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## The Demographic Situation in France: Recent Developments and Trends over the Last 70 Years

## I. General trends and population age structure

## 66 million people

On 1 January 2015, the population of France was 66.3 million, of which 2.1 million in the overseas départements (Bellamy and Beaumel, 2015).

In 2014, the population increased by 300,000, of which 239,000 in metropolitan France. The growth rate was $0.45 \%$ ( $0.44 \%$ for metropolitan France). ${ }^{(1)}$ This is higher than in 2013, when the estimated growth rate in metropolitan France was $0.41 \%$ (Appendix Table A.1). ${ }^{(2)}$

The growth of the French population is mainly driven by positive natural increase (a greater number of births than deaths). Crude birth and death rates vary little from one year to the next, so natural growth is quite stable. The crude birth rate fluctuates around a value of 12.2 per 1,000 population, while the crude mortality rate is around 8.2 per 1,000 in metropolitan France. Nevertheless, due to a relatively smaller number of deaths in 2014, the growth rate increased slightly between 2013 and 2014. On a longer time scale (the last

[^0]ten years), the gap between these two rates has been progressively narrowing, from 4.6 per 1,000 in metropolitan France in 2006 down to 3.7 per 1,000 in 2014 (Appendix Table A.1).

Natural increase, which fluctuated around 300,000 per year from the 1950s until the mid-1970s (Figure 1), has progressively declined since then. It is now closer to 200,000. The trend in net migration has been more erratic. Aside from the peak in 1962 due to repatriates from Algeria, the rates since the mid1970s have been lower than those of the 1950s and 1960s (Figure 1) due to lower levels of labour immigration.

Figure 1. Net migration and natural increase, 1946-2014


## Net migration has little influence on total growth

Apparent net migration, ${ }^{(3)}$ estimated at $+33,000$ (for the whole of France) and $+45,000$ for metropolitan France in 2014, is relatively low compared to natural increase. The number of arrivals in France (330,000 in 2013) is thus largely offset by the number of departures. The French statistical systems do not provide data for direct observation of departures; the measure of arrivals produced by the census underestimates the true figure, but these data are adjusted by INSEE (Appendix 1).

[^1]
## One in four people is aged 60 or older

At the beginning of 2014, the population aged 60 years or above (Appendix Table A.2), represented $24.4 \%$ of the total French population, the same proportion as those aged 19 or younger. By early 2015, however, the over-60s outnumbered young people, reaching a proportion of $24.8 \%$. Their weight in the population is growing every year, while that of under-20s has been decreasing since 1966 (Figure 2), when this age group made up a third of the total.

Figure 2. Population age structure by broad age group, 1946-2015


Coverage: Metropolitan France.
Source: INSEE, population on 1 January of each year.

The ageing of the French population continues, mainly at the top of the population pyramid (decreasing mortality at advanced ages), while in many other European countries rapid fertility decline has accelerated demographic ageing by reducing the share of the population at the bottom of the pyramid (children and young adults).

At the top of the population pyramid (Figure 3), there were nearly 25,000 centenarians on 1 January 2015, including 20,000 women, who outnumbered men by four to one in this age range.

The numerical imbalance between the sexes increases progressively from age 60 (Figure 4). At age 81, there are around one and a half times more women than men; at age 87 there are twice as many women as men, and at age 94 there are three women for every man. The gender imbalance is very large at advanced ages because of excess male mortality, although the gender gap in life expectancy has been decreasing over time (see below).

Figure 3. Population pyramid of France on 1 January 2015


Coverage: Whole of France (including Mayotte).
Source: INSEE.

Figure 4. Sex ratio (number of males per 100 females) at each age, on 1 January 2015


## II. Immigration from non-EEA countries, based on numbers of long-term residence permits

Citizens of countries outside the European Union are obliged to hold a residence permit to reside in France. ${ }^{(4)}$ The statistics on migration presented here, which are drawn from administrative statistics, concern these people.

Net migration, which measures the difference between arrivals on French territory and departures over the course of a year, can be broken down into the arrivals and departures of French citizens and of foreigners. This section is devoted to recent trends in the arrivals and departures of foreigners from so-called third countries, whose nationals must hold a residence permit to reside in France, and who have applied for residence. To ensure the consistency of comparisons over time, these statistics are established for a constant geographical area. They therefore exclude residence permits previously issued to immigrants from countries whose nationals no longer need a residence permit. ${ }^{(5)}$

Flows of foreigners ${ }^{(6)}$ arriving legally in France to establish permanent residence in the country can be estimated from the statistics on long-term residence permits and long-stay visas (valid for one year or more) valid as residence permits. They are based on data from the computer system used by the French Ministry of the Interior to manage files concerning foreigners residing in France (AGDREF). The methodology applied to calculate these flows is presented in detail in the present volume of Population by d'Albis and Boubtane (2015). INSEE produces other estimates of migration flows on the basis of the annual census surveys (see Appendix 1 for a comparison of the two sources).

## A slight increase in inflows

Table 1 presents the flows of migrants who received a first residence permit valid for one year or more between 2008 and 2013. The number of permits issued to foreigners, at 192,000 in 2013, remained below the peak levels seen in 2003 and 2004, when this figure exceeded 200,000 per year. Inflows nonetheless increased by $6.8 \%$ between 2012 and 2013. The proportion of permits valid for one year or more decreased. In 2013, nearly $80 \%$ of all permits were temporary permits, with residence permits and permits for minors each representing less than $10 \%$ of the total. Flows in 2013 were also affected by the circular of 28 November 2012 which came into effect on 3 December 2012. This circular recalls the principles and clarifies the procedures for receiving

[^2]Table 1. Number of first permits valid for one year or more issued to third-country nationals (constant geographical area) by year of validity start date and period of validity

| Period of validity | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| :--- | ---: | :---: | :---: | :---: | :---: | :---: |
| Valid for 364 to 3,649 <br> days | 159,984 | 167,175 | 163,629 | 157,784 | 159,209 | 173,149 |
| Valid for more than <br> 3,649 <br> days | 24,345 | 22,326 | 20,905 | 19,957 | 20,868 | 19,270 |
| Total | 184,329 | 189,501 | 184,534 | 177,741 | 180,077 | 192,419 |

Coverage: Residence permits issued in France and abroad to foreign nationals, excluding member countries of the European Union on 30 June 2013, as well as nationals of Vatican City State, Iceland, Liechtenstein, Norway, the principalities of Andorra and Monaco, the Republic of San Marino, and Switzerland. Permits issued in year $N$ and recorded in the data extracted in July of the year $N+2$, except for 2009, when extraction took place in July 2012.

Source: Authors' calculations based on AGDREF data.
and processing applications to reside in France submitted by undocumented foreigners. In 2013, 8,122 residence permits were issued by virtue of the 2012 circular. For comparison, 34,295 permits - four times more - were issued in 1998 by virtue of the circular of 24 June 1997 which re-examined the situation of certain categories of undocumented foreigners.

## A majority of adults below age 35, still more females than males

The proportion of permits issued to adults has been increasing slightly since 2011 (Table 2). Among adults, the age distribution is highly concentrated in the youngest age group, although new permit holders were slightly older. Two-thirds of permits were issued to individuals aged 18-34. The proportion issued to minors, who are generally not required to apply for a permit, has been decreasing steadily since 2005. In 2013, 18,254 permits were issued to minors (born abroad to non-French parents).

Table 2. Distribution of holders of a first residence permit valid for one year or more by age group and year of validity start date (\%)

| Age group | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| $0-17$ | 11.2 | 9.8 | 9.7 | 9.9 | 9.7 | 9.5 |
| $18-34$ | 64.2 | 65.3 | 65.1 | 64.5 | 64.4 | 62.8 |
| $35-64$ | 23.1 | 23.4 | 23.7 | 24.2 | 24.5 | 26.2 |
| $65+$ | 1.5 | 1.5 | 1.4 | 1.4 | 1.5 | 1.5 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

Coverage: Residence permits issued to foreigners. See Table 1.
Source: Authors' calculations based on AGDREF data.

A majority of residence permits in 2013 were issued to females, and the proportion has remained stable since 2012, following a slight increase (Table 3). Among women who provided information on their marital situation (92\%), $51.2 \%$ were married or in a PACS civil partnership, and $45.4 \%$ were single.

Table 3. Proportion of females among holders of a first residence permit valid for one year or more, by year of validity start date (\%)

|  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Proportion of <br> females | 50.3 | 51.0 | 51.3 | 51.4 | 52.2 | 52.2 |

Coverage: Residence permits issued to foreigners. See Table 1.
Source: Authors' calculations based on AGDREF data.

According to the AGDREF database, in May 2015, these women had a total of 67,454 children, of whom $55.5 \%$ were born in France.

A large majority of the recipients of a first residence permit are still from Africa, although the proportion of immigrants from other continents has increased slightly since 2002 (Table 4). The recipients' principal countries of origin are Algeria ( 24,014 permits issued in 2013), Morocco ( 22,737 permits), China ( 14,063 permits), and Tunisia ( 12,301 permits). The share of females varies widely by continent of origin. Slightly less than half of new permit holders from Africa ( $49.2 \%$ in 2013) are female, versus a majority of those from Asia (54.1\%) and the Americas (58.3\%).

Table 4. Distribution of holders of a first residence permit valid for one year or more by continent of origin and year of validity start date (\%)

| Continent of <br> origin | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Africa | 58.7 | 57.7 | 57.3 | 56.9 | 57.0 | 57.0 |
| Americas | 10.8 | 10.7 | 12.6 | 11.9 | 11.5 | 10.8 |
| Asia | 24.3 | 25.4 | 24.1 | 24.3 | 24.5 | 25.3 |
| Europe | 5.6 | 5.6 | 5.5 | 6.3 | 6.4 | 6.2 |
| Oceania | 0.4 | 0.4 | 0.4 | 0.5 | 0.4 | 0.4 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

Coverage: Residence permits issued to foreigners by nationality of origin. Turkey is classified as part of Asia. Europe includes all countries in Europe that were not previously excluded (see Table 1). The total does not necessarily sum to 100 due to rounding and missing values.
Source: Authors' calculations based on AGDREF data.

## Half of permits are issued for family reasons, a quarter for education

Half of residence permits are issued for family reasons, while permit for educational reasons now make up a quarter of the total (Table 5). ${ }^{(7)}$ In 2013, 12,970 permits were issued for work-related reasons (including 919 for seasonal work), 107,894 for family reasons (a figure that includes those issued to minors), 46,055 for education, and 17,063 for humanitarian reasons. For first permits

[^3]issued for a duration of ten years or more, the distribution of reasons for admission was very different: in this case, $49.3 \%$ of permits were issued for family reasons and $45.8 \%$ for humanitarian reasons.

Table 5. Distribution of holders of a first residence permit valid for one year or more by reason for admission and year of validity start date (\%)

| Reason for <br> admission | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Family | 53.1 | 52.5 | 53.1 | 53.5 | 55.5 | 56.1 |
| Education | 24.4 | 25.1 | 25.8 | 25.2 | 23.7 | 23.9 |
| Humanitarian | 9.0 | 9.3 | 9.3 | 9.4 | 9.7 | 8.9 |
| Employment | 9.3 | 8.8 | 7.5 | 7.6 | 6.6 | 6.7 |
| Various and <br> unspecified | 4.3 | 4.3 | 4.2 | 4.2 | 4.5 | 4.4 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

Coverage: Residence permits issued to foreigners by reason for admission listed in AGDREF. Source: Authors' calculations based on AGDREF data.

## III. Births, male and female fertility

## A stable numbers of births

In 2014, there were 818,565 births in France ( 781,167 in metropolitan France). The number of births was stable (or very slightly lower) in comparison to 2013, when 811,500 births were registered in the whole of France (excluding Mayotte), including 781,621 in metropolitan France (Beaumel and Bellamy, 2015c; Appendix Table A.1).

Although there were fewer women of reproductive age (the number of women aged 15-49 fell by $0.4 \%$ ), their fertility increased slightly (from 1.97 to 1.98 children per woman), so the number of births did not decrease in 2014 (Bellamy and Beaumel, 2015). The crude birth rate saw a small decline, however, falling from 12.4 to 12.3 births per 1,000 inhabitants between 2013 and 2014, because of the increase in total population.

The detailed data, not yet available at the time of our statistical analyses, will reveal what ages were responsible for the upturn in fertility (Appendix Table A.4). Based on the trends observed last year, this increase is likely to be concentrated among women aged 35-39 (Mazuy et al., 2014a). Fertility before age 20 and after age 40 continues to account for a marginal proportion of total fertility (around $2 \%$ before age 20 and $4 \%$ at age 40 and above). Trends in these two age groups are contrasting, with a decrease among very young women and an increase among older women (Figure 5).

Over the long term, after a large decrease (for all ages combined) up to the mid-1980s (corresponding first to a postponement of fertility and then to a decline linked notably to the spread of effective methods of contraception),

Figure 5 . Fertility rates by age group, 1946-2013 (births per 1,000 women)

fertility has remained relatively stable for several decades, and even showed a slight uptrend in the 2000s (Figure 5). It has stabilized at slightly above two children per woman in the most recent cohorts, with a mean age at childbearing of around 30 years (Appendix Table A.5).

## Nearly six in ten children are born outside marriage

The proportion of births outside marriage continued to increase, reaching $57.2 \%$ of total births in 2014, i.e. 356,000 births (Figure 6). In the first half of the twentieth century, the proportion of births outside marriage was below $9 \%$,

Figure 6. Proportion of births outside marriage, 1946-2014 (\%)

and varied little in peacetime (Daguet, 2002a). The proportion of non-marital births reached its lowest level in the 1960s, at around $6 \%$. From the 1970 s, the frequency of births outside marriage began increasing, reaching 30\% in 1990 and $40 \%$ in 1997 (Daguet, 2002b). Since 2007, the majority of children have been born outside marriage. If the trend continues, in 2018 six out of ten children will be born to an unmarried couple.

Ten percent of children born in 2014 were given both of their parents' names

Since 2002, both parents' names can be passed on to children at birth. ${ }^{(8)}$ In 2014, a majority of children ( $83 \%$ ) were given their father's name (Table 6). Nearly $10 \%$ of children were given both parents' names, in which case the father's name most often came first. The change in the law offered made it easier to pass on the desired parental name, but traditional practices have not been seriously challenged. In $6.5 \%$ of cases, children were given only their mother's name, but the majority of these were children not recognized by their biological father at birth. Couples rarely choose to pass on the mother's name only.

Table 6. Distribution of family names given to children born in 2014 (\%)

| Choice of name type |  |
| :--- | :---: |
| Father's name | 83.1 |
| Mother's name | 6.5 |
| Father's name followed by mother's name | 8.0 |
| Mother's name followed by father's name | 2.2 |
| Other name or not reported | 0.2 |
| Total | 100 |
| Coverage: Live births registered throughout France (excluding judgments establishing date of birth). |  |
| Source: Bellamy (2015b). |  |

## French fertility was the highest in the European Union in 2013

At two children per women, French fertility probably remained among the highest in Europe in 2014, assuming no major change with respect to 2013. In 2013, the last year for which data from the entire European Union are available, France was in the top position, ahead of Ireland, Iceland, and Sweden (Appendix Table A.6). In 10 EU countries, the total fertility rate (TFR) was below 1.4 children per woman (Cyprus, Germany, Greece, Hungary, Italy, Malta, Poland, Portugal, Slovakia, and Spain).

[^4]
## Male and female fertility, and fertility timing

The results presented here are drawn from vital registration data published by INSEE. They are drawn from birth records filled out for each birth in France, and which include information on both parents ${ }^{(9)}$ (see the birth registration form in Appendix 2).

Men have lower age-specific fertility rates than women and are older when their children are born (Figure 7). In 2013, women's mean age at childbearing was 30.2 years, versus 33.1 years for men. At the end of the 1940s, these ages were 28.4 and 31.7 years, respectively. This gap of around 3 years has remained steady over time; it corresponds to the age gap between spouses (see below). In the 1970s, mean age at childbirth decreased, falling to 26.5 years for women and 29.5 years for men.

Figure 7. Male and female age-specific fertility rates in 1946, 1966, 1986, 2006, and 2013 (births per 1,000 individuals)


The availability of long time series makes it possible to estimate male and female completed fertility on the basis of fertility rates and mean age at childbirth. For the most recent cohorts, men's completed fertility seems to be on a par with that of women, which stood at 2.07 children for the female cohorts born between 1960 and 1963 (Robert-Bobée, 2015; Beaumel and Bellamy, 2015a; Appendix Table A.7).

