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Recent Demographic Developments in France: Seasonal Patterns of Births, Deaths, Unions, and Migration

I. General trends and population age structure

1. Population growth and structure

Historically low natural growth

On 1 January 2018, the population of the whole of France[1] was 66.9 million,[2] including 2.2 million in the overseas departments (*départements*) and regions (Papon and Beaumel, 2019). Over the year 2017, it increased by 221,280, compared with a rise of 247,775 in 2016.[3] French population growth was the lowest it has been in nearly 20 years, with around 3 per 1,000 (Appendix Table A.1).

(1) The figures given in this article are for the whole of France, i.e. the 101 French departments, of which 96 are in Europe (metropolitan France) and 5 outside Europe (overseas departments and regions, abbreviated as DROM, formerly DOM): Guadeloupe, French Guiana, Réunion, Martinique, and Mayotte. The "whole of France" does not include the other territories of the French Republic (New Caledonia, French Polynesia, Wallis and Futuna, French Southern and Antarctic Lands, Scattered Islands of the Indian Ocean, and the self-governing territorial overseas collectivity of Saint-Pierre-et-Miquelon), which are not included in the national accounts and do not form part of the European Union. The long time-series given in the Appendix are for metropolitan France; INSEE has only published data for the whole of France since 1991.

(2) In January 2019, INSEE published population estimates at 1 January 2017 and 1 January 2018, which differ from those published in January 2018 (Papon and Beaumel, 2018). These differences result from a revision of the census forms, which allows for better identification of people with more than one residence and entails a decrease in the total number of the populations.

(3) The changes mentioned in n. 2 have required INSEE to adjust net migration estimates for 2015, 2016, and 2017 by nearly 100,000 fewer people than was previously assessed (INSEE, 2019).

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Natural growth, the historical driver of French population increase, fell to an all-time low in 2017, with an increase of just 164,000, below the level of 1976 (Breton et al., 2017), even though the total population has never been so large. The natural growth rate was 2.4 per 1,000 (with a crude birth rate of 11.5 per 1,000 and a crude death rate of 9.1 per 1,000).[4] This decrease in natural growth is due both to fewer births, as illustrated by the narrowing base of the population pyramid (Figure 1), and to an increase in deaths, attributable mainly to the rise in life expectancy and to the increasing mortality of the cohorts born between 1946 and 1974 as they reach older ages. In the coming years, the increase in deaths should slow down as the "depleted" cohorts born in the 1930s after the Great Depression reach advanced ages (in 1939, there were 130,000 fewer births than in 1930, with a steady decline over the entire decade) (Bourgeois-Pichat, 1950; Pailhé, 2010). The number of births should rise again as the larger cohorts born after 1998 – who have been stretching the limited capacities of French universities for the last two years – reach childbearing age.

In 2017, net migration was estimated at +58,000 for France as a whole and +66,000 for metropolitan France alone.[3][5] The method used to determine net migration entails annual corrections for the previous years (Brutel, 2015).[6]

In 2016, Germany became the EU country with the most births, ahead of France

On 1 January 2017, France was still the second most populated country of the European Union (EU) after Germany, and one of four EU countries with over 60 million inhabitants (alongside Germany, Italy, and the United Kingdom). In 2016, there were fewer births in France than in Germany, where a 7% increase was recorded between 2015 and 2016 (from 737,575 to 792,131). Natural growth in Germany remains negative (–118,000), however, and its population increase is due solely to high net migration (+500,000).

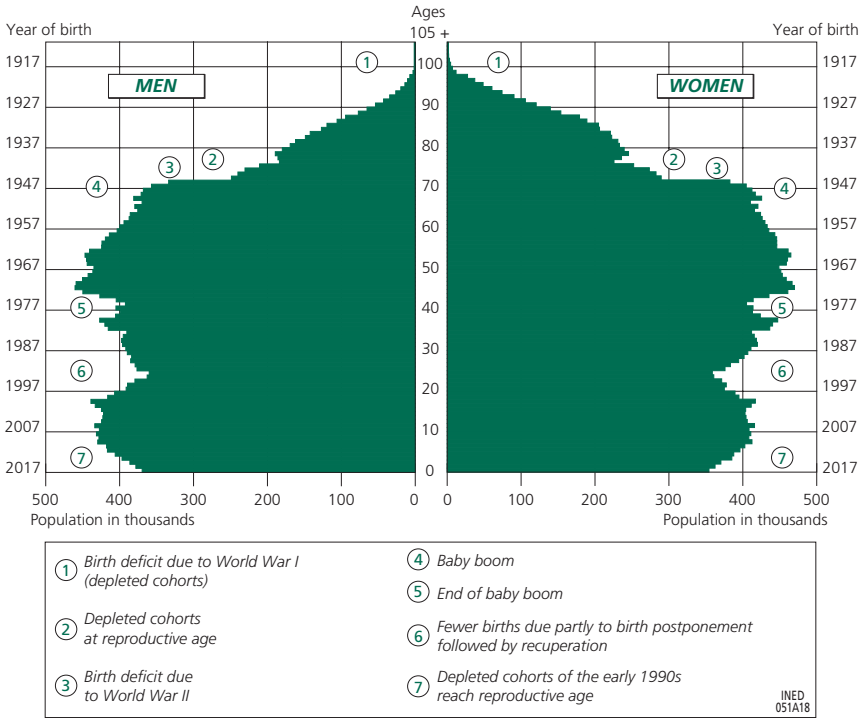
The respective contributions of natural growth and net migration vary in time and across countries (Table 1). They have been affected by the economic crisis of 2008 and recent population movements in Europe. Comparison of the periods 2003–2007 and 2013–2017 reveals a population decrease in certain countries due to negative natural growth and negative net migration over both five-year periods. This is the case in Baltic and Eastern European countries (Bulgaria, Latvia, Lithuania, Poland, Romania). Certain countries of Western

(4) The natural growth rate is the difference between the crude birth rate and the crude death rate. It can also be calculated as the ratio of natural growth to the mid-year population.

(5) These net migration figures do not take the adjustment into account. This difference is explained by the negative net migration in the overseas departments, where emigrants outnumber immigrants, even in those with high levels of immigration, such as French Guiana or Mayotte.

(6) The correction may be upward or downward. For example, net migration in 2013 was forecast at +47,000 but was actually +100,000. Conversely, the estimate of +67,000 for 2014 was lowered to +32,000 in INSEE's 2017 demographic report (Bellamy and Beaumel, 2016, 2017; Papon and Beaumel, 2018).

Figure 1. Population pyramid on 1 January 2018



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

Europe have relatively stable and positive natural growth and net migration over both periods (Belgium, France, United Kingdom). For others, the situation has reversed. In a first group of countries – Croatia, Greece, Portugal, Spain – a sharp fall in net migration between 2013 and 2017 was accompanied by a slowing of the natural growth rate. Conversely, net migration increased strongly in Austria, Denmark, Germany, the Netherlands, and Sweden over the most recent period, offsetting weak or even negative natural growth, as in Germany and Italy.

The 20–59 age group represents less than half the total population

On 1 January 2018, nearly half the French population was aged between 20 and 59 (49.9%) (Appendix Table A.2, Figure 1). In 2018, as in 2017, the proportion of under-20s is practically the same as that of the over-60s (around 25%). France is a European outlier in this respect (Figure 2) but also the country with the highest dependency ratio (0.99). There are few countries in Europe where the under-20s outnumber the over-60s, and they are generally small nations (Iceland, Ireland) where birth rates have remained relatively high.

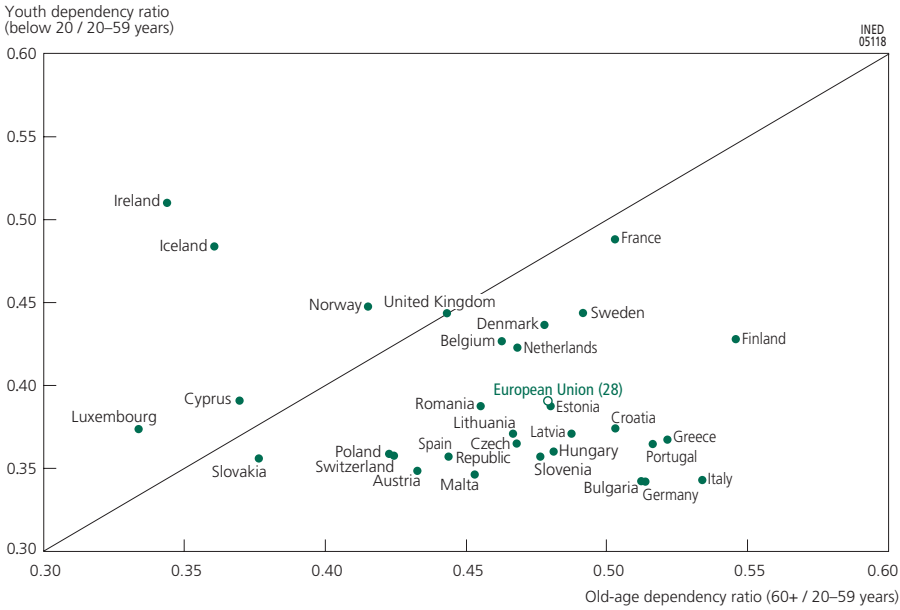
Table 1. Total population growth and net migration in EU countries, 2003–2007 and 2013–2017 (per 1,000)

2003–2007				2013–2017			
	Rate of growth				Rate of growth		
	Natural	Migratory	Total		Natural	Migratory	Total
Ireland	8.5	14.9	23.5	Malta	2.0	21.7	23.7
Spain	2.0	15.6	17.6	Luxembourg	3.7	18.1	21.8
Cyprus	4.2	12.6	16.8	Sweden	2.5	9.0	11.5
Luxembourg	3.6	11.7	15.3	Ireland	7.6	2.1	9.7
United Kingdom	2.4	4.4	6.8	Austria	0.4	8.2	8.6
France	4.4	2.5	6.8	United Kingdom	2.8	4.2	7.0
Belgium	1.6	4.3	5.9	Denmark	1.1	5.2	6.3
Sweden	1.3	4.1	5.4	Germany	**–2.0**	7.7	5.7
Italy	**–0.1**	5.4	5.3	Belgium	1.3	3.6	4.9
Malta	1.9	3.4	5.2	France	3.2	1.0	4.2
Austria	0.3	4.7	5.1	Netherlands	1.6	2.4	4.0
Finland	1.8	1.7	3.6	Finland	0.4	2.8	3.1
Denmark	1.6	1.8	3.4	Italy	**–2.2**	4.9	2.7
Slovenia	–0.1	3.2	3.1	Czech Republic	0.2	1.6	1.8
Czech Republic	**–0.4**	3.4	3.0	Slovakia	0.6	0.5	1.2
Greece	0.2	2.4	2.6	Slovenia	0.5	0.3	0.8
Netherlands	3.2	**–0.7**	2.6	Spain	0.2	**–0.4**	**–0.3**
Portugal	0.3	1.8	2.1	Cyprus	4.4	**–4.7**	**–0.4**
Croatia	**–2.4**	2.7	0.3	Estonia	**–1.2**	0.8	**–0.4**
Slovakia	0.1	**–0.1**	0.0	Poland	**–0.3**	**–0.2**	**–0.5**
Poland	**–0.1**	**–0.5**	**–0.5**	Hungary	**–3.6**	1.0	**–2.6**
Germany	**–1.7**	0.9	**–0.8**	Portugal	**–2.3**	**–1.5**	**–3.8**
Hungary	**–3.7**	1.7	**–2.0**	Greece	**–2.4**	**–2.5**	**–4.9**
Estonia	**–2.3**	**–3.1**	**–5.4**	Romania	**–3.1**	**–1.9**	**–5.0**
Bulgaria	**–5.3**	**–2.2**	**–7.5**	Bulgaria	**–5.9**	**–0.6**	**–6.6**
Romania	**–2.0**	**–7.4**	**–9.4**	Croatia	**–3.3**	**–4.2**	**–7.5**
Latvia	**–4.7**	**–4.9**	**–9.6**	Latvia	**–3.6**	**–5.4**	**–9.0**
Lithuania	**–4.1**	**–9.1**	**–13.2**	Lithuania	**–3.7**	**–7.6**	**–11.3**
European Union	0.7	3.2	3.9	European Union	0.0	2.8	2.8

Note: The negative values are in bold, and the countries with shaded lines are those whose ranking changed the most between the two periods.
Interpretation: The countries are ranked in decreasing order of the total population growth rate in the period concerned.
Coverage: Europe.
Sources: Eurostat, authors' calculations.

Conversely, in the countries where fertility and hence birth numbers have been low for the last 20 years (close to 1.5 children per woman), the population is ageing rapidly. This is the case in Austria, Poland, and Spain, and likewise in Germany, Greece, Italy, and Portugal, where ageing at the top of the pyramid (longer life expectancy) is compounded by ageing at the bottom (fewer births).

Figure 2. Dependency ratios in Europe on 1 January 2017



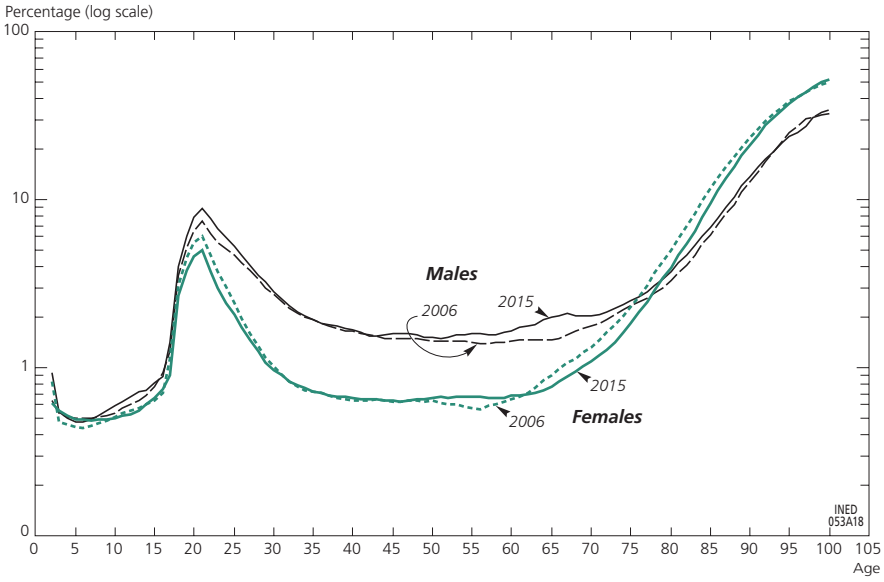
Interpretation: In France, on average, there are 49 people aged below 20 per 100 aged 20–59, and 52 people aged 60+ per 100 aged 20–59.
Coverage: Europe.
Sources: Eurostat, authors' calculations.

2. Household population

A continued decrease in people not living in ordinary housing

Following the introduction of the new population census in 2004, INSEE now publishes each year detailed census statistics combining data from five annual census surveys (EAR). The oldest available data concern 2006 (EAR 2004 to 2008) and the most recent 2015 (EAR 2013 to 2017). Besides total numbers of individuals and the population distribution by age and sex (used as denominators for numerous indicators in this article), the census tells us whether individuals are living in ordinary or collective housing (workers' hostels, retirement homes, university residence halls, prisons, etc.). In 2015, 2.24% of the French population (around 1.5 million individuals) were living in collective housing, with an initial peak in early adulthood (5%–10% around age 20; Figure 3) and a sharp increase beyond age 60 to over 50% at the most advanced ages (Figure 3). Between 2006 and 2015, the proportion decreased slightly at all ages, but above age 60 especially, in line with a trend observed since at least 1990 (Pirou et al., 2013). This gradual decline is linked both to a decrease in the number of children in boarding schools and to an increase in the age at which older people enter institutional care (Muller, 2017; Pirou et al., 2013).

Figure 3. Proportion of individuals living in collective housing in 2006 and 2015 by age and sex



Coverage: Whole of France excluding Mayotte, individuals living in ordinary households.
Sources: INSEE, censuses, authors' calculations.

In 2015, the overall proportion of men living in collective housing had fallen to a level very similar to that of women, after a long period in which it was slightly higher (2.25% of men and 2.23% of women in 2015 versus 2.44% and 2.20%, respectively, in 2006). While the male and female curves of age-specific rates have the same profile, their relative positions are different (Figure 3). Before age 75, the proportion of men in collective housing is higher than that of women, but the curves then cross over because of excess male mortality and the rising number of widowed women.

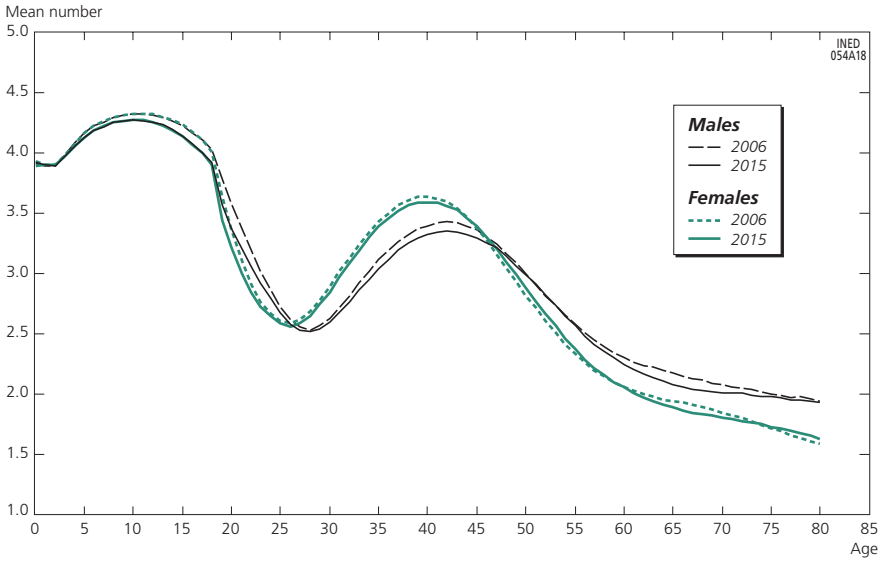
Household size is decreasing

In 2015, an average household comprised 2.23 people, compared with 2.31 in 2006. This decrease continues a historical trend with multiple causes, including fertility decline, increasing healthy life expectancy, more frequent separations, and growing frequency and duration of periods spent without a cohabiting partner (Daguet, 2017). Shrinking household size is giving rise to new housing needs in both quantitative and qualitative terms (number of rooms, living space, location, etc.), and this explains why the number of homes increased almost twice as fast as the population between 2006 and 2015 (+8.6 % versus +4.9%).(7)

(7) Here, housing refers to the primary residence. In the census, the notion of household is associated with that of the dwelling. A household corresponds to a group of individuals living under the same roof, within a dwelling where they reside for most of the year.

The number of people in a household varies over time, with changes in the sex composition and ages of household members over the course of family life (Figure 4). Children live in relatively large households on average (over 4.0 members), as do adults of childbearing and child-rearing age (close to 3.5 members). It is in early adulthood (15–25 years) and at ages when the children leave the family home (after age 45) that household size is smallest, with a minimum at the oldest ages (close to one person per household beyond age 90). The men's and women's curves are identical in shape, but the levels differ at ages 25–45, notably because more women are lone parents. They also diverge above age 50 due to men's lower risk of being widowed, given that women live longer than men. The slight decrease in mean household size between 2006 and 2015 (–0.08 people) is observed at most ages (except at ages 45–60) and is greatest at ages 19–20 (–6% for men) and 65–67 (–4%). This is due partly to population ageing. The trend is set to continue, except in the unlikely event that older people's living arrangements revert to the traditional system of intergenerational cohabitation.

Figure 4. Mean household size in 2006 and 2015 by sex and age



Coverage: Whole of France excluding Mayotte, individuals living in ordinary households.
Sources: INSEE, censuses, authors' calculations.

