8	83.1	83.0	*83.3*	*83.6*	*83.3*
Life expectancy at age 65	18.3	18.7	18.9	19.0	19.2	19.4	19.6	19.5	*19.7*	*20.0*	*19.7*
Male	16.4	16.8	16.9	17.1	17.3	17.5	17.7	17.7	*17.9*	*18.2*	*17.9*
Female	19.9	20.4	20.5	20.6	20.8	21.0	21.3	21.1	*21.3*	*21.6*	*21.2*

Note: 2010-2012 and 2014-2015, breaks in series.
Source: Eurostat (online data code: demo_mlexpec)

Table 2: Life expectancy at birth and at age 65 years, by sex, EU-28, 2005-2015(years)Source: Eurostat (demo_mlexpec)

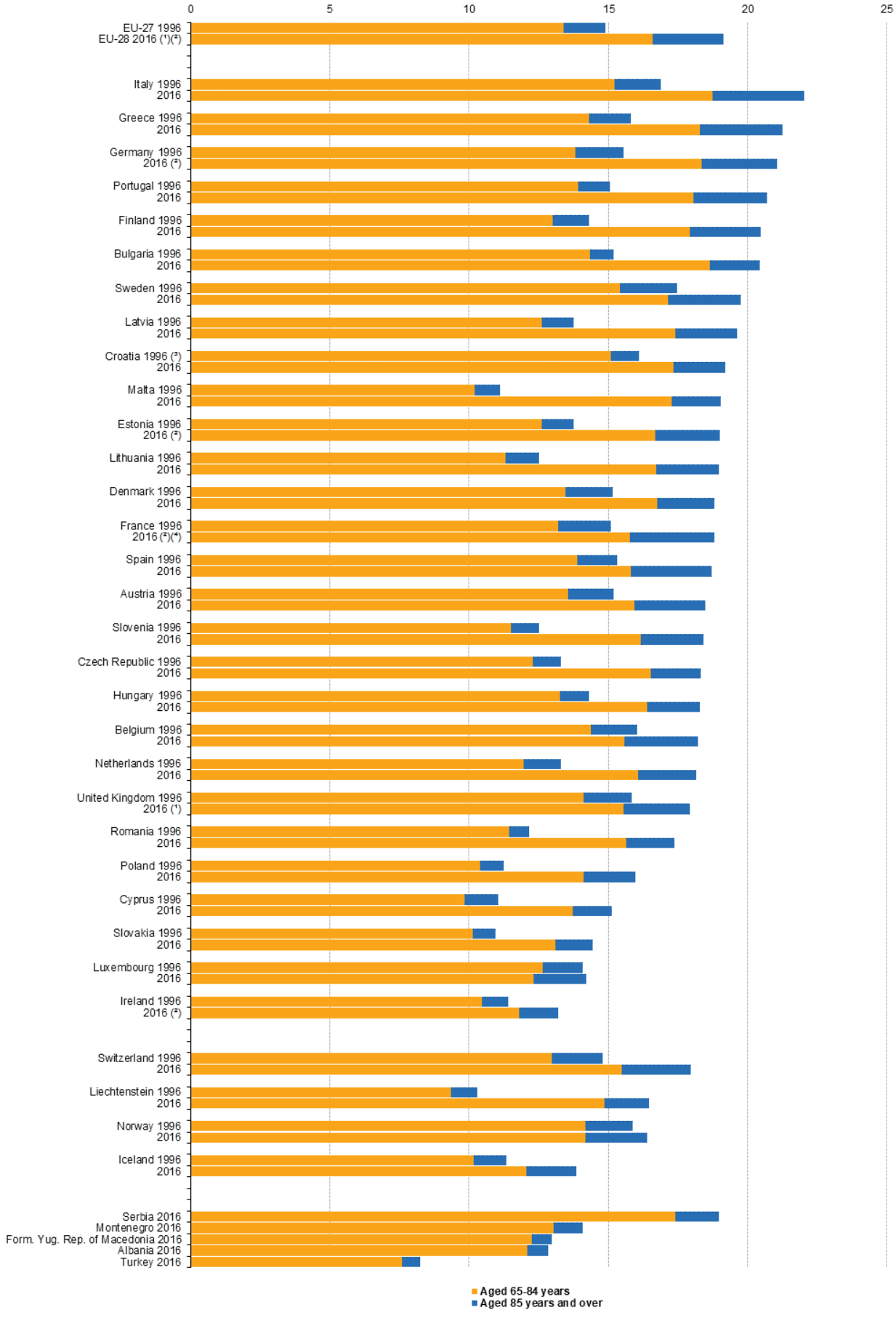
The number of elderly people in the EU-28 rose, over the last two decades, at a rate that was almost six times as fast as for the overall population

On 1 January 2016, there were almost 98 million persons aged 65 years and over in the EU-28. Figure 11 shows that they accounted for a 19.2 % share of the EU-28 population: 16.6 % of the population were aged 65-84 years and an additional 2.6 % of the population were aged 85 years and over. The elderly accounted for a relatively high share — more than one fifth — of the total population in Italy, Greece, Germany, Portugal, Finland and Bulgaria. By contrast, less than 15 % of the population in Slovakia, Luxembourg and Ireland was composed of people aged 65 years and over.