Through a more detailed analysis of men's and women's conjugal and family histories using data from retrospective surveys such as the most recent

[^5]family and housing survey (Enquête Famille et logements, EFL) carried out in 2011, rates of male and female childlessness by cohort (at age 50) can be estimated. Among the cohorts born between 1961 and 1965, 13.5\% of women and $20.6 \%$ of men have not had any children (Masson, 2013). Childlessness has increased slightly across cohorts, and varies strongly by marital situation and social background: it is higher among highly educated women, loweducated men, and individuals who have never lived with a partner (ibid; Köppen et al., 2016). Voluntary childlessness ${ }^{(10)}$ remains marginal and has increased very little: $5 \%$ of men and women do not wish to have any children (Debest and Mazuy, 2014). The EFL survey offers further information on childlessness in the broad sense, i.e. including individuals who have neither had nor adopted children, and who have not raised any stepchildren. In the cohorts born between 1961 and 1965, this was the case for $13 \%$ of women and $19.1 \%$ of men. The similarity of the figures for the two definitions shows that individuals who raise stepchildren are also often parents (before or after becoming step-parents); individuals who have no children, women especially, rarely raise stepchildren.

## IV. Induced abortion

Induced abortions increased in 2013, but the abortion rate has followed that of fertility for 20 years

The number of induced abortions increased in 2013 (Vilain and Mouquet, 2015): 229,000 abortions were recorded, ${ }^{(11)}$ of which 216,000 in metropolitan France (Appendix Table A.8). The abortion rate rose from 14.5 per 1,000 women at ages $15-49$ in 2012 to 15.3 in 2013. The mean number of abortions per woman also increased in 2013 (from 0.53 to 0.55). A more detailed analysis of the final figures for 2013, as well as the provisional figures for 2014, should make it possible to better characterize this increase, but several hypotheses can already be formulated. Notably, it is clear that the abortion rate depends on general fertility: for 20 years, the trend curves for the total fertility rate and the abortion rate have followed a similar pattern (Figure 8). It may also be supposed that a greater proportion of unwanted pregnancies are terminated.

[^6]Figure 8. Total abortion and fertility rates, 1976-2013


Coverage: Metropolitan France
Source: Mazuy et al. (2015).

## V. Marriage, civil partnership (PACS), and divorce

## A stable number of unions officialized in 2012 and 2013, but a greater diversity of forms

In 2013, 406,718 unions (PACS and marriages) ${ }^{(12)}$ were registered, almost exactly the same number as in $2012(406,569)$ (Appendix Table A.9). The forms of these unions have continued to diversify, with the opening-up of marriage to same-sex couples in 2013, almost 15 years after the creation of the PACS civil partnership, and the ever-growing number of heterosexual couples choosing the PACS over marriage. Marriages between a man and a woman remained the most common form of contractual union, although they represented only $57 \%$ of unions registered in 2013. Among women and men aged below 25 , they represented a minority of unions ( $45 \%$ and $39 \%$, respectively), and among those aged $25-34$, a slight majority ( $54 \%$ and $51 \%$, respectively) (Figure 9). With the growing popularity of PACS unions among heterosexual couples, the profiles of persons in civil partnerships and marriages are becoming less dissimilar (Bailly and Rault, 2013). For samesex couples, trends in marriage and PACS unions will be studied with interest in years to come.

[^7]Figure 9. PACS unions as a percentage of all unions (marriage + PACS) by sex and age group in 2013


The total number of marriages in 2014 is estimated at 241,000 (Bellamy and Beaumel, 2015) versus 238,600 in 2013 (Beaumel and Bellamy, 2015b). ${ }^{(13)}$ However, these two figures cannot be directly compared as same-sex marriage did not become legal until May 2013. Without same-sex marriages, the number of marriages would have declined very slightly in 2014 (-300). If the estimate of heterosexual marriages in 2014 proves correct, the figure would be a new all-time low (Mazuy et al., 2014a; Bellamy, 2015a). In parallel, the number of unmarried (i.e. single, divorced or widowed) individuals aged 20-59 increased slightly between 2012 and 2013 ( $+1.4 \%$, or $+264,000$ individuals).

In 2013, the number of new PACS unions increased by more than 7,000 to 168,126 (Appendix Table A.9). Contrary to marriages, the number of heterosexual PACS increased, but the number of same-sex PACS fell by more than 900 . The proportion of all PACS signed by same-sex couples reached its lowest level yet in 2013, at $3.5 \%$. The figures from the first two quarters of 2014 confirm this trend (Table 7). Some of the same-sex couples who married in these years would most likely have entered a civil partnership if the marriage law had not changed.

[^8]Table 7. Number of PACS unions, 2009 to 2013

| Number of PACS unions | 2009 | 2010 | 2011 | 2012 | 2013* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PACS registered (total) | 174,584 | 205,561 | 152,176 | 160,732 | 168,779, |
| of which PACS in overseas <br> départements | 1,404 | 1,602 | 1,376 | 1,537 | 1,656 |
| Number of PACS by partners' sex |  |  |  |  |  |
| Man-man | 4,894 | 5,208 | 4,156 | 3,750 | 3,348, |
| Woman-woman | 3,542 | 3,938 | 3,338 | 3,223 | 2,733, |
| Man-woman | 166,148 | 196,416 | 144,682 | 153,759 | 162,698, |
| * Provisional. <br> Coverage: Whole of France, excluding Mayotte. <br> Source: Ministry of Justice (unions registered in the courts and before notaries). |  |  |  |  |  |

In 2013, out of all officialized unions (marriages and PACS combined), $3 \%$ were between individuals of the same sex. This proportion should be close to $4 \%$ in 2014. The proportion of women and men who officialized a union with a person of the same sex varied with age (Figure 10): it was highest for individuals who married or signed a PACS above age 55 (nearly one in eight men, and one in 14 women) and lowest among those aged 18-24.

Figure 10. Same-sex unions (marriage + PACS) as a percentage of all unions, by sex and age group, in 2013


## Officialized same-sex unions

There were 10,000 same-sex marriages in 2014, versus 7,500 between late May and the end of December 2013. These figures correspond to 1,070 samesex marriages per month in 2013 and 830 in 2014. This drop can be partly explained by an early surge in marriages among couples who had been waiting for the law to come into force. Moreover, the first actual marriages were not celebrated until June, so the first two quarters, generally a less popular time of year for officialization of unions, did not enter into the calculation of the monthly mean for 2013.

As previously emphasized, the number of PACS between persons of the same sex decreased between 2012 and 2013, and the trend in 2014 was towards stability: in the first two quarters of 2014 there were 2,857 PACS unions between same-sex couples, versus 2,970 in the same two quarters of 2013.

## Change in the seasonality of PACS unions

The law of 17 May 2013 authorizing same-sex marriage also changed the seasonality of unions (Figure 11). After the peak in same-sex marriages in September 2013, which was linked to a catch-up effect, ${ }^{(14)}$ the seasonality of same-sex marriages in 2014 will probably mirror that of heterosexual marriages

Figure 11. Seasonality of marriages and PACS unions in France (2007-2013)


[^9](Bellamy and Beaumel, 2015), becoming distinct from the seasonality of samesex PACS. This result is confirmed by a simultaneous analysis of the seasonality of marriages and PACS between 2007 and 2013 (Figure 11). Until 2010, few PACS were concluded in the first quarter, while there was a slight peak in the third quarter. The seasonality of PACS is less pronounced than that of marriages, but the two have shared features. After the tax 2011 reform, the seasonality of PACS returned to the pattern observed before the 2005 reform (Leturcq, 2009). This was not the case of marriages, although they were affected by the 2011 tax reform in the same way as PACS. The seasonal alignment of same-sex marriages with that of other marriages (Bellamy, Beaumel, 2015) suggests that for same-sex couples who choose marriage over civil partnership, the celebration may have a different symbolic importance, be more festive and/or constrained by organizational factors, and thus held at a more favourable time, in the summer.

## More same-sex PACS unions registered through a notary

In 2013, 13.1\% of PACS unions were registered by a notary. This proportion has been increasing over the years, and is higher for those signed late in the year. It is also higher among same-sex couples, especially for PACS signed in the final quarter of the year (Figure 12). In the fourth quarter of 2013, one in four PACS between same-sex couples was signed before a notary, versus one in six for other couples. The 2011 tax reform probably had some influence on couples' behaviour. The tax advantages of a mid-year marriage or PACS having been abolished, seasonality became unimportant; the increase in the proportion of PACS signed in the fourth quarter may be attributable to the approaching end of the tax year.

Figure 12. Percentage of PACS signed before a notary, 2011-2014, by quarter


Nearly three quarters of marriages are first marriages for both spouses
In 2013, the majority of marriages were between two never-married individuals (73\%), a proportion that has remained virtually unchanged since 2004 (71\%). Other marriages were almost equally divided between couples where only the man ( $9 \%$ ), only the woman ( $7 \%$ ), or both spouses ( $9 \%$ ) were divorced. Less than $3 \%$ of couples included a widow or widower. This distribution varies strongly with age: beyond age 40, a minority of marriages are between two never-married individuals, and beyond age 50, the proportion becomes very small (Figure 13).

Figure 13. Distribution of marriages by age and marital status of both the man and the woman at the time of marriage, 2004 and 2013 (\%)

Men's marriages


Women's marriages


Coverage: Whole of France, excluding Mayotte.
Sources: Ministry of Justice, INSEE, authors' calculations

Between 2004 and 2013, the situation remained virtually unchanged, aside from a growing proportion of marriages between never-married individuals among men marrying after age 40 . This proportion rose from $28 \%$ to $49 \%$ among men aged 40-49 years, and from $9 \%$ to $21 \%$ among men marrying at age 50 and above (Figure 13). In absolute terms, the number of such marriages more than doubled, from 9,000 to 20,000. A portion of these couples of nevermarried individuals who married beyond age 40 had doubtless cohabited for a long time before tying the knot.

## The trend toward later marriage continues

Mean age at marriage continues to increase, for both men and women, regardless of marital history. In 2013, it was 37.2 years for men and 34.6 years for women. In the early 1970s, this figure was below 26 years for men and below 24 years for women (Appendix Table A.9). Since 1973, the age difference between men and women at marriage has been relatively stable (Figure 14).

Figure 14. Mean age at marriage by marital status at time of marriage, 1973-2013


Note: Mean ages were calculated from the distributions of spouses' years of birth on the marriage certificate. Data available from 1973 for metropolitan France.

Coverage: Metropolitan France.
Source: INSEE.

The age gap between spouses is reversed when men marry young

In 2013, men were older than their spouses at the time of marriage by a mean of 2.6 years, versus 3.1 years in 2004. The older the man, or the younger the woman, the larger the age gap between spouses (Figure 15). There are few configurations where women are older on average than their spouses,
although this is the case when men marry young (below age 30), and particularly when one of the spouses is widowed, although such marriages are very rare. In all other cases, men are older on average, regardless of the couple's marital status at the time of marriage. Behaviour changed little in

Figure 15. Mean age gap between spouses by spouse's age at time of marriage and marital status of the two spouses, 2004 and 2013


Woman's age in year of marriage
Note: The numbers indicated are for the year 2013.
Coverage: Metropolitan France.
Source: INSEE.
this regard over the decade, with the exception of never-married women who married late (after age 50) to a never-married man. In this case, there was no age gap between spouses (in women aged 40-49 years) or the gap was even negative (in women aged 50 or older) in 2013, whereas the gap was positive in 2004.

## First marriages by sex and age in different cohorts

At all ages, the proportion of men and women who marry at least once has been progressively decreasing with later cohorts (Figure 16). This trend reflects both the increasing age at first marriage (Appendix Table A.10) and the trend toward choosing informal unions and civil partnerships over marriage. The proportion of persons who marry at least once before age 50 can be expected to continue its progressive decline with later cohorts, approaching one in two individuals (Figure 16, dotted curve, assuming that the probabilities of marriage at each age observed in 2013 did not change). This will depend in part on couples' interest in marrying, but also on the capacity of marriage, whether civil or religious, to maintain its role as the symbolic representation of the conjugal bond - one that the PACS at present only partially replaces (Rault, 2009) - and on changes in the legal and tax advantages of civil partnerships, which continue to differ from those of marriage. The analysis of these series highlights a turning point that starts with the 1975 cohort, who were 24 years old when the PACS was created in 1999, and who are now 40 years old. It was this and subsequent cohorts that massively adopted the PACS, notably among heterosexual couples.

Figure 16. Percentage of ever-married women and men at different ages in the 1953-1991 birth cohorts


## Divorces and PACS dissolutions

The number of divorces in France fell by 3,000 between 2012 and 2013 (Mazuy et al., 2014b), partly because the number of married individuals is decreasing. In 2013, the total divorce rate (which neutralizes effects of size and structure), which had been increasingly steadily until 2011, fell to 44.2 divorces per 100 marriages, returning to its 2003 level (Appendix Table A.9). This slight decline probably reflects a decrease in the rate of divorce in each marriage cohort, but may also result from a lengthening of the time to divorce (i.e. an increase in the mean duration of marriage at the time of divorce).

The proportion of divorces at each age, calculated over the population as a whole regardless of marital status, is highest at age 40 for both men and women (result not shown). The peak age differs if the rate is calculated only over individuals who can in fact divorce - i.e. married people (Figure 17). In this case, women's divorce rate peaks earlier than men's, a little before age 25 . Rates then remain stable between the ages of 30 and 45 for both sexes (Figure 17).

Figure 17. Divorce rate by age and sex in 2010 and 2013
(divorces per 1,000 married persons)


Coverage: Whole of France, excluding Mayotte.
Source: INSEE, authors' calculations.

In 2013, the divorce rate was highest after five years of marriage, a year later than in 2004. The duration of marriage at the time of divorce lengthened slightly over the period, mainly between 2004 and 2010. Between 2010 and 2014, it was the intensity of divorce that fell slightly (Figure 18). In comparison to 2004, the divorce rate decreased for almost all durations, with a particularly
notable drop at three, four and five years of marriage, the durations with the highest risk of divorce.

Figure 18. Divorce rate by marriage duration in 2004, 2010, and 2013 (divorces per 1,000 marriages)


Coverage: Whole of France, excluding Mayotte.
Source: INSEE, authors' calculations.

In 2011, it was projected that $45 \%$ of marriages celebrated in the mid-1980s would end in divorce (Mazuy et al., 2011). The subsequent decrease in divorce rates at all ages and for all marriage durations makes this hypothesis less likely. For example, for the 1985 marriage cohort, Mazuy et al. estimated that between $39.2 \%$ and $41.0 \%$ of couples would divorce, and their projected minimum for the 1995 cohort was $42.5 \%$. But extrapolating from the rates by duration, the lower rates of $41.8 \%$ in 2010 and $38.3 \%$ in 2013 are obtained. This result must be understood in the context of the decreasing proportion of individuals who marry. It is likely that those who marry are to some extent selected (notably, they have already "escaped" union dissolution in the first years of union). It might simply be a timing effect, however, with those who marry later also divorcing later.

## Fewer minor children affected by divorce

The parents of 115,508 minor children divorced in 2013, of whom 112,776 in metropolitan France, versus nearly 130,000 in 2009 (Prioux et al., 2010). Between 2009 and 2013, the number of divorces decreased by $4.5 \%$, while the number of minor children whose parents divorced fell by more than $13 \%$. This result confirms the decrease previously observed for all union dissolutions (Breton and Prioux, 2009). When the woman is below 35 years old or above 50 in the year of the divorce, the proportion of divorces involving at least one minor
child is relatively low. If the woman is aged 35-44, in contrast, the proportion rises to seven in ten divorces (Figure 19).

Figure 19. Distribution of divorces by number of minor children and the woman's age at the time of divorce, 2013


| No reported minor <br> child | $\square$ One child | $\square$ Three children |
| :--- | :--- | :--- |
|  | $\square$ Two children | $\square$ Four or more minor children |

Coverage: Whole of France.
Source: Ministry of Justice.

## PACS dissolutions

The number of PACS dissolved rose by 7,136 between 2012 and 2013 (Table 8), an increase which is slightly smaller than that of the number of new PACS. The distribution of dissolutions by reason for dissolution has remained virtually unchanged since 2010: around $56 \%$ are by mutual consent, $40 \%$ due to marriage, $3 \%$ at the unilateral request of one of the partners, and around $1 \%$ for another reason, notably the partner's death. Between 2010 and 2013, the proportion of dissolutions due to marriage increased slightly ( +3 percentage points). It is highly likely that the availability of marriage as an option to same-sex couples will contribute to an increase in this proportion in 2014 and the following years, assuming that many of these couples initially chose the PACS partly because they were not able to marry.

Table 8. Number of PACS dissolutions by reason, 2010-2013

| Year | Dissolutions | Reason for PACS dissolution |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Mutual consent | Requested by one partner | Marriage | Death | Other cases and not recorded |
| 2010 | 35,627 | 20,817 | 1,153 | 13,263 | 366 | 28 |
| 2011 | 42,290 | 24,117 | 1,295 | 16,450 | 417 | 11 |
| 2012 | 48,841 | 27,745 | 1,473 | 19,142 | 451 | 30 |
| 2013 | 55,977 | 31,336 | 1,643 | 22,484 | 481 | 33 |
| Coverage: Whole of France Source: Ministry of Justice. |  |  |  |  |  |  |

## Remarriages continue to decrease

The proportion of men and women who remarry after a divorce is steadily decreasing (Figure 20). The spread of consensual union as a form of cohabitation for couples partly explains this trend. Slightly more than one in five women in the 2004 divorce cohort had remarried ten years later, versus one in three in the 1984 cohort. Remarriages occur more than 10 years after a divorce (Prioux, 2007), but data by year of remarriage and time since divorce is lacking. We can thus only estimate these figures: in total, around $30 \%$ of women who divorced in 2004 will likely remarry.