II. Immigration from third countries

Net migration, which measures the difference between arrivals and departures from France over a year, can be broken down into arrivals and departures of French or French-born citizens, and of immigrants, i.e. people born as foreigners outside France. This section examines recent trends in

inflows of foreigners from countries whose adult nationals must obtain a residence permit to live in France. It does not concern citizens of countries in the European Economic Area (EEA)[8] and Switzerland. To ensure consistency of comparisons over time, the statistics are established for constant geographical areas. We do not count people of nationalities that were formerly required to hold a residence permit but are now exempted.[9]

Inflows of nationals from third countries who come to live legally in France are determined here based on statistics on residence permits and long-term visas valid as residence permits issued in the year. These statistics are drawn up using data retrieved from the Ministry of the Interior's AGDREF database (Application de gestion des dossiers des ressortissants étrangers en France) and transmitted each year to INED. The method used to determine these flows is detailed in d'Albis and Boubtane (2015). It is based on the principle whereby individuals are counted in the inflows of the year in which they obtain their first residence permit valid for at least one year. In most cases, this year is the same as the year of entry, although it may be a later year (notably if the person was previously authorized to stay in France for a shorter period). It is thus the entry into permanent migrant status – i.e. long-term legal residence – that is measured, rather than the physical entry into France.

The Ministry of the Interior also publishes a complementary series of migration flow statistics based on a count of all first residence permits issued to adults, so the scope is different. Inflows of foreigners can also be estimated from other statistical sources. INSEE uses population censuses, which also provide data on inflows of EEA nationals and third-country immigrants without residence permits. However, for an identical geographical area, the census-based estimates of inflows are lower than those obtained using AGDREF data (Temporal and Brutel, 2016).

1. An ongoing increase in inflows

Table 2 shows inflow data for the years 2011 to 2016. A total of 218,354 people received a residence permit in 2016, the highest number since 2000 (Appendix Table A.3). Inflows in 2016 were 4% higher than in 2015 and 23% higher than in 2011. Among the individuals counted, the share of immigrants receiving a residence permit valid for ten years or more remains low, at slightly below 12% in 2016. A residence permit valid for ten years or more, typically a resident card, is generally granted after one or more permits of less than ten years.

(8) Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and United Kingdom.

(9) Appendix Table A.3 has been modified since 2014 to take account of changes in coverage and in estimation methods. The set of nationalities considered may vary from one annual report to the next, in response to legislative changes in rights of residence.

Table 2. Inflows of third-country nationals by first year of validity and period of validity of the first residence permit of one year or more

Period of validity	2011	2012	2013	2014	2015	2016
Less than 10 years	157,669	159,077	173,058	178,677	187,626	193,163
10 years or more	20,002	20,934	19,338	21,210	22,414	25,191
Total	177,671	180,011	192,396	199,887	210,040	218,354

Coverage: Permits granted in France and abroad to foreign nationals excluding citizens of the EEA and Switzerland (constant geographical area from 2011 to 2016). Permits granted in year *N* and retrieved from the AGDREF database in July of the year *N* + 2. Permits of less than ten years are valid for between 364 and 3,649 days; permits of ten years or more are valid for more than 3,649 days.
Source: Authors' calculations based on AGDREF data transmitted to INED.

According to Eurostat, which disseminates information transmitted by INSEE, 240,888 foreign nationals entered France in 2016.[10] This total also includes nationalities not required to hold a residence permit (i.e. EEA countries and Switzerland). Again according to Eurostat, if the latter are excluded, the total falls to 158,156, a figure well below that obtained using AGDREF data.

2. The share of women is decreasing but still varies by continent of origin

Recent immigrants are young. People aged 18–34 accounted for 63.1% of all arrivals (Table 3) and 70.2% of adult arrivals in 2016. The share of minors is stable, at 10.3% in 2016. Only minors receiving a residence permit are counted.[11] Foreign minors do not have to hold a residence permit but may need to obtain one if, for example, they wish to travel outside France. Minors born in France to foreign parents are not counted in the inflows. The first row of Table 2 only includes minors born abroad who hold a residence permit.

Table 3. Distribution of inflows (%) by age group, by first year of validity of the first residence permit of one year or more

Age group	2011	2012	2013	2014	2015	2016
0–17	9.9	9.7	9.5	10.3	10.2	10.3
18–34	64.5	64.4	62.8	62.2	62.5	63.1
35–64	24.2	24.4	26.2	25.7	25.5	24.9
65+	1.4	1.5	1.5	1.7	1.7	1.8

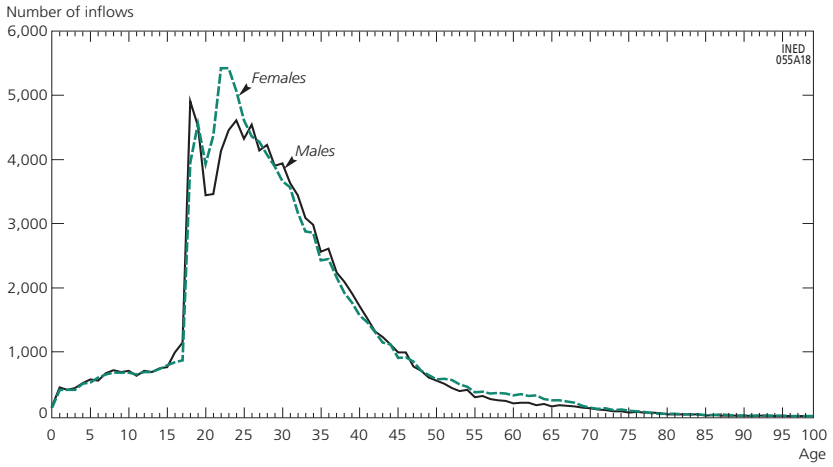
Coverage: Permits granted to foreigners. See Table 2.
Source: Authors' calculations based on AGDREF data transmitted to INED.

(10) The Eurostat data are available online (http://ec.europa.eu/eurostat/en/data/database) and on the OECD website (http://www.oecd.org/els/mig/keystat.htm).

(11) This permit, called a *document de circulation pour étranger mineur*, was instituted by a decree published on 24 December 1991.

Figure 5 gives a more detailed representation of the age–sex distribution of flows in 2016. The peak at ages 18–19 is due to individuals who arrived as minors and who wait until age 18 to apply for a residence permit, and to students. The figure shows that women outnumber men at ages 21–31 but that their mean age was 29.3 years, compared with 28.9 years for men.

Figure 5. Distribution of inflows by age and sex in 2016



Coverage: Permits granted to foreigners. See Table 2.
Source: Authors' calculations based on AGDREF data transmitted to INED.

A large majority of incoming migrants are African nationals. They accounted for 57.8% of the total in 2016 (Table 4). The share of arrivals from Asia increased, while that of arrivals from Africa and America decreased.

Table 4. Distribution of inflows (%) by continent of origin, by first year of validity of the first residence permit of one year or more

Continent of origin	2011	2012	2013	2014	2015	2016
Africa	56.9	57.0	57.0	58.0	58.2	57.8
America	11.9	11.5	10.8	10.5	10.4	9.4
Asia	24.3	24.5	25.3	24.5	24.4	25.6
Europe	6.3	6.3	6.2	6.3	6.3	6.7
Oceania	0.5	0.4	0.4	0.4	0.4	0.4

Note: The sum does not necessarily equal 100 because some values are rounded, and others are missing.
Coverage: Permits granted to foreigners. See Table 2. Turkey is included in Asia. Europe includes all European countries outside the EEA and Switzerland.
Source: Authors' calculations based on AGDREF data transmitted to INED.

Women form a small majority among inflows. In 2016, they represented 50.6% of the total (Table 5). Their proportion has been decreasing since 2014. In 2016, there were fewer women than men among African inflows, but they formed a majority among inflows from all other continents. They are over-represented among European nationals in particular.

Table 5. Share of women in inflows (%) by continent of origin, by first year of validity of the first residence permit of one year or more

Continent of origin	2011	2012	2013	2014	2015	2016
Africa	47.5	49.0	49.2	49.9	49.3	48.3
America	58.7	58.3	58.3	57.7	56.7	57.3
Asia	54.7	54.7	54.1	53.8	53.0	51.3
Europe	60.7	60.4	60.4	60.2	60.0	58.6
Oceania	54.0	52.4	55.4	50.1	52.7	53.5
Overall	51.4	52.2	52.2	52.3	51.6	50.6

Coverage: Permits granted to foreigners. See Table 2. Turkey is included in Asia. Europe includes all European countries outside the EEA and Switzerland.
Source: Authors' calculations based on AGDREF data transmitted to INED.

3. A decrease in the share of admissions for family reasons since 2013

The share of immigrants admitted to France for family reasons – the main reason for admission – has decreased sharply since 2013; 49% of migrants were admitted for this reason in 2016 (Table 6).[(12)] By comparison, the shares of admissions for educational (25.9%), humanitarian (12.7%), and employment-related reasons (8.1%) are low but increasing. Admissions for humanitarian reasons mainly concern two types of immigrants: ill foreigners (6,178 people in 2016) and foreigners admitted as refugees, stateless persons, or beneficiaries of territorial asylum or subsidiary protection (21,473 people).[(13)] Residence permits granted for this second set of reasons increased by 41% in 2016. This reflects the increase in asylum applications received since 2014 (d'Albis and Boubtane, 2018). Among people admitted for employment-related reasons (17,726 in 2016), almost 75% are wage employees or self-employed. The remainder are seasonal or temporary workers, scientists, and artists.

Table 6. Distribution of inflows (%) by reason for granting first residence permit valid for one year or more, by first year of permit validity

Reason for granting permit	2011	2012	2013	2014	2015	2016
Family	53.5	55.5	56.1	55.0	52.7	49.0
Education	25.2	23.8	24.0	23.8	25.3	25.9
Humanitarian	9.5	9.7	8.9	9.9	10.2	12.7
including refugee	*6.0*	*6.1*	*5.6*	*6.4*	*7.2*	*9.8*
Employment	7.6	6.6	6.7	7.2	7.7	8.1
Various and unspecified	4.2	4.5	4.4	4.2	4.2	4.3

Coverage: See Table 3. The "refugee" row covers permits granted on these grounds: "refugee and stateless, territorial asylum, and subsidiary protection".
Source: Authors' calculations based on AGDREF data transmitted to INED.

(12) Foreign minors with a residence permit are included under this reason.

(13) It is important to distinguish these people from asylum seekers who are counted as temporary migrants. Admissions for humanitarian reasons only include people whose application has been processed and approved.

Women are over-represented among inflows admitted for family reasons and under-represented among those admitted for humanitarian and, above all, employment-related reasons (Table 7). Among students, men and women are equally represented.

Table 7. Share of women among inflows (%) by reason for granting first residence permit valid for one year or more, by first year of permit validity

Reason for granting permit	2011	2012	2013	2014	2015	2016
Family	57.3	57.3	57.1	58.3	58.1	58.0
Education	49.9	51.1	50.4	50.0	49.0	49.4
Humanitarian	43.6	43.5	44.1	44.8	44.6	41.3
Employment	22.2	23.5	24.9	23.1	24.8	23.6
Overall	51.4	52.2	52.2	52.3	51.6	50.6

Coverage: Permits granted to foreigners. See Table 2.
Source: Authors' calculations based on AGDREF data transmitted to INED.

Reasons for admission are distributed differently from one continent of origin to another (Table 8). Family reasons are over-represented among permits granted to Africans (56.1% of permits in 2016) and Europeans (52.3%) and under-represented among those granted to Asians (33.4%) and Americans (45.6%). Education reasons are over-represented among Asians (33.4%) and Americans (29.9%) and under-represented among Europeans (11.6%). Humanitarian reasons account for a large share of permits granted to Europeans (25.0%) and Asians (20.2%) but a very small share among Americans (2.2%), for whom employment-related reasons are over-represented (12.3%). Among migrants from Africa, the share of admissions for family reasons is decreasing in favour of other reasons. The reasons for migration from America have remained stable since 2015. Among Asian migrants, the number of permits granted for family and educational reasons has fallen sharply, while permits granted for employment and humanitarian reasons – due to the war in Syria – have increased. Last, permits granted to European migrants have increased for humanitarian reasons and fallen for educational and family reasons.

4. Over 35,000 asylum seekers admitted for residence in 2016

Asylum seekers may be admitted for residence in France in several ways. If their application is accepted, they obtain a permit on humanitarian grounds (and are counted in the fourth row of Table 6). As d'Albis and Boubtane (2018) show, a share of those whose application is rejected are admitted for residence on different grounds, most often family reasons. The rates of admission for residence by submission date of the asylum application are given in d'Albis and Boubtane (2018). The perspective here is different. Table 9 shows the annual inflows of people having submitted an asylum application to the French Office for the Protection of Refugees and Stateless Persons (OFPRA). They

Table 8. Distribution of inflows (%) by reason for granting first residence permit valid for one year or more and continent of origin, by first year of permit validity

Continent of origin and reason for granting permit	2011	2012	2013	2014	2015	2016
Africa						
Family	61.5	64.8	64.4	63.5	61.2	56.1
Education	21.2	19.3	20.1	20.2	22.8	24.8
Humanitarian	7.8	7.8	7.4	8.0	7.5	9.7
Employment	6.5	4.9	5.1	5.5	5.7	6.4
America						
Family	51.2	48.0	49.1	49.4	45.9	45.6
Education	26.7	28.7	28.6	28.9	29.8	29.9
Humanitarian	3.0	2.9	2.4	2.0	1.9	2.2
Employment	10.4	10.6	10.3	10.5	13.4	12.3
Asia						
Family	37.8	39.0	40.7	37.8	35.3	33.4
Education	36.9	34.6	33.4	33.3	32.8	30.9
Humanitarian	12.0	13.2	12.5	14.6	17.2	20.2
Employment	8.6	8.2	8.5	9.5	10.2	10.8
Europe						
Family	47.2	50.5	55.3	53.8	53.5	52.3
Education	14.8	14.7	13.9	13.0	13.1	11.6
Humanitarian	26.1	23.7	18.5	21.3	21.3	25.0
Employment	7.5	6.7	7.2	6.4	6.5	6.1

Coverage: Permits granted to foreigners. See Table 2.
Source: Authors' calculations based on AGDREF data transmitted to INED.

Table 9. Distribution of inflows (%) of asylum seekers by first year of validity of first residence permit valid for one year or more, continent of origin and reason for admission

	2011	2012	2013	2014	2015	2016
Share of women	39.3	39.7	40.7	41.5	41.1	39.7
Continent of origin						
Africa	42.9	41.1	37.8	37.9	35.9	36.9
America	5.9	4.9	5.2	4.7	4.1	3.0
Asia	33.7	36.6	41.6	41.4	44.0	43.9
Europe	16.3	15.7	13.8	14.5	14.9	15.3
Reason for granting permit						
Family	35.8	36.8	45.1	38.1	33.1	35.8
Education	0.4	0.5	0.5	0.6	0.5	0.4
Humanitarian	55.5	57.3	48.4	54.4	59.5	55.5
Employment	7.7	4.7	5.3	6.2	6.2	7.7
Inflows	22,236	22,169	25,132	25,703	27,507	35,262

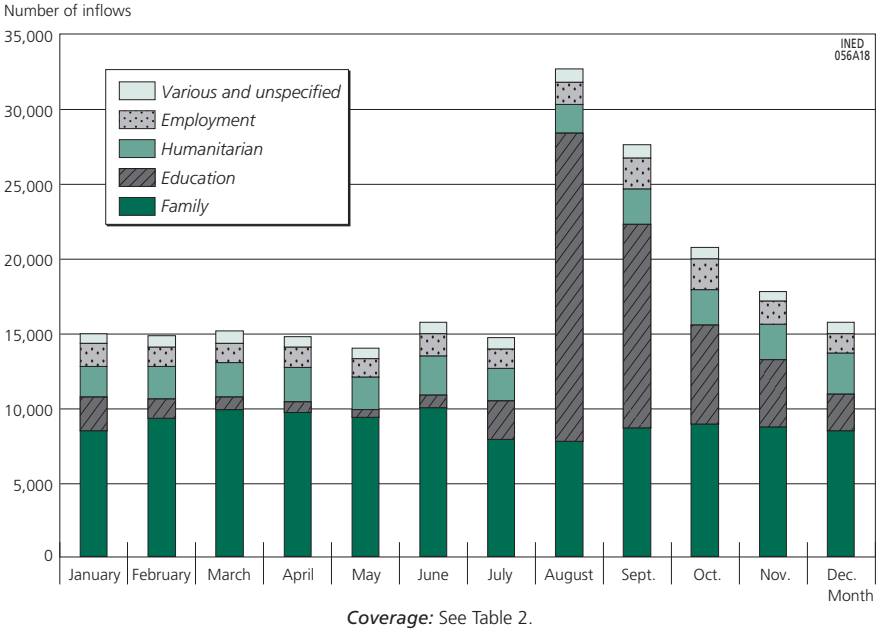
Coverage: Permits granted in France and abroad to foreign nationals excluding citizens of the EEA and Switzerland (constant geographical area from 2011 to 2016) who applied for asylum between 1985 and the first year of validity of the first residence permit valid for one year or more. Permits granted in year *N* and recorded in the data retrieved in July of the year *N* + 2.
Source: Authors' calculations based on AGDREF data transmitted to INED.

totalled 35,262 in 2016 and represented 16.1% of overall inflows.[14] Due to the Syrian war, the number of asylum seekers admitted for residence and their share of overall flows in 2016 were at their highest levels since 2011. In 2016, the share of women among incoming asylum seekers (40%) was lower than among overall inflows, and their proportion has remained stable since 2011. Since 2013, the largest share of incoming asylum seekers have been of Asian origin. They represented 44% of the total in 2016. Africans represent almost 37% of the total and are admitted mainly for humanitarian reasons (55.5% of admissions in 2016) and family reasons (35.8%).

5. Almost 28% of inflows in August and September

A high proportion of first permits valid for one year or more are granted between August and October (Figure 6). This seasonal pattern is due mainly to the arrival of students, 60% of whom enter France during August and September. Inflows for employment reasons also fluctuate on a seasonal basis, though to a lesser extent, with 23% of entries in September and October alone. Entries for family and humanitarian reasons do not vary markedly over the year.

Figure 6. Inflows of third-country nationals in 2016 by reason for admission, first month of validity, and period of validity of the first residence permit of one year or more



Coverage: See Table 2.

Source: Authors' calculations based on AGDREF data transmitted to INED.

(14) This proportion is higher than the share admitted for humanitarian reasons as it includes admissions for other reasons.

III. Births and fertility

1. A drop in fertility among younger women

In 2017, 769,500 births were registered in the whole of France (730,000 in metropolitan France; see n. 2). The number of births fell for the third year running, owing to concomitant decreases in fertility and the size of the childbearing-age population (Papon and Beaumel, 2019). Total fertility fell from 2.0 children per woman at the start of the 2010s to 1.9 in 2016 and 2017, the same as at the start of the 2000s. Compared to the previous year, the annual number of births was down 2.4% in 2015, 1.9% in 2016 (a leap year), and 1.8% in 2017. Estimates of the number of births in 2018 confirm this steady decrease, at 1.6% between 2017 and 2018 (758,000 births; Papon and Beaumel, 2019). But the French total fertility rate is still higher than that of neighbouring countries (Appendix Tables A.6 and A.7).

The under-25s show the sharpest drop over the past years (Table 10, Figure 7). This could be due to a calendar effect which might ultimately lead to a reduction in the mean number of children per woman for that generation, unless they make up for it later (Appendix Table A.5). The impact will be less if some births are postponed.

