HAL
open science

Recent demographic developments in France: Marked differences between Départements

Didier Breton, Magali Barbieri, Hippolyte d'Albis, Magali Mazuy

To cite this version:

Didier Breton, Magali Barbieri, Hippolyte d'Albis, Magali Mazuy. Recent demographic developments in France: Marked differences between Départements. Population (English edition), 2017, The demographic situation in France, 72 (4), pp.557-624. 10.3917/pope.1704.0557 . hal-02148790

HAL Id: hal-02148790

https://hal.science/hal-02148790v1

Submitted on 5 Jun 2019

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Didier Breton,*◊ Magali Barbieri,◊ Hippolyte d'Albis,**
Magali Mazuy◊

Recent Demographic Developments in France: Marked Differences between *Départements*

I. General trends and population age structure

1. A population of 67 million

On 1 January 2017, the population of the whole of France[1] was nearly 67 million (66.99 million), including 2.13 million in overseas *départements* and regions (Bellamy and Beaumel, 2017). During 2016, the population increased by 264,000 (+4.0 per 1,000 or +0.4%) versus +272,300 (+4.1 per 1,000 in 2015) (see Appendix Table A.1). The population of France is continuing to grow but the pace is slower each year.

Natural increase – i.e. the number of births minus the number of deaths – continues to be the main driver of French population growth. However, in 2016, natural increase was less than 200,000 (+198,000) for France as a whole and less than 175,000 for metropolitan France. This makes growth in 2016 the second lowest since World War II, second only to 1976, the year that marked

(1) The statistics presented in this article concern the whole of France, that is, all of its 101 *départements* (Appendix figure A.1): 96 of them are situated in Europe and 5 lie overseas, outside Europe. The latter *départements* are Guadeloupe, French Guiana (Guyane), Réunion, Martinique, and Mayotte. The expression "the whole of France" does not include a few other territories that are part of the French Republic: New Caledonia, French Polynesia, Wallis and Fortuna Islands, the French Southern and Antarctic Territories, isolated islands in the Indian Ocean, and the archipelago of Saint Pierre and Miquelon. These territories are not included in French national accounts, and they are not part of the European Union. The time series in the appendices cover only the territory of France that lies within Europe (metropolitan France). The national statistical institute, INSEE, began publishing data on the whole of France in 1991.

* Université de Strasbourg, SAGE (UMR 7363).

◊ French Institute for Demographic Studies (INED).

** Paris School of Economics, CNRS.

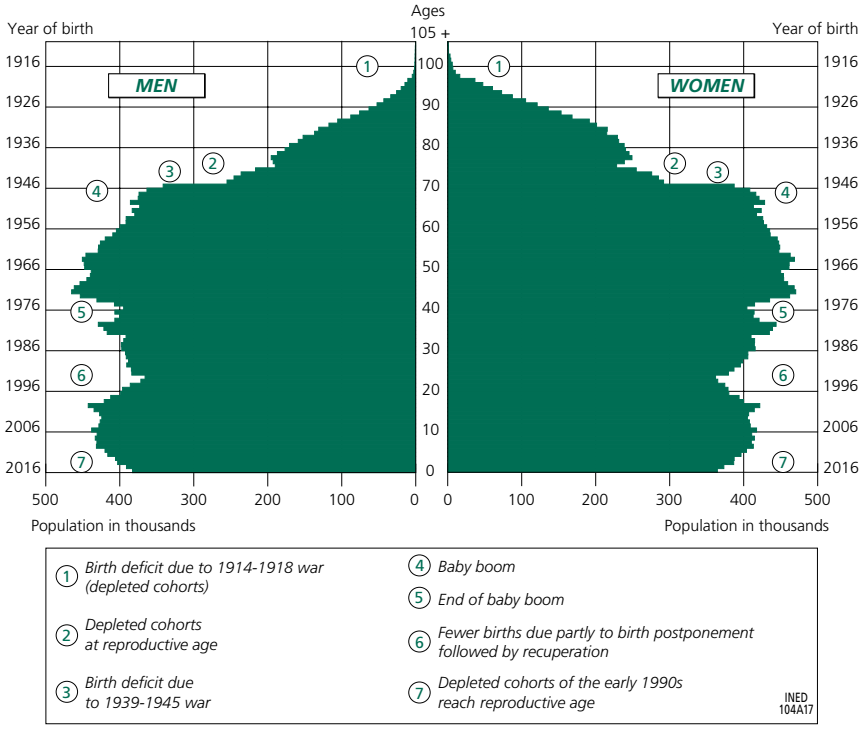
Correspondence: Didier Breton, Université de Strasbourg, Institut de démographie (IDUS), 22 rue René Descartes - Patio - Bâtiment 5, 67084 Strasbourg Cedex, email: dbreton@unistra.fr