Figure 20. Percentage of men and women in the 1984, 1994 and 2004 divorce cohorts who have remarried 0-9 years after divorce


## VI. Mortality

After stagnating at 569,000 in 2012 and 2013 due to a concentration of winter flu deaths in 2013, the total number of deaths decreased by 10,000 in 2014 to 559,300 according to INSEE figures (Bellamy and Robert-Bobée, 2015). This level of mortality corresponds to a life expectancy at birth of 79.2 years for men and 84.7 years for women in the whole of France ( 79.3 years and 85.5 years in metropolitan France), a gain of 0.5 and 0.4 years, respectively, for the two sexes with respect to 2013 ( +0.5 years for both sexes in metropolitan France). Since the turn of the twenty-first century, mean length of life has risen by 4.0 years for males and 2.6 years for females, representing a mean annual increase of 0.29 and 0.19 years, respectively, between 2000 and 2013. Life expectancy increased more for men than for women over this time, narrowing the life expectancy gap from 7.6 years in 2000 to 5.7 years in 2014 ( 6.2 years in metropolitan France).

In 2013, the most recent year for which comparative data are available, France remained near the European average, both for infant mortality (Appendix Table A.13) and for life expectancy at birth (Appendix Table A.12), with no notable change from 2012. French women remained close to the top of the European ranking for mean length of life ( 85.0 years), just behind Spanish ( 86.1 years) and Italian women ( 85.2 years). ${ }^{(15)}$ The situation has long been less favourable for French men, however. With a life expectancy of 78.7 years, they ranked only 1lth in Europe in 2013; this is nonetheless an improvement with respect to 1980, when France had one of the highest gender mortality gaps in western Europe. Men's rise in the international ranking reflects the fact that the gender gap in life expectancy at birth has been narrowing faster in France than in other countries, due to a more pronounced slowing of the rate of decrease in female mortality combined with an acceleration of progress in male mortality (Meslé, 2006).

## Seven decades of increase in mean life expectancy

Recent changes in life expectancy at birth follow the trends observed, if not since the end of the Second World War, at least since 1960 (Figure 21). In 1946, male and female life expectancies in metropolitan France ${ }^{(16)}$ were 59.9 years and 65.2 years, respectively. ${ }^{(17)}$ Between 1946 and 2013, male life expectancy increased by 18.9 years and female life expectancy by 19.8 years, but progress was not uniform over this time (Appendix Table A.11).

Improvements were particularly rapid between1946 and 1956 (Table 9). In the following decades they slowed considerably, dropping by almost half in the

[^10]Figure 21. Male and female life expectancy at birth, 1946-2013

decade 1956-1966, and again during the decade 1966-1976. While the decade after that (1976-1986) was relatively favourable for women, it was followed by a slowing that became progressively more marked with time: the mean annual gain in 2006-2013 was only 12\% of its level in 1946-1956 ( 0.8 months per year in 2006-2013, versus 7.8 months per year in 1946-1956). In men, the slowing of improvements in the decades 1956-1966 and 1966-1976 was followed by an acceleration, with annual gains that grew from 1.6 months in 1966-1976 to 3.7 months in 1996-2006. The most recent period has seen far less improvement in the life expectancies of both men and women, however, with gains in 20062013 at only half the level of those in the decade 1996-2006.

Table 9. Gains in life expectancy at birth by sex and 10-year period, 1946-2013

| Period | Gain in life expectancy at birth |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | Total (years) |  |  | Annual mean (months) |  |
|  | Men | Women | Men | Women |  |
| 1946-1956 | 5.3 | 6.5 | 6.3 | 7.8 |  |
| 1956-1966 1976 | 2.7 | 3.5 | 3.2 | 4.2 |  |
| 1976-1986 | 1.4 | 2.0 | 1.6 | 2.4 |  |
| 1986-1996 | 2.3 | 2.5 | 2.8 | 3.0 |  |
| 1996-2006 | 2.6 | 2.4 | 3.1 | 2.8 |  |
| 2006-2013* | 3.1 | 2.1 | 3.7 | 2.6 |  |

* As 2013 is the last year for which the information needed for this calculation is available, the last period is 7 years long, versus 10 for the preceding periods.
Coverage: Metropolitan France.
Source: Authors' calculations on the basis of INSEE's life tables by sex.

From progress in survival during childhood to progress at advanced ages
Examination of the contributions of different age groups to gains over time in life expectancy at birth by 10-year period reveals the decreasing role of children's mortality and the growing importance of mortality at advanced ages (Table 10). Over the period 1946-2013, decreases in child mortality (0-14 years) explained about a third of progress in life expectancy at birth. But the contribution of child mortality was highly concentrated at the beginning of the period: while this age group explained $80 \%$ and $60 \%$ of the increase in male and female life expectancies, respectively, between 1946 and 1956, its contribution progressively decreased over time, down to $4 \%$ and less than $1 \%$, respectively, in 2006-2013.

Table 10. Contribution of age groups to gains in life expectancy at birth (years) by ten-year period between 1946 and 2013 and by sex

| Period | Age group |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-14 | 15-24 | 25-44 | 45-64 | 65-79 | $80+$ | Total gain |
| Males |  |  |  |  |  |  |  |
| 1946-1956 | 4.27 | 0.57 | 0.72 | -0.20 | -0.06 | -0.02 | 5.28 |
| 1956-1966 | 1.31 | - 0.04 | 0.21 | 0.59 | 0.37 | 0.20 | 2.65 |
| 1966-1976 | 0.82 | -0.13 | 0.17 | 0.22 | 0.23 | 0.04 | 1.36 |
| 1976-1986 | 0.47 | 0.16 | 0.14 | 0.66 | 0.78 | 0.15 | 2.36 |
| 1986-1996 | 0.38 | 0.15 | 0.07 | 0.86 | 0.77 | 0.34 | 2.57 |
| 1996-2006 | 0.17 | 0.19 | 0.59 | 0.64 | 1.05 | 0.47 | 3.12 |
| 2006-2013* | 0.06 | 0.08 | 0.21 | 0.42 | 0.52 | 0.26 | 1.55 |
| 1946-2013 | 7.49 | 0.98 | 2.12 | 3.19 | 3.67 | 1.45 | 18.89 |
| Females |  |  |  |  |  |  |  |
| 1946-1956 | 3.87 | 0.72 | 1.03 | 0.49 | 0.39 | 0.00 | 6.49 |
| 1956-1966 | 1.15 | 0.03 | 0.34 | 0.66 | 0.89 | 0.43 | 3.51 |
| 1966-1976 | 0.68 | - 0.01 | 0.19 | 0.42 | 0.57 | 0.18 | 2.02 |
| 1976-1986 | 0.40 | 0.06 | 0.15 | 0.52 | 0.92 | 0.44 | 2.49 |
| 1986-1996 | 0.33 | 0.07 | 0.05 | 0.37 | 0.75 | 0.80 | 2.36 |
| 1996-2006 | 0.13 | 0.07 | 0.25 | 0.19 | 0.69 | 0.82 | 2.16 |
| 2006-2013* | 0.00 | 0.05 | 0.10 | 0.12 | 0.28 | 0.26 | 0.81 |
| 1946-2013 | 6.55 | 0.98 | 2.11 | 2.78 | 4.49 | 2.93 | 19.84 |
| * As 2013 is the last year for which the information needed for this calculation is available, the last period is 7 years long, versus 10 in the preceding periods. <br> Note: The method used to calculate the contribution of each age group to gains in life expectancy at birth from one calendar year to the next is that of Andreev et al. (2002). <br> Coverage: Metropolitan France. <br> Source: Authors' calculations on the basis of INSEE's life tables by sex. |  |  |  |  |  |  |  |

Over the same period, decreasing mortality at age 65 and above made steadily greater contributions to total gains in life expectancy. The contribution of this age group, which in 1946-1956 was negative for men (mortality increased very slightly over these years) and relatively low for women (among whom progress in this age group accounted for just $6 \%$ of total progress), has grown ever since. Since the decade 1996-2006 it has accounted for around $50 \%$ of gains in life expectancy at birth for men and $70 \%$ for women.

Intermediate ages have made varying contributions to progress in life expectancy in different periods. Decreases in mortality at ages $15-44$ played an important role at the very beginning of the period (1946-1956), but their impact weakened rapidly thereafter, particularly in women. In contrast, decreases in adult mortality at ages 45-64 explain a large share of the progress in life expectancy after 1956, particularly in men.

To better understand the reasons for these recent changes, which are differentiated by sex, it is useful to look at changes in their composition by major groups of causes of death.

## Cause-specific mortality trends

Figure 22 presents standardized mortality rates ${ }^{(18)}$ for the principal causes of death and for each sex, corrected for effects of changes in classification (Meslé, 2006), between 1946 and 2011. Here we use the continuous series of deaths by cause reconstituted by France Meslé and Jacques Vallin for metropolitan France (Vallin and Meslé, 1988; Meslé and Vallin, 1996) and updated for the most recent period, after proportional distribution of deaths from unknown or ill-defined causes.

It can be seen that both male and female mortality from almost all major groups of causes of death has generally changed for the better since the year after the end of the Second World War. The most spectacular drop has been in mortality from infectious diseases: the corresponding standardized mortality rate was divided by 15 between 1946 and 2011 for both sexes. The bulk of this progress was made before the early 1980s, however, and after reaching a minimum in that period, the trend was reversed in the following period, mainly in men due to the HIV/AIDS epidemic. The downtrend resumed from 19941995, and infectious disease mortality has remained stable at around 12 deaths per 100,000 men and 7 deaths per 100,000 women since the turn of the century. The trajectory of mortality from respiratory diseases over this period has been similar, albeit in a less marked form, including the interruption of the downward trend in the 1990s, which can be explained in the same way.

Thanks to previous improvements, mortality from infectious and respiratory diseases already represented a relatively small proportion of total mortality in 1946. Changes in general mortality over the period are mostly attributable to

[^11]Figure 22. Standardized mortality rates by major group of causes and sex, 1946-2011


Sources: Database of causes of death in France (Meslé, 2006); INSERM, CépiDC.
the two main causes of death: cardiovascular diseases and cancers. The decrease in cardiovascular mortality, which occurred in all subgroups of this category (heart diseases, cerebrovascular diseases, and diseases of the arterial system), was considerable. Between 1946 and 2011, the standardized rate of mortality from these causes was divided by four in men and by six in women. Cancer mortality, in contrast, is a heterogeneous category, with highly varied, and sometimes opposite, trends in different subcategories, by anatomical location as well as by sex. Overall, the level of cancer mortality in 2011 was highly comparable to that of 1946 (slightly higher for men, after a long period of increase, and then a reversal in the late 1980s; slightly lower for women). Cancers have been the leading cause of death since 1988 for men and since 1999 for women. However, cancer mortality in 1946 was almost certainly underestimated due to the lesser capacity to diagnose these diseases at the time.

Among the other major groups of causes, two types of trends can be distinguished. Mortality from digestive diseases and external causes increased until 1970, before entering a long-term pattern of steady decline. The former,
dominated by cirrhosis of the liver (a disease that mainly affects the 45-64 age group), tracked alcohol consumption (increasing, then decreasing) with a delay of around a decade. The latter mainly affected children, adolescents, and young adults, and was due to an increase in accidental deaths. The introduction of road safety measures beginning in the 1970s decreased the incidence of road traffic accidents, whose primary victims were the young. Mortality attributed to the residual category of "other diseases" followed an opposite pattern, decreasing up to the late twentieth century before starting to rise in the 1990s, partly due to increased mortality from mental illnesses, notably senile dementia, in the last 25 years or so. It is very difficult, however, to determine how much of this rise is due to a real uptrend in the incidence of these types of diseases in older people, and how much to the increasingly accurate diagnosis of degenerative diseases of old age. Foremost among these is Alzheimer's disease, whose standardized rate has increased steadily since the disease was included in the International Classification of Diseases in 1979 (Désesquelles et al., 2014).

## Divergence and convergence of gender differences in mortality

As Figure 23 shows, the gender difference in life expectancy at birth grew continuously until the early 1980s. It then stabilized at a high level in comparison to other developed countries, reaching a maximum of 8.3 years in 1992 before beginning a long-term decline.

Figure 23. Gender difference in life expectancy at birth, 1946-2013


In 1946, the gender difference in mortality at ages 40-75 years was particularly large. Excess male mortality at these ages increased considerably over the following period (1946-1980), with a male/female mortality ratio that
rose from around 1.5 to 2.5 (Figure 24). The growth in the gender gap over this period was even more dramatic in young adults: in 1946, mortality was around $25 \%$ higher in men aged 20-24 years than in women from the same age group, but by 1980 the ratio had risen to above three. In fact, excess male mortality increased at almost all ages over this time, the only exceptions being the youngest (under 15) and oldest (75-80 and above) age groups. The worsening of excess male mortality between 1946 and 1980 resulted from the much speedier decline in female than male mortality over this period.

Figure 24. Excess male mortality by five-year age group in France, 1946, 1980 and 2013


Source: Human mortality database (www.mortality.org, consulted on 2 June 2015).

While the risk of death remained much higher for males than for females in 2013 compared to 1946 in all age groups between the ages of 15 and 75 years, excess male mortality has nonetheless decreased considerably among adults aged 40-65 since 1980: at ages 45-49, for example, the mortality ratio has decreased by $20 \%$ (from 2.4 in 1980 to 1.9 in 2013). For young adults, the excess male mortality peak remains unchanged, however, and the ratio continues to worsen beyond age 75, albeit to a limited degree (Figure 24).

The rising gender gap in mortality from 1946 to 1980 is explained mainly by differences between the sexes in mortality from three major groups of causes: deaths from external causes in young adults, and cardiovascular diseases and cancers after age 45 . Other pathologies contributed little and, aside from digestive diseases, their contribution to the gender gap went down over this period. The growing contribution of cardiovascular and social
diseases (such as smoking and driving) to total mortality thus increased the inequality between men and women. Women were first to benefit from the cardiovascular revolution of the 1960s and 1970s, as well as from the new public health policies (Meslé, 2004).

Over the period that followed (1980-2013), excess male mortality in young adults continued to be marked by the disproportionate contribution of road traffic accidents among men. While the contribution of cardiovascular diseases to the life expectancy gap between the sexes stabilized over these years, the drop in cancer mortality in men is the main explanation for its decrease in the 45-64 age group. To better understand the role of cancers in the narrowing of the gender gap, it is useful to break this category down into components (Figure 25).

Figure 25. Standardized mortality rates from the most lethal cancers by sex, 1946-2011


A look at standardized mortality rates from the principal cancers over the period 1946-2013 reveals a positive recent overall trend in mortality from the most lethal cancers, in both men and women (Figure 25). More precisely, three patterns can be seen:

- mortality from stomach cancer (in both sexes), uterine cancer, and the residual category of other cancers in women began to decline in the 1950s;
- for most other types of cancer, the downward turn occurred in the 1980s or early 1990s (intestinal cancer in both sexes, cancer of the lung, esophagus, prostate, and upper aerodigestive tract in men);
- finally, mortality from a few cancers resisted until more recently, only beginning to drop in the 2000s (blood cancer in both sexes, breast cancer in women, and the residual category of other cancers in men).
These improvements are due to medical progress (the introduction of antibiotics had a major effect on cancers linked to infectious disease, such as stomach cancer and cervical cancer), better storage conditions for food and improvements in diet (stomach cancers again), changes in individual behaviours that favour health (decreasing tobacco and alcohol consumption in men), and probably also screening policies (for prostate cancer in men, and for breast and cervical cancer in women). The only exception is female lung cancer, which has been increasing since the 1960s, contrary to the trend among men, which began a downturn in the 1990s. This difference results from sex-specific patterns of tobacco consumption. The way the mortality gap between the sexes evolves in coming years will depend in large part on trends in men's and women's behaviour, notably smoking. Cancers currently contribute more to the mortality gap between the sexes than all other major causes of death (Appendix Table A.14). The decline in deaths due to road traffic accidents could, if this trend continues, also reduce the gender gap in young adult mortality.


## Overview

On 1 January 2015, France had 66 million inhabitants. Continuing the pattern of recent years, population growth was due mainly to a surplus of births over deaths, with a rate of natural increase of $0.42 \%$. Although the population is ageing, with nearly a quarter aged 60 or older, it remains younger than the European average. Notably, a higher proportion of the French population is under 20 years old. Estimated net migration in 2014 was 45,000 . The annual number of first residence permits (valid for at least one year) remained stable, as did the number of entries estimated from census data.