Table 10. Fertility by age group, 2012 to 2017

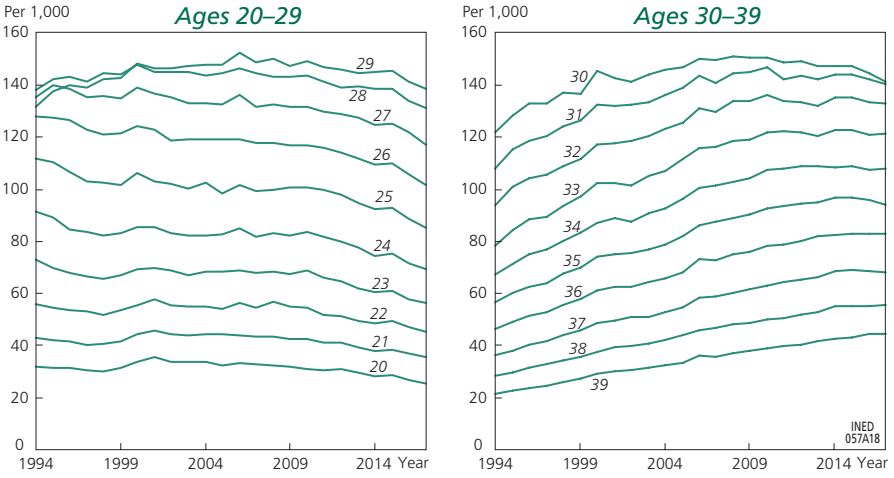
Age reached in the year	Sum of age-specific rates (per 1000 women)						Absolute variation				
	2012	2013	2014	2015	2016	2017[a]	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017
Under 20	40	38	37	35	32	30	–2	–1	–2	–3	–2
20–24	267	257	252	240	231	222	–10	–5	–12	–9	–9
25–29	627	618	612	592	574	555	–9	–5	–21	–17	–20
30–34	656	650	658	648	643	635	–6	8	–9	–3	–11
35–39	333	338	347	347	345	343	5	9	0	–2	–2
40 or over	85	88	93	93	95	98	3	5	0	2	3
Total (TFR*)	2,008	1,988	1,999	1,955	1,920	1,883	–19	11	–44	–32	–41

* TFR: total fertility rate (sum of age-specific rates, children per 1000 women). Due to rounding, the total may differ slightly from the sum, and variations may not correspond to apparent differences.
(a) Provisional data.
Coverage: Whole of France (including Mayotte since 2014).
Source: INSEE, authors' calculations.

2. Childbearing around the age of 30

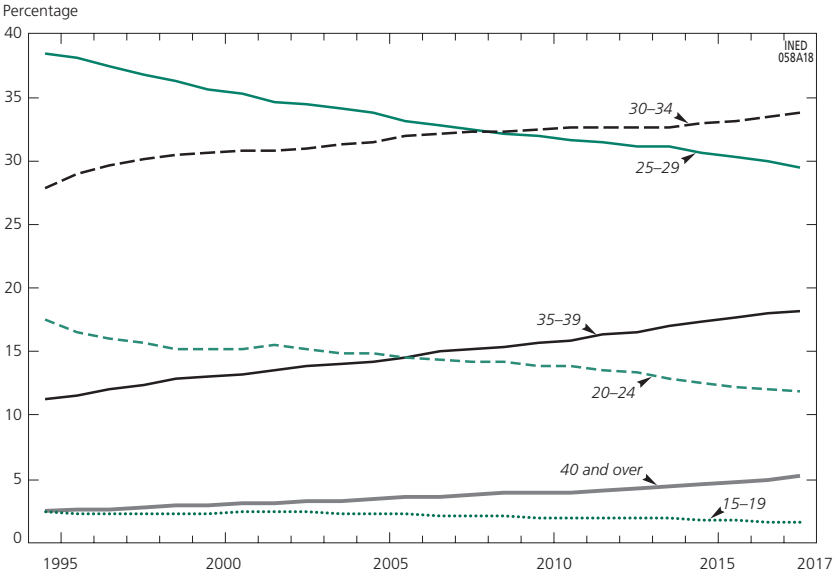
The fertility curves for every age group have changed over the past 20 years. At present, 63% of births are concentrated between the ages of 25 and 35 (Table 10), and mean age at childbirth is still rising. In 1994, women aged 25–29 accounted for nearly 40% of total fertility; in 2017, less than 30% (Figure 8). Since the mid-2000s, women in the 30–34 age group have been contributing the most to total fertility (more than a third in 2017). Fertility

Figure 7. Age-specific fertility rates (per 1000 women) between 20 and 39 years of age, 1994 to 2017



Coverage: Whole of France (including Mayotte since 2014).
Source: INSEE, authors' calculations.

Figure 8. Age group contributions to total fertility rate, 1994 to 2017 (%)



Coverage: Whole of France (including Mayotte since 2014).
Source: INSEE, authors' calculations.

among over-30s accounts for 57% of the total, while the younger age groups contribute little (12% for age 20–24) and fertility in the 15–19 age group, already low 20 years ago, has fallen further, to 1.6%. Births before the age of 20 are increasingly rare, reflecting widespread contraceptive use among the young

(Rahib and Lydié, 2016; Rahib et al., 2016) and doubtless widespread use of abortion in cases of unplanned pregnancy.

The fertility curves for under-30s show a continuous decline since the early 2000s and a steeper drop in recent years. Because fertility is high at these ages, the decrease has significantly lowered the total fertility rate (Table 10, Figure 8). Fertility rates for age 30 and over have recently either stabilized or fallen slightly. Total fertility is therefore falling (from 2.01 in 2012 to 1.89 in 2017), and mean age at childbirth is still rising. In 2017, mean age at childbirth was 30.7, as against 30.1 in 2012 (Appendix Table A.4).

3. Fewer births on Saturdays, Sundays, and national holidays

Monthly birth registrations in 2017 ranged between 57,900 (February) and almost 68,500 (July). Birth numbers are lowest in late winter and early spring and highest between July and October, the result of conceptions spread over the second quarter of the previous year. Couples would prefer, ideally, to schedule births for spring but, on average, it takes several ovulation cycles to achieve conception (Régnier-Loilier, 2010; Régnier-Loilier and Rohrbasser, 2011). So stopping contraception use in July or August is no promise of a May birth, and the peak period for actual births is somewhat later than couples would have wanted.

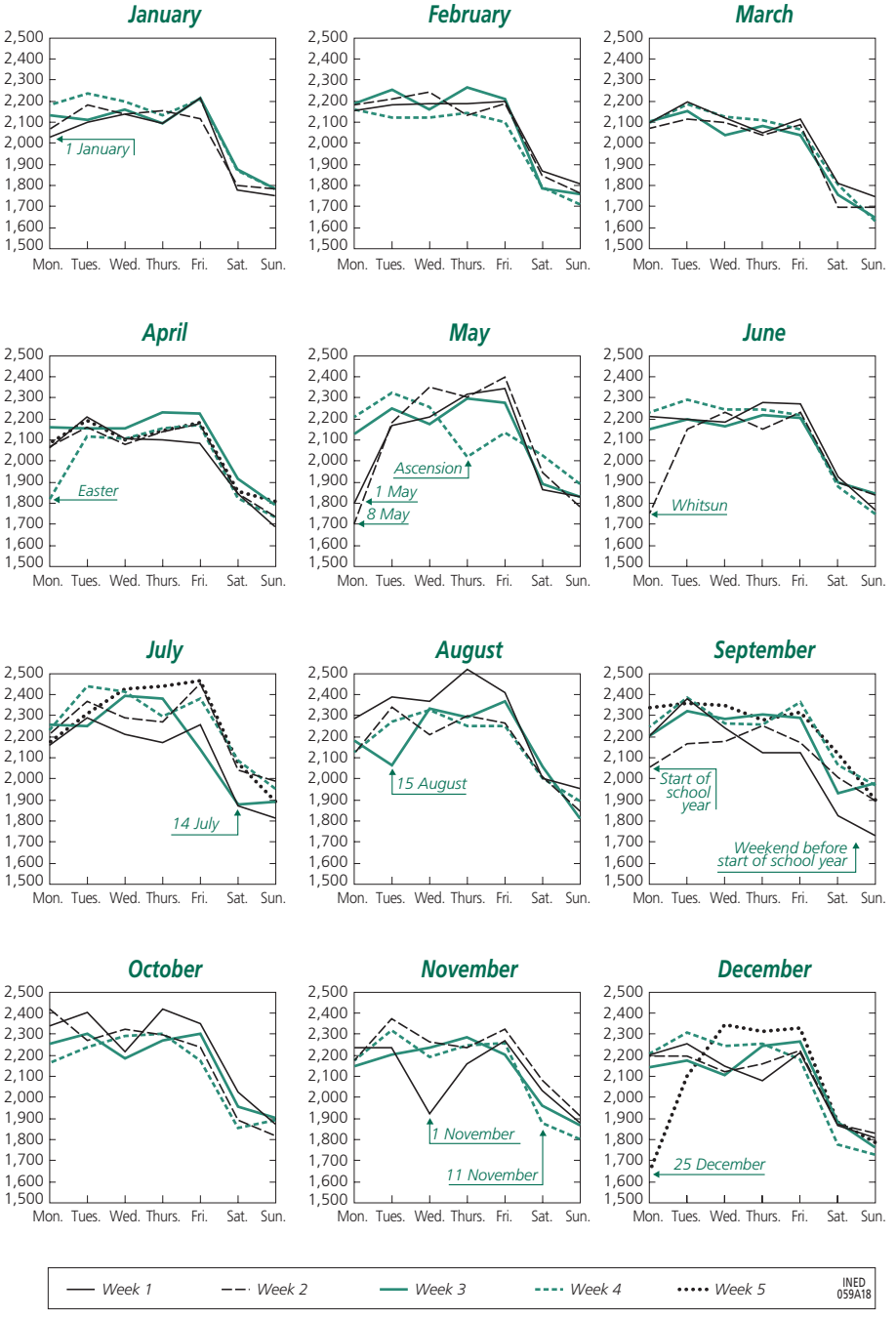
Daily birth numbers were about 2,000 in 2017 (Figure 9), with large or small variations. The most marked variations are due to births being programmed for weekdays; there were fewer births at weekends and on national holidays, and fewest on Sundays – especially in March and April, when there were fewer births overall. The day with the fewest births of all in 2017 was 25 December. In September, the weekend before the start of the school year and the first days of the new term were also low-birth periods, probably because fewer births were programmed for those days (Figure 9).

4. 26,000 ART-conceived births

In 2016, some 26,000 births resulted from assisted reproductive technology, or ART (Agence de la biomédecine, 2018; La Rochebrochard, 2018) – slightly over 3% of all births. The most widely used ART technique is in vitro fertilization (IVF) (50%).[15] "Artificial" insemination (AI), which is less invasive of the woman's body, gives rise to 25% of ART births; almost another quarter are due to frozen embryo transfer (Agence de la biomédecine, 2018, Figure AMP10, p. 13). In 95% of AI and IVF births, egg and sperm come from the two spouses; recourse to a donor is rare. ART in France is predominantly biological, conjugal, and heteronormative (Gross and Bureau, 2015), both in terms of the law and in practice. Some people "excluded" from the ART system, dissatisfied with

(15) A distinction is now made between two IVF techniques. One uses intra-cytoplasmic sperm injection, or ICSI, where a single sperm cell is injected directly into the egg (La Rochebrochard, 2018). ICSI was developed in the early 1990s and is now the most widely used method: of all births resulting from ART, 34% are from ICSI IVF and 16% are from non-ICSI IVF.

Figure 9. Number of births by day of the week, 2017



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

French care provision or waiting for donated sperm (which can mean a long wait), go abroad, mainly to Belgium, Spain, or Greece. Most ART candidates coming from France and going to centres abroad are women wanting donated sperm, women without a partner, or same-sex couples (Rozée and La Rochebrochard, 2013). A few heterosexual or homosexual couples use a surrogate abroad. Surrogacy is a highly charged issue on which ethical and moral positions are starkly divided. It is banned in France.

5. 11% of children born in 2017 were given a combination of both parents' surnames

In 2005, a new law on surnames came into force, allowing parents to give their children both their surnames by registering their name choice in the civil register (Mazuy et al., 2015, 2016).(16) Of the children born in 2017, slightly over 11% were given both parents' names. Although this minority choice seems egalitarian because it highlights the child's dual parentage, it still bears the mark of traditional custom since the father's surname is put first in eight cases out of ten (Table 11). This has scarcely changed since 2010.

Table 11. Breakdown of birth surnames of children born in 2017 (%)

Surname given to the child	
Father's surname	82.4
Mother's surname	6.2
Father's surname followed by mother's	8.7
Mother's surname followed by father's	2.5
Other surname or not declared	0.2
Total	100.0

Coverage: Live births recorded in whole of France, including Mayotte.
Source: INSEE, civil register statistics.

IV. Induced abortions

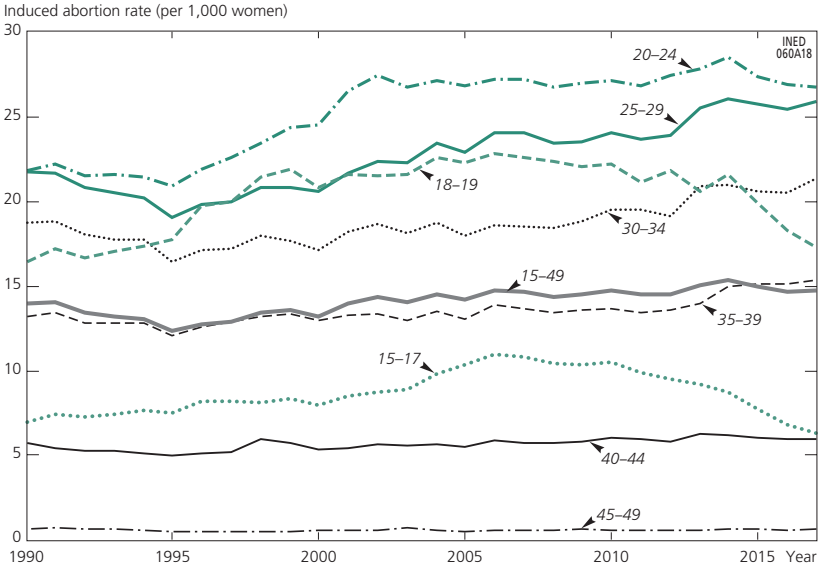
1. Slight rise in abortion rates

The number of induced abortions, which had been falling since 2014, rose slightly in 2017 (Vilain, 2018). The number recorded was 216,700 (202,919 for metropolitan France), up from 214,800 in 2016 but lower than those in 2015 (218,097), 2014 (227,038), and 2013 (229,021). Of the 2017 total, 202,919 abortions concerned women resident in metropolitan France (Appendix Table A.8). The drop in the number of childbearing-age women did not lead to fewer abortions in 2017, although there were fewer among women under the age of 25 (Figure 10). Overall, the abortion trend has been following a similar curve to the total fertility

(16) The law of 4 March 2002 came into force on 1 January 2005. It makes it possible for a child to be given his or her mother's surname, and it changed the terminology from *patronymique* (patronym) to *nom de famille* (family name) – there is no mention of "patronym" anywhere in the new law.

rate but at a level four times lower (Mazuy et al., 2015; Vilain, 2018). The 2017 increase in abortions concerned women in the 30–34 and 35–39 age groups; abortions before age 20 continued to fall (Figure 10). The trend towards abortions at younger ages observed since the late 1990s seems to have stopped. The data for 2018 will show whether the downturn in abortions among the young continues. It may be partly connected with a decline in conceptions in the 20–29 age groups, as suggested by the drop in fertility at these ages (see below).

Figure 10. Number of induced abortions by age group (years), 1990 to 2017



Coverage: Whole of France.
Source: Vilain (2018).

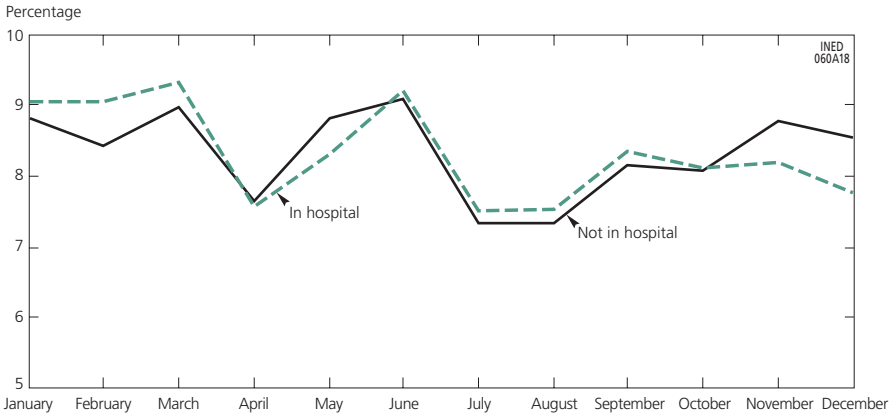
2. Seasonal variations in abortions

The monthly breakdown of the year's abortions gives an average of about 8% each month (Figure 11). Broken down by place, similar numbers of abortions are carried out in hospitals and elsewhere.(17) The slight difference between the curves can be explained by the fact that all non-hospital abortions are medical abortions and therefore performed, on average, earlier in the pregnancy.

There are more abortions early in the year, corresponding to conceptions occurring late in the previous year and at the New Year peak (Régnier-Loilier,

(17) Two types of data are available: those collected via the Programme de médicalisation des systèmes d'information (PMSI, information system medicalization programme) for abortions in hospital, and the number of abortion expenses reimbursed (medical fees and drugs) for medical abortions performed outside hospital, supplied by the health insurance body for salaried employees (Caisse nationale d'assurance maladie des travailleurs salariés, CNAM-TS) from their own data since 2005 and from health centres and family planning and family education centres since 2009, by the farmers' health insurance body Mutualité Sociale Agricole (MSA) and by the self-employed health insurance system since 2010 (Vilain, 2018).

Figure 11. Monthly distribution of abortions by establishment type, 2017



Note: All months aligned to same baseline to neutralize differences in the number of days in the month.
Coverage: Whole of France.
Source: Authors' calculations based on DREES data.

2010; Régnier-Loilier and Rohrbasser, 2011). Numbers drop in April, which is a holiday period. The steep rise in June may correspond to a tendency to hasten recourse to abortion before the summer holidays. The September increase can similarly be interpreted as terminating July and August pregnancies that were not dealt with during the summer holiday period. The difficulty getting an abortion in summer is one point raised by the national abortion data committee in its report (Commission IVG, 2016). Difficulties in getting abortions and in finding trained and practised staff to perform them under good conditions are recurrent problems in most countries (Guillaume and Rossier, 2018). In France, this was particularly the case in 2018 in the south of Sarthe, where one hospital could not perform abortions for nine months of the year. This instance highlighted the difficulties inherent in staff shortages and the way local supply can be impeded when medical staff use the conscience clause.

V. Marriages, civil and consensual unions, and divorces

1. Registered unions

A rise in registered unions after the drop in 2016

In 2017, 427,865 unions[(18)] were registered (193,950 civil unions, known as PACS in France,[(19)] and 233,915 marriages), a rise of 3,603 (+0.8%) after the

(18) Some couples who are already in a civil partnership get married. Marriages and civil partnerships rarely occur in the same year, but the figures are not published. Finding out how many couples are counted twice would require a special study based on the month and year in which civil unions were made and dissolved.

(19) PACS: *pacte civil de solidarité*, or civil solidarity pact. The law of 15 November 1999 authorized both opposite-sex and same-sex civil unions.

decrease of 1,001 (–0.2%) between 2015 and 2016 (Table 12; Appendix Table A.9). The year 2016 witnessed for the first time a decrease in the number of registered unions since 2013, when same-sex marriages were introduced.

The upward trend should continue in 2018, judging by the latest estimate of marriage numbers published by INSEE, i.e. 229,000 opposite-sex marriages and 6000 same-sex marriages (Papon and Beaumel, 2019).[20]

The rise in the number of unions registered in 2017 concern all types of unions. Heterosexual marriages and PACS have risen the most in absolute numbers (+3,248); but in relative terms, same-sex unions have increased the most (+2.5%) (Table 12). The rise in 2017 contrasts with the "historic" drop in 2016, which was characterized by a sharp fall in marriages, whether between opposite-sex partners (–2,953 or 1.3%) or same-sex partners (–638 or 8.2%). Only heterosexual and lesbian civil unions increased between 2015 and 2016, and only slightly: +1.4% for civil unions, the smallest rise since 2011 but very specific to that year owing to taxation changes (Breton et al., 2017).