 DOI: 10.3917/pope.1704.0557

the end of a period of declining births that began in 1973 with the onset of the economic crisis (the oil shock) and the end of the baby boom (INED, 1978). However, during that period, France had fewer than 53 million inhabitants. Thus, in 2016, the rate of natural increase was at its lowest level since World War II, with +2.9 per 1,000 for the whole of France and +2.6 per 1,000 for metropolitan France. The number of deaths rose in 2016, as was also the case in 2015, when it was particularly high (Mazuy et al., 2016), but the main cause of the slowdown in natural growth is the steady decline in the number of births since 2011. The base of the age pyramid has narrowed as a consequence (Figure 1). This narrowing is partly a result of declining fertility (Pison, 2017), but it is mostly due to the fact that the cohorts reaching childbearing age, born between 1992 and 1998, are quite small. Although fertility is stable, the base of the population pyramid should continue to shrink for several years to come.

In 2016, net migration was +67,000 for the whole of France and +82,000 for metropolitan France.[2] The National Institute for Statistics and Economic

Figure 1. Population pyramid of France on 1 January 2017



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

(2) The difference between these two numbers is due to negative net migration in overseas *départements*, where emigration is common, notably to metropolitan France. Emigrants outnumbered immigrants, even in the overseas *départements* with high levels of immigration, such as French Guiana or Mayotte.

Studies (INSEE) has adjusted net migration upwards for the years 2013 to 2015 (Bellamy and Beaumel, 2016, 2017).

At 67.0 million on 1 January 2017, the population of France continues to be the second largest in Europe, quite far behind Germany's 82.8 million. The difference between France and the United Kingdom (population 65.8 million) is small, and France actually ranks below the United Kingdom if only metropolitan France is counted (Pison, 2015). The difference with respect to Italy (60.6 million) is larger. In comparison with the three other European Union countries with more than 60 million inhabitants as of 1 January 2017, the population of France is growing more slowly than that of Germany (+7.6 per 1,000 due solely to migration) or the United Kingdom (+6.5 per 1,000 due to both net migration of +3.8 per 1,000 and natural increase of +2.7 per 1,000), while the population of Italy is decreasing (–1.3 per 1,000, due to natural decrease of –2.3 per 1,000 that was not fully offset by positive net migration of +1.1 per 1,000).

2. An expanding "empty diagonal"[3]

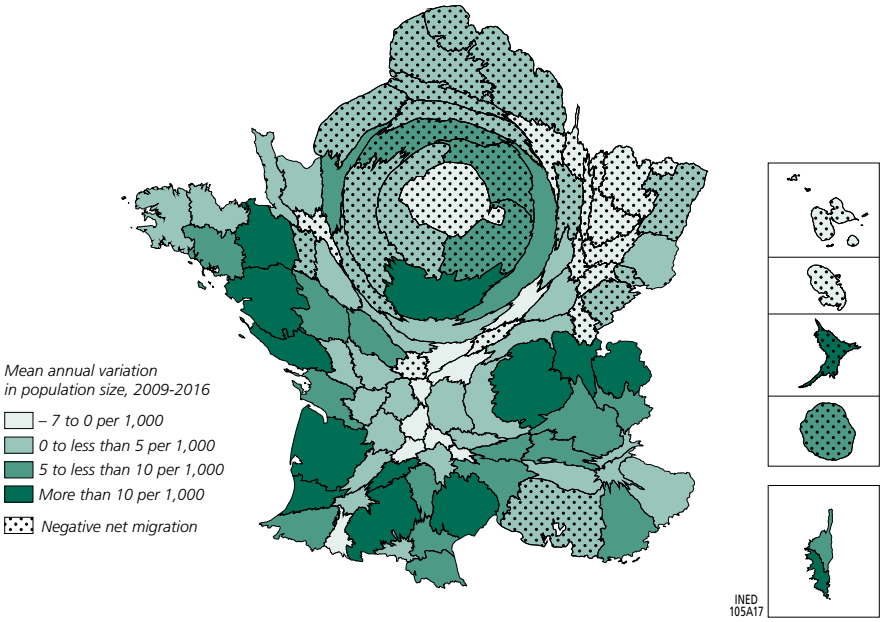
The population of France is concentrated in certain *départements*, especially those located in the Île-de-France region, situated in and around Paris (Figure 2).[4] However, the Nord *département* has the largest population of all, more than Paris, followed by Bouches-du-Rhône (Appendix Figure A.2). These three *départements* are the only ones with more than two million inhabitants. On the opposite end of the spectrum, 13 *départements* have fewer than 200,000 inhabitants. One, Lozère, has a population of just over 75,000, a number that corresponds to the population of towns such as La Rochelle or Calais. The correlation between population size as of 1 January 2016, represented by the surface occupied by each *département* in Figure 2, and population growth between 1 January 2009 and 1 January 2016, represented by the colour ascribed to each *département*, is significant but quite small ($p < 0.001$; $r = 0.36$). For example, the population of the Paris *département* has decreased,[5] while those of Tarn-et-Garonne, Landes, and the two *départements* that make up Corsica, have increased. Changes in population size tend to be grouped geographically: population decrease has been concentrated in the centre and the north-east of France, a development that has accentuated the "empty diagonal" zone described for the period 1968 to 2009 (Oliveau and Doignon, 2016). Net