The number of births remained stable between 2013 and 2014. French fertility remains among the highest in Europe (it topped the rankings in 2013). The number of induced abortions increased in 2013. Over the long term, the trend in the rate of induced abortions follows the trend in the fertility rate.

Marriage rates (in heterosexual couples) continue to decrease. Marriage was opened to same-sex couples by the law of 17 May 2013, with 10,000 samesex marriages registered in 2014, and 7,000 in 2013. Since 2011, notaries have
been able to perform the registration procedures for PACS unions. Same-sex couples are more likely than other couples to sign their PACS before a notary.

The number of divorces has been declining slightly. The total divorce rate, which had been increasing steadily until 2011, decreased in 2012 and 2013, to 44.2 divorces per 100 marriages, around its 2003 level. Out of the 125,000 divorces pronounced in 2013, half were by mutual consent.

There were an estimated 559,300 deaths in the whole of France in 2014, a crude mortality rate of around 8.5 per 1,000 with a decrease of more than 10,000 deaths with respect to 2013. Life expectancy at birth was 79.2 years for men and 85.2 years for women for the whole of France ( 79.3 years and 85.5 years in metropolitan France), a gain of half a year with respect to 2013. Since the turn of the twenty-first century, this indicator has progressed by 4.0 years for men and 2.6 years for women. Male life expectancies increased more than female life expectancies over this time, decreasing the gender gap from 7.6 years in 2000 to 5.7 years ( 6.2 years in metropolitan France) in 2014.

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## (1)

## APPENDICES

## Appendix 1

## Annual census surveys: A measure of inflows to France with full population coverage

In January 2004, INSEE overhauled the French population census. The traditional complete count of the entire population every nine to ten years was replaced by annual census surveys (enquête annuelle de recensement, EAR). In municipalities (communes) with 10,000 or more inhabitants, $8 \%$ of the population, distributed throughout the territory, is surveyed each year. After five years, data from the entire territory of these municipalities over this period is analysed and the census results are calculated on the basis of this sample of $40 \%$ of their population. The other half of the population, residing in municipalities with fewer than 10,000 inhabitants, is exhaustively surveyed every five years, and annual estimates are computed by interpolation or extrapolation on the basis of the annual data. In addition to counting the population, the annual census surveys provide a wide range of other information. They cover all persons residing in France for at least one year, and, for new arrivals, those who plan to remain in France for at least one year.

INSEE uses the annual census surveys to estimate inflows to France. This information is then transmitted to Eurostat within the time frame defined by Regulation no. 862/2007 of the European Parliament and of the Council on Community statistics on migration and international protection (European Union, 2007). This regulation stipulates that data on a given year $N$ must be transmitted to Eurostat by the end of year N+1 at the latest.

Contrary to the AGDREF application for managing the administrative files of foreigners residing in France (the source used in this article), which can be used to count the numbers of residence permits issued, the annual census surveys provide data on inflows in the demographic sense of the term. These flows are consistent with the overall estimate of net migration to France, which includes not only the movements of immigrants, but also those of individuals born in France (or born French abroad). However, as in any survey, the data are self-reported.

The two main items in the annual census surveys used to measure migration flows are, first, year of arrival in France (a question asked only to those who were born abroad) and, second, place of residence before the survey. In the annual census surveys from 2004 to 2010, the question on previous residence referred to the situation five years before the survey date. In 2011, the questionnaire was changed for purposes of European harmonization, and the question has since been about place of residence one year before the survey date. This change was accompanied by a change in the method for estimating arrivals. Annual census surveys from 2011 onward
now make it possible to identify more precisely those persons who were residing abroad one year earlier.

This method for estimating arrivals is detailed in a working document (Brutel, 2014a). For persons born abroad who report their year of arrival in France, the method matches this information against the previous place of residence. This comparison, which sometimes reveals inconsistencies, is used to establish decision rules that determine whether or not an individual will be included in the number of arrivals for the year. For other persons, the main information used is previous place of residence. Finally, regardless of place of birth, other variables can be used to confirm the appropriateness of the choice, such as the date when the person moved into their current residence.

The following situations are counted as arrivals in the year $N$ on the basis of the annual census survey in year N+l (for EARs from 2011 onward):

- persons who reported year $N$ as their year of arrival;
- persons residing abroad on 1 January of year $N$ (except if they indicated year $N+1$ as their year of arrival);
- children born abroad in year $N$ (unless they arrived in year $N+1$ ).

For years $N$ between 2004 and 2009, the following cases are counted as arrivals on the basis of the annual census survey in $\mathrm{N}+1$ :

- persons who reported year $N$ as their year of arrival;
- children born abroad in year $N$ (unless they arrived in $N+1$ );
- to determine the number of arrivals for stays of more than one year in other cases, i.e. where no information is available on the person's year of arrival in France or whose year of arrival is later than N-4, the method chosen consists in estimating the number of arrivals in year $N$ by applying the rate of arrivals by sex and age observed in the 2011 EAR to each of the relevant populations (born in France or born abroad). These rates are defined, for each category of the population, as the ratio of the number of persons counted as arrivals in the 2011 EAR (i.e. persons who reported residing abroad on $01 / 01 / N$ ) to the total number in the category. This solution ensures overall levels that are fairly coherent between older and newer annual census surveys, although the existence of discontinuities cannot be ruled out (the methods and data used in the two cases are different).
Table A gives the total number of arrivals estimated using this method for the years 2004 to 2013, by continent of birth. A study published by INSEE in late 2014 details these inflows (for immigrants) over the period 2006-2012: the number of immigrants who arrived in France in 2012 is estimated at 230,000 (Brutel, 2014b).

Table A. Annual total number of arrivals for more than one year, by place of residence, 2004-2013

| Place of birth | Year of arrival in France |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| Europe | 171,100 | 167,900 | 172,700 | 165,800 | 165,800 | 161,600 | 173,900 | 184,500 | 190,700 | 194,100 |
| of which born in France | 78,700 | 78,400 | 78,400 | 78,300 | 77,900 | 78,100 | 78,000 | 81,400 | 76,600 | 77,000 |
| Africa | 82,500 | 77,700 | 73,500 | 72,800 | 74,500 | 77,500 | 72,800 | 74,400 | 77,000 | 78,300 |
| Asia | 34,100 | 32,500 | 33,000 | 34,600 | 32,600 | 35,300 | 31,800 | 34,800 | 34,400 | 35,800 |
| Americas and Oceania | 21,800 | 22,000 | 22,300 | 20,800 | 23,700 | 22,600 | 28,600 | 26,100 | 25,300 | 24,400 |
| Total | 309,500 | 300,100 | 301,500 | 294,000 | 296,600 | 297,000 | 307,100 | 319,800 | 327,400 | 332,600 |

Note: Discontinuities in data series between entries for 2009 and 2010.
Coverage: France (with Saint-Martin and Saint-Barthélemy until 2011, excluding Saint-Barthélemy from 2012 onward). Source: Annual census surveys from 2005 to 2014 (Brutel, 2014b).

## Matching of data from the annual census surveys with the administrative source (AGDREF)

How should the data from the annual census surveys be matched with those from the AGDREF database? AGDREF is a software tool for managing residence permits throughout France. To remain in France for more than three months, adult migrants who are nationals of a third country (countries outside the European Union apart from Iceland, Norway, Liechtenstein, Switzerland, Monaco, Andorra, and San Marino) are obliged to hold a residence permit issued by a prefecture. Migrants below age 18 are not required to hold a residence permit. The AGDREF database thus contains all information on residence permits and their renewals. A residence permit is characterized by its period of validity (between three months and 10 years; in the majority of cases one year) and by the associated reason for admission (employment, family, education, humanitarian, and other).

The annual census surveys and the AGDREF database thus do not cover exactly the same populations. These two distinct sources can only be compared by examining their shared coverage: adult migrants upon arrival in France, with third-country nationality, and residing, or planning to reside, in France for at least one year. The difficult lies in the fact that we do not know in advance whether migrants who obtain residence permits will reside, or plan to reside, for more than a year in France.

The AGDREF database indicates the number of residence permits issued each year. On average, for the period 2004-2012, the annual census survey counted 88,000 arrivals (in the shared population) and the AGDREF database recorded 157,000 first residence permits. To avoid counting migrants who come to France for more than three months but less than a year (and who are
thus not part of the census population), migration flows can be estimated by counting the number of residence permits valid for a year or more (but not renewals of residence permits with a validity of a year or more). However, this method is not reliable, for a number of reasons. First of all, certain permits issued in a year $N$ are issued to migrants who arrived in the year $N-1$ or even before: $37 \%$ of first permits issued in 2008 were issued to migrants who arrived in 2007 or earlier. For a portion of migrants, then, there is a discrepancy between year of arrival in France and the year in which they obtain their first residence permit. Moreover, the permit's period of validity may differ from the length of time that the migrant actually resides in France: a first residence permit that is valid for less than six months, if renewed, can lead to a stay of more than one year. Conversely, a migrant can obtain a first permit that is valid for a year or more but actually remain in the country for only six months.

To address these problems, renewals of residence permits and dates of arrival in France (information provided by the AGDREF database) can be taken into account. Cases where the time between a migrant's arrival and the expiry of their last non-renewed permit is less than one year are not counted (6,000 per year in 2004-2010). Migrants with an interval of one year or more between their date of arrival and the date of submitting their last registered application are counted (118,000 per year for the period 2004-2010), despite the discrepancy with regard to their date of arrival in France. For other migrants, we do not know whether they remained for more or less than a year (33,000 per year in 2004-2010). This method narrows the gaps between the two sources, but uncertainties and inconsistencies remain and clarification is needed (Arbel, Costemalle, 2015, forthcoming).

Chantal Brutel, Vianney Costemalle (INSEE)

## Appendix 2. Birth certificate (civil registration)




## (1)

## STATISTICAL APPENDIX

Table A.1. Population change (in thousands) and crude rates (per 1,000) ${ }^{(1)}$

| Year | Mid-year population | Live births | Deaths | Growth |  |  | Crude rates (per 1,000) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Natural increase | Net migration | Total | Birth rate | Death rate | Growth |  |
|  |  |  |  |  |  |  |  |  | Natural increase | Total |
| 1985 | 55,284 | 768 | 552 | + 216 | + 38 | + 254 | 13.9 | 10.0 | + 3.9 | + 4.6 |
| 1990 | 56,709 | 762 | 526 | + 236 | + 80 | + 316 | 13.4 | 9.3 | + 4.1 | + 5.6 |
| 1995 | 57,844 | 730 | 532 | + 198 | + 40 | $+238$ | 12.6 | 9.2 | + 3.4 | +4.1 |
| 2000 | 59,062 | 775 | 531 | + 244 | + 70 | + 314 | 13.1 | 9.0 | + 4.1 | + 5.3 |
| 2001 | 59,476 | 771 | 531 | $+240$ | + 85 | + 325 | 13.0 | 8.9 | +4.1 | + 5.5 |
| 2002 | 59,894 | 762 | 535 | + 226 | +95 | + 321 | 12.7 | 8.9 | + 3.8 | + 5.4 |
| 2003 | 60,304 | 761 | 552 | + 209 | + 100 | + 309 | 12.6 | 9.2 | + 3.4 | + 5.1 |
| 2004 | 60,734 | 768 | 509 | + 259 | + 105 | + 364 | 12.6 | 8.4 | + 4.2 | +6.0 |
| 2005 | 61,181 | 774 | 528 | $+247$ | +95 | + 342 | 12.7 | 8.6 | +4.1 | + 5.6 |
| 2006 | 61,597 | 797 | 516 | + 280 | + 115 | + 395 | 12.9 | 8.4 | + 4.6 | + 6.4 |
| 2007 | 61,965 | 786 | 521 | + 265 | + 75 | + 340 | 12.7 | 8.4 | + 4.3 | + 5.5 |
| 2008 | 62,300 | 796 | 532 | + 264 | + 67 | + 331 | 12.8 | 8.6 | +4.2 | + 5.3 |
| 2009 | 62,615 | 793 | 538 | + 255 | + 44 | + 300 | 12.7 | 8.6 | +4.1 | + 4.8 |
| 2010 | 62,918 | 802 | 540 | + 262 | +43 | + 305 | 12.8 | 8.6 | +4.2 | $+4.8$ |
| 2011 | 63,224 | 793 | 535 | + 258 | $+47$ | + 305 | 12.6 | 8.5 | + 4.1 | $+4.8$ |
| 2012* | 63,514 | 790 | 559 | + 231 | + 45 | + 276 | 12.4 | 8.8 | + 3.6 | $+4.3$ |
| 2013* | 63,786 | 782 | 558 | + 224 | + 45 | + 269 | 12.2 | 8.8 | + 3.4 | +4.1 |
| 2014* | 64,062 | 782 | 547 | + 235 | +45 | + 280 | 12.2 | 8.5 | + 3.7 | +4.4 |

${ }^{(1)}$ Population and rates revised after the 2011 census.

* Provisional.

Coverage: Metropolitan France.
Source: INSEE, Demographic Surveys and Studies Division, Bellamy and Beaumel (2015).

Table A.2. Age distribution of the population on 1 January (\%)

| Age group | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2011 | 2012* | 2013* | 2014* | 2015* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0-19 | 29.2 | 27.8 | 26.1 | 25.6 | 25.0 | 24.5 | 24.5 | 24.4 | 24.4 | 24.4 | 24.4 |
| 20-59 | 52.7 | 53.2 | 53.8 | 53.8 | 54.1 | 52.7 | 52.2 | 51.9 | 51.5 | 51.6 | 50.8 |
| 60+ | 18.1 | 19.0 | 20.1 | 20.6 | 20.9 | 22.8 | 23.3 | 23.7 | 24.1 | 24.4 | 24.8 |
| including: |  |  |  |  |  |  |  |  |  |  |  |
| 65+ | 12.8 | 13.9 | 15.0 | 16.0 | 16.5 | 16.8 | 16.9 | 17.3 | 17.7 | 18.2 | 18.6 |
| 75+ | 6.3 | 6.8 | 6.1 | 7.2 | 8.1 | 8.9 | 9.0 | 9.1 | 9.2 | 9.1 | 9.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| * Provisional. <br> Coverage: Metropolitan France. <br> Source: INSEE. Demographic Surveys and Studies Division. series revised after the 2011 census. |  |  |  |  |  |  |  |  |  |  |  |

Table A.3. Number of first residence permits of at least one year granted to citizens of third countries (constant geographical area) by first year of validity

| Year admitted <br> for residence | Total | Of which minors |
| :---: | :---: | :---: |
| 2000 | 137,027 | 16,239 |
| 2001 | 164,866 | 22,139 |
| 2002 | 187,353 | 24,169 |
| 2003 | 200,709 | 24,610 |
| 2004 | 201,531 | 29,139 |
| 2005 | 199,892 | 31,141 |
| 2006 | 195,042 | 27,227 |
| 2007 | 177,411 | 24,776 |
| 2008 | 184,329 | 20,569 |
| 2009 | 189,501 | 18,536 |
| 2010 | 184,534 | 17,988 |
| 2011 | 177,741 | 17,599 |
| 2013 | 180,077 | 17,509 |

Coverage: Permits granted in France and abroad to citizens of countries not listed in Footnote 5. Permits granted in the year $n$ and registered in the database extraction performed in July of the year $n+2$, except for the year 2009, for which extraction was performed in July 2012.
Source: Authors' calculations based on AGDREF data.