Table 12. Number of unions officially registered in 2016 and 2017, and change between 2015, 2016, and 2017, by type of union and partners' sex

	2016			Change 2015–2016					
	Marriages	Civil unions	Total	Marriages	%	Civil unions	%	Total	%
Opposite-sex	225,612	184,425	410,037	–2,953	–1.3	2,495	1.4	–458	–0.1
Same-sex	7,113	7,112	14,225	–638	–8.2	95	1.4	–543	–3.7
Men	3,672	3,862	7,534	–413	–10.1	–70	–1.8	–483	–6.0
Women	3,441	3,250	6,691	–225	–6.1	165	5.3	–60	–0.9
Total	232,725	191,537	424,262	–3,591	–1.5	2,590	1.4	–1,001	–0.2
	2017			Change 2016–2017					
	Marriages	Civil unions	Total	Marriages	%	Civil unions	%	Total	%
Opposite-sex	226,671	186,614	413,285	1,059	0.5	2,189	1.2	3,248	0.8
Same-sex	7,244	7,336	14,580	131	1.8	224	3.1	355	2.5
Men	n/a	4,084	n/a	n/a	n/a	222	5.7	n/a	n/a
Women	n/a	3,252	n/a	n/a	n/a	2	0.1	n/a	n/a
Total	233,915	193,950	427,865	1190	0.5	2,413	1.3	3,603	0.8

n/a: Data unpublished as of the writing of this article.
Coverage: Whole of France.
Sources: Ministry of Justice, INSEE, civil register.

As in 2016, the number of marriages registered in 2017 was still slightly more than the number of civil unions. The reasons for dissolving civil unions have not yet been published for 2017, unlike 2016. In that year, marriages

(20) INSEE has published provisional numbers of marriages and PACS for 2018 but not yet the detailed files. PACS figures were not published until the autumn, after this article was finalized. The difference is often tiny, but in 2017 it was not negligible: the forecast figure was 228,000 marriages, and the definitive number was 233,915.

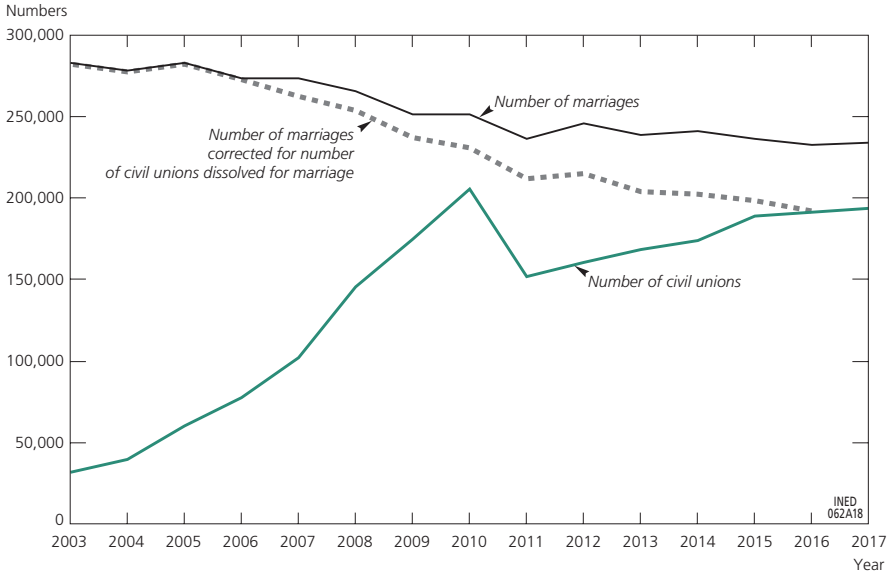
outnumbered civil unions, even after deducting for civil unions dissolved in order to marry (40,670; Table 13). In those cases, the marriage is just a confirmation of a partnership already officially registered by a civil union. But the order is likely to have reversed (Figure 12). The increase in civil union dissolutions for marriage purposes shows that partnerships are being officialized step by step, usually starting with a civil union, sometimes followed by marriage.[21]

Table 13. Number of civil union dissolutions by reason, 2012–2016

Year	Number of dissolutions	Reason for civil union dissolution				
		Mutual consent	Requested by one partner	Marriage[a]	Death	Other or not recorded
2012	61,507	28,532	1,552	30,660	731	32
2013	69,540	32,138	1,733	34,870	766	33
2014	76,267	34,927	2,062	38,483	724	71
2015	79,386	38,295	2,144	38,139	740	68
2016	84,662	40,972	2,220	40,670	730	70

(a) The marriage may involve two people already united by a civil union, or a person who has left their civil union partner to marry someone else. Absent more detailed data, it is assumed here that a marriage following dissolution of a civil union is a marriage between the two civil union partners and does not end a union.
Coverage: Whole of France.
Source: Ministry of Justice.

Figure 12. Number of civil unions and marriages, 2003–2017



Coverage: Whole of France.
Sources: Ministry of Justice, INSEE, civil register.

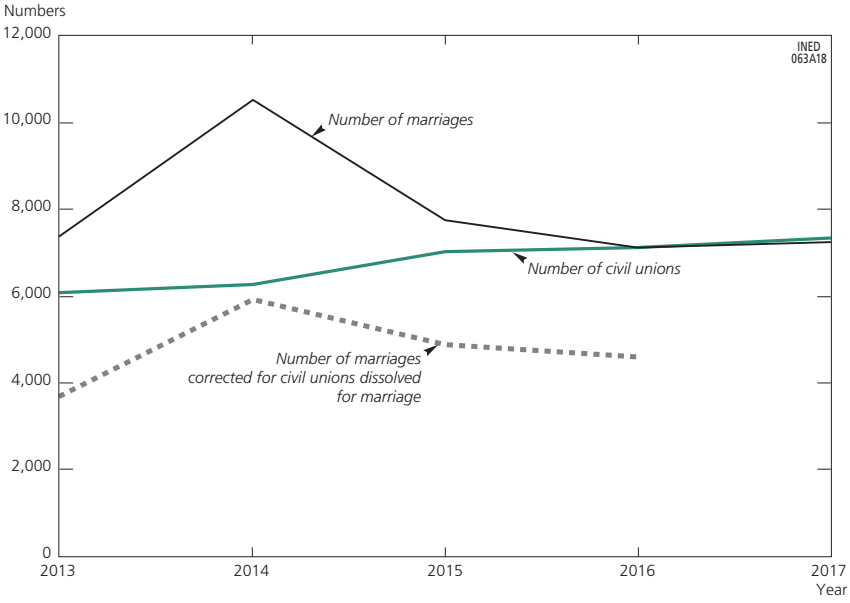
(21) Unfortunately, the number of civil union dissolutions for marriage purposes is not published by duration of the civil union; this information would be needed to calculate the proportion of civil unions registered in a given year that are dissolved in order to marry.

2016 and 2017: Same-sex unions comprised the lowest proportions of union registrations

Same-sex unions make up a little more than 3% of all union registrations (3.3% in 2016 and 3.4% in 2017); 3.1% of marriages and 3.8% of PACS. The drop in registrations mainly concerns the number of same-sex marriages, which fell sharply in 2016 and was not offset by the slight increase in marriages and same-sex civil unions.

The number of same-sex civil unions continued to rise. In 2017, it surpassed the number of marriages (whether preceded by a civil union or not) (Figure 13). The pattern of partnerships starting with a civil union and moving on to marriage seems more widespread among these couples. In 2016, nearly a third of same-sex marriages (35.5%) followed on from a civil union. This proportion has been declining constantly since 2013 (50.0%), when marriage became available to same-sex couples.

Figure 13. Numbers of same-sex marriages and civil unions, 2013–2016



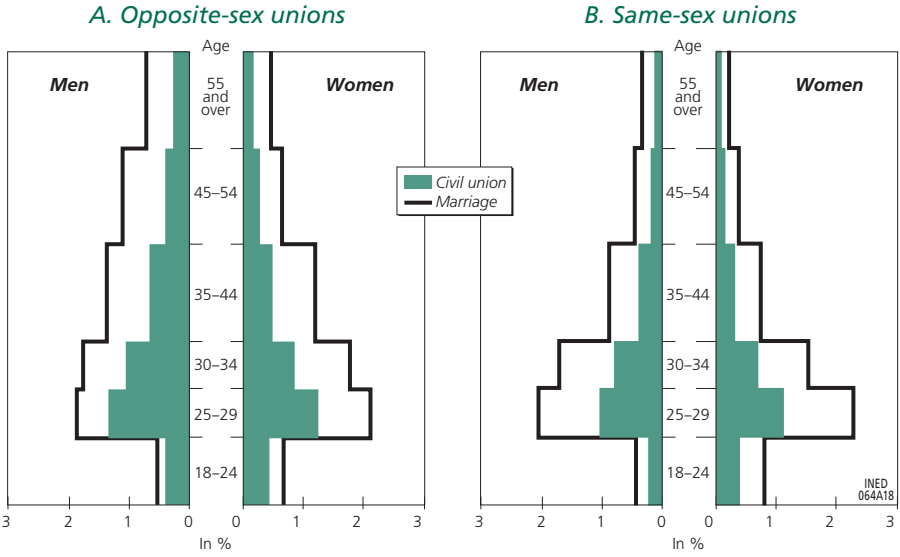
Coverage: Whole of France.
Sources: Ministry of Justice, INSEE, civil register.

Civil unions registered at younger ages than marriages, especially among same-sex couples

A breakdown by sex and age of unions registered in 2016 shows very similar patterns for opposite-sex and same-sex unions (civil unions and marriages), both for modal age group (25–29) – though opposite-sex PACS are a little more frequent – and for breakdown by sex, though an asymmetry is observed for

age 45 and over, in particular for opposite-sex unions (Figure 14).[22] In both subpopulations, civil unions are registered earlier, and they are as numerous or more numerous than marriages up to the age of 30, and even 35 in the case of civil unions between two men.

Figure 14. Opposite- and same-sex marriages and civil unions by sex and age, 2016



Coverage: Whole of France.
Sources: Ministry of Justice, INSEE, civil register, authors' calculations.

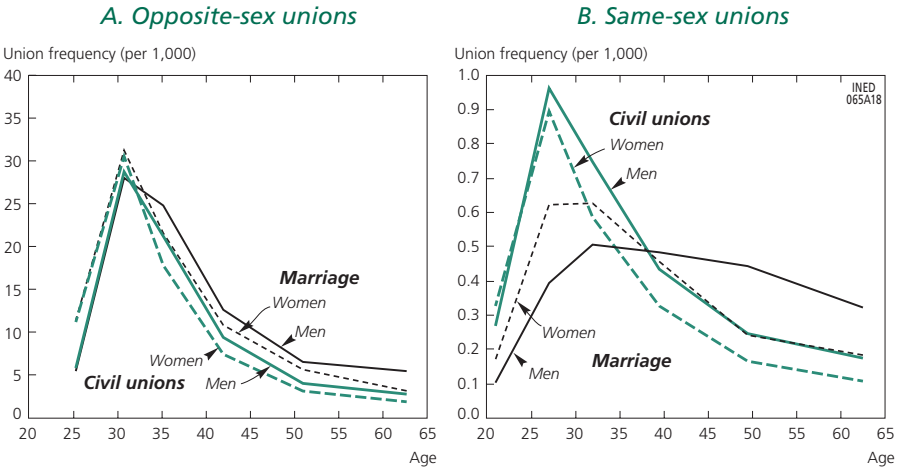
The differences between types of couples are sharper in terms of event frequency (mean number of marriages and civil unions per person in a given age group) (Figure 15).[23] For opposite-sex unions, the curves are almost the same, although after the age of 30, marriages are the more numerous, some of these being marriages of people who have been in a civil union (Figure 15A). For same-sex couples, there is a sharper difference between the age curves for civil unions and marriages; civil unions are registered earlier (Figure 15B). However, the difference between marriages and civil unions has been fading since 2013, when marriage was made available to same-sex couples (Mazuy et al., 2016). It is difficult to explain why same-sex marriages occur later than opposite-sex marriages. It could be because it is harder to get these unions accepted socially, or it could be due to a difference in behaviour, prolonging the period of consensual union or having a more particular union history. Another possible explanation suggests a different social structure among

(22) Data from detailed census files from 2017 are only published during the first semester of 2019. The analysis by sex and age therefore concerns the year 2016.

(23) The denominator for calculating event frequency is the set of all individuals, regardless of marital status. The denominators for marriage frequency and civil union frequency are therefore identical.

same-sex couples, with a higher proportion of urbanites and graduates, both of which characteristics are linked to later partnership formation (Bailly and Rault, 2013; Buisson and Laplinte, 2013).

Figure 15. Civil union and marriage frequency by sex and age, 2016



Coverage: Whole of France.
Sources: Ministry of Justice, INSEE, civil register.

Between 2014 and 2016, the number of unions per 1,000 people (cumulated event frequency) increased for both same-sex and opposite-sex civil unions and decreased for marriages (except for marriages between a man and a woman). Age at registration of a union rose, except for same-sex marriages, for which the mean age of the partners fell (from 40.8 years to 40.1 for male marriages and 36.9 to 35.6 for female marriages) (Table 14).

Table 14. Number of unions per 1000 people (cumulated event frequency) and mean age at union in 2014 and 2016

	Civil unions				Marriages			
	Man		Woman		Man		Woman	
	With a man	With a woman	With a man	With a woman	With a man	With a woman	With a man	With a woman
2014								
Cumulated event frequency	16	398	13	405	23	529	21	545
Mean age	32.9	31.3	32.0	29.8	40.8	33.5	36.9	31.8
2016								
Cumulated event frequency	19	457	16	450	18	555	16	544
Mean age	33.8	32.3	32.2	30.6	40.1	34.1	35.6	32.0

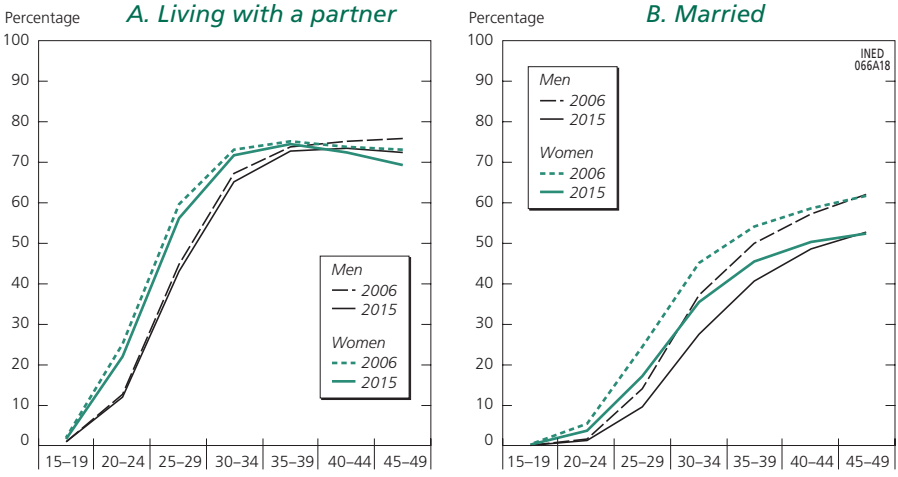
Coverage: Whole of France.
Sources: Ministry of Justice, INSEE, civil register, authors' calculations.

2. Consensual unions

The historic decline in the number of marriages since the mid-1970s does not reflect a lesser propensity to live with a partner but a shift away from institutionalized unions. Because consensual union formation is not routinely recorded as civil unions and marriages are, it is hard to know how many consensual unions are started each year. However, an estimate can be made from specific data sources like the Permanent Demographic Sample (Échantillon permanent démographique, or EDP). The annual number of consensual unions is much higher than the annual number of marriages or civil unions. According to this data source, 546,000 new consensual unions were formed each year between 2011 and 2014 – more than twice the number of marriages and three times the number of civil unions for that period (Costemalle, 2017).

An analysis of census data confirms that the propensity to live with a partner is still strong, though fewer partnerships are being formalized. The proportion of men and women living with a partner at the time of the census (regardless of type of union) scarcely fell between 2006 and 2015, unlike the number of married people (Figure 16). Some of the unmarried partnerships were probably civil unions. The question about civil unions was not introduced into the personal data sheets for the census until 2015 (Buisson, 2017). Analysis of the data from five annual census survey rounds will therefore not be possible until the end of 2019.

Figure 16. Proportions (%) of married persons and persons living with partners at time of census, by sex and age group, in 2006 and 2015



Coverage: Whole of France except Mayotte.
Source: INSEE censuses, primary data, authors' calculations.

3. Fewer first marriages with each successive generation

First-marriage probability, i.e. the likelihood of marrying at a given age for someone who has never been married, scarcely changed between 2015 and

2016, and there were still slight peaks at age 40 and age 50 (Breton et al., 2017). For a generation that behaved throughout their lives like the never-married singles of 2015, first-marriage probability would reach an all-time low (Appendix Table A.9).

Analysis of marriage patterns by generation shows that the proportion of men and women who have married at least once is still falling, regardless of age (Appendix Table A.10; Rault and Régnier-Loilier, 2015) and, for the 1990 generation, should drop at the age of 50 to as low as 0.5 marriages per man and 0.6 marriages per woman.

4. Seasonal patterns of unions

Marriages are most frequent in summer, civil unions at the year's end

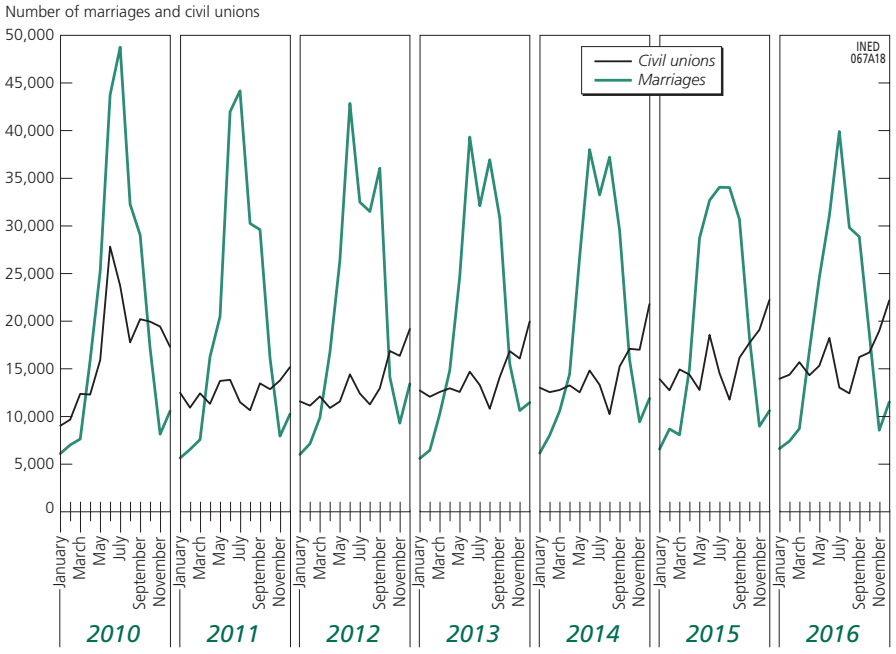
When the journal *Population* celebrated its seventieth year, two INED researchers looked at Jean Bourgeois-Pichat's work on seasonal patterns in marriages, published in 1946, and updated it (Bourgeois-Pichat, 1946; Rault and Régnier-Loilier, 2016). They point out the sociological value of studying these seasonal patterns because they reveal both the importance of the values and constraints that govern society and the weakening of their influence over the years. The timing of weddings used to be dictated by the religious and farming calendars; nowadays, it is determined by pleasurability: the success of a wedding is judged mainly by the number of guests and how much they enjoy it, which partly depends on the weather. Couples select a date for their wedding that will make it distinctive: some choose a symbolic date, others pick a public holiday to make it easier for guests to attend. As for days of the week, marriages are largely concentrated on Saturday.(24)

For these various reasons, most marriages today take place in spring and summer (Figure 17), and the breakdown by month partly depends on the number of Saturdays in each month. For example, in 2010 and 2011 there were five Saturdays in July but only four in June and August, while in 2012, 2013, and 2016 there were five Saturdays in June and only four in May and July. The September peak in 2012 is probably connected with there being five Saturdays that month, after two months with only four, in July and August. 2015 was an oddity for at least two likely reasons: the five Saturdays in May and a slightly larger number of February marriages than usual because Valentine's Day fell on a Saturday that year. In 2014, there were also five Saturdays in May and only four in June, but, unusually, the long Whitsun weekend fell in June that year (as it did in 2017).

The monthly distribution of marriages shows a second, much smaller peak in December. The reason for this peak, which especially concerns civil unions,

(24) Exceptions include Valentine's Day and 12/12/2012 (as noted by Rault and Régnier-Loilier, 2016) and other cultural phenomena, e.g. in Réunion (Dumas-Champion, 2008) where 50.1% of marriages in 2016 were celebrated on a Friday, contrasting with 9.4% nationwide.