(3) France has a long-standing "empty diagonal" zone, an area of low population density that spans the country roughly from the south-west corner to the north-east corner. The expression has existed for many years, has been widely discussed and its reality confirmed (Oliveau and Doignon, 2016).

(4) This map in Figure 2 is an "anamorphosis", in which the surface occupied by each *département* on the map corresponds to its population size as of 1 January 2016. This mode of representation obscures the "empty diagonal" zone which appears more clearly in the map in Appendix Figure A.2. Neither does the map in Figure 2 show differences in population density (see Appendix Figure A.3). Figure 2 is the only map constructed this way.

(5) The population decrease in Paris is due solely to negative net migration. The populations of neighbouring suburban *départements* have increased (Laroche, 2017).

Figure 2. Total population growth and net migration from 1 January 2009 to 1 January 2016, based on population size of each *département* on 1 January 2016



Note: The size of the *départements* is proportional to their populations on 1 January 2017.
Coverage: Whole of France, excluding Mayotte.
Sources: INSEE, census; authors' calculations.

increases in migration follow similar geographical patterns. The northern half of France is characterized by negative net migration, which is most marked in Paris, while this is the case for only one *département* in the south, Bouches-du-Rhône. The south and the west continue to attract newcomers (Baccaïni and Levy, 2009; Levy and Dzikowski, 2017).

The overseas territories lie at the two extremes. The population of Martinique is dropping the most rapidly of all the *départements*; in metropolitan France, only Nièvre has experienced such a marked decrease. It is also falling in Guadeloupe (–2 per 1,000). On the other hand, Mayotte and French Guiana have the highest population growth (+23 per 1,000), well above the record for metropolitan France of +15 per 1,000 in Haute-Savoie, Corse du Sud, Hérault, and Haute-Garonne. In Réunion, population growth is about the same as the national average of +6 per 1,000. Throughout overseas France, net migration has been negative.

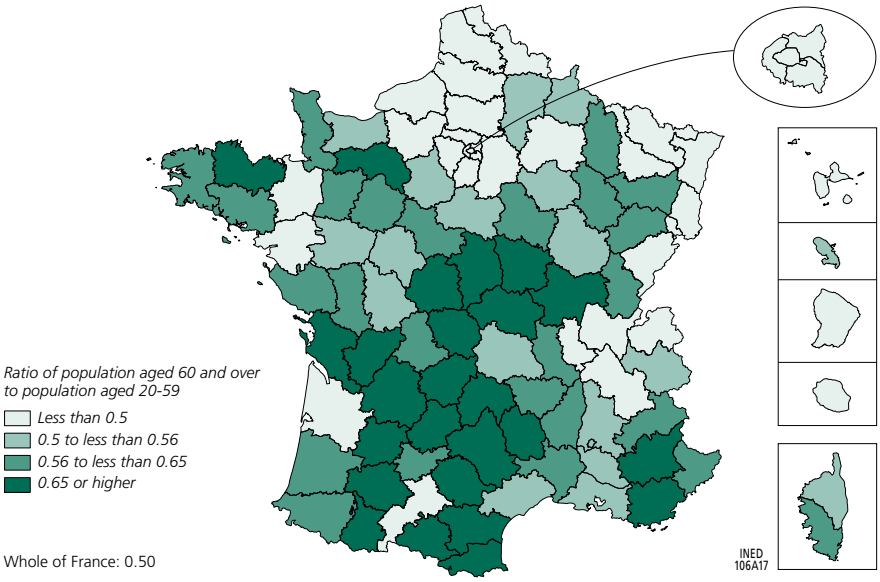
3. Just over half of the population is aged between 20 and 59