Table A.4. Fertility since 1970

| Year | Sum of age-specific rates (per 100 women) |  |  | Mean age at childbearing |  | Non-marital fertility |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ages 15-27 | Ages 28 and over | Total (TFR) | All births | $\begin{aligned} & \text { First } \\ & \text { births }{ }^{(1)} \end{aligned}$ | Sum of agespecific rates (per 1000 women) | Share in total fertility (\%) |
| 1970 | 143 | 104 | 247 | 27.2 | 23.9 | 16 | 6.4 |
| 1975 | 118 | 74 | 193 | 26.7 | 24.1 | 16 | 8.5 |
| 1980 | 116 | 78 | 194 | 26.8 | 24.5 | 22 | 11.4 |
| 1985 | 99 | 82 | 181 | 27.5 | 25.2 | 36 | 19.6 |
| 1990 | 84 | 94 | 178 | 28.3 | 26.0 | 53 | 30.1 |
| 1995 | 69 | 102 | 171 | 29.0 | 26.8 | 65 | 37.9 |
| 2000 | 69 | 119 | 187 | 29.4 | 27.4 | 81 | 43.2 |
| 2001 | 69 | 119 | 188 | 29.4 |  | 83 | 44.3 |
| 2002 | 67 | 119 | 186 | 29.5 |  | 84 | 44.7 |
| 2003 | 66 | 121 | 187 | 29.5 |  | 86 | 45.6 |
| 2004 | 67 | 123 | 190 | 29.6 | 27.6 | 89 | 46.8 |
| 2005 | 66 | 126 | 192 | 29.7 | 27.7 | 92 | 47.9 |
| 2006 | 67 | 131 | 198 | 29.8 | 27.8 | 98 | 49.7 |
| 2007 | 65 | 131 | 196 | 29.8 | 27.9 | 100 | 50.9 |
| 2008 | 66 | 133 | 199 | 29.9 | 27.9 | 103 | 51.6 |
| 2009 | 66 | 134 | 199 | 29.9 | 28.0 | 104 | 52.9 |
| 2010 | 66 | 136 | 202 | 30.0 | 28.1 | 109 | 54.2 |
| 2011 | 64 | 136 | 200 | 30.1 |  | 110 | 55.2 |
| 2012* | 63 | 136 | 199 | 30.1 |  | 112 | 56.0 |
| 2013* | 61 | 136 | 197 | 30.2 |  | na | na |
| 2014* | na | na | 198 | 30.3 |  | na | na |
| na: not available. <br> * Provisional data published by INSEE. <br> Coverage: Metropolitan France. <br> Sources: INSEE, Surveys and Demographic Studies Division. Series revised after the 2011 census except : <br> ${ }^{(1)}$ 1970-1995: Laurent Toulemon, from EHF (Study of Family History) 1999; 2000: estimate based on civil registration; 2004-2010: Davie and Niel (2012) Table 3. |  |  |  |  |  |  |  |

Table A.5. Cohort fertility: cumulative fertility up to selected ages, estimated completed fertility (mean number of children per 100 women), and mean age at childbearing (in years and tenths of years)

| Birth cohort | Cumulative fertility per 100 women (age in completed years) |  |  |  | Projection at constant rate* |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 24 | 29 | 34 | 39 | Completed fertility | Mean age at child-bearing |
| 1930 | 90 | 177 | 231 | 256 | 263 | 27.5 |
| 1935 | 89 | 181 | 233 | 254 | 258 | 27.1 |
| 1940 | 96 | 181 | 225 | 238 | 241 | 26.4 |
| 1945 | 99 | 174 | 206 | 219 | 222 | 26.0 |
| 1950 | 89 | 154 | 192 | 207 | 211 | 26.5 |
| 1955 | 77 | 148 | 190 | 209 | 213 | 27.0 |
| 1960 | 66 | 139 | 184 | 206 | 212 | 27.7 |
| 1961 | 63 | 135 | 181 | 203 | 209 | 27.9 |
| 1962 | 60 | 131 | 179 | 202 | 208 | 28.1 |
| 1963 | 56 | 127 | 176 | 200 | 207 | 28.3 |
| 1964 | 53 | 122 | 173 | 198 | 205 | 28.5 |
| 1965 | 49 | 118 | 170 | 196 | 204 | 28.7 |
| 1966 | 46 | 114 | 168 | 195 | 202 | 28.9 |
| 1967 | 44 | 111 | 167 | 194 | 202 | 29.1 |
| 1968 | 42 | 109 | 166 | 193 | 201 | 29.2 |
| 1969 | 39 | 105 | 163 | 192 | 200 | 29.4 |
| 1970 | 37 | 103 | 162 | 192 | 200 | 29.5 |
| 1971 | 35 | 100 | 160 | 191 | 199 | 29.7 |
| 1972 | 33 | 98 | 159 | 191 | 199 | 29.8 |
| 1973 | 32 | 97 | 159 | 191 | 200 | 29.9 |
| 1974 | 31 | 96 | 160 | 192 | 200 | 30.0 |
| 1975 | 30 | 96 | 161 |  | 201 | 30.0 |
| 1976 | 30 | 95 | 160 |  | 201 | 30.0 |
| 1977 | 31 | 96 | 161 |  | 203 | 30.1 |
| 1978 | 31 | 95 | 162 |  | 203 | 30.1 |
| 1979 | 31 | 96 | 163 |  | 205 | 30.1 |
| 1980 | 31 | 95 |  |  |  |  |
| 1981 | 32 | 96 |  |  |  |  |
| 1982 | 32 | 96 |  |  |  |  |
| 1983 | 31 | 95 |  |  |  |  |
| 1984 | 32 | 95 |  |  |  |  |
| 1985 | 31 |  |  |  |  |  |
| 1986 | 31 |  |  |  |  |  |
| 1987 | 31 |  |  |  |  |  |
| 1988 | 30 |  |  |  |  |  |
| 1989 | 30 |  |  |  |  |  |
| * For the 1930-62 cohorts, observed completed fertility and mean age at childbearing; for later cohorts, unobserved rates are assumed equal to rates observed at the same age in 2013. <br> Coverage: Metropolitan France. <br> Source: Calculations and estimates based on data from INSEE, Demographic Surveys and Studies Division. |  |  |  |  |  |  |

Table A.6. Total fertility rates in Europe (children per woman)

|  | Year |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 | 2011 | 2012 | 2013 |
| Austria | 1.65 | 1.47 | 1.46 | 1.41 | 1.36 | 1.40 | 1.44 | 1.43 | 1.44 | 1.44 |
| Belgium | 1.68 | 1.51 | 1.62 | 1.56 | 1.67 | 1.76 | 1.86 | 1.81 | 1.79 | 1.75 |
| Bulgaria | 2.05 | 1.97 | 1.82 | 1.23 | 1.26 | 1.37 | 1.57 | 1.51 | 1.50 | 1.48 |
| Croatia |  |  |  |  |  | 1.50 | 1.55 | 1.48 | 1.51 | 1.46 |
| Cyprus | - | 2.43 | 2.41 | 2.03 | 1.64 | 1.48 | 1.44 | 1.35 | 1.39 | 1.30 |
| Czech Rep. | 2.08 | 1.95 | 1.90 | 1.28 | 1.15 | 1.29 | 1.51 | 1.43 | 1.45 | 1.46 |
| Denmark | 1.55 | 1.45 | 1.67 | 1.80 | 1.78 | 1.80 | 1.87 | 1.75 | 1.73 | 1.67 |
| Estonia | 2.02 | 2.13 | 2.05 | 1.38 | 1.36 | 1.52 | 1.72 | 1.61 | 1.56 | 1.52 |
| Finland | 1.63 | 1.64 | 1.78 | 1.81 | 1.73 | 1.80 | 1.87 | 1.83 | 1.80 | 1.75 |
| France | - | - | - | - | 1.89 | 1.94 | 2.03 | 2.01 | 2.01 | 1.99 |
| France (metropolitan) | 1.95 | 1.81 | 1.78 | 1.71 | 1.87 | 1.92 | 2.01 | 2.00 | 1.99 | 1.98 |
| Germany | 1.56 | 1.37 | 1.45 | 1.25 | 1.38 | 1.34 | 1.39 | 1.36 | 1.38 | 1.39 |
| Greece | 2.23 | 1.67 | 1.40 | 1.31 | 1.27 | 1.32 | 1.47 | 1.40 | 1.35 | 1.30 |
| Hungary | 1.91 | 1.85 | 1.87 | 1.57 | 1.32 | 1.31 | 1.25 | 1.23 | 1.34 | 1.35 |
| Ireland | 3.21 | 2.48 | 2.11 | 1.84 | 1.89 | 1.86 | 2.05 | 2.03 | 2.01 | 1.96 |
| Italy | 1.64 | 1.42 | 1.33 | 1.19 | 1.26 | 1.34 | 1.46 | 1.44 | 1.43 | 1.39 |
| Latvia | - | - | - | - | 1.25 | 1.38 | 1.36 | 1.33 | 1.44 | 1.52 |
| Lithuania | 1.99 | 2.08 | 2.03 | 1.55 | 1.39 | 1.29 | 1.50 | 1.55 | 1.60 | 1.59 |
| Luxembourg | 1.50 | 1.38 | 1.60 | 1.70 | 1.76 | 1.63 | 1.63 | 1.52 | 1.57 | 1.55 |
| Malta | 1.99 | 1.95 | 2.04 | 1.81 | 1.70 | 1.38 | 1.36 | 1.45 | 1.43 | 1.38 |
| Netherlands | 1.60 | 1.51 | 1.62 | 1.53 | 1.72 | 1.71 | 1.79 | 1.76 | 1.72 | 1.68 |
| Poland | - | - | 2.06 | 1.62 | 1.37 | 1.24 | 1.41 | 1.33 | 1.33 | 1.29 |
| Portugal | 2.25 | 1.72 | 1.56 | 1.41 | 1.55 | 1.41 | 1.39 | 1.35 | 1.28 | 1.21 |
| Romania | 2.43 | 2.31 | 1.83 | 1.33 | 1.31 | 1.40 | 1.59 | 1.47 | 1.52 | 1.41 |
| Slovakia | 2.32 | 2.26 | 2.09 | 1.52 | 1.30 | 1.27 | 1.43 | 1.45 | 1.34 | 1.34 |
| Slovenia | - | 1.71 | 1.46 | 1.29 | 1.26 | 1.26 | 1.57 | 1.56 | 1.58 | 1.55 |
| Spain | 2.20 | 1.64 | 1.36 | 1.17 | 1.23 | 1.33 | 1.37 | 1.34 | 1.32 | 1.27 |
| Sweden | 1.68 | 1.74 | 2.13 | 1.73 | 1.54 | 1.77 | 1.98 | 1.90 | 1.91 | 1.89 |
| United Kingdom | 1.90 | 1.79 | 1.83 | 1.71 | 1.64 | 1.76 | 1.92 | 1.91 | 1.92 | 1.83 |
| Iceland | 2.48 | 1.93 | 2.30 | 2.08 | 2.08 | 2.05 | 2.20 | 2.02 | 2.04 | 1.93 |
| Norway | 1.72 | 1.68 | 1.93 | 1.87 | 1.85 | 1.84 | 1.95 | 1.88 | 1.85 | 1.78 |
| Switzerland | 1.55 | 1.52 | 1.58 | 1.48 | 1.50 | 1.42 | 1.52 | 1.52 | 1.52 | 1.52 |

Source: Eurostat (site accessed in June 2015).

Table A.7. Cohort fertility in Europe

| Cohort | Completed fertility (per woman) |  |  |  |  | Mean age at childbearing (years) |  |  |  |  | Lastavailable year |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & 1954 \\ & 1955 \end{aligned}$ | $\begin{aligned} & 1959 \\ & 1960 \end{aligned}$ | $\begin{aligned} & 1964 \\ & 1965 \end{aligned}$ | $\begin{gathered} 1969 \\ 1970 \end{gathered}$ | $\begin{gathered} 1974 \\ 1975^{(1)} \end{gathered}$ | $\begin{aligned} & 1954 \\ & 1955 \end{aligned}$ | $\begin{aligned} & 1959 \\ & 1960 \end{aligned}$ | $\begin{aligned} & 1964 \\ & 1965 \end{aligned}$ | $\begin{aligned} & 1969 \\ & 1970 \end{aligned}$ | $\begin{gathered} 1974 \\ 1975^{(1)} \end{gathered}$ |  |
| Austria | 1.77 | 1.71 | 1.66 | 1.61 | 1.63-1.64 | 25.8 | 26.5 | 27.3 | 28.2 | 28.8-28.9 | 2010 |
| Belgium | 1.83 | 1.87 | 1.84 | 1.84 | 1.83-1.87 | 26.7 | 27.4 | 28.3 | 29.2 | 29.6-29.8 | 2009 |
| Bulgaria | 2.04 | 1.96 | 1.84 | 1.66 | 1.56 | 24.0 | 23.7 | 23.6 | 24.3 | 26.0 | 2010 |
| Czech Rep. | 2.08 | 2.03 | 1.95 | 1.87 | 1.77-1.78 | 24.5 | 24.5 | 24.9 | 25.7 | 27.7-27.9 | 2010 |
| Denmark | 1.84 | 1.88 | 1.93 | 1.98 | 1.96-1.98 | 27.2 | 28.4 | 29.2 | 29.7 | 30.2-30.3 | 2010 |
| Estonia |  |  |  | 1.91 | 1.83-1.86 |  |  |  | 26.4 | 27.7-27.9 | 2010 |
| Finland | 1.88 | 1.95 | 1.92 | 1.89 | 1.89-1.90 | 27.9 | 28.6 | 29.2 | 29.6 | 30.0-30.1 | 2010 |
| France (metro.) | 2.13 | 2.12 | 2.04 | 1.99 | 2.01-2.04 | 27.0 | 27.6 | 28.6 | 29.5 | 29.9-30.1 | 2010 |
| Germany | 1.66 | 1.66 | 1.56 | 1.50 | 1.54-1.56 | 26.4 | 27.1 | 28.1 | 29.0 | 29.5-29.6 | 2010 |
| Greece | 2.02 | 1.97 | 1.79 | 1.64 | 1.55-1.58 | 25.9 | 26.0 | 27.0 | 28.7 | 29.9-30.0 | 2010 |
| Hungary | 1.96 | 2.02 | 1.98 | 1.88 | 1.70-1.71 | 24.9 | 25.0 | 25.5 | 26.4 | 27.7-27.8 | 2010 |
| Ireland |  |  | 2.21 | 2.12 | 2.06-2.12 |  |  | 30.2 | 31.0 | 31.3-31.6 | 2010 |
| Italy | 1.80 | 1.69 | 1.55 | 1.47 | 1.42-1.45 | 27.1 | 27.9 | 29.3 | 30.6 | 31.2-31.4 | 2010 |
| Latvia $^{(2)}$ | - | - | - | - | - | - | - | - | - |  |  |
| Lithuania | 1.97 | 1.92 | 1.72 | 1.77 | 1.72-1.73 | 26.3 | 26.0 | 26.1 | 26.0 | 26.8 | 2010 |
| Luxembourg | 1.67 | 1.75 | 1.83 | 1.85 | 1.80-1.82 | 27.6 | 28.6 | 29.2 | 29.7 | 29.9-30.0 | 2010 |
| Netherlands | 1.88 | 1.86 | 1.79 | 1.77 | 1.78-1.80 | 28.1 | 29.2 | 30.0 | 30.6 | 30.7-30.8 | 2010 |
| Poland |  |  |  | 1.85 | 1.61-1.62 |  |  |  | 26.1 | 27-3-27.4 | 2010 |
| Portugal | 2.03 | 1.90 | 1.83 | 1.69 | 1.57-1.58 | 26.2 | 26.4 | 27.4 | 28.3 | 29.0-29.1 | 2010 |
| Romania | 2.33 | 2.16 | 1.94 | 1.63 | 1.55 | 25.0 | 24.5 | 24.2 | 25.2 | 26.2-26.3 | 2010 |
| Slovakia | 2.23 | 2.17 | 2.05 | 1.92 | 1.73 | 25.2 | 25.0 | 25.0 | 25.4 | 26.8 | 2010 |
| Slovenia |  |  | 1.79 | 1.71 | 1.66-1.67 |  |  | 25.9 | 27.3 | 28.9-29.0 | 2010 |
| Spain | 1.93 | 1.80 | 1.65 | 1.50 | 1.37-1.41 | 27.2 | 27.8 | 29.2 | 30.6 | 31.6-31.8 | 2010 |
| Sweden | 2.02 | 2.05 | 2.03 | 1.98 | 1.96-1.99 | 27.9 | 28.6 | 28.9 | 29.6 | 30.6-30.7 | 2010 |
| United Kingdom | 2.01 | 1.97 | 1.92 | 1.88 | 1.90-1.93 | 27.1 | 27.8 | 28.4 | 28.9 | 29.4-29.5 | 2010 |
| Iceland | 2.55 | 2.46 | 2.39 | 2.32 | 2.26-2.27 | 26.6 | 27.4 | 28.0 | 28.4 | 29.3-29.4 | 2010 |
| Norway | 2.05 | 2.09 | 2.07 | 2.05 | 2.00-2.01 | 27.0 | 28.0 | 28.6 | 29.1 | 29.7-29.8 | 2010 |
| Switzerland | 1.75 | 1.78 | 1.69 | 1.65 | 1.63-1.65 | 28.0 | 28.7 | 29.5 | 30.2 | 30.7-30.8 | 2010 |
| (1) The estimate is based on rates that remain unchanged with respect to the last observation year. <br> (2) The series of published rates (2002-2010) cannot be used to calculate and estimate completed fertility. <br> Sources: Calculations and estimations based on age-specific fertility rates published on the Eurostat website (site accessed 18 July 2013). |  |  |  |  |  |  |  |  |  |  |  |