Figure 17. Monthly distribution of marriages and civil unions, 2010 to 2016



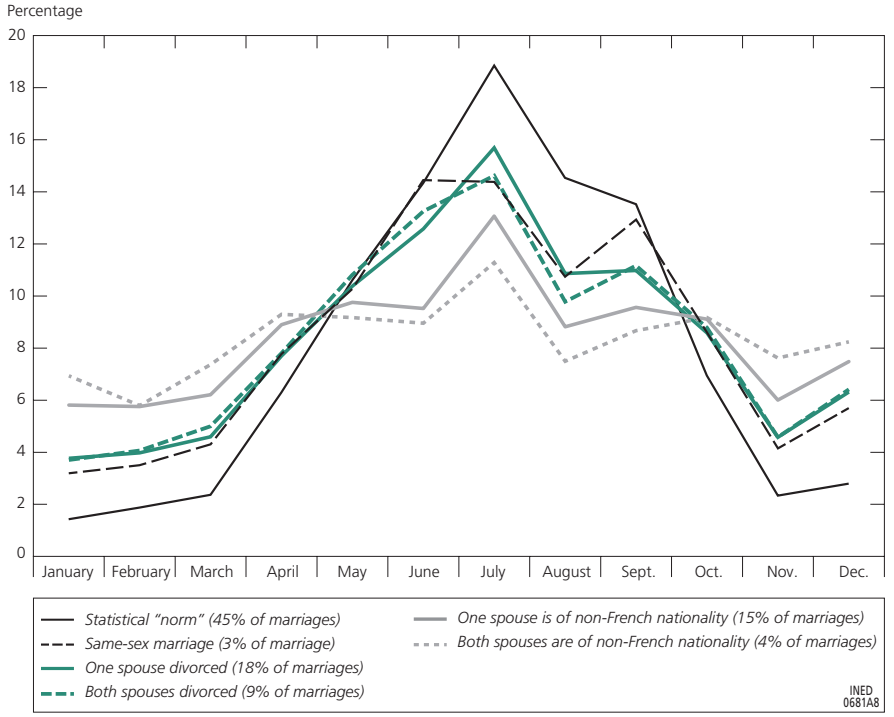
Source: INSEE, civil register.

has to do with the end of the fiscal year. In 2011, the fiscal advantage of marrying or registering a civil union at mid-year was abolished, but this change has only affected the monthly distribution of civil unions, which are not occasions for celebration in the way weddings are (Mazuy et al., 2016). The December marriage peak must be due to the possibility of celebrating the wedding with family during the festive season. The overseas departments are notably different. In 2016, whereas the figure for December weddings was 4.9% nationwide, it was 20.3% in these departments (24.7% in Martinique, 22.1% in Guadeloupe, 19.8% in Réunion, where December is a summer month, 14.6% in French Guiana, and 14.1% in Mayotte). No department in metropolitan France has a proportion of December weddings higher than 7.2% (Paris and the Seine-Saint-Denis department).

The seasonal pattern for weddings is proportionately more marked the closer couples are to the statistical norm, i.e. the most widespread set of characteristics: two people of different sexes, both of French nationality, aged 25 to 34 (both the same age or the man older than the woman), and both marrying for the first time. For these couples, about 60% of marriages are registered between May and August (Figure 18), 10 percentage points higher than for same-sex couples and 12 points higher than for couples where both partners are divorced (48.5%). The seasonal pattern is weakest for couples of

whom one or both are of foreign nationality. However, there may be particular priorities connected with marriage in these cases, in terms of different life projects or administrative constraints.

Figure 18. Differences in monthly distribution of marriages (%) according to spouses' profiles, 2016

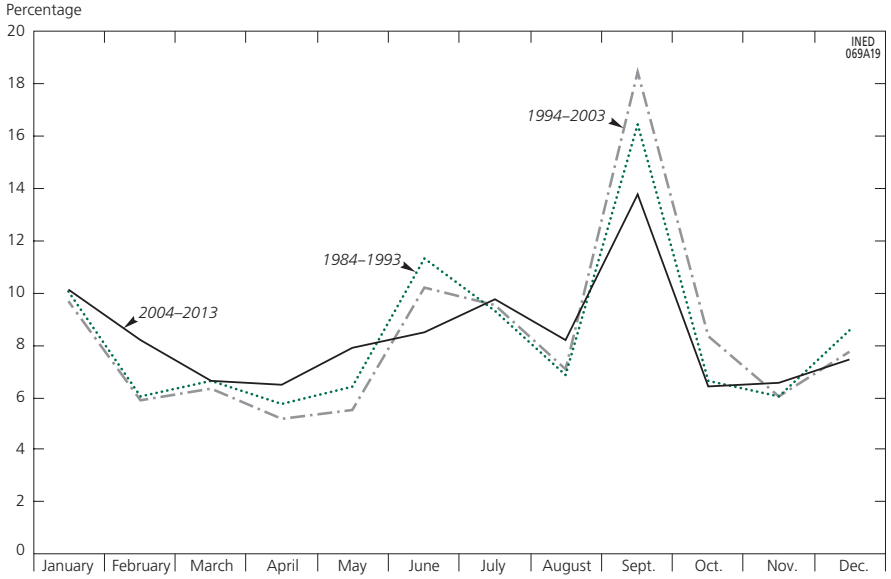


Coverage: Metropolitan France.
Sources: INSEE, civil register, authors' calculations.

Cohabitation generally begins in September

A partnership generally starts with a period of consensual union, usually a cohabiting one, sometimes followed by a civil union or marriage, or a civil union and then marriage. The data from the EPIC survey (Étude des parcours individuels et conjugaux) confirm that marriage is now almost never the first step (Rault and Régnier-Loilier, 2015). Cohabiting couple formation has its own seasonal pattern, unlike those of civil unions and marriages. September seems to be the "favourite" month for couples to move in together, followed by January and June (Figure 19). This confirms the data from the 1999 family history survey (Étude de l'histoire familiale, EHF) (Breton, 2006). The pattern mainly reflects practical considerations: with higher education now a mass phenomenon and lasting longer, couples move in together at the start of the academic year.

Figure 19. Change (%) in monthly distribution of cohabiting couple formations between 1984 and 2013



Coverage: Metropolitan France, men and women aged 26 to 65 in 2013.
Sources: INED–INSEE, EPIC, 2013–2014, unimputed data, authors' calculations.

5. A new increase in the divorce rate

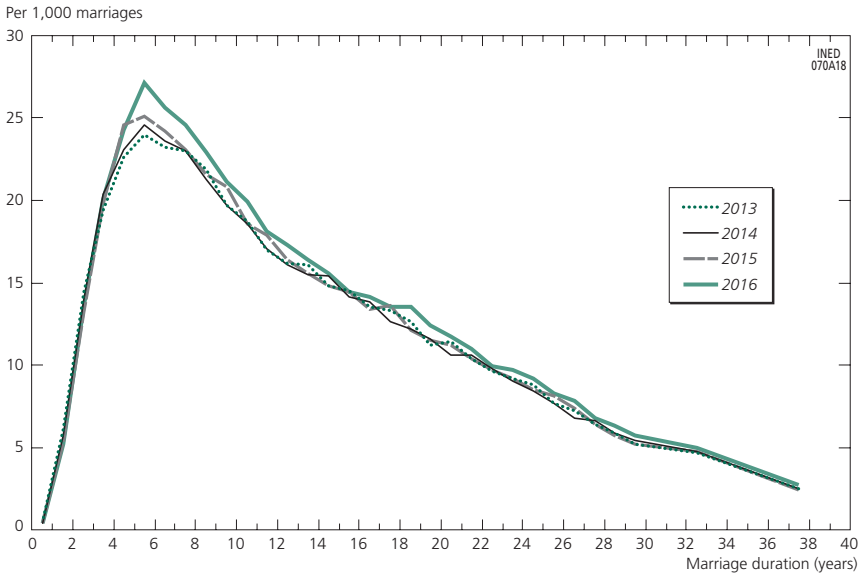
Divorces increased in 2016, both in absolute numbers (+4,375) and in terms of the composite measures that partly correct for size effects, such as the crude divorce rate (up from 1.86 divorces per 1,000 population to 1.92) and the total divorce rate (+4.5%). This increase ends a three-year drop from 2012 to 2014 (Appendix Table A.9) and is almost entirely accounted for by an increase in the number of divorces by mutual consent. As is often the case with variations in the divorce rate, there may be a link with legal changes that have made divorce proceedings more flexible. The legal change that occurred in 2016 has given more power to the judge, who can now liquidate the spouses' marital property agreement at the same time as granting the divorce (article 267 of the Civil Code, February 2016).[25] The new divorce provisions that came into force on 1 January 2017, making it possible to divorce without going before a judge, will probably have a similar effect.

In 2016, the probability of divorce still peaked five years after marriage and had increased regardless of how long the marriage had lasted (Figure 20). The rise in divorces increasingly concerns couples with minor children. The

(25) Liquidation of the marital property agreement involves drawing up a list of the assets and debts that will fall to each partner on their divorce. Before 2016, this procedure took place before a notary public, unless there was no real estate involved. It can now be put before a judge.

128,043 divorces granted in 2016 (3.5% up on 2015) concerned 169,830 children (3.0% up), of whom 115,945 were minors (3.95% up) (Ministry of Justice).

Figure 20. Divorce probability by duration of marriage, 2013 to 2016



Champ: Whole of France except Mayotte.
Source: INSEE, authors' calculations.

VI. Mortality

1. Mortality characteristics

A resumption of progress in life expectancy

According to the latest (provisional) INSEE figures, the number of deaths in France (metropolitan France and overseas departments) reached a record high of 606,000 in 2017, of which 594,000 in metropolitan France and 12,000 in the overseas departments. This increase is due exclusively to population ageing – the proportion of older adults with higher mortality rates is increasing in the general population, and the large post-war baby-boom cohorts are now arriving at ages of high mortality – and not to a slowdown of progress in life expectancy. After the mortality peak of 2015, when life expectancy at birth decreased due to exceptional epidemiological conditions (severe flu epidemic concentrated mainly in the first months of the year rather than over the entire winter 2014–2015), increase in length of life resumed over 2016. In 2017, life expectancy at birth was estimated at 79.4 years for men and 85.2 years for women for the country as a whole (79.4 years and 85.3 years in metropolitan France), corresponding to a crude mortality rate of 9.1 per 1,000 (Appendix Table A.11).

France at the European average

In 2016, the most recent year for which comparative data are available, France remained at the average European level in terms of life expectancy at birth (Appendix Table A.12), with no notable change with respect to previous years. The country's relatively poor ranking for infant mortality (close to the median and behind 16 countries with lower infant mortality; Appendix Table A.13) is offset by a very good ranking for mortality above age 65.

France remains very high in the rankings for women despite a gradual downward shift. While French women had the world's highest life expectancy in the 1990s, they were gradually overtaken by Japan and then by other European countries. Under the mortality conditions of 2016, Japanese women can expect to live for 87.2 years, compared with 85.3 years for French women, who also lag behind women in Spain (86.3 years), Italy (85.6 years), Switzerland (85.6 years), and Luxembourg (85.4 years).

For many years, France has not performed well in terms of male life expectancy (79.3 years of life expectancy at birth in 2016 for the whole of France), with a ranking close to the European average. Alongside Austria, France lags behind several countries of Western Europe (Switzerland, Luxembourg, the Netherlands, Ireland, and United Kingdom), Northern Europe (Norway, Sweden, Iceland), and Southern Europe (Italy and Spain). In all the other European countries, some of which, such as Belgium and Germany, have highly developed economies, male life expectancies are below that of France.

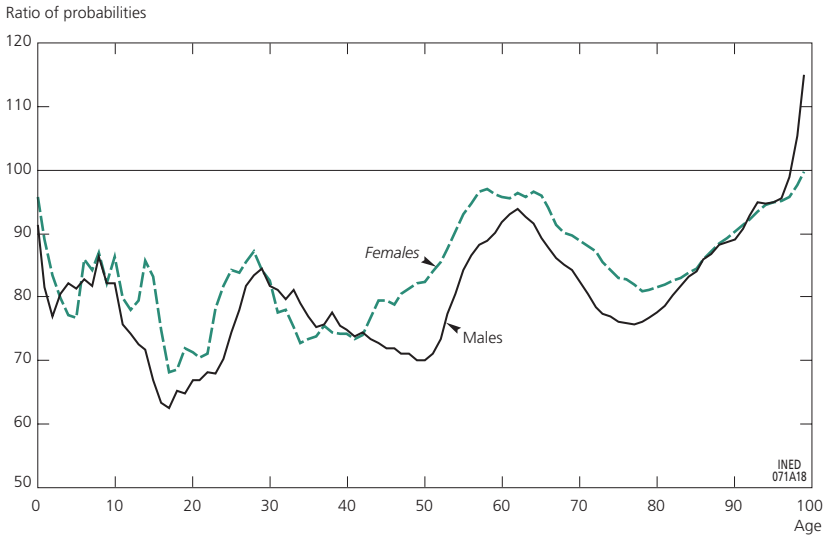
Mortality trends that vary by age and sex

Figure 21 illustrates the changes in mortality by sex over the life course, presenting the ratio between the age-specific probabilities of dying of 2004–2006 and those of 2014–2016.[(26)] For both males and females, progress has been achieved in all age groups, except at the most advanced ages. It has been slower, however, at very young ages, around age 65, and after age 95. Conversely, progress has been especially high around age 20, with a probability of dying at age 18 in 2014–2016 that was 40% lower than in 2004–2006 for men and 35% lower for women. Improvement has also been more pronounced for both sexes around age 40 (a decrease of around 25% over the period). After this age and up to age 50, progress is more visible for men (30% decrease). At ages 75–85, substantial progress has also been made (probability of dying around 25% lower for men and 20% lower for women in 2014–2016 compared with 2004–2006).

Generally, males progressed more than females between 2004–2006 and 2014–2016. Figure 22 gives the male-to-female ratio of probabilities of dying by year of age in 2004–2006 and 2014–2016. It shows that male mortality remains higher than female mortality at all ages. Excess male mortality is

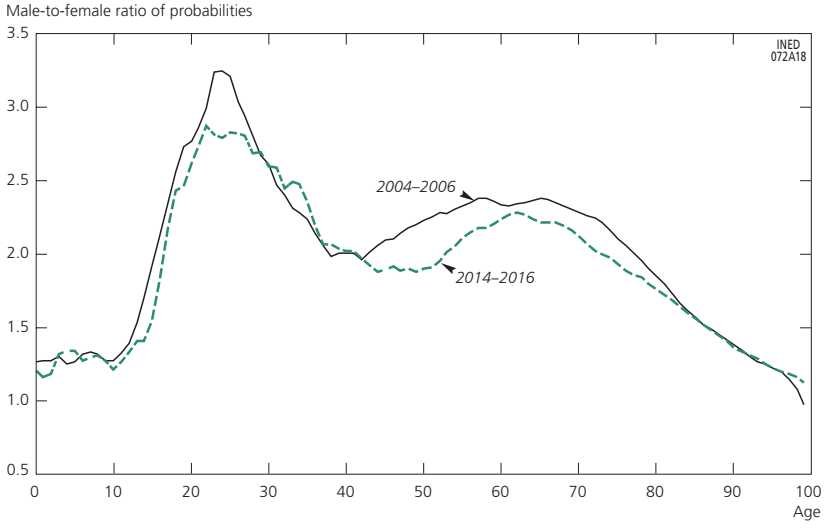
(26) As with the other results presented in this section, Figure 21 is based on data from INSEE's triennial tables whose coverage is limited to metropolitan France.

Figure 21. Decrease in mortality at each age from 2004–2006 to 2014–2016 (ratio of age-specific probabilities smoothed over 3 years of age, except age 0)



Coverage: Metropolitan France.
Source: INSEE, life tables 2004–2006 and 2014–2016.

Figure 22. Male excess mortality at each age in 2004–2006 and 2014–2016 (male-to-female ratio of probabilities, smoothed over 3 years of age, except age 0)



Coverage: Metropolitan France.
Source: INSEE, life tables 2004–2006 and 2014–2016.

especially high among young men aged 20–35, with a threefold higher risk of dying than that of women, notably around age 25. It is also double that of women between ages 50 and 70. These two excess mortality peaks have become less pronounced in the last decade, however, as women's mortality has decreased more slowly than that of men, at these ages especially. These recent trends are consistent with a long-term reduction of the gender mortality gap, which has been narrowing steadily since reaching a maximum of 8.3 years in 1992. According to provisional INSEE figures, it stood at 5.9 years in 2017.

Table 15 shows the contribution in years of each age group to life expectancy over the last three decades for each sex. Only one-fifth of the gains between 2004–2006 and 2014–2016 (21% for men and 17% for women) are attributable to the mortality decline before age 45. These proportions are low compared with the previous decade (1994–1996 to 2004–2006), when they reached 35% and 23%, respectively. They nonetheless reflect a long-term reduction in the probability of dying at these ages throughout the twentieth century, down to the very low levels observed today. Mortality improvements at young ages thus have an increasingly limited impact on the increase in life expectancy at birth. More than half of the years of life gained by men and almost 70% of those gained by women over the decade 2004–2006 to 2014–2016 are due to progress above age 65, and for women, almost a quarter of the total gain is attributable to mortality decline at age 85 and above. Analysis of mortality by medical cause of death sheds light on the differential trends in mortality by age.

Table 15. Contribution (%) of age groups to life expectancy gains, total gain over each decade and life expectancy at the end of the period, by sex

Age group	Males			Females		
	From 1984–1986 to 1994–1996	From 1994–1996 to 2004–2006	From 2004–2006 to 2014–2016	From 1984–1986 to 1994–1996	From 1994–1996 to 2004–2006	From 2004–2006 to 2014–2016
0–14	14.4	6.9	2.6	12.2	8.3	2.3
15–24	5.8	5.9	5.6	2.9	3.9	3.8
25–44	–1.2	21.8	12.6	2.0	11.2	10.8
45–64	34.6	21.5	26.0	15.9	9.3	14.6
65–84	40.5	37.6	45.5	49.4	48.3	46.9
85 and over	5.8	5.9	7.8	17.6	19.0	21.5
Total gain in years	2.57	3.03	2.31	2.45	2.05	1.30
Life expectancy at end of period	73.88	76.91	79.22	81.94	83.99	85.29

Coverage: Metropolitan France.
Source: Authors' calculations based on INSEE triennial life tables (Demographic Surveys and Studies Division).

2. Trends in cause-specific mortality

The distribution by medical cause of death can be analysed using statistics compiled by the French National Institute of Health and Medical Research

(INSERM) up to 2015, the most recent year for which data are available. The mortality increase in 2015 concerned all causes of death, alongside influenza and other respiratory diseases for which the rise was most pronounced. It mainly affected older adults, especially those aged 85 and over. Excluding this exceptional episode, if we compare mortality for the six major groups of medical causes of death (cancers, cardiovascular diseases, infectious diseases, respiratory diseases, other diseases, ill-defined causes and external causes) over the period 2005–2015, we see a decline in all age groups. However, substantial variations emerge when mortality is broken down by sex, age group, or detailed cause of death.

Ongoing rapid decline in cardiovascular mortality

Among all the major groups of medical causes of death, cardiovascular mortality fell most rapidly over the period 2005–2015. The standardized rate fell by almost 30% between 2005 and 2015, and has dropped by 50% since 1995. This substantial decline reflects the progress achieved in treating ischaemic heart disease (with a 35% decrease in mortality over the last ten years) and cerebrovascular diseases (30% decrease). Mortality from other heart diseases fell by 20% over the same period, and mortality from other diseases of the circulatory system fell by 40%. These overall trends are entirely consistent with the downward pattern of cardiovascular mortality observed since around 1980.

Overall progress was similar for men and women. The only significant difference was a faster decrease in ischaemic heart disease for women (–40% versus –30% for men between 2005 and 2015). The starting level was also much lower for women, and the standardized mortality rate from cardiovascular diseases now stands at 74 per 100,000 for women and 131 per 100,000 for men (Appendix Table A.14), compared with 104 and 187 per 100,000, respectively, ten years earlier. However, as overall female mortality is also lower than that of males, the share of mortality from cardiovascular diseases in overall mortality is identical for both sexes (23% of the all-cause standardized rate for all ages in 2015; Table 16).