In 2017, a little less than one quarter (24.5%) of the population of the whole of France is under 20 years of age, a proportion that has remained quite stable

over the last five years. People aged 20-59 account for a little more than half (50.2%) of the population, and their proportion is steadily declining, while the share of people aged 60 or more (25.3%) is constantly increasing (Appendix Table A.2). In other words, the ongoing process of population ageing is concentrated at the top of the pyramid, as the baby boomers reach old age. This ageing will accelerate in coming years due to the recent narrowing of the base of the pyramid. Indicators point to an increase in the dependency ratio over time (Appendix Table A.2). The customary dependency indicator, that is, the ratio of the population aged under 20 or over 60 to that aged 20-59, has almost reached one: it was 0.99 in 2017 versus 0.90 in 1985. France has the highest ratio among the 27 member countries of the European Union because its birth rate is relatively high. The old-age dependency ratio – the ratio of people aged 60 or over to people aged 20-59 – has reached 0.5 for the first time, up from 0.34 in 1985. It is higher in Finland, Germany, Bulgaria, Greece, and Portugal.

Many *départements* of France have an old-age dependency ratio that surpasses 0.5. It is below 0.5 only in the *départements* that make up the Île-de-France and Nord regions, and those that border on Germany and Switzerland, as well as in the most urban *départements* of the west (Île-et-Vilaine, Loire-Atlantique, Gironde, and Haute-Garonne (Figure 3). In contrast, the old-age dependency ratio is well above 0.5 in the south of the country and in the most rural areas; it is as high as 0.8 in the *départements* of Creuse, Nièvre and Lot.

Figure 3. Old-age dependency ratio by French *département*, 2017



Coverage: Whole of France, excluding Mayotte.
Sources: INSEE, census; authors' calculations.

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

Net migration, that is, the difference between arrivals and departures to and from France over the course of a year, can be broken down into arrivals and departures of French citizens or people who were born in France, and of immigrants.(6) Some immigrants are required to hold a residence permit in order to stay in France, but citizens of countries that belong to the European Economic Area(7) or Switzerland, are exempted.

This section examines recent trends in arrivals of foreigners who are required to hold a residence permit and who do in fact have one. In order to compare different periods, our statistics cover a constant geographical area. Hence, residence permits issued previously to citizens of countries who no longer need a permit, are not counted here.(8)

Flows of non-EEA nationals arriving legally in France to establish residence can be estimated from statistics on residence permits and long-term visas that serve as residence permits. Our data come from the system used by the Ministry of the Interior manage the permit applications of foreign nationals living in France (AGDREF). The methodology used to calculate these flows is described in detail in d'Albis and Boubtane (2015). The basic principle is the following: individuals arriving in France are counted in the inflow for the year in which they first receive a residence permit valid for one year or more. In most cases, this is the year of arrival, but it can be later if the person received an initial short-term permit upon arrival. Hence our statistics do not measure entry into France, but rather access to the status of permanent migrant, that is, long-term legal residence. In addition, the Ministry of the Interior publishes a complementary statistical series of first residence permits granted that includes permits of all durations.

The inflow of foreigners can be estimated through other statistical sources. INSEE uses census data, which can serve to determine the number of people arriving from EEA countries, and, in theory, those arriving from non-EEA countries without residence permits. However, for the same geographical area, estimates of numbers of people entering based on census data are lower than those based on AGDREF data (Temporal and Brutel, 2016).

1. A slight increase in arrivals

Table 1 gives the inflows of people who receive a first residence permit valid for at least one year. In 2015, the number of permits granted to foreign

(6) Born abroad to parents who are not French citizens.

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

(8) Due to changes in the geographical area covered and in methods of estimation, Appendix Table A.3 was completely revised in 2014. In particular, the status of different nationalities may change from year to year due to modifications in legislation concerning the right to reside in France.