Table A.8. Number of induced abortions and annual indices since 1976

| Year | Abortions reported in notifications ${ }^{(1)}$ | Abortions recorded in $S A E^{(2)}$ | Abortions estimated by INED ${ }^{(3)}$ | Abortions per 100 live births ${ }^{(4)}$ | Annual abortions per 1000 women aged $15-49^{(4)}$ | Mean number of abortions per woman ${ }^{(4)}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1976 | 134,173 |  | 246,000 | 34.1 | 19.6 | 0.66 |
| 1981 | 180,695 |  | 245,000 | 30.4 | 18.7 | 0.62 |
| 1986 | 166,797 |  | 221,000 | 28.4 | 16.1 | 0.53 |
| 1990 | 170,423 |  | 209,000 | 27.4 | 14.8 | 0.49 |
| 1991 | 172,152 |  | 206,000 | 27.1 | 14.4 | 0.48 |
| 1992 | 167,777 |  | 206,000 | 27.7 | 14.3 | 0.48 |
| 1993 | 166,921 |  | 206,000 | 28.9 | 14.3 | 0.49 |
| 1994 | 163,180 |  | 207,000 | 29.1 | 14.3 | 0.49 |
| 1995 | 156,181 | 179,648 | 207,000 | 28.4 | 14.2 | 0.50 |
| 1996 | 162,792 | 187,114 | 207,000 | 28.2 | 14.2 | 0.50 |
| 1997 | 163,985 | 188,796 | 207,000 | 28.5 | 14.2 | 0.50 |
| 1998 |  | 195,960 | 207,000 | 28.0 | 14.2 | 0.51 |
| 1999 |  | 196,885 | 206,000 | 27.7 | 14.2 | 0.51 |
| 2000 |  | 192,174 | 206,000 | 26.6 | 14.2 | 0.51 |
| 2001 |  | 202,180 | 206,000 | 26.7 | 14.3 | 0.51 |
| 2002 | 137,497 | 206,596 |  | 27.1 | 14.3 | 0.51 |
| 2003 |  | 203,300 |  | 26.7 | 14.0 | 0.50 |
| 2004 |  | 210,664 |  | 27.4 | 14.5 | 0.52 |
| 2005 | 166,985 | 206,311 |  | 26.6 | 14.2 | 0.51 |
| 2006 | 174,561 | 215,390 |  | 27.0 | 14.9 | 0.53 |
| 2007 | 185,498 | 213,382 |  | 27.1 | 14.7 | 0.53 |
| 2008 | 180,108 | 209,245 |  | 26.3 | 14.5 | 0.52 |
| 2009 | 171,152 | 209,987 |  | 26.5 | 14.6 | 0.53 |
| 2010 | 172,505 | 213,317* |  | 26.4 | 14.8 | 0.53 |
| 2011 | 170,081 | 209,291* |  | 26.4* | 14.7* | 0.53* |
| 2012 | 156, 824 | 207,120* |  | 26.2* | 14.5* | 0.53* |
| 2013 | 149,579 | 216,697* |  | 26.7* | 15.3* | 0.55* |

* Provisional.
(1) Statistics from notifications including elective and therapeutic abortions.
(2) Administrative statistics based on recorded medical procedures. Data from 2010 includes data from the CNAM-TS and takes account of abortions covered by specific health insurance funds (MSA and RSI). Source: DREES and CNAM-TS from 2010.
(3) INED estimate (elective abortions). From 2002, the hospital statistics are considered exhaustive. Source: Rossier and Pirus (2007).
(4) Based on INED statistics up to 2001, and on hospital statistics from 2002.

Coverage: Metropolitan France.
Table A.9. Characteristics of nuptiality and divorce since 1985

|  |  |  <br>  <br>  $\stackrel{\sim}{\infty} \underset{\sim}{\sim}$ N |
| :---: | :---: | :---: |
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[^12]Table A.10. Characteristics of nuptiality by birth cohort
Men

| Male birth <br> cohort | Proportion <br> ever-married <br> at age 49* | Mean age <br> at first marriage* <br> (years) | Proportion ever-married |  |
| :--- | :---: | :---: | :---: | :---: |
|  | 0.88 | 24.5 | At age 24 | At age 30 |
| 1943 | 0.87 | 24.5 | 0.55 | 0.81 |
| 1948 | 0.85 | 25.0 | 0.56 | 0.80 |
| 1953 | 0.79 | 26.4 | 0.52 | 0.75 |
| 1958 | 0.72 | 28.2 | 0.39 | 0.64 |
| 1963 | 0.70 | 28.9 | 0.23 | 0.52 |
| 1965 | 0.68 | 29.4 | 0.19 | 0.47 |
| 1967 | 0.66 | 29.9 | 0.16 | 0.44 |
| 1969 | 0.64 | 30.4 | 0.12 | 0.41 |
| 1971 | 0.63 | 30.6 | 0.09 | 0.39 |
| 1973 |  |  | 0.08 | 0.37 |
| 1975 |  |  | 0.06 | 0.34 |
| 1977 |  |  | 0.06 | 0.32 |
| 1979 |  |  | 0.05 | 0.29 |
| 1981 |  |  | 0.05 |  |
| 1983 |  |  |  | 0.04 |

Women

| Female birth cohort | Proportion ever-married at age 49* | Mean age at first marriage* (years) | Proportion ever-married |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | At age 22 | At age 28 |
| 1945 | 0.92 | 22.3 | 0.59 | 0.86 |
| 1950 | 0.90 | 22.6 | 0.57 | 0.83 |
| 1955 | 0.87 | 22.9 | 0.53 | 0.77 |
| 1960 | 0.82 | 24.3 | 0.42 | 0.67 |
| 1965 | 0.75 | 26.3 | 0.24 | 0.54 |
| 1967 | 0.73 | 26.9 | 0.19 | 0.50 |
| 1969 | 0.70 | 27.5 | 0.15 | 0.46 |
| 1971 | 0.68 | 28.1 | 0.12 | 0.43 |
| 1973 | 0.67 | 28.6 | 0.09 | 0.40 |
| 1975 | 0.65 | 28.9 | 0.07 | 0.38 |
| 1977 |  |  | 0.07 | 0.36 |
| 1979 |  |  | 0.06 | 0.33 |
| 1981 |  |  | 0.06 | 0.30 |
| 1983 |  |  | 0.05 |  |
| 1985 |  |  | 0.05 |  |
| 1987 |  |  | 0.04 |  |

* Unobserved marriage probabilities are assumed to be stable at the average level observed in 2010.

Coverage: Metropolitan France.
Source: Calculations and estimates based on INSEE data.

Table A.11. Characteristics of overall mortality, 1946-2014

| Year | Life expectancy (years) |  |  |  | Mortality rate (per 1,000 live births) |  | Survivors at age 60 (per 1,000 at birth) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | At birth |  | At age 60 |  | Infant ${ }^{(1)}$ | Neonatal ${ }^{(2)}$ | Male | Female |
|  | Male | Female | Male | Female |  |  |  |  |
| 1946 | 59.9 | 65.2 | 15.4 | 18.0 | 77.8 | na | 655 | 741 |
| 1947 | 61.2 | 66.7 | 15.5 | 18.2 | 71.1 | na | 670 | 762 |
| 1948 | 62.7 | 68.8 | 15.6 | 18.7 | 55.9 | na | 685 | 785 |
| 1949 | 62.2 | 67.6 | 14.9 | 17.7 | 60.3 | na | 685 | 777 |
| 1950 | 63.4 | 69.2 | 15.4 | 18.4 | 52.0 | 26.0 | 697 | 795 |
| 1951 | 63.1 | 68.9 | 14.9 | 18.0 | 50.8 | 24.0 | 693 | 794 |
| 1952 | 64.4 | 70.2 | 15.5 | 18.6 | 45.2 | 22.4 | 711 | 810 |
| 1953 | 64.3 | 70.3 | 15.0 | 18.1 | 41.9 | 22.0 | 709 | 813 |
| 1954 | 65.0 | 71.2 | 15.5 | 18.9 | 40.7 | 21.6 | 719 | 823 |
| 1955 | 65.2 | 71.5 | 15.4 | 18.9 | 38.6 | 20.8 | 722 | 829 |
| 1956 | 65.2 | 71.7 | 15.2 | 18.7 | 36.2 | 20.5 | 721 | 833 |
| 1957 | 65.5 | 72.2 | 15.3 | 19.0 | 33.8 | 19.5 | 726 | 839 |
| 1958 | 66.8 | 73.2 | 16.0 | 19.5 | 31.4 | 18.9 | 749 | 853 |
| 1959 | 66.8 | 73.4 | 15.9 | 19.6 | 29.6 | 18.1 | 748 | 854 |
| 1960 | 67.0 | 73.6 | 15.7 | 19.5 | 27.4 | 17.6 | 752 | 858 |
| 1961 | 67.5 | 74.4 | 16.1 | 20.1 | 25.7 | 16.7 | 756 | 865 |
| 1962 | 67.0 | 73.9 | 15.7 | 19.6 | 25.7 | 16.7 | 751 | 863 |
| 1963 | 66.8 | 73.9 | 15.5 | 19.5 | 25.6 | 16.6 | 749 | 862 |
| 1964 | 67.7 | 74.8 | 16.0 | 20.3 | 23.4 | 15.9 | 761 | 869 |
| 1965 | 67.5 | 74.7 | 15.7 | 20.1 | 21.9 | 15.2 | 757 | 869 |
| 1966 | 67.8 | 75.2 | 16.1 | 20.5 | 21.7 | 14.9 | 762 | 872 |
| 1967 | 67.8 | 75.2 | 15.9 | 20.4 | 20.7 | 14.5 | 762 | 873 |
| 1968 | 67.8 | 75.2 | 15.8 | 20.4 | 20.4 | 14.2 | 763 | 875 |
| 1969 | 67.4 | 75.1 | 15.6 | 20.2 | 19.6 | 13.7 | 758 | 873 |
| 1970 | 68.4 | 75.9 | 16.2 | 20.8 | 18.2 | 12.6 | 773 | 880 |
| 1971 | 68.3 | 75.9 | 16.2 | 20.8 | 17.2 | 12.0 | 770 | 880 |
| 1972 | 68.5 | 76.2 | 16.4 | 21.1 | 16.0 | 11.2 | 770 | 882 |
| 1973 | 68.7 | 76.3 | 16.4 | 21.0 | 15.4 | 10.6 | 774 | 886 |
| 1974 | 68.9 | 76.7 | 16.5 | 21.3 | 14.6 | 9.9 | 776 | 888 |
| 1975 | 69.0 | 76.9 | 16.5 | 21.3 | 13.8 | 9.2 | 777 | 890 |
| 1976 | 69.2 | 77.2 | 16.7 | 21.5 | 12.5 | 8.1 | 776 | 893 |
| 1977 | 69.7 | 77.8 | 17.1 | 22.0 | 11.4 | 7.4 | 783 | 898 |
| 1978 | 69.8 | 78.0 | 17.0 | 22.0 | 10.7 | 6.7 | 787 | 899 |
| 1979 | 70.1 | 78.3 | 17.2 | 22.3 | 10.0 | 6.0 | 788 | 902 |
| 1980 | 70.2 | 78.4 | 17.3 | 22.4 | 10.0 | 5.8 | 790 | 903 |
| 1981 | 70.4 | 78.5 | 17.3 | 22.3 | 9.7 | 5.5 | 793 | 906 |
| 1982 | 70.7 | 78.9 | 17.7 | 22.7 | 9.5 | 5.3 | 795 | 908 |
| 1983 | 70.7 | 78.8 | 17.6 | 22.6 | 9.1 | 5.0 | 797 | 908 |
| 1984 | 71.2 | 79.3 | 17.9 | 23.0 | 8.3 | 4.7 | 801 | 912 |

Table A. 11 (cont'd). Characteristics of overall mortality, 1946-2014

| Year | Life expectancy (years) |  |  |  | Mortality rate (per 1,000 live births) |  | Survivors at age 60 (per 1,000 at birth) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | At birth |  | At age 60 |  | Infant ${ }^{(1)}$ | Neonatal ${ }^{(2)}$ | Male | Female |
|  | Male | Female | Male | Female |  |  |  |  |
| 1985 | 71.3 | 79.4 | 17.9 | 23.0 | 8.3 | 4.6 | 803 | 913 |
| 1986 | 71.5 | 79.7 | 18.1 | 23.2 | 8.0 | 4.3 | 807 | 915 |
| 1987 | 72.0 | 80.3 | 18.4 | 23.7 | 7.8 | 4.1 | 814 | 918 |
| 1988 | 72.3 | 80.5 | 18.7 | 23.9 | 7.8 | 4.1 | 816 | 919 |
| 1989 | 72.5 | 80.6 | 18.8 | 24.0 | 7.5 | 3.8 | 818 | 920 |
| 1990 | 72.7 | 81.0 | 19.0 | 24.2 | 7.3 | 3.6 | 822 | 923 |
| 1991 | 72.9 | 81.2 | 19.2 | 24.4 | 7.3 | 3.5 | 824 | 923 |
| 1992 | 73.2 | 81.5 | 19.4 | 24.6 | 6.8 | 3.3 | 827 | 925 |
| 1993 | 73.3 | 81.5 | 19.4 | 24.6 | 6.5 | 3.1 | 828 | 924 |
| 1994 | 73.7 | 81.9 | 19.7 | 25.0 | 5.9 | 3.2 | 832 | 926 |
| 1995 | 73.9 | 81.9 | 19.7 | 24.9 | 4.9 | 2.9 | 836 | 928 |
| 1996 | 74.1 | 82.1 | 19.7 | 25.0 | 4.8 | 3.0 | 841 | 929 |
| 1997 | 74.6 | 82.3 | 19.9 | 25.2 | 4.7 | 3.0 | 847 | 931 |
| 1998 | 74.8 | 82.4 | 20.0 | 25.3 | 4.6 | 2.9 | 850 | 931 |
| 1999 | 75.0 | 82.5 | 20.2 | 25.3 | 4.3 | 2.7 | 852 | 932 |
| 2000 | 75.3 | 82.8 | 20.4 | 25.6 | 4.4 | 2.8 | 855 | 933 |
| 2001 | 75.5 | 82.9 | 20.6 | 25.7 | 4.5 | 2.9 | 855 | 933 |
| 2002 | 75.8 | 83.1 | 20.8 | 25.8 | 4.1 | 2.7 | 857 | 934 |
| 2003 | 75.9 | 83.0 | 20.8 | 25.6 | 4.0 | 2.6 | 859 | 935 |
| 2004 | 76.7 | 83.9 | 21.5 | 26.5 | 3.9 | 2.6 | 868 | 937 |
| 2005 | 76.8 | 83.9 | 21.4 | 26.8 | 3.6 | 2.3 | 868 | 939 |
| 2006 | 77.2 | 84.2 | 21.8 | 26.7 | 3.6 | 2.3 | 871 | 939 |
| 2007 | 77.4 | 84.4 | 21.9 | 26.9 | 3.6 | 2.4 | 874 | 941 |
| 2008 | 77.6 | 84.4 | 22.0 | 26.9 | 3.6 | 2.4 | 877 | 940 |
| 2009 | 77.8 | 84.5 | 22.2 | 27.0 | 3.7 | 2.4 | 876 | 940 |
| 2010 | 78.0 | 84.7 | 22.4 | 27.1 | 3.5 | 2.3 | 879 | 942 |
| 2011 | 78.4 | 85.0 | 22.7 | 27.4 | 3.3 | 2.2 | 883 | 943 |
| 2012* | 78.5 | 84.8 | 22.6 | 27.2 | 3.3 | 2.3 | 886 | 944 |
| 2013* | 78.8 | 85.0 | 22.8 | 27.3 | 3.5 | 2.4 | 889 | 945 |
| 2014* | 79.3 | 85.5 | 23.2 | 27.7 | na | na | na | na |

* Provisional.
na: not available.
(1) Deaths under one year per 1,000 live births.
(2) Deaths before 28 days per 1,000 live births.

Coverage: Metropolitan France.
Source: INSEE. Demographic Surveys and Studies Division.