Female cancer trends are a cause for concern

Cancer mortality has declined steadily for men but is falling more slowly (half as fast) than that of cardiovascular diseases. The standardized rate fell by just 15% between 2005 and 2015, at a pace similar to that observed during the previous decade (1995–2005). The decrease in female cancer mortality, already very small between 1995 and 2005 (–7%), became negligible in the last decade: in 2015, the standardized cancer mortality rate was just 3% lower than in 2005. This is the only major cause of death for which the decrease was much smaller for females than for males, even though the female standardized cancer mortality rate remains well below that of males, at 116 per 100,000 versus 211 per 100,000 in 2015 (Appendix Table A.14). In 2015, cancers represented 37% of the standardized mortality rate for both males and females (Table 16). Cancer

Table 16. Standardized mortality rate by age group in 2015* (per 100,000) and distribution by cause of death (%)

Cause of death	Age group (years)						
	0–14	15–24	25–44	45–64	65–84	85 and over	All ages
Males							
Standardized rates, all causes (per 100,000)	4	4	11	61	248	1,501	595
Infectious diseases	2.0	0.8	1.2	1.5	1.6	2.4	1.7
Cancers	7.3	10.5	19.9	46.7	44.8	21.8	37.4
Cardiovascular diseases	2.7	4.5	11.1	16.9	22.6	33.0	22.8
Respiratory diseases	1.4	1.3	1.8	3.4	7.3	11.7	7.0
Diseases of the digestive organs	1.1	0.8	4.6	7.9	4.7	3.7	5.1
Other diseases	75.3	11.0	13.1	10.8	13.5	21.4	15.7
External causes	10.2	71.1	48.4	12.9	5.4	6.1	10.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Females							
Standardized rates, all causes (per 100,000)	3	2	5	29	127	1,098	332
Infectious diseases	2.0	2.2	1.7	1.3	1.8	2.3	1.9
Cancers	7.8	20.2	45.3	59.2	43.7	15.6	37.2
Cardiovascular diseases	3.2	6.0	9.3	10.9	21.0	36.0	22.7
Respiratory diseases	1.9	3.8	2.3	3.6	5.9	9.8	6.4
Diseases of the digestive organs	1.3	0.7	4.1	5.7	4.6	3.9	4.5
Other diseases	75.8	16.8	14.0	11.1	17.9	26.8	20.3
External causes	8.0	50.4	23.4	8.3	5.0	5.6	7.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* These rates differ from those of Appendix Table A.14 because of the calculation method used. Ill-defined causes have been distributed across other causes. For a definition of the major groups of causes and of the method used to distribute ill-defined causes, see Meslé (2005).
Coverage: Metropolitan France.
Source: Authors' calculations based on INSERM data (CépiDc).

has been the leading cause of death in France since the 1980s for males and since 1999 for females.

The differential trends by sex can be largely attributed to diverging smoking behaviours. While the proportion of regular smokers among men aged 15 and above decreased until 2010, from a level of 70% in the mid-1950s to slightly over 30% in 2010, it increased steadily among women, from below 10% to over 25% over the same period (Guignard et al., 2015; Hill and Laplanche, 2005). Since 2010, the proportion of male smokers has remained stable, with 32% of regular smokers in both 2010 and 2014. While the proportion among women fell from 26% to 24% over the same period, this decrease is too recent to produce a corresponding decline in female cancer deaths. Mortality from cancers of the larynx, lung, and bronchi, the main smoking-related causes of death, has

increased by 37% among women over the last ten years, exactly as much as it did in the previous decade (1995–2005). This represents a doubling of the standardized mortality rate for this cause of death, from just over 100 per 100,000 in 1995 to almost 200 per 100,000 in 2015. For men, the rate has fallen by a quarter, from over 800 to less than 600 per 100,000 over the last two decades. The proportion of smokers or former smokers among men nonetheless remains much higher than that of women, and this explains why the male standardized mortality rate for this cancer is still three times higher than the female rate.

Cancers of the upper aerodigestive tract (UAT) and the oesophagus, also strongly linked to smoking, are also increasing sharply for women (4% increase in standardized rates since 2005 for UAT and 12% for the oesophagus) but not for men (decrease of around 25% for both rates). Last, the slower decline in breast cancer mortality (just 10% between 2005 and 2015 versus 12% between 1995 and 2005) and the lack of progress in uterine cancer mortality (after a 15% decrease in the standardized rate between 1995 and 2005) could be at least partly attributable to the ongoing increase in female smoking among the birth cohorts now aged 45 and over (Guignard et al., 2015). According to the World Health Organization, the time lag between peak rates of smoking in a population and its most severe epidemiological effects is around 30 years. The women now dying of cancers linked to their former smoking habits belong to the birth cohorts born before 1970. Around 15 cancer sites (for women, primarily breast, then colon-rectum and lung, and far behind, body of uterus) are directly concerned (Marant-Micallef et al., 2018).

Good progress has been achieved for other cancers, however, notably stomach cancer, for which the standardized mortality rate has fallen by 21% since 2005 for men and women, and male prostate cancer, with a 27% decrease over the same decade. Prostate cancer is the only cancer for which progress has accelerated over the last 20 years thanks to improved screening, diagnosis, and treatments, and to lower levels of smoking among men (Grosclaude et al., 2016).

A faster decline in mortality from road traffic accidents, suicide, and homicide

Mortality from road traffic accidents, which mainly concerns young adults, has fallen by almost 70% over the last 20 years, with an acceleration between 1995–2005 (–37%) and 1995-2005 (–47%). This acceleration is also observed for suicide mortality (–15% and –22%) and homicides (–31% and –35%). However, the mortality decline for other external causes (accidental falls in particular) has slowed substantially, although we do not know whether this reflects a real trend or simply the effect of a revision of the International Classification of Diseases introduced in France in 2000. The standardized rate for all external causes fell by only 18% between 2005 and 2015, compared with 26% over the previous decade.

Worrying trends in other diseases

The most worrying situation – apart from trends in female cancer mortality – concerns mortality from mental disorders and diseases of the nervous system, which have been increasing rapidly over the last 20 years. These diseases are especially prevalent at advanced ages. After a rapid increase in mortality from Alzheimer's disease, the trend appears to be reversing: the standardized rate, which had doubled in 15 years and reached a peak in 2012 (at 134 per 100,000), has been declining steadily since then and stood at 120 per 100,000 in 2015. Given that this disease did not enter the statistics until 1979, the initial increase may be due partly to progress in diagnosis and in the recording and certification of deaths of older adults whose frequent multiple pathologies can make it difficult to identify the underlying cause of death.

The trend is more favourable for infectious diseases, respiratory diseases, and digestive diseases, but the decline observed between 2005 and 2015 was smaller than during the previous decade, especially for the first two groups of diseases (21% decrease between 1995 and 2005 versus 51% between 2005 and 2015 for infectious diseases, 13% versus 31% for respiratory diseases, but 19% versus 22% for digestive diseases). However, the share of these three causes of death in overall mortality has become very small. These pathologies now represent only 2%, 6%, and 5%, respectively, of the standardized rate for all causes, with little difference between the sexes (Table 16).

3. Annual mortality fluctuations: a winter peak and a summer dip

We examined seasonal variations over the last ten years (2006–2015) by calculating monthly and seasonal coefficients adjusted for the variable length of months and years.[27] These coefficients were established using INSERM data on deaths by cause in metropolitan France to measure seasonal variations in overall mortality and in mortality by age group and by major cause of death. The coefficients of monthly variations over the period 2006–2015 were determined by calculating the ratio of the mean daily number of deaths for each month, from January to December, to the mean daily number of deaths over the year.

The analysis shows that the number of deaths varies systematically from month to month in a pattern repeated from year to year. The change is very regular, reaching a peak in winter and a low-point in summer (Figure 23). Identical patterns have been found by researchers elsewhere in Europe (Rau, 2007). This periodicity is relatively recent; until the end of the nineteenth century at least, in France as in other European countries where annual patterns have been studied, the mortality curve had two annual peaks, one in winter and the other in summer, with very different causes, as described below. While

(27) This analysis was performed in collaboration with Robert Chung (Department of Demography, University of California, Berkeley). Overseas departments are excluded.

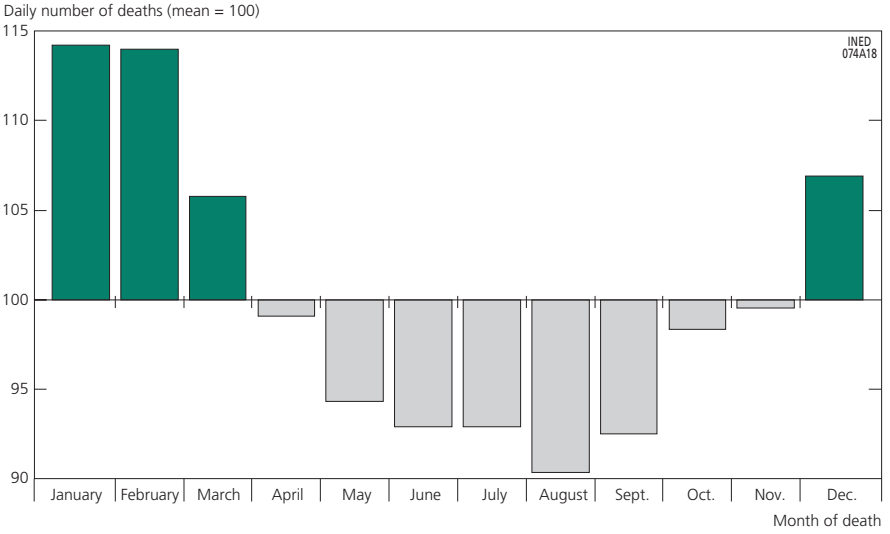
the first peak, though less pronounced, is still observed today (Aubenque et al., 1979), the second has disappeared. With the exception of heat wave years such as 2003 and 2006 – when daily numbers of deaths can peak at much higher levels than on the most deadly days of winter – daily deaths are least numerous in summer and in August especially (Figure 24) (Corso et al., 2017; Fouillet et al., 2006; Rey et al., 2007; Toulemon and Barbieri, 2008). If the August mortality conditions existed throughout the year, the mean annual number of deaths over the period 2006–2015 would have been 501,000 instead of 553,000.

Figure 23. Daily number of deaths, 2006–2015

Interpretation: Each circle on the graph corresponds to one day.
Coverage: Metropolitan France.
Source: Authors' calculations based on INSERM data (CépiDc).

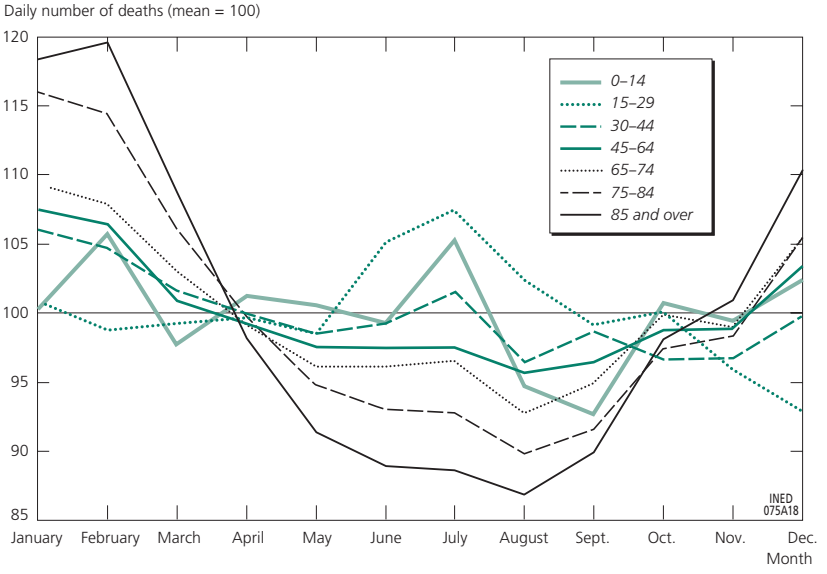
The decreasing amplitude of seasonal variations over time concerns young people especially. As shown in Figure 25, the difference between the months of maximum and minimum mortality is small for children and young adults compared with the other age groups; this was not the case up to the early twentieth century (Aubenque et al., 1979). The timing is also very different; the current peaks occur in July and February, with a minimum in September. For the general mortality pattern, monthly fluctuations in daily deaths increase with age, starting at around age 45 (excess mortality in winter, below-average mortality in summer), becoming especially pronounced after age 65. While the difference in daily numbers of deaths between the extreme months represents 23% of the annual mean for the population as a whole, it is just 11% for the

Figure 24. Daily number of deaths as a ratio of the mean daily number of deaths each year, 2006–2015



Coverage: Metropolitan France.
Source: Authors' calculations based on INSERM data (CépiDc).

Figure 25. Daily number of deaths as a ratio of the mean daily number of deaths each year by age group (years), 2006–2015



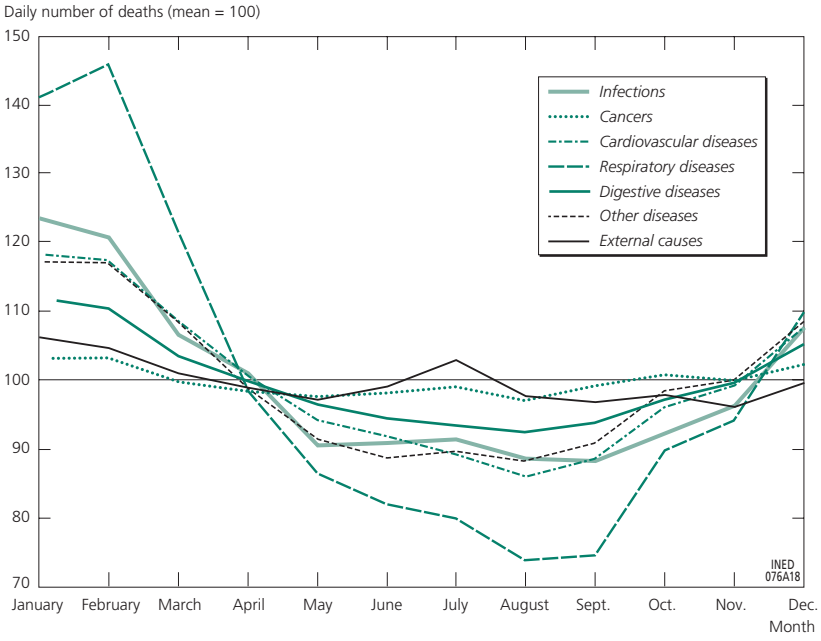
Coverage: Metropolitan France.
Source: Authors' calculations based on INSERM data (CépiDc).

under-30s. For the over-65s, this difference reaches 26% of the annual mean. However, as is the case for children, seasonal mortality variations at the oldest ages lessened over the twentieth century (Aubenque et al., 1979).

The differences in intensity and timing between age groups are closely linked to the causes of death responsible for the seasonal fluctuations. Historically, cardiovascular and respiratory diseases (notably influenza and pneumonia) were the main pathologies associated with the winter mortality peak, and this is still the case today. The former summer peak was attributable to mortality from certain infectious diseases (gastrointestinal diseases, measles, and whooping cough especially) (Aubenque et al., 1979; Rau, 2007). Cancer mortality changes little across the seasons. Only deaths from external causes are associated with a summer peak (in July) due to excess accident mortality.

The secular decline in mortality from infectious diseases, including those most prevalent in the summer months, has mainly benefitted young children, and this explains why the former summer mortality peak, very pronounced for this age group, has now disappeared. Older adults are especially prone to cardiovascular and respiratory diseases, which are more prevalent in winter. Winter excess mortality among older adults remains high, although it has fallen since the introduction and rapid generalization of flu vaccination in France

Figure 26. Daily number of deaths as a ratio of the mean daily number of deaths each year by major groups of medical causes of death, 2006–2015



Coverage: Metropolitan France.
Source: Authors' calculations based on INSERM data (CépiDc).

following the 1967–1968 epidemic (Meslé, 2010). Until then, influenza was the direct cause of 10,000 to 20,000 deaths each year, compared with 1,000 to 2,000 today. Note that despite the more pronounced seasonality of mortality from respiratory diseases, the majority of deaths in the winter peak are due to cardiovascular diseases, which account for a much larger share of overall mortality.

There are numerous factors behind winter excess mortality due to respiratory diseases, other infectious diseases, and cardiovascular diseases, and they are directly linked to temperature. Infections are more frequent when temperatures are low and humidity is high because the population spends more time indoors; bacteria are also more resistant – they survive for longer and are transmitted more easily; the immune system is weakened not only because of the low temperature but also because people eat fewer fruits and vegetables containing essential vitamins and minerals; the blood vessels contract mechanically to avoid heat loss, and this increases blood viscosity and puts strain on the heart (Huyen et al., 2001; Keatinge and Donaldson, 1997; Rau, 2007). In addition, certain pollutants, such as those linked to oil-fired heating systems (sulfur dioxide and carbon monoxide) reach peak levels in winter and raise the concentration of fine particles in the atmosphere, thus increasing the risk of respiratory and cardiovascular diseases. Last, the effects of cold on the body persist for three weeks after exposure to low temperatures, a fact which explains their prolonged effect on mortality even after temperatures return to more normal levels (Corso et al., 2017).

Summary

On 1 January 2018, the population of France stood at 66.9 million. Population growth was the least it had been in 20 years, largely because natural increase was at a 40-year low. However, its age structure is one of the youngest in Europe.

Over 300,000 foreign nationals entered France in 2016. Foreigners arriving in France fall into two groups: those who are required to hold a residence permit and those who are not. INED used the AGDREF database (the Interior Ministry's residence permit application management database) to estimate the number of arrivals required to hold a permit: 218,354. This inflow has increased every year since 2011 and mainly comprises families (49%) and students (26%). The inflow of asylum seekers has increased constantly since 2011 and reached 35,262 in 2016. Arrivals not needing a residence permit numbered 82,732, according to Eurostat; this figure has been falling since 2013.

Annual birth numbers fell for the third year running in 2017, with 769,500 births registered. This is because there are fewer women of childbearing age and fertility is falling. The fertility of young women, notably those aged 25–29, fell most sharply (in proportion). About two-thirds of births were to women in the 25–35 age group.

Birth numbers varied from month to month, with fewer in late winter and spring and more in summer and autumn. Daily birth numbers in 2017 fluctuated between a little under 1,700 and slightly over 2,300. More births take place on weekdays than at weekends or on public holidays, doubtless owing to programmed births. Births following recourse to assisted reproductive technology amounted to 3% of all births (about 26,000 births).

There was a slight increase in the number of induced abortions in 2017, to 216,700. The increase was mainly among women around 30 years of age. Abortion numbers were lowest in April, July, and August. This highlights the difficulty of obtaining abortion services during the summer, which is still a problem.

Civil unions are gradually becoming as common as marriages. They have already caught up, if no account is taken of marriages that follow on from a civil union. In 2016, registrations of heterosexual and same-sex unions reached a record low, while 3.3% of registered unions (civil or marriage) were same-sex unions. However, this drop does not mean that fewer people are forming partnerships: every year, the number of consensual unions is significantly greater than the number of marriages and civil unions put together. Marriages and civil unions follow different seasonal patterns, with marriages taking place mainly between June and September (depending on the number of Saturdays in each month) and civil unions mainly at the end of the year.

The years 2015 and 2016 saw the end of a three-year drop in divorce numbers and divorce probabilities, regardless of how long the marriage had lasted.

In 2017, life expectancy at birth was provisionally estimated by INSEE at 79.4 (+0.1 years) for men and 85.2 (–0.1 years) for women relative to 2016. French women's life expectancy is the highest in Europe, whereas for men it is about average. Over the past ten years, three age groups have made better progress than the rest: those around 20, 50, and 80 years of age. The progress was slightly greater for males, although they still have markedly higher mortality than females, especially among young adults.