A lengthy time series is not available for the EU-28 (note that the data for 1996 in Figure 11 is for the EU-27). However, a comparison is available for the period 2001 to 2016, when the number of elderly people in the EU-28 rose overall by 26.6 %, while the overall population of the EU-28 increased, during the same period, by 4.5 %.

Looking in more detail at the very old (those aged 85 years and over), they accounted for the highest share of the population in Italy (3.3 %), Greece, France (both 3.0 %), Spain (2.9 %) and Germany (2.7 %). By contrast, those aged 85 years and over accounted for less than 1.5 % of the total population in Ireland, Cyprus and Slovakia.

Between 1 January 1996 and 1 January 2016, there was almost no change in the share of the very old in the Cypriot population (up 0.2 percentage points), while in the majority of the EU Member States the share of the very old rose by 0.4 to 1.2 percentage points. There was a more rapid increase in the proportion of very old people in four southern EU Member States, with a gain of 1.5 percentage points in Greece, Spain and Portugal, and 1.6 points in Italy.



Note: as of 1 January. Ranked on the share of the total population aged 65 or over.
(1) Estimates.
(2) Break in series.
(3) 2001 instead of 1996.
(*) Provisional.
Source: Eurostat (online data code: demo_pjangroup)

Figure 11: Elderly population, 1996 and 2016(% share of total population)Source: Eurostat (demo_pjangroup)

Age dependency ratios are based on comparisons of those parts of the population that are generally economically inactive (the young and/or the old) with those of working age (defined here as people aged 15-64 years). The old-age dependency ratio is the ratio of older dependents (those aged 65 years and over) to those of working age; values are expressed in percentage terms, in other words, per 100 persons of working age. Such ratios can be used to analyse the pressures on the 'productive' part of the population to provide for dependents. Higher dependency ratios imply an increased burden on those of working age to provide for government expenditure related to education and/or health, pensions and social care, in other words services most used by the young and the elderly.

Note that dependency ratios ignore the fact that those aged 65 years and over are not necessarily 'dependent'. As mentioned above, an increasing share of the elderly population remains economically active and a growing number continue working beyond statutory or conventional retirement ages. By contrast, there are many people aged 15-64 years who remain outside of the labour force (broadly defined as those in work and those seeking work), as an increasing share of young people continue their studies into their twenties, some people choose to retire early, others cease to work due to illness or disability or to care for others, while some simply choose to be economically inactive.

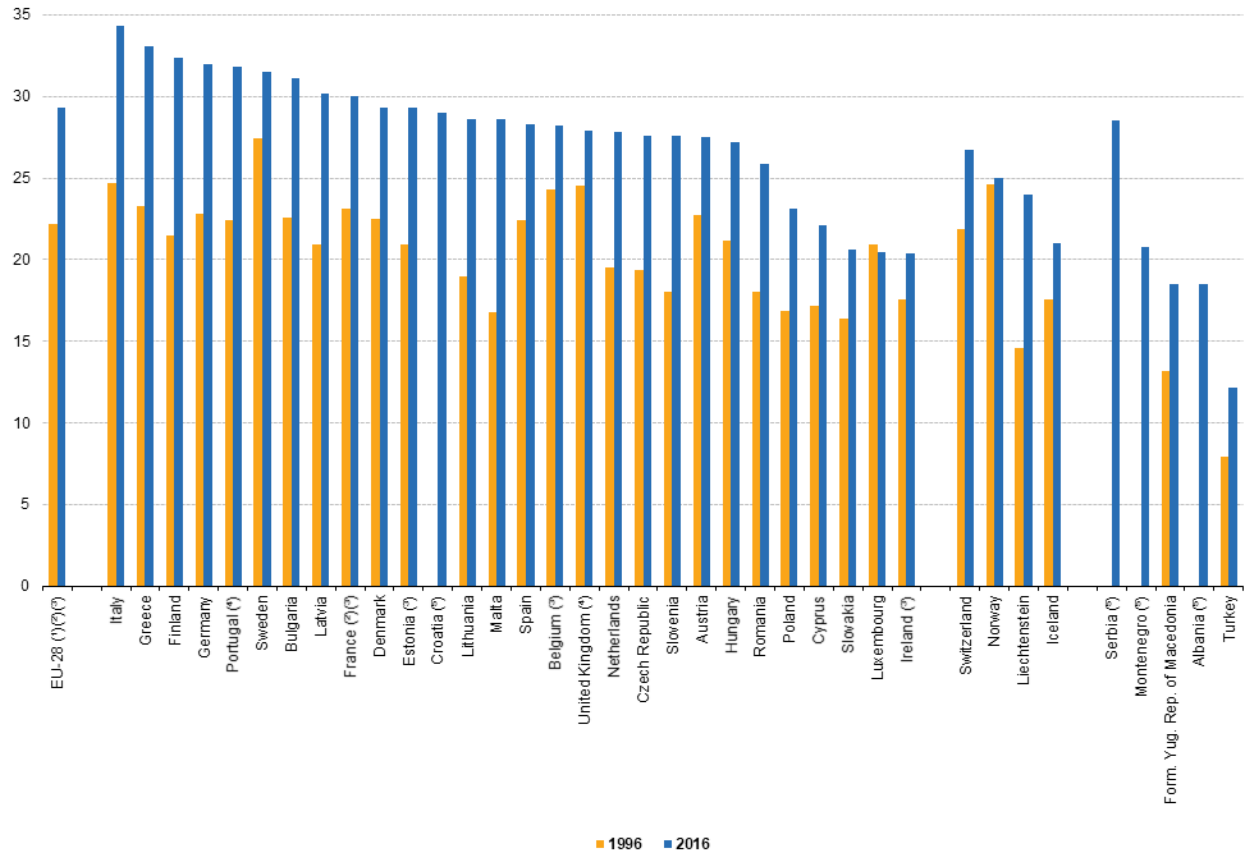
Since reaching a peak at 336.4 million in 2009, the working-age population in the EU-28 has been shrinking not only as a share of the total population but also in absolute terms. The European Commission has stated that '... raising employment levels ... is arguably the most effective strategy with which countries can prepare for population ageing', for example, by raising the employment opportunities available to young people, women and older persons.