Table A.12. Life expectancy at birth in Europe in 2013

| Country | Life expectancy at birth (years) |  |  |
| :--- | :---: | :---: | :---: |
|  | Male | Female | Difference <br> (F - M) |
| Austria | 78.6 | 83.8 | 5.2 |
| Belgium | 78.1 | 83.2 | 5.1 |
| Bulgaria | 71.3 | 78.6 | 7.3 |
| Croatia | 74.5 | 81.0 | 6.5 |
| Czech Republic | 75.2 | 81.3 | 6.1 |
| Denmark | 78.3 | 82.4 | 4.1 |
| Estonia | 72.8 | 81.7 | 8.9 |
| Finland | 78.0 | 84.1 | 6.1 |
| France excl. Mayotte | 78.7 | 85.0 | 6.3 |
| Germany | 78.6 | 83.2 | 4.6 |
| Greece | 78.7 | 84.0 | 5.3 |
| Hungary | 72.2 | 79.1 | 6.9 |
| Iceland | 80.5 | 83.7 | 3.2 |
| Ireland | 79.0 | 83.1 | 4.1 |
| Italy | 80.3 | 85.2 | 4.9 |
| Latvia | 69.3 | 78.9 | 9.6 |
| Lithuania | 68.5 | 79.6 | 11.1 |
| Luxembourg | 79.8 | 83.9 | 4.1 |
| Netherlands | 79.5 | 83.2 | 3.7 |
| Norway | 79.8 | 83.8 | 4.0 |
| Poland | 73.0 | 81.2 | 8.2 |
| Portugal | 77.6 | 84.0 | 6.4 |
| Romania | 71.6 | 78.7 | 7.1 |
| Slovakia | 72.9 | 80.1 | 7.2 |
| Slovenia | 77.2 | 83.6 | 6.4 |
| Spain | 80.2 | 86.1 | 5.9 |
| Sweden | 80.2 | 83.8 | 3.6 |
| Switzerland | 80.7 | 85.0 | 4.3 |
| United Kingdom* | 79.1 | 82.8 | 3.7 |
| * Data for 2012. |  |  |  |
| Source : Eurostat (Table 00025, http://epp.eurostat.ec.europa.eu/portal/page/portal/ |  |  |  |
| statistics/search_database, accessed 8 May 2015), except France (INSEE). |  |  |  |

Table A.13. Infant mortality in Europe 1980-2013 (rate per 1,000 live births)

| Country | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Austria | 14.3 | 11.2 | 7.8 | 5.4 | 4.8 | 4.2 | 3.6 | 3.7 | 3.7 | 3.8 | 3.9 | 3.6 | 3.2 | 3.1 |
| Belgium | 12.1 | 9.8 | 8.0 | 6.0 | 4.8 | 3.7 | 4.0 | 3.9 | 3.7 | 3.5 | 3.6 | 3.3 | 3.8 | 3.5 |
| Bulgaria | 20.2 | 15.4 | 14.8 | 13.3 | 13.3 | 10.4 | 9.7 | 9.2 | 8.6 | 9.0 | 9.4 | 8.5 | 7.8 | 7.3 |
| Croatia | na | na | na | na | 7.4 | 5.7 | 5.2 | 5.6 | 4.5 | 5.3 | 4.4 | 4.7 | 3.6 | 4.1 |
| Czech Republic | 16.9 | 12.5 | 10.8 | 7.7 | 4.1 | 3.4 | 3.3 | 3.1 | 2.8 | 2.9 | 2.7 | 2.7 | 2.6 | 2.5 |
| Denmark | 8.4 | 7.9 | 7.5 | 5.1 | 5.3 | 4.4 | 3.8 | 4.0 | 4.0 | 3.1 | 3.4 | 3.5 | 3.4 | 3.5 |
| Estonia | 17.1 | 14.1 | 12.3 | 14.9 | 8.4 | 5.4 | 4.4 | 5.0 | 5.0 | 3.6 | 3.3 | 2.5 | 3.6 | 2.1 |
| Finland | 7.6 | 6.3 | 5.6 | 3.9 | 3.8 | 3.0 | 2.8 | 2.7 | 2.6 | 2.6 | 2.3 | 2.4 | 2.4 | 1.8 |
| France excl. Mayotte* | na | na | na | 5.0 | 4.5 | 3.8 | 3.8 | 3.8 | 3.8 | 3.9 | 3.6 | 3.5 | 3.5 | 3.6 |
| France (metropolitan)* | 10.0 | 8.3 | 7.3 | 4.9 | 4.4 | 3.6 | 3.6 | 3.6 | 3.6 | 3.7 | 3.5 | 3.3 | 3.3 | 3.5 |
| Germany | 12.4 | 9.1 | 7.0 | 5.3 | 4.4 | 3.9 | 3.8 | 3.9 | 3.5 | 3.5 | 3.4 | 3.6 | 3.3 | 3.3 |
| Greece | 17.9 | 14.1 | 9.7 | 8.1 | 5.9 | 3.8 | 3.7 | 3.5 | 2.7 | 3.1 | 3.8 | 3.4 | 2.9 | 3.7 |
| Hungary | 23.2 | 20.4 | 14.8 | 10.7 | 9.2 | 6.2 | 5.7 | 5.9 | 5.6 | 5.1 | 5.3 | 4.9 | 4.9 | 5.0 |
| Iceland | 7.7 | 5.7 | 5.9 | 6.1 | 3.0 | 2.3 | 1.4 | 2.0 | 2.5 | 1.8 | 2.2 | 0.9 | 1.1 | 1.8 |
| Ireland | 11.1 | 8.8 | 8.2 | 6.4 | 6.2 | 4.0 | 3.6 | 3.1 | 3.8 | 3.3 | 3.8 | 3.5 | 3.5 | 3.5 |
| Italy | 14.6 | 10.5 | 8.2 | 6.2 | 4.5 | 3.8 | 3.6 | 3.5 | 3.3 | 3.4 | 3.2 | 3.2 | 2.9 | 2.9 |
| Latvia | 15.3 | 13.0 | 13.7 | 18.8 | 10.4 | 7.8 | 7.6 | 8.7 | 6.7 | 7.8 | 5.7 | 6.6 | 6.3 | 4.4 |
| Lithuania | 14.5 | 14.2 | 10.2 | 12.5 | 8.6 | 6.8 | 6.8 | 5.9 | 4.9 | 4.9 | 4.3 | 4.2 | 3.9 | 3.7 |
| Luxembourg | 11.5 | 9.0 | 7.3 | 5.5 | 5.1 | 2.6 | 2.5 | 1.8 | 1.8 | 2.5 | 3.4 | 4.3 | 2.5 | 3.9 |
| Netherlands | 8.6 | 8.0 | 7.1 | 5.5 | 5.1 | 4.9 | 4.4 | 4.1 | 3.8 | 3.8 | 3.8 | 3.6 | 3.7 | na |
| Norway | 8.1 | 8.5 | 6.9 | 4.0 | 3.8 | 3.1 | 3.2 | 3.1 | 2.7 | 3.1 | 2.8 | 2.4 | 2.5 | 2.4 |
| Poland | 25.4 | 22.1 | 19.4 | 13.6 | 8.1 | 6.4 | 6.0 | 6.0 | 5.6 | 5.6 | 5.0 | 4.7 | 4.6 | 4.6 |
| Portugal | 24.2 | 17.8 | 11.0 | 7.5 | 5.5 | 3.5 | 3.3 | 3.4 | 3.3 | 3.6 | 2.5 | 3.1 | 3.4 | 2.9 |
| Romania | 29.3 | 25.6 | 26.9 | 21.2 | 18.6 | 15.0 | 13.9 | 12.0 | 11.0 | 10.1 | 9.8 | 9.4 | 9.0 | 9.2 |
| Slovakia | 20.9 | 16.3 | 12.0 | 11.0 | 8.6 | 7.2 | 6.6 | 6.1 | 5.9 | 5.7 | 5.7 | 4.9 | 5.8 | na |
| Slovenia | 15.3 | 13.0 | 8.4 | 5.5 | 4.9 | 4.1 | 3.4 | 2.8 | 2.4 | 2.4 | 2.5 | 2.9 | 1.6 | 2.9 |
| Spain | 12.3 | 8.9 | 7.6 | 5.5 | 4.4 | 3.8 | 3.5 | 3.5 | 3.3 | 3.2 | 3.2 | 3.1 | 3.1 | 2.7 |
| Sweden | 6.9 | 6.8 | 6.0 | 4.1 | 3.4 | 2.4 | 2.8 | 2.5 | 2.5 | 2.5 | 2.5 | 2.1 | 2.6 | 2.7 |
| Switzerland | 9.0 | 6.7 | 6.7 | 5.0 | 5.3 | 4.2 | 4.4 | 3.9 | 4.0 | 4.3 | 3.8 | 3.8 | 3.6 | na |
| United Kingdom | 13.9 | 11.1 | 7.9 | 6.2 | 5.6 | 5.1 | 4.9 | 4.7 | 4.6 | 4.5 | 4.2 | 4.2 | 4.1 | 3.8 |
| * Data for 2012. <br> na: not available. <br> Source: Eurostat (Table 00025, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database, accessed 8 May 2015), except (1). <br> (1) INSEE for the whole of France excluding Mayotte between 1995 and 2012 and for metropolitan France in 2010 and 2013. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table A.14. Standardized death rates (per 100,000) by sex and groups of causes of death ${ }^{(1)}$

| Cause of death | 1980 | 1985 | 1990 | 1995 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23 groups of causes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lung cancer | 63 | 67 | 70 | 70 | 66 | 65 | 64 | 63 | 63 | 64 | 63 | 62 | 60 | 60 | 58 | 58 |
| Stomach cancer | 20 | 17 | 14 | 12 | 10 | 90 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 7 |
| Cancer of the intestine | 31 | 29 | 29 | 28 | 25 | 25 | 25 | 24 | 24 | 24 | 23 | 22 | 22 | 22 | 22 | 21 |
| Prostate cancer | 28 | 30 | 32 | 29 | 26 | 26 | 26 | 26 | 24 | 23 | 22 | 22 | 21 | 20 | 20 | 19 |
| Other cancers | 176 | 180 | 171 | 160 | 152 | 151 | 149 | 146 | 140 | 139 | 136 | 134 | 131 | 129 | 125 | 121 |
| Ischaemic heart diseases | 117 | 118 | 96 | 85 | 76 | 72 | 70 | 68 | 64 | 62 | 58 | 56 | 54 | 51 | 48 | 46 |
| Other heart diseases | 130 | 115 | 93 | 90 | 81 | 79 | 78 | 78 | 72 | 71 | 69 | 69 | 68 | 66 | 64 | 59 |
| Cerebro-vascular diseases | 123 | 103 | 71 | 59 | 47 | 45 | 44 | 43 | 38 | 37 | 35 | 34 | 33 | 31 | 30 | 29 |
| Other diseases of the circulatory system | 38 | 35 | 29 | 26 | 21 | 21 | 20 | 19 | 17 | 16 | 16 | 15 | 15 | 13 | 13 | 11 |
| Tuberculosis (all forms) | 5 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| AIDS | 0 | 0 | 8 | 13 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| Influenza | 2 | 2 | 3 | 1 | 2 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other infectious and parasitic diseases | 11 | 12 | 10 | 11 | 12 | 11 | 12 | 12 | 10 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Other diseases of the respiratory system | 83 | 79 | 71 | 69 | 53 | 50 | 50 | 52 | 44 | 47 | 42 | 42 | 42 | 42 | 39 | 39 |
| Alcoholism and cirrhosis of the liver | 56 | 46 | 35 | 29 | 28 | 28 | 27 | 27 | 25 | 24 | 24 | 23 | 23 | 22 | 22 | 21 |
| Diabetes | 11 | 11 | 9 | 9 | 15 | 15 | 14 | 15 | 14 | 14 | 13 | 13 | 13 | 13 | 12 | 12 |
| Other mental disorders and diseases of the nervous system | 28 | 28 | 31 | 30 | 40 | 42 | 41 | 45 | 39 | 42 | 41 | 41 | 42 | 42 | 42 | 41 |
| Other diseases of the digestive system | 41 | 35 | 29 | 25 | 20 | 20 | 20 | 21 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 16 |
| Other diseases | 56 | 50 | 40 | 37 | 36 | 36 | 35 | 37 | 33 | 32 | 32 | 31 | 32 | 31 | 31 | 27 |
| Transport accidents | 30 | 26 | 26 | 20 | 19 | 19 | 18 | 15 | 13 | 13 | 12 | 12 | 11 | 11 | 10 | 9 |
| Suicides | 29 | 34 | 30 | 29 | 26 | 25 | 25 | 26 | 25 | 25 | 24 | 23 | 23 | 24 | 23 | 23 |
| Other external causes | 63 | 54 | 51 | 44 | 36 | 35 | 34 | 36 | 32 | 31 | 31 | 31 | 31 | 31 | 31 | 30 |
| Unspecified or ill-defined causes of death | 74 | 70 | 56 | 48 | 46 | 49 | 49 | 51 | 44 | 45 | 43 | 44 | 46 | 47 | 55 | 53 |
| 6 broad groups of causes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cancer | 318 | 323 | 316 | 299 | 279 | 276 | 273 | 268 | 260 | 258 | 252 | 248 | 241 | 238 | 232 | 226 |
| Cardiovascular diseases | 408 | 371 | 289 | 260 | 225 | 217 | 212 | 208 | 191 | 186 | 178 | 174 | 170 | 161 | 155 | 145 |
| Infectious and parasitic diseases, diseases of the respiratory system | 101 | 96 | 94 | 96 | 72 | 66 | 67 | 68 | 57 | 62 | 56 | 56 | 56 | 55 | 52 | 52 |
| Other diseases | 192 | 170 | 144 | 130 | 139 | 141 | 137 | 145 | 130 | 131 | 129 | 126 | 128 | 126 | 125 | 117 |
| External causes | 122 | 114 | 107 | 93 | 81 | 79 | 77 | 77 | 70 | 69 | 67 | 66 | 65 | 66 | 64 | 62 |
| Unspecified or ill-defined causes of death | 74 | 70 | 56 | 48 | 46 | 49 | 49 | 51 | 44 | 45 | 43 | 44 | 46 | 47 | 55 | 53 |
| All causes | 1215 | 1144 | 1006 | 926 | 842 | 828 | 815 | 817 | 752 | 751 | 725 | 714 | 706 | 693 | 683 | 655 |

Females

| Cause of death | 1980 | 1985 | 1990 | 1995 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23 groups of causes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lung cancer | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 16 | 16 | 16 |
| Stomach cancer | 9 | 7 | 6 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cancer of the intestine | 19 | 18 | 17 | 16 | 15 | 14 | 14 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 12 | 12 |
| Breast cancer | 27 | 28 | 29 | 29 | 27 | 26 | 26 | 26 | 26 | 25 | 25 | 24 | 24 | 24 | 23 | 23 |
| Cancer of the uterus | 11 | 10 | 8 | 7 | 6 | 7 | 6 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| Other cancers | 76 | 74 | 70 | 69 | 67 | 67 | 67 | 65 | 63 | 63 | 62 | 60 | 61 | 60 | 59 | 57 |
| Ischaemic heart diseases | 51 | 51 | 42 | 35 | 30 | 29 | 28 | 27 | 24 | 23 | 22 | 21 | 20 | 19 | 17 | 16 |
| Other heart diseases | 93 | 81 | 64 | 61 | 54 | 53 | 53 | 53 | 47 | 47 | 45 | 45 | 45 | 44 | 42 | 39 |
| Cerebro-vascular diseases | 88 | 74 | 52 | 41 | 33 | 32 | 31 | 31 | 27 | 26 | 25 | 23 | 23 | 23 | 22 | 21 |
| Other diseases of the circulatory system | 19 | 17 | 14 | 12 | 9 | 9 | 8 | 8 | 7 | 7 | 6 | 6 | 6 | 6 | 5 | 5 |
| Tuberculosis (all forms) | 1 | 1 | 1 | 1 | 1 | 1 | , | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| AIDS | 0 | 0 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| Influenza | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other infectious and parasitic diseases | 7 | 7 | 6 | 7 | 8 | 7 | 7 | 8 | 6 | 7 | 6 | 6 | 7 | 7 | 7 | 7 |
| Other diseases of the respiratory system | 33 | 33 | 31 | 30 | 24 | 21 | 22 | 23 | 19 | 21 | 18 | 19 | 19 | 19 | 17 | 18 |
| Alcoholism and cirrhosis of the liver | 19 | 15 | 12 | 10 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 6 | 7 |
| Diabetes | 10 | 9 | 8 | 7 | 10 | 10 | 10 | 10 |  | 9 | 8 | 8 | 8 | 8 | 7 | 7 |
| Other mental disorders and diseases of the nervous system | 22 | 22 | 24 | 24 | 32 | 33 | 34 | 37 | 31 | 33 | 33 | 33 | 34 | 34 | 33 | 34 |
| Other diseases of the digestive system | 27 | 23 | 18 | 16 | 13 | 13 | 13 | 13 | 12 | 12 | 11 | 11 | 11 | 11 | 11 | 10 |
| Other diseases | 38 | 34 | 29 | 28 | 27 | 27 | 27 | 29 | 25 | 24 | 24 | 23 | 24 | 23 | 23 | 20 |
| Transport accidents | 10 | 9 | 9 | 7 | 6 | 6 | 6 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 2 |
| Suicides | 11 | 12 | 10 | 10 | 8 | 8 | 9 | 8 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 |
| Other external causes | 36 | 31 | 27 | 23 | 19 | 19 | 19 | 20 | 17 | 16 | 16 | 16 | 16 | 15 | 15 | 15 |
| Unspecified or ill-defined causes of death | 48 | 44 | 35 | 31 | 28 | 29 | 30 | 32 | 26 | 27 | 26 | 26 | 27 | 27 | 31 | 30 |
| 6 broad groups of causes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cancer | 142 | 137 | 130 | 126 | 119 | 118 | 117 | 115 | 112 | 111 | 109 | 106 | 107 | 106 | 103 | 101 |
| Cardiovascular diseases | 251 | 223 | 172 | 149 | 126 | 123 | 120 | 119 | 105 | 103 | 98 | 95 | 94 | 92 | 86 | 81 |
| Infectious and parasitic diseases, diseases of the respiratory system | 43 | 43 | 41 | 42 | 35 | 30 | 31 | 33 | 27 | 31 | 25 | 26 | 26 | 26 | 24 | 25 |
| Other diseases | 116 | 103 | 91 | 85 | 91 | 92 | 93 | 98 | 85 | 86 | 84 | 82 | 84 | 83 | 80 | 78 |
| External causes | 57 | 52 | 46 | 40 | 33 | 33 | 34 | 32 | 30 | 28 | 27 | 27 | 27 | 25 | 25 | 24 |
| Unspecified or ill-defined causes of death | 48 | 44 | 35 | 31 | 28 | 29 | 30 | 32 | 26 | 27 | 26 | 26 | 27 | 27 | 31 | 30 |
| All causes | 657 | 602 | 515 | 473 | 432 | 425 | 425 | 429 | 385 | 386 | 369 | 362 | 365 | 359 | 349 | 339 |
| (1) Standardized rate calculated from mortality rates by five-year age group (in completed years) and from standard European population (accordin WHO). Thanks to a new analysis of INSERM data, the age groups now have the same definition for all years. The contents of the cause-of-death gro numbers refer to ICD-9 for 1980 to 1999 and ICD-10 from 2000). <br> Coverage: Metropolitan France. <br> Source: F. Meslé from CépiDc-INSERM data. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table A.15. Standardized mortality rates (per 100,000) by sex, age group and cause-of-death group ${ }^{(a)}$ in 2009-2011