Improvements in all major groups of medical causes of death have helped towards longer life expectancy, with the notable exceptions of mental disorders, nervous system diseases and, for women only, cancer. This worsening of female mortality from cancer is due to lack of progress in the treatment of uterine cancer and the rapid increase in lung cancer cases among women (the reverse of the trend among men). This discrepancy between men and women is due to men's earlier reduction of their tobacco consumption. As women have since followed, their lung cancer mortality rates should also decline in the future.

Mortality is not evenly spread through the year. It is highest in winter, January and February especially, and lowest in summer, August especially, except in heat wave years (2003 in particular). Seasonal differences become sharper with age, being almost negligible in children and young adults and particularly marked from age 75 onwards. Older people are susceptible to

cardiovascular and respiratory diseases, which are more common in winter, for reasons both biological (bacteria being more resistant at low temperatures) and behavioural (confinement).

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Appendix

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

	Numbers												Crude rates (per 1,000)							
	Mid-year population		Live births		Deaths		Natural increase		Net migration		Total		Birth rate		Death rate		Natural increase		Total	
	Metro. France	Whole of France	Metro. France	Whole of France	Metro. France	Whole of France	Metro. France	Whole of France	Metro. France	Whole of France	Metro. France	Whole of France	Metro. France	Whole of France	Metro. France	Whole of France	Metro. France	Whole of France	Metro. France	Whole of France
1985	55,284	56,582	768	796	552	560	216	236	38	39	254	275	13.9	14.1	10.0	9.9	3.9	4.2	4.6	4.9
1990	56,709	58,138	762	793	526	534	236	259	80	77	316	336	13.4	13.6	9.3	9.2	4.1	4.4	5.6	5.8
1995	57,844	59,384	730	759	532	540	198	219	40	42	238	261	12.6	12.8	9.2	9.1	3.4	3.7	4.1	4.4
2000	59,062	60,725	775	807	531	541	244	266	70	72	314	338	13.1	13.3	9.0	8.9	4.1	4.4	5.3	5.6
2001	59,476	61,163	771	803	531	541	240	262	85	87	325	349	13.0	13.1	8.9	8.8	4.1	4.3	5.5	5.7
2002	59,894	61,605	762	793	535	545	227	248	95	97	322	345	12.7	12.9	8.9	8.8	3.8	4.1	5.4	5.6
2003	60,304	62,038	761	793	552	562	209	231	100	102	309	333	12.6	12.8	9.2	9.1	3.4	3.7	5.1	5.4
2004	60,734	62,491	768	799	509	519	259	280	105	105	364	385	12.6	12.8	8.4	8.3	4.2	4.5	6.0	6.2
2005	61,181	62,958	774	807	528	538	246	269	95	92	341	361	12.7	12.8	8.6	8.5	4.1	4.3	5.6	5.7
2006	61,597	63,393	797	829	516	527	281	302	115	112	396	414	12.9	13.1	8.4	8.3	4.5	4.8	6.4	6.5
2007	61,965	63,781	786	819	521	531	265	288	75	74	340	362	12.7	12.8	8.4	8.3	4.3	4.5	5.5	5.7
2008	62,300	64,133	796	828	532	543	264	285	67	57	331	342	12.8	12.9	8.5	8.5	4.3	4.4	5.3	5.3
2009	62,615	64,459	793	825	538	549	255	276	44	32	299	308	12.7	12.8	8.6	8.5	4.1	4.3	4.8	4.8
2010	62,918	64,773	802	833	540	551	262	282	43	39	305	321	12.7	12.9	8.6	8.5	4.1	4.4	4.8	5.0
2011	63,223	65,087	793	823	535	545	258	278	47	30	305	308	12.5	12.6	8.5	8.4	4.0	4.2	4.8	4.7
2012	63,537	65,403	790	821	559	570	231	251	91	72	322	323	12.4	12.6	8.8	8.7	3.6	3.9	5.1	4.9
2013	63,863	65,848	782	812	558	569	224	243	107	100	331	343	12.2	12.4	8.7	8.7	3.5	3.7	5.2	5.2
2014	64,164	66,277	781	819	547	559	234	260	39	32	273	292	12.2	12.4	8.5	8.4	3.7	4.0	4.3	4.4
2015*	64,685	66,513	760	799	582	594	178	205	52	41	230	246	11.8	12.0	9.0	8.9	2.8	3.1	3.6	3.7
2016*	64,544	66,686	745	784	581	594	164	190	66	58	230	248	11.5	11.8	9.0	8.9	2.5	2.9	3.6	3.7
2017*	64,672	66,830	730	770	594	606	136	164	66	58	202	222	11.3	11.5	9.2	9.1	2.1	2.4	3.1	3.3

* Provisional data end 2018.
Coverage: Whole of France, including Mayotte from 2014.
Source: INSEE, Demographic Surveys and Studies Division.

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

Metropolitan France

Age group	1985	1990	1995	2000	2005	2010	2015*	2016*	2017*	2018*
0-19	29.2	27.8	26.1	25.6	25.0	24.5	24.3	24.3	24.1	24.0
20-59	52.7	53.2	53.8	53.8	54.1	52.7	50.9	50.5	50.3	50.0
60+	18.1	19.0	20.1	20.6	20.9	22.8	24.8	25.2	25.6	26.0
including:										
65+	*12.8*	*13.9*	*15.0*	*16.0*	*16.5*	*16.8*	*18.6*	*19.1*	*19.5*	*19.9*
75+	*6.3*	*6.8*	*6.1*	*7.2*	*8.1*	*8.9*	*9.3*	*9.3*	*9.3*	*9.3*
Overall	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Whole of France

Age group	1985	1990	1995	2000	2005	2010	2015*	2016*	2017*	2018*
0-19	n/a	n/a	26.4	25.8	25.3	24.8	24.6	24.6	24.4	24.3
20-59	n/a	n/a	53.8	53.8	54.0	52.6	50.9	50.4	50.2	49.9
60+	n/a	n/a	19.9	20.4	20.7	22.6	24.5	25.0	25.4	25.8
including:										
65+	n/a	n/a	*14.9*	*15.8*	*16.3*	*16.6*	*18.4*	*18.9*	*19.3*	*19.7*
75+	n/a	n/a	*6.0*	*7.1*	*8.0*	*8.8*	*9.1*	*9.2*	*9.1*	*9.2*
Overall			100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Provisional results end 2018.
n/a: not available.
Source: INSEE, Demographic Surveys and Studies Division, series revised after the 2013 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 for residence	Total	Of which minors
2000	136,865	16,230
2001	164,676	22,126
2002	187,077	24,153
2003	200,531	24,597
2004	201,380	29,131
2005	199,780	31,128
2006	194,936	27,205
2007	177,304	24,766
2008	184,201	20,561
2009	189,428	18,524
2010	184,429	17,980
2011	177,671	17,594
2012	180,011	17,500
2013	192,396	18,246
2014	199,887	20,688
2015	210,040	21,493
2016	218,354	22,406

Coverage: Permits granted in France and abroad to citizens of third countries, excepting member countries of the European Economic Area and Switzerland. 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 transmitted to INED.

Table A.4. Fertility since 1970

Year	Sum of age-specific rates (per 100 women)				Mean age at childbearing		Non-marital fertility	
	Ages 15–24	Ages 25–34	Ages 35+	Total (TFR)	All births	First births[1]	Sum of age-specific rates (per 1,000 women)	Share in total fertility (%)
1970	93	125	30	247	27.2	23.9	16	6.4
1975	76	97	19	193	26.7	24.1	16	8.5
1980	70	109	16	194	26.8	24.5	22	11.4
1985	54	110	17	181	27.5	25.2	36	19.6
1990	42	114	22	178	28.3	26.0	53	30.1
1995	31	116	24	171	29.0	26.8	65	37.9
2000	32	125	31	187	29.4	27.4	81	43.2
2005	31	126	35	192	29.7	27.7	92	47.9
2006	32	130	37	198	29.8	27.8	98	49.7
2007	31	128	37	196	29.8	27.9	100	50.9
2008	31	129	38	199	29.9	27.9	103	51.6
2009	31	129	39	199	29.9	28.0	104	52.9
2010	31	131	40	202	30.0	28.1	109	54.2
2011	30	129	41	200	30.1		110	55.2
2012	29	128	42	199	30.1		112	56.0
2013	28	127	42	197	30.2		112	56.6
2014	27	127	44	197	30.3		114	57.7
2015*	25	124	43	192	30.4		-	-
2016*	24	121	44	189	30.6		-	-
2017*	22	120	44	186	30.7		-	-

* Provisional data end 2018.
Coverage: Metropolitan France.
Sources: INSEE. Surveys and Demographic Studies Division. Series revised after the 2015 census except: (1) 1970–1995: Laurent Toulemon, from EHF (Study of Family History) 1999; 2000: estimate based on vital records; 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 childbearing
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	201	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	202	30.0
1975	30	96	161	194	203	30.0
1976	30	95	160	194	203	30.1
1977	31	96	161	196	205	30.1
1978	31	95	162	196	205	30.1
1979	31	96	163		207	30.1
1980	31	95	161		205	30.1
1981	32	96	162		205	30.1
1982	32	96	162		205	30.1
1983	31	95	160			
1984	32	95				
1985	31	94				
1986	31	94				
1987	31	92				
1988	30	89				
1989	30					
1990	29					
1991	28					
1992	27					
1993	26					

* For the 1930–1967 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 2017.
Coverage: Metropolitan France.
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	2015	2016
Austria	1.65	1.47	1.46	1.42	1.36	1.41	1.44	1.49	1.53
Belgium	1.68	1.51	1.62	1.56	1.67	1.76	1.86	1.7	1.68
Bulgaria	2.05	1.97	1.82	1.23	1.26	1.37	1.57	1.53	1.54
Croatia	1.50	1.55	1.48	1.51	1.46	1.50	1.55	1.4	1.42
Cyprus	-	2.43	2.41	2.03	1.64	1.48	1.44	1.32	1.37
Czech Rep.	2.08	1.95	1.90	1.28	1.15	1.29	1.51	1.57	1.63
Denmark	1.55	1.45	1.67	1.80	1.77	1.80	1.87	1.71	1.79
Estonia	2.02	2.13	2.05	1.38	1.36	1.52	1.72	1.58	1.60
Finland	1.63	1.64	1.78	1.81	1.73	1.80	1.87	1.65	1.57
France	-	-	-	-	1.89	1.94	2.03	1.96	1.92
France metro.	1.95	1.81	1.78	1.71	1.87	1.92	2.02	1.92	1.89
Germany	1.56	1.37	1.45	1.25	1.38	1.34	1.39	1.50	1.60
Greece	2.23	1.67	1.39	1.28	1.25	1.34	1.48	1.33	1.38
Hungary	1.91	1.85	1.87	1.57	1.32	1.31	1.25	1.45	1.53
Ireland	3.21	2.48	2.11	1.84	1.89	1.86	2.05	1.85	1.81
Italy	1.64	1.42	1.33	1.19	1.26	1.34	1.46	1.35	1.34
Latvia	-	-	-	-	1.25	1.39	1.36	1.70	1.74
Lithuania	1.99	2.08	2.03	1.55	1.39	1.29	1.50	1.70	1.69
Luxembourg	1.50	1.38	1.60	1.70	1.76	1.63	1.63	1.47	1.41
Malta	1.99	1.95	2.04	1.77	1.68	1.38	1.36	1.37	1.37
Netherlands	1.60	1.51	1.62	1.53	1.72	1.71	1.79	1.66	1.66
Poland	-	-	2.06	1.62	1.37	1.24	1.41	1.32	1.39
Portugal	2.25	1.72	1.56	1.41	1.55	1.41	1.39	1.31	1.36
Romania	2.43	2.31	1.83	1.33	1.31	1.40	1.59	1.58	1.64
Slovakia	2.32	2.26	2.09	1.52	1.30	1.27	1.43	1.40	1.48
Slovenia	-	1.71	1.46	1.29	1.26	1.26	1.57	1.57	1.58
Spain	2.20	1.64	1.36	1.16	1.22	1.33	1.37	1.33	1.34
Sweden	1.68	1.74	2.13	1.73	1.54	1.77	1.98	1.85	1.85
United Kingdom	1.90	1.79	1.83	1.71	1.64	1.76	1.92	1.80	1.79
Iceland	2.48	1.93	2.30	2.08	2.08	2.05	2.20	1.80	1.74
Norway	1.72	1.68	1.93	1.87	1.85	1.84	1.95	1.72	1.71
Switzerland	1.55	1.52	1.58	1.48	1.50	1.42	1.52	1.54	1.54

Source: Eurostat (site accessed in August 2018).

Table A.7. Cohort fertility in Europe

Cohort	Completed fertility (per woman)					Mean age at childbearing (years)					Last available year
	1954-1955	1959-1960	1964-1965	1969-1970	1974-1975[1]	1954-1955	1959-1960	1964-1965	1969-1970	1974-1975[1]	
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.
(2) The series of published rates (2002–2010) cannot be used to calculate and estimate completed fertility.
Sources: Calculations and estimations based on age-specific fertility rates published on the Eurostat website (not available since 2012).

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

Year	Abortions reported in notifications[1]	Abortions recorded in SAE[2]	Abortions estimated by INED[3]	Abortions per 100 live births[4]	Annual abortions per 1,000 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
1991	172,152		206,000	27.1	14.4	0.48
1996	162,792	187,114	207,000	28.2	14.2	0.50
2001		202,180	206,000	26.7	14.3	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
2014	126,464	211,764		27.1	15.0	0.55
2015	n/a	203,463		26.7	14.5	0.52
2016	n/a	201,410		27.0	14.3	0.52
2017*	n/a	202,919		27.8	14.4	0.52

* Provisional data.
n/a: Not available.
(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

Year	Number of marriages				Total first marriage rate*				Mean age at first marriage (based on rates)*		Number of divorces[3]		Total divorce rate per 100 marriages	Number of PACS unions		Number of PACS dissolutions	
	Metropolitan France		Whole of France (including DOMs and Mayotte from 2014)		Overall rate[1]		Overall probability[2]		Men	Women	Metro-politan France	Whole of France		Metro-politan France	Whole of France	Metro-politan France	Whole of France
	Different-sex	Overall	Different-sex	Overall	Men	Women	Men	Women									
1985	269,419				0.53	0.54	0.71	0.74	26.3	24.2	107,505		30.5				
1990	287,099				0.55	0.56	0.69	0.72	27.6	25.6	105,813		32.1				
1995	254,651		261,813		0.48	0.50	0.61	0.64	28.9	26.9	119,189	121,946	38.2				
2000	297,922		305,234		0.58	0.60	0.66	0.69	30.2	28.0	114,005	116,723	38.2	22,108	22,271	620	624
2001	288,255		295,720		0.57	0.59	0.64	0.68	30.2	28.1	112,631	115,388	38.0	19,410	19,629	1,859	1,872
2002	279,087		286,169		0.55	0.57	0.63	0.66	30.4	28.3	115,861	118,686	39.2	24,979	25,305	3,143	3,185
2003	275,963		282,756		0.55	0.56	0.62	0.65	30.6	28.5	125,175	127,966	42.5	31,161	31,570	5,229	5,292
2004	271,598		278,439		0.53	0.55	0.61	0.64	30.8	28.8	131,335	134,601	44.8	39,576	40,080	6,935	7,043
2005	276,303		283,036		0.54	0.55	0.61	0.64	31.1	29.1	152,020	155,253	52.3	59,837	60,462	8,564	8,690
2006	267,260		273,914		0.52	0.53	0.59	0.62	31.2	29.2	135,910	139,147	46.9	76,680	77,347	9,470	9,583
2007	267,194		273,669		0.51	0.52	0.59	0.62	31.4	29.5	131,316	134,477	45.5	101,062	101,992	22,908	23,132
2008	258,749		265,404		0.50	0.51	0.57	0.60	31.6	29.6	129,379	132,594	45.1	144,782	145,938	25,585	25,802
2009	245,151		251,478		0.47	0.48	0.55	0.58	31.7	29.8	127,578	130,601	44.7	173,180	174,584	32,411	32,711
2010	245,334		251,654		0.47	0.48	0.54	0.58	31.8	30.0	130,810	133,909	46.2	203,959	205,561	43,250	43,628
2011	231,100		236,826		0.44	0.45	0.52	0.55	31.9	30.1	129,802	132,977	46.2	150,800	152,169	51,555	52,002
2012	239,840		245,930		0.46	0.47	0.53	0.56	32.0	30.2	125,217	128,371	45.0	159,195	160,639	60,950	61,507
2013	225,784	233,108	231,225	238,592	0.44	0.45	0.52	0.55	32.4	30.6	121,849	124,948	44.2	167,123	168,682	68,933	69,540
2014	224,878	235,315	230,770	241,292	0.45	0.45	0.52	0.55	32.6	30.9	120,568	123,537	44.1	172,026	173,731	75,646	76,267
2015	222,664	230,364	228,565	236,316	0.44	0.45	0.51	0.53	32.7	31.0	120,731	123,668	44.7	187,248	188,947	78,725	79,386
2016*	219,549	226,614	225,612	232,725	0.43	0.44	0.49	0.52	32.9	31.2	124,768	128,043	46.7	189,756	191,537	83,937	84,662
2017*	220,582	227,758	226,671	233,915	0.43	0.44			33.0	31.4					193,950		82,345

* Provisional data.
(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.
(3) Direct divorces and separations converted into divorces.
Coverage: Metropolitran France and whole of France.
Sources: INSEE, Division of Demographic Surveys and Studies; French Ministry of Justice.

Table A.10. Characteristics of nuptiality by birth cohort

Men

Birth cohort	Proportion ever-married at age 49*	Mean age at first marriage* (years)	Proportion ever-married	
			At age 25	At age 30
1955	0.83	26.40	0.55	0.72
1960	0.77	27.10	0.39	0.60
1965	0.71	28.90	0.25	0.48
1970	0.66	30.20	0.15	0.40
1975	0.62	31.00	0.10	0.35
1980			0.08	0.28
1985			0.06	0.23
1990			0.05	0.20

Women

Birth cohort	Proportion ever-married at age 49*	Mean age at first marriage* (years)	Proportion ever-married	
			At age 25	At age 30
1955	0.88	22.90	0.71	0.81
1960	0.82	24.20	0.59	0.72
1965	0.76	26.30	0.43	0.60
1970	0.71	27.90	0.30	0.52
1975	0.66	28.90	0.23	0.46
1980			0.18	0.39
1985			0.14	0.32
1990			0.10	0.27

* Unobserved marriage probabilities are estimated as the average of the three preceding years.
Coverage: Metropolitan France.
Source: Calculations and estimates based on INSEE data.