Life expectancy in the EU-28 is predicted to continue rising during the next 30-40 years and as a result old-age dependency ratios will also probably increase (given there is no rapid change in fertility rates or patterns of net migration). The old-age dependency ratio of the EU-28 was 29.3 % in 2016; in other words, for each person aged 65 years and over there were slightly more than 3.4 persons of working age in the EU-28 who could potentially contribute towards paying taxes and social security payments that would allow government expenditure on a range of benefits and services that provide support to the elderly.

Across the EU Member States, the old-age dependency ratio peaked at 34.3 % in Italy (where there were fewer than three persons of working age for each person aged 65 years and over in 2016); rates were also higher than 30.0 % in Greece, Finland, Germany, Portugal, Sweden, Bulgaria and Latvia. By contrast, the old-age dependency ratio was less than 25 % (more than four persons of working age for each person aged 65 years and over) in Poland, Cyprus, Slovakia, Luxembourg and Ireland.

The pace and implications of population ageing can be seen in Figure 12. Between 1996 and 2016, the old-age dependency ratio rose by at least eight percentage points in four southern EU Member States (Malta, Greece, Italy and Portugal), the three Baltic Member States, as well as Finland, Slovenia, Germany, Bulgaria, the Netherlands and the Czech Republic. The largest increase (11.8 percentage points) was in Malta, where there were almost six persons of working age for each elderly person at the start of 1996, a ratio that had fallen to 3.5 : 1 by the start of 2016.

By contrast, the process of population ageing and the burden on the working age population was considerably less marked in a number of other EU Member States. Luxembourg was the only EU Member State to report that its old-age dependency ratio fell between 1996 and 2016 (a decrease of 0.4 percentage points to 20.5 %), while this ratio rose at a relatively slow pace in Ireland, the United Kingdom and Belgium.



Note: as of 1 January. The old-age dependency ratio is defined as the ratio between the number of persons aged 65 years and over to the number of persons aged 15-64 years, expressed as a percentage.
(1) 1996: EU-27.
(2) 2016: provisional.
(3) Break in series.
(4) Estimate.
(5) 1996: not available.
Source: Eurostat (online data code: demo_pjanind)

Figure 12: Old-age dependency ratio, 1996 and 2016(%)Source: Eurostat (demo_pjanind)

Source data for tables and graphs

- Demographic changes — profile of the population: tables and figures

Other articles

- All articles from *People in the EU: who are we and how do we live?*

Main tables

- Population (t_demo_pop)
- Fertility (t_demo_fer)
- Mortality (t_demo_mor)
- International Migration (t_migr_int)
- Marriage and divorce (t_demo_nup)
- Population projections (t_proj)

Database

- Population and housing census data — the Census hub
- Population (demo_pop)
- Fertility (demo_fer)
- Mortality (demo_mor)
- Migration and citizenship data , see:

Immigration (migr_immi)

Emigration (migr_emi)

Acquisition and loss of citizenship (migr_acqn)

- Marriages and divorces (demo_nup)
- Population projections (proj)
- Population and housing census (cens)

Dedicated section

- Population and housing census
- Population

Legislation

- EU legislation on the 2011 Population and Housing Censuses — Explanatory Notes
- Legislation relevant for the population and housing census
- Demographic statistics: a review of definitions and methods of collection in 44 European countries
- Legislation relevant for population statistics

External links

- European Commission — Directorate-General for health and food safety
- European website on integration
- European Commission — Directorate-General for home affairs — Migration
- European Commission — Directorate-General for home affairs — Common European asylum system

View this article online at https://ec.europa.eu/eurostat/statistics-explained/index.php/People_in_the_EU_-_statistics_on_demographic_changes