| Cause of death | Ages 0-14 | Ages 15-24 | Ages 25-44 | Ages 45-64 | Ages 65-79 | Ages 80+ | All ages |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23 groups of causes |  |  |  |  |  |  |  |
| Lung cancer | 0 | 0 | 4 | 103 | 273 | 361 | 59 |
| Stomach cancer | 0 | 0 | 1 | 9 | 34 | 87 | 7 |
| Cancer of the intestine | 0 | 0 | 1 | 22 | 106 | 315 | 22 |
| Prostate cancer | 0 | 0 | 0 | 7 | 83 | 526 | 20 |
| Other cancers | 3 | 5 | 14 | 169 | 560 | 1,345 | 125 |
| Ischaemic heart diseases | 0 | 0 | 5 | 45 | 180 | 977 | 48 |
| Other heart diseases | 1 | 1 | 5 | 37 | 186 | 1,747 | 63 |
| Cerebro-vascular diseases | 0 | 0 | 2 | 18 | 110 | 751 | 30 |
| Other diseases of the circulatory system | 0 | 0 | 1 | 10 | 49 | 263 | 13 |
| Tuberculosis (all forms) | 0 | 0 | 0 | 0 | 2 | 17 | 1 |
| AIDS | 0 | 0 | 1 | 2 | 1 | 1 | 1 |
| Influenza | 0 | 0 | 0 | 1 | 1 | 4 | 0 |
| Other infectious and parasitic diseases | 1 | 0 | 1 | 10 | 38 | 237 | 11 |
| Other diseases of the respiratory system | 0 | 1 | 2 | 20 | 138 | 1,086 | 40 |
| Alcoholism and cirrhosis of the liver | 0 | 0 | 7 | 52 | 62 | 45 | 22 |
| Diabetes | 0 | 0 | 1 | 10 | 53 | 239 | 12 |
| Other mental disorders and diseases of the nervous system | 2 | 3 | 7 | 22 | 121 | 1,101 | 41 |
| Other diseases of the digestive system | 0 | 0 | 2 | 15 | 60 | 366 | 17 |
| Other diseases | 22 | 2 | 3 | 15 | 72 | 674 | 30 |
| Transport accidents | 1 | 20 | 13 | 9 | 9 | 17 | 10 |
| Suicides | 0 | 10 | 27 | 37 | 36 | 84 | 23 |
| Other external causes | 3 | 9 | 16 | 31 | 72 | 502 | 31 |
| Unspecified or ill-defined causes of death | 6 | 7 | 19 | 57 | 131 | 889 | 51 |
| 6 broad groups of causes |  |  |  |  |  |  |  |
| Cancer | 3 | 5 | 21 | 309 | 1,056 | 2,633 | 232 |
| Cardiovascular diseases | 1 | 2 | 13 | 110 | 525 | 3,739 | 154 |
| Infectious and parasitic diseases, diseases of the respiratory system | 1 | 1 | 5 | 33 | 181 | 1,345 | 53 |
| Other diseases | 24 | 5 | 21 | 115 | 368 | 2,425 | 122 |
| External causes | 5 | 39 | 56 | 77 | 118 | 603 | 64 |
| Unspecified or ill-defined causes of death | 6 | 7 | 19 | 57 | 131 | 889 | 51 |
| All causes | 40 | 59 | 135 | 702 | 2,378 | 11,634 | 677 |

Females

Table A.16. Cause-of-death categories and the corresponding codes in the International Classification of Diseases (ninth and tenth revisions)

|  | ICD 9 | ICD 10 |
| :---: | :---: | :---: |
| Cancer | 140 to 239 | C00 to D48 |
| Lung cancer | 162 | C33 to C34 |
| Stomach cancer | 151 | C16 |
| Cancer of the intestine | 152 to 154 | C18 to C21 |
| Breast cancer | 174, 175 | C50 |
| Cancer of the uterus | 179 to 180; 182 | C53 to C55 |
| Prostate cancer | 185 | C61 |
| Other cancers | $\begin{gathered} 140 \text { to } 150 ; 155 \text { to } 161 ; 163 \text { to } 173 ; 181 \text {; } \\ 183 \text { to } 184 ; 186 \text { to } 239 \end{gathered}$ | C00 to C15; C17; C22 to C32; C37 to C49; C51; C52; C56 to C60; C62 to D48 |
| Cardiovascular diseases | 390 to 459 | 100 to 199 |
| Ischaemic heart diseases | 410 to 414 | 120 to I25 |
| Other heart diseases | 390 to $405 ; 415$ to 429 | IOO to I15; I26 to I51 |
| Cerebro-vascular diseases | 430 to 438 | 160 to 169 |
| Other diseases of the circulatory system | 440 to 459 | 170 to 199 |
| Infectious and parasitic diseases, diseases of the respiratory system | 000 to 139; 460 to 519 | A00 to B99; J00 to J98 |
| Tuberculosis (all forms) | 010 to 018 | A15 to A19; B90 |
| AIDS | 042 to 044 | B20 to B24 |
| Influenza | 487 | J10 to J11 |
| Other infectious and parasitic diseases of ICD Chapter I | 001 to 009; 020 to $041 ; 045$ to 139 | A00 to A09; A20 to B19; B25 to B89; |
| Other diseases of the respiratory system | 460 to 586; 490 to 519 | J00 to J06; J12 to J98 |
| Other diseases | 240 to 389; 520 to 779 | D50 to D89; E00 to H95; K00 to Q99 |
| Alcoholism and cirrhosis of the liver | 291; 303; 305.0; 571.0 to.3;.5 | F10; K70; K73 to K74 |
| Diabetes | 250 | E10 to E14 |
| Other mental disorders and diseases of the nervous system | 290; 292 to 302; 304; 305.1 to 389 | F00 to F09; F11 to H95 |
| Other diseases of the digestive system | 520 to 570; 571.4; 571.6 to 579 | K00 to K67; K71; K72; K75 to K93 |
| Other diseases | 240 to 246; 251 to 289; 580 to 779 | D50 to D89; E00 to E07; E15 to E89; L00 to Q99 |
| External causes | 800 to 999 | V01 to Y89 |
| Transport accidents | 810 to $819 ; 826$ to 829 | V01 to V99 |
| Suicides | 950 to 959 | X60 to X84 |
| Other deaths from external causes | 800 to 807; 820 to 825; 830 to 949; 960 to 999 | W00 to X59; X85 to Y89 |
| Unspecified or ill-defined causes of death | 780 to 799 | R00 to R99 |
| All causes | 001 to 999 | A00 to R99; V01 to Y89 |

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## Magali Mazuy, Magali Barbieri, Didier Breton, Hippolyte d'Albis • <br> The Demographic Situation in France: Recent Developments and Trends over the Last 70 Years

On 1 January 2015, the population of France was 66.3 million (of which 64.2 million in metropolitan France), an increase of $0.45 \%$ with respect to the previous year. Fertility increased slightly, to 2.0 children per woman. Women had children at a mean age of 30.2 years, and men at 33.1 years. Nearly six in ten children were born outside marriage. Net migration remained quite stable. Among residence permits issued to migrants in 2013, half were granted for family reasons, slightly less than a quarter for educational purposes, $10 \%$ for humanitarian reasons, and $7 \%$ for work-related reasons. The number of marriages (among opposite-sex couples) continued to decrease slightly. Marriage was opened to same-sex couples on 17 May 2013. Between that date and the end of 2014, 17,000 same-sex marriages were registered. The seasonality of marriages remained fairly stable, while the annual peak in civil partnerships (PACS) previously observed in the second quarter shifted to the end of the year. Mean age at marriage continued to increase, reaching 34.6 years for women and 37.2 years for men in 2013. According to provisional estimates, the number of deaths in 2014 totalled 559,300. Women's life expectancy was 84.7 years and that of men was 79.2 years, a gap of 5.5 years that has been narrowing over time.

## Magali Mazuy, Magali Barbieri, Didier Breton, Hippolyte d'Albis • L’évolution déMographique réCente de la France et ses tendances depuis 70 ans

Au premier janvier 2015, la France comptait 66,3 millions d'habitants (dont 64,2 millions en France métropolitaine), soit un accroissement annuel de $4,5 \%$. La fécondité augmente légèrement, passant à 2,0 enfants par femme. Les femmes ont eu en moyenne leurs enfants à 30,2 ans, les hommes à 33,1 ans. Près de six enfants sur dix naissent hors mariage. Le solde migratoire varie peu. Parmi les migrants ayant obtenu un titre de séjour en 2013, la moitié ont reçu un titre pour motif familial, un peu moins du quart pour les études, $10 \%$ pour motif humanitaire, $7 \%$ pour le travail. Le nombre de mariages (pour les couples de sexe différent) est toujours en légère baisse. Depuis que le mariage a été ouvert aux couples de même sexe le 17 mai 2013, 17000 mariages ont été enregistrés jusqu'à fin 2014. La saisonnalité des mariages a peu varié, alors que pour les pacs, le pic observé au deuxième trimestre a laissé place à une augmentation des pacs en fin d'année. L'âge moyen au mariage continue de reculer et atteint 34,6 ans pour les femmes et 37,2 ans pour les hommes en 2013. Le nombre de décès en 2014 est provisoirement estimé à 559300 . L'espérance de vie des femmes est égale à 84,7 ans et celle des hommes à 79,2 ans, soit un écart de 5,5 ans qui se réduit au fil des années.

## Magali Mazuy, Magali Barbieri, Didier Breton, Hippolyte d'Albis • La evolución demográfica de Francia y sus tendencias en los últimos 70 años

El $1^{\circ}$ de enero de 2015 Francia contaba con 66,3 millones de habitantes ( 64,2 millones en Francia metropolitana) lo cual representa un crecimiento anual de $4,5 \%$. La fecundidad ha aumentado ligeramente, pasando a 2,0 hijos por mujer. Las mujeres han tenido sus hijos a 30,2 años como promedio, y los hombres a 33,1 años. Casi seis niños sobre diez nacen fuera del matrimonio. El saldo migratorio ha variado poco. Entre los inmigrantes que han obtenido un permiso de residencia, la mitad lo ha obtenido por motivos familiares, un poco menos del cuarto por estudios, el $10 \%$ por motivos humanitarios y el $7 \%$ por trabajo. El número de matrimonios (parejas de sexo diferente) continúa a disminuir ligeramente. Desde el 17 de mayo de 2013 -fecha en que el matrimonio de parejas del mismo sexo fue autorizado- hasta finales de 2014, se han registrado 17000 matrimonios de esta categoría. La estacionalidad de los matrimonios ha variado poco, mientras que para los Pacs (uniones civiles) el máximo que se observaba en el segundo trimestre se ha desplazado hacia el final del año. La edad media al matrimonio continúa aumentando y alcanza 34,6 años en las mujeres y 37,2 años en los hombres, en 2013. El número de muertes en 2014 se estima provisionalmente a 559300. La esperanza de vida de las mujeres es de 84,7 años y la de los hombres de 79,2 años, o sea una diferencia de 5,5 años, diferencia que se ha ido reduciendo con los años.

Keywords: France, demographic situation, ageing, migration, fertility, conjugality, same-sex couples, mortality, causes of death, gender inequalities.

Translated by Paul Reeve.


[^0]:    (1) Figures concerning population change are based on provisional data published by INSEE at the beginning of the year (Bellamy and Beaumel, 2015).
    (2) Appendix Tables A. 1 to A. 16 can be found at the end of the article. They are updated annually if new data become available. Their numbering does not always correspond to the order in which they are cited in the text.

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[^1]:    (3) Apparent net migration for a year is defined as the difference between total variation in the population between 1 January of the years $N$ and $N+1$ and the natural population increase in year N. The data for the years 2012 to 2014 are provisional INSEE estimates (Appendix Table A.l).

[^2]:    (4) Member countries of the European Union on 30 June 2013, as well as Vatican City State, Iceland, Liechtenstein, Norway, the principalities of Andorra and Monaco, the Republic of San Marino, and Switzerland are excluded.
    (5) Appendix Table A. 3 was completely revised in 2014 to take account of changes in coverage and estimation methods.
    (6) Born abroad to non-French parents.

[^3]:    (7) Thanks to new information on recorded reasons, the figures in this table have been updated with respect to those published in Mazuy et al. (2014a) by assigning a reason for admission to certain permits previously classified as "various and unspecified".

[^4]:    (8) Since Law no. 2002-304 of 4 March 2002, applicable to children born since January 2005, parents have been able to choose between four options for their children's family name. Before the opening of marriage to same-sex couples, there were four possible configurations: the father's name, the mother's name, or both names, with that of the mother in either first or second position. This choice of name must be made, at the latest, when the child is registered (Article 311-21 inserted by Law no. 2002-304, modified by Law no. 2013-404 of 17 May 2013 - Art. 11.) Future estimates will also analyse transmission of both names by same-sex couples.

[^5]:    (9) Information about fathers is systematically adjusted in the data made available by INSEE. All children are systematically attributed a "father," and if the father's age is missing, an estimated age is entered on the basis of the mother's age. This systematic reattribution makes it impossible to analyse the situation of mothers who did not provide information on the father when the birth was registered.

[^6]:    (10) Voluntary childlessness is defined as the desire by a person with no children to not have any children in the future. In principle, therefore, sterile persons are excluded from this estimate. Surveys on fertility intentions include a series of questions on whether or not the respondent wishes to have children in the future. The indicator of voluntary childlessness is established by measuring individuals' actual situations and their reported intentions at the time of the survey.
    (11) Since 2010, the data have included abortions covered by specific health insurance funds for the self-employed and farmers: the Régime social des indépendants (RSI) and the Mutualité sociale agricole (MSA).

[^7]:    (12) This number includes two types of double counts. First, there are couples who sign a PACS and then marry in the same calendar year, and second, marriages between couples who have been in a PACS for several years. This duplication cannot be detected in the marriage statistics taken from civil registration. The 2011 family and housing survey (EFL) estimated that around $10 \%$ of persons who married in 2010 were already in a PACS. It may be assumed that this proportion varied little between 2012 and 2013, and thus that these counts of unions overestimate the number of newly officialized couples by around 6\%.

[^8]:    (13) Marriages and PACS statstics were analysed using data recorded in 2013. While INSEE publishes estimates of the number of marriages, the data for the year 2014 will only be available in January 2016. Marriage records are more prone to transmission problems than other types of vital records, notably from small municipalities. For this reason, since 2001 annual surveys have been carried out on a sample of municipalities in order to adjust marriage statistics. This indispensable operation delays the publication of these data.

[^9]:    (14) A total of 1,596 same-sex marriages were registered in France in September 2013, compared with a monthly mean of slightly over 1,052 between June and December 2013.

[^10]:    (15) Only Spain ranks above France if female life expectancy at birth in metropolitan France (85.5 years) is used for comparison.
    (16) Figures not available for the whole of France within its current borders.
    (17) We chose the comparison with 1946 rather than 1945 because life expectancies at the end of the war were much lower than in 1939: 51.3 years versus 56.5 years for males, and 58.6 years versus 62.6 years for females (Vallin and Meslé, 2001). The use of 1946 as a reference thus better reflects long-term trends in mortality than would the war year of 1945.

[^11]:    (18) The reference population used to calculate standardized rates is the European Standard Population of the World Health Organization.

[^12]:    (p) Provisional.
    (1) Ratio of number of first marriages to number of persons of same age, summed to age 49 .
    (2) Ratio of number of first marriages to (estimated) number of never-married persons at the same age, summed to age 49 .
    (2) Ratio of number of first marriages to (estimated) number of never-married persons at the same age, summed to age 49.
    (3) Direct divorces and separations converted into divorces.

    Sources: INSEE, Division of Demographic Surveys and Studies; French Ministry of Justice.