Table A.11. Characteristics of overall mortality, 1946–2017

Year	Life expectancy (years)				Mortality rate (per 1,000 live births)		Survivors at age 65 (per 1,000 at birth)	
	At birth		At age 65		Infant[1]	Neonatal[2]	Male	Female
	Male	Female	Male	Female				
1946	59.9	65.2	12.2	14.3	77.8	n/a	574	681
1947	61.2	66.7	12.3	14.5	71.1	n/a	589	703
1948	62.7	68.8	12.5	15.0	55.9	n/a	599	727
1949	62.2	67.6	11.8	14.0	60.3	n/a	595	716
1950	63.4	69.2	12.2	14.6	52.0	26.0	609	736
1951	63.1	68.9	11.8	14.2	50.8	24.0	602	732
1952	64.4	70.2	12.3	14.8	45.2	22.4	623	752
1953	64.3	70.3	11.8	14.4	41.9	22.0	617	753
1954	65.0	71.2	12.4	15.1	40.7	21.6	629	765
1955	65.2	71.5	12.3	15.1	38.6	20.8	631	772
1956	65.2	71.7	12.1	14.9	36.2	20.5	626	776
1957	65.5	72.2	12.2	15.2	33.8	19.5	631	783
1958	66.8	73.2	12.8	15.6	31.4	18.9	660	801
1959	66.8	73.4	12.8	15.7	29.6	18.1	657	801
1960	67.0	73.6	12.6	15.6	27.4	17.6	658	806
1961	67.5	74.4	13.0	16.1	25.7	16.7	664	815
1962	67.0	73.9	12.6	15.7	25.7	16.7	656	811
1963	66.8	73.9	12.4	15.6	25.6	16.6	652	810
1964	67.7	74.8	12.9	16.4	23.4	15.9	667	820
1965	67.5	74.7	12.6	16.2	21.9	15.2	661	820
1966	67.8	75.2	12.9	16.5	21.7	14.9	669	824
1967	67.8	75.2	12.8	16.5	20.7	14.5	668	826
1968	67.8	75.2	12.7	16.4	20.4	14.2	669	827
1969	67.4	75.1	12.5	16.3	19.6	13.7	661	824
1970	68.4	75.9	13.0	16.8	18.2	12.6	682	834
1971	68.3	75.9	13.0	16.8	17.2	12.0	680	836
1972	68.5	76.2	13.1	17.0	16.0	11.2	683	838
1973	68.7	76.3	13.1	17.0	15.4	10.6	688	842
1974	68.9	76.7	13.3	17.2	14.6	9.9	690	847
1975	69.0	76.9	13.2	17.2	13.8	9.2	691	849
1976	69.2	77.2	13.3	17.4	12.5	8.1	693	853
1977	69.7	77.8	13.7	17.9	11.4	7.4	702	860
1978	69.8	78.0	13.7	17.9	10.7	6.7	704	861
1979	70.1	78.3	13.9	18.1	10.0	6.0	707	864
1980	70.2	78.4	14.0	18.2	10.0	5.8	710	866
1981	70.4	78.5	14.0	18.2	9.7	5.5	714	869
1982	70.7	78.9	14.3	18.5	9.5	5.3	718	872
1983	70.7	78.8	14.2	18.4	9.1	5.0	719	872
1984	71.2	79.3	14.5	18.8	8.3	4.7	724	878
1985	71.3	79.4	14.5	18.8	8.3	4.6	727	880

Table A.11 (cont'd). Characteristics of overall mortality, 1946–2017

Year	Life expectancy (years)				Mortality rate (per 1,000 live births)		Survivors at age 65 (per 1,000 at birth)	
	At birth		At age 65		Infant[1]	Neonatal[2]	Male	Female
	Male	Female	Male	Female				
1986	71.5	79.7	14.7	19.0	8.0	4.3	731	882
1987	72.0	80.3	15.0	19.4	7.8	4.1	740	886
1988	72.3	80.5	15.3	19.6	7.8	4.1	744	888
1989	72.5	80.6	15.4	19.7	7.5	3.8	746	889
1990	72.7	81.0	15.6	19.9	7.3	3.6	752	893
1991	72.9	81.2	15.7	20.1	7.3	3.5	754	894
1992	73.2	81.5	15.9	20.4	6.8	3.3	758	896
1993	73.3	81.5	15.9	20.4	6.5	3.1	760	895
1994	73.7	81.9	16.2	20.7	5.9	3.2	766	898
1995	73.9	81.9	16.1	20.6	4.9	2.9	771	900
1996	74.1	82.1	16.1	20.7	4.8	3.0	776	901
1997	74.6	82.3	16.3	20.9	4.7	3.0	784	904
1998	74.8	82.4	16.4	20.9	4.6	2.9	789	905
1999	75.0	82.5	16.5	21.0	4.3	2.7	793	906
2000	75.3	82.8	16.7	21.2	4.4	2.8	797	908
2001	75.5	82.9	16.9	21.4	4.5	2.9	799	908
2002	75.8	83.1	17.1	21.4	4.1	2.7	802	909
2003	75.9	83.0	17.1	21.3	4.0	2.6	804	910
2004	76.7	83.9	17.7	22.2	3.9	2.6	815	913
2005	76.8	83.9	17.7	22.0	3.6	2.3	816	914
2006	77.2	84.2	18.0	22.4	3.6	2.3	820	915
2007	77.4	84.4	18.2	22.5	3.6	2.4	823	917
2008	77.6	84.4	18.3	22.5	3.6	2.4	825	917
2009	77.8	84.5	18.4	22.6	3.7	2.4	826	917
2010	78.0	84.7	18.6	22.7	3.5	2.3	829	918
2011	78.4	85.0	18.9	23.0	3.3	2.2	834	920
2012	78.5	84.8	18.8	22.8	3.3	2.3	836	921
2013	78.8	85.0	19.0	23.0	3.5	2.4	840	922
2014	79.3	85.4	19.4	23.3	3.3	2.3	846	923
2015*	79.0	85.1	19.1	23.0	3.5	2.5	844	923
2016*	79.3	85.3	19.3	23.2	3.5	2.5	847	924
2017*	79.4	85.3	19.4	23.2	3.6	n/a	n/a	n/a

* Provisional data end 2017.
n/a: 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 2016

Country	Life expectancy at birth (years)		
	Male	Female	Difference (F – M)
Austria	79.3	84.1	4.8
Belgium	79.0	84.0	5.0
Bulgaria	71.3	78.5	7.2
Croatia	75.0	81.3	6.3
Czech Rep.	76.1	82.1	6.0
Denmark	79.0	82.8	3.8
Estonia	73.3	82.2	8.9
Finland	78.6	84.4	5.8
Whole of France (including Mayotte)	79.3	85.3	6.0
Germany	78.6	83.5	4.9
Greece	78.9	84.0	5.1
Hungary	72.6	79.7	7.1
Iceland	80.4	84.1	3.7
Ireland	79.9	83.6	3.7
Italy	81.0	85.6	4.6
Latvia	69.8	79.6	9.8
Lithuania	69.5	80.1	10.6
Luxembourg	80.1	85.4	5.3
Netherlands	80.0	83.2	3.2
Norway	80.7	84.2	3.5
Poland	73.9	82.0	8.1
Portugal	78.1	84.3	6.2
Romania	71.7	79.1	7.4
Slovakia	73.8	80.7	6.9
Slovenia	78.2	84.3	6.1
Spain	80.5	86.3	5.8
Sweden	80.6	84.1	3.5
Switzerland	81.7	85.6	3.9
United Kingdom*	79.4	83.0	3.6

* Provisional data for 2016.
Source: Eurostat (http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database, accessed 27 June 2018), except France (INSEE).

Table A.13. Infant mortality in Europe 1980–2016 (rate per 1,000 live births)

Country	1980	1985	1990	1995	2000	2005	2010	2011	2012	2013	2014	2015	2016
Austria	14.3	11.2	7.8	5.4	4.8	4.2	3.9	3.6	3.2	3.1	3.0	3.1	3.1
Belgium	12.1	9.8	8.0	6.0	4.8	3.7	3.6	3.3	3.8	3.5	3.4	3.3	3.2
Bulgaria	20.2	15.4	14.8	13.3	13.3	10.4	9.4	8.5	7.8	7.3	7.6	6.6	6.5
Croatia	n/a	n/a	n/a	n/a	7.4	5.7	4.4	4.7	3.6	4.1	5.0	4.1	4.3
Czech Rep.	16.9	12.5	10.8	7.7	4.1	3.4	2.7	2.7	2.6	2.5	2.4	2.5	2.8
Denmark	8.4	7.9	7.5	5.1	5.3	4.4	3.4	3.5	3.4	3.5	4.0	3.7	3.1
Estonia	17.1	14.1	12.3	14.9	8.4	5.4	3.3	2.5	3.6	2.1	2.7	2.5	2.3
Finland	7.6	6.3	5.6	3.9	3.8	3.0	2.3	2.4	2.4	1.8	2.2	1.7	1.9
Whole of France (1)	n/a	n/a	n/a	5.0	4.5	3.8	3.6	3.5	3.5	3.6	3.6	3.7	3.7
Metropolitan France (1)	10.0	8.3	7.3	4.9	4.4	3.6	3.5	3.3	3.3	3.5	3.3	3.5	3.5
Germany	12.4	9.1	7.0	5.3	4.4	3.9	3.4	3.6	3.3	3.3	3.2	3.3	3.4
Greece	17.9	14.1	9.7	8.1	5.9	3.8	3.8	3.4	2.9	3.7	3.7	4.0	4.2
Hungary	23.2	20.4	14.8	10.7	9.2	6.2	5.3	4.9	4.9	5.0	4.5	4.2	3.9
Iceland	7.7	5.7	5.9	6.1	3.0	2.3	2.2	0.9	1.1	1.8	2.1	2.2	0.7
Ireland	11.1	8.8	8.2	6.4	6.2	4.0	3.8	3.5	3.5	3.5	3.3	3.4	3.0
Italy	14.6	10.5	8.2	6.2	4.5	3.8	3.2	3.2	2.9	2.9	2.8	2.9	2.8
Latvia	15.3	13.0	13.7	18.8	10.4	7.8	5.7	6.6	6.3	4.4	3.8	4.1	3.7
Lithuania	14.5	14.2	10.2	12.5	8.6	6.8	4.3	4.2	3.9	3.7	3.9	4.2	4.5
Luxembourg	11.5	9.0	7.3	5.5	5.1	2.6	3.4	4.3	2.5	3.9	2.8	2.8	3.8
Netherlands	8.6	8.0	7.1	5.5	5.1	4.9	3.8	3.6	3.7	3.8	3.6	3.3	3.5
Norway	8.1	8.5	6.9	4.0	3.8	3.1	2.8	2.4	2.5	2.4	2.4	2.3	2.2
Poland	25.4	22.1	19.4	13.6	8.1	6.4	5.0	4.7	4.6	4.6	4.2	4.0	4.0
Portugal	24.2	17.8	11.0	7.5	5.5	3.5	2.5	3.1	3.4	2.9	2.9	2.9	3.2
Romania	29.3	25.6	26.9	21.2	18.6	15.0	9.8	9.4	9.0	9.2	8.4	7.6	7.0
Slovakia	20.9	16.3	12.0	11.0	8.6	7.2	5.7	4.9	5.8	5.5	5.8	5.1	5.4
Slovenia	15.3	13.0	8.4	5.5	4.9	4.1	2.5	2.9	1.6	2.9	1.8	1.6	2.0
Spain	12.3	8.9	7.6	5.5	4.4	3.8	3.2	3.1	3.1	2.7	2.8	2.7	2.7
Sweden	6.9	6.8	6.0	4.1	3.4	2.4	2.5	2.1	2.6	2.7	2.2	2.5	2.5
Switzerland	9.0	6.7	6.7	5.0	5.3	4.2	3.8	3.8	3.6	3.9	3.9	3.9	3.6
United Kingdom	13.9	11.1	7.9	6.2	5.6	5.1	4.2	4.2	4.0	3.9	3.9	3.9	3.8

Provisional data 2016.
n/a: not available.
(1) INSEE for the whole of France excluding Mayotte between 1995 and 2014 and for metropolitan France in 2010 and 2015.
Source: Eurostat, Infant mortality rate (http://ec.europa.eu/eurostat/data/database, accessed 11 June 2018), except (1).

Table A.14. Standardized death rates (per 100,000) by sex and groups of causes of death[(a)]

Males

Causes of death	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
23 groups of causes																
Lung cancer	63	67	70	70	66	64	63	62	60	60	58	58	56	55	54	54
Stomach cancer	20	17	14	12	10	8	8	8	7	7	7	7	7	7	7	6
Cancer of the intestine	31	29	29	28	25	24	23	22	22	22	22	21	21	20	20	20
Prostate cancer	28	30	32	29	26	23	22	22	21	20	20	19	18	17	16	16
Other cancers	176	180	171	160	152	139	136	134	131	129	125	121	119	116	116	115
Ischaemic heart diseases	117	118	96	85	76	62	58	56	54	51	48	46	45	43	40	41
Other heart diseases	130	115	93	90	81	71	69	69	68	66	64	59	58	57	54	55
Cerebro-vascular diseases	123	103	71	59	47	37	35	34	33	31	30	29	28	27	25	25
Other diseases of the circulatory system	38	35	29	26	21	16	16	15	15	13	13	11	11	10	10	10
Tuberculosis (all forms)	5	3	2	2	2	1	1	1	1	1	1	1	0	1	0	0
AIDS	0	0	8	13	3	2	2	2	2	1	1	1	1	1	1	1
Influenza	2	2	3	1	2	1	0	0	0	0	0	0	1	1	0	1
Other infectious and parasitic diseases	11	12	10	11	12	11	11	11	11	11	11	11	11	10	9	10
Other diseases of the respiratory system	83	79	71	69	53	47	42	42	42	42	39	39	40	39	36	39
Alcoholism and cirrhosis of the liver	56	46	35	29	28	24	24	23	23	22	22	21	20	19	18	18
Diabetes	11	11	9	9	15	14	13	13	13	13	12	12	12	12	11	12
Other mental disorders and diseases of the nervous system	28	28	31	30	40	42	41	41	42	42	42	41	43	42	40	44
Other diseases of the digestive system	41	35	29	25	20	19	19	18	18	18	18	16	16	16	15	15
Other diseases	56	50	40	37	36	32	32	31	32	31	31	27	28	28	26	29
Transport accidents	30	26	26	20	19	13	12	12	11	11	10	9	8	7	7	7
Suicides	29	34	30	29	26	25	24	23	23	24	23	23	21	21	19	20
Other external causes	63	54	51	44	36	31	31	31	31	31	31	30	30	29	28	31
Unspecified or ill-defined causes of death	74	70	56	48	46	45	43	44	46	47	55	53	60	59	53	55
6 broad groups of causes																
Cancer	318	324	317	300	280	258	251	247	241	239	232	226	220	216	213	211
Cardiovascular diseases	409	371	288	260	225	187	177	173	169	161	156	145	142	137	129	131
Infectious and parasitic diseases, diseases of the respiratory system	101	97	95	95	72	62	56	56	56	55	52	53	54	51	47	51
Other diseases	193	169	143	131	138	132	129	126	128	126	124	118	120	117	111	118
External causes	123	114	106	93	81	69	67	66	66	66	64	63	60	57	55	57
Unspecified or ill-defined causes of death	74	70	56	48	46	45	43	44	46	47	55	53	60	59	53	55
All causes	1217	1145	1005	928	842	753	723	713	705	694	684	657	656	638	608	624

Females

Cause of death	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
23 groups of causes																
Lung cancer	6	7	8	9	10	14	14	15	15	16	16	16	17	17	18	18
Stomach cancer	9	7	6	5	4	3	3	3	3	3	3	3	3	3	3	2
Cancer of the intestine	19	18	17	16	15	14	13	13	13	13	12	12	12	12	11	11
Breast cancer	27	28	29	29	27	25	25	24	24	24	23	23	22	22	22	22
Cancer of the uterus	11	10	8	7	6	6	6	6	6	6	6	6	6	6	6	6
Other cancers	76	74	70	69	67	63	62	60	61	60	59	57	56	56	56	57
Ischaemic heart diseases	51	51	42	35	30	23	22	21	20	19	17	16	16	15	14	14
Other heart diseases	93	81	64	61	54	47	45	45	45	44	42	39	39	38	36	37
Cerebro-vascular diseases	88	74	52	41	33	26	25	23	23	23	22	21	21	20	19	19
Other diseases of the circulatory system	19	17	14	12	9	7	6	6	6	6	5	5	4	4	4	4
Tuberculosis (all forms)	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
AIDS	0	0	1	3	1	1	1	1	0	0	0	0	0	0	0	0
Influenza	2	2	2	1	1	1	0	0	0	0	0	0	0	1	0	1
Other infectious and parasitic diseases	7	7	6	7	8	7	6	6	7	7	7	7	7	6	6	6
Other diseases of the respiratory system	33	33	31	30	24	21	18	19	19	19	17	18	20	18	17	20
Alcoholism and cirrhosis of the liver	19	15	12	10	9	8	8	7	7	7	6	7	6	6	5	5
Diabetes	10	9	8	7	10	9	8	8	8	8	7	7	7	7	6	7
Other mental disorders and diseases of the nervous system	22	22	24	24	32	33	33	33	34	34	33	34	36	36	34	36
Other diseases of the digestive system	27	23	18	16	13	12	11	11	11	11	11	10	10	10	9	10
Other diseases	38	34	29	28	27	24	24	23	24	23	23	20	21	21	20	21
Transport accidents	10	9	9	7	6	4	3	3	3	3	3	2	2	2	2	2
Suicides	11	12	10	10	8	8	8	8	8	7	7	7	6	6	6	5
Other external causes	36	31	27	23	19	16	16	16	16	15	15	15	15	14	14	15
Unspecified or ill-defined causes of death	48	44	35	31	28	27	26	26	27	27	31	30	34	34	30	32
6 broad groups of causes																
Cancer	147	143	138	135	129	124	123	121	123	121	119	118	117	115	116	116
Cardiovascular diseases	250	223	172	148	126	104	98	95	95	91	86	81	80	77	73	74
Infectious and parasitic diseases, diseases of the respiratory system	43	43	42	41	34	30	26	26	27	27	25	26	28	26	24	27
Other diseases	116	103	91	85	91	85	84	83	84	83	81	77	80	79	75	79
External causes	57	53	46	40	34	28	27	26	26	26	25	24	23	23	21	22
Unspecified or ill-defined causes of death	48	44	35	31	28	27	26	26	27	27	31	30	34	34	30	32
All causes	662	609	525	480	442	399	384	377	381	375	367	356	362	353	339	351

(a) Standardized rate calculated from mortality rates by five-year age group (in completed years) and from standard European population (according to the structure proposed by the 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 groups are defined in Table A.15 (item numbers refer to ICD-9 for 1980 to 1999 and ICD-10 from 2000).
Coverage: Metropolitan France.
Source: F. Meslé from CépiDc-INSERM data.

Table A.15. 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	140 to 150; 155 to 161; 163 to 173; 181; 183 to 184; 186 to 239	C00 to C15; C17; C22 to C32; C37 to C49; C51; C52; C56 to C60; C62 to D48
Cardiovascular diseases	390 to 459	I00 to I99
Ischaemic heart diseases	410 to 414	I20 to I25
Other heart diseases	390 to 405; 415 to 429	I00 to I15; I26 to I51
Cerebro-vascular diseases	430 to 438	I60 to I69
Other diseases of the circulatory system	440 to 459	I70 to I99
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; B91 to B99
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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Au premier janvier 2018, la France comptait près de 66,9 millions d'habitants, soit 122300 personnes de plus que l'année précédente, mais l'accroissement annuel moyen, et tout particulièrement l'accroissement naturel, n'ont jamais été aussi faibles depuis 20 ans. L'indice conjoncturel de fécondité poursuit sa baisse, observée notamment chez les femmes les plus jeunes. Le nombre de titres de séjour délivrés augmente en 2016 (près de 220000). La nuptialité continue de diminuer, tant pour les couples hétérosexuels que pour les couples de même sexe. En 2017, la mortalité recule de nouveau, mais le nombre de décès dépasse 600000, chiffre lié au vieillissement de la population. Les causes de mortalité dont les évolutions sont les plus préoccupantes sont le cancer chez les femmes, les maladies par troubles mentaux et les maladies du système nerveux. Les événements démographiques ne se répartissent pas uniformément au fil de l'année : les mariages et mises en union libre sont plus souvent observés au printemps et en été, les naissances en été et à l'automne, tout comme les entrées sur le territoire ; alors que l'hiver et la fin de l'année marquent une recrudescence d'enregistrements de pacs et des pics de mortalité.

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El primero de enero de 2018, Francia contaba con cerca de 66,9 millones de habitantes, es decir 122300 personas más que el año precedente, pero el crecimiento medio anual, y particularmente el crecimiento natural, nunca han sido tan bajos desde hace 20 años. El índice coyuntural de fecundidad continúa su caída, especialmente en las mujeres más jóvenes. El número de permisos de residencia acordados aumenta en 2016 (cerca de 220000). La nupcialidad prosigue su baja, tanto en los parejas heterosexuales como en las homosexuales. En 2017, la mortalidad retrocede de nuevo pero el número de muertes sobrepasa 600000, debido al envejecimiento de la población. Las causas de muerte cuya evolución es más inquietante son el cáncer para las mujeres, los trastornos mentales y las enfermedades del sistema nervioso. Los acontecimientos demográficos no se reparten uniformemente a lo largo del año: los casamientos y la formación de uniones libres se observan en primavera y en verano, los nacimientos en verano y en otoño, así como las entradas en el territorio nacional, mientras que el invierno y el fin de año se caracterizan por un fuerte aumento de las uniones libres y de los picos de mortalidad.

Keywords: France, demographic situation, migration, fertility, conjugality, marriage, civil union, consensual union, divorce, same-sex couple, ageing, mortality, mortality by cause of death, seasonal variations

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