Table 1. Number of first permits valid for one year or more issued to non-EEA nationals, by first year of validity and length of permit

Length of residence permit	First year of residence permit validity					
	2010	2011	2012	2013	2014	2015
Less than 10 years	163,486	157,669	159,077	173,060	178,677	187,626
More than 10 years	20,943	20,002	20,934	19,338	21,210	22,414
Total	184,429	177,671	180,011	192,398	199,887	210,040

Coverage: Residence permits issued in France and abroad to citizens of foreign countries, except countries of the European Economic Area and Switzerland. Constant geographical area from 2010 to 2015. Permits issued in year *N* are recorded in the data extracted in July of year *N*+2. Permits that are valid less than ten years are valid for 364 to 3,649 days. Ten-year permits are valid for more than 3,649 days.
Source: Authors' calculations based on AGDREF data.

nationals (210,040) was the highest since 1998 (d'Albis and Boubtane, 2015). The number of newly arrived foreigners with a residence permit in 2015 was equivalent to 0.32% of the total French population on 1 January 2015. This flow increased by over 5% in 2015, more than in 2014 (3%) but less than in 2013 (9%). Since 2002, there has been no clearcut trend, with the total varying between 175,000 and 210,000 permits. The main factors that determine these inflows are economic conditions and availability of housing (d'Albis et al., 2016, 2017), as well as the French government's immigration policy.

Only slightly more than 10% of first-time permits are valid for ten years or longer. Long-term residence permits of ten or more years are generally granted only after the beneficiary has held one or more short-term permits.

Arrivals of permit holders can be compared against total arrivals of foreigners, including those not obliged to have a residence permit, i.e. citizens of EEA countries and Switzerland. On the basis of information from the Ministry of the Interior, the OECD estimates total arrivals in 2015 to be 252,643.[9] According to Eurostat, which relies on information from INSEE, arrivals in 2015 totalled 232,709.[10] On the basis of the same source, when citizens of the 28 European Union member countries[11] are subtracted, the total inflow is 148,484, far below the estimate of 210,040 based on AGDREF data.

2. Marked geographical disparities

Migration flows are very unevenly distributed across France. Arrivals are generally concentrated in the largest urban areas, in border areas, and on the shores of the Mediterranean. The maps in Figure 4 show this distribution. On the left-hand map, each *département* is classified by its share of total arrivals in France in 2015.[12] The *départements* are divided into four groups

(9) http://www.oecd.org/els/mig/keystat.htm

(10) http://ec.europa.eu/eurostat/en/data/database

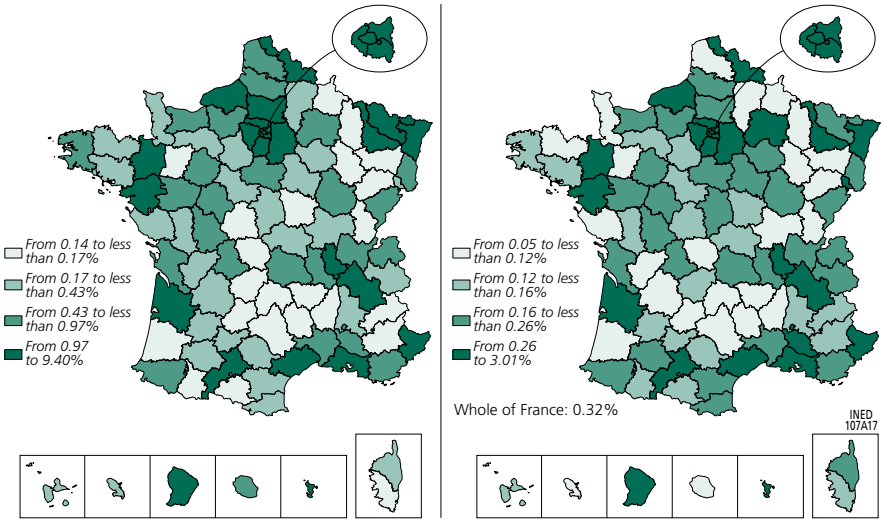
(11) EU member countries account for almost all the countries whose citizens are not required to hold a residence permit in order to legally reside in France.

(12) The methodology used to estimate numbers of arrivals in each *département* is described in d'Albis et al. (2017).

of equal size, depending on their share. For example, the 25% of *départements* with the largest share of total arrivals (between 0.97% and 9.4%) are shown in dark green on the map, while those shown in light green have the smallest share (between 0.04% and 0.17%). The number of arrivals surpassed 10,000 in only three *départements*, all located in the Paris region: Paris itself, with 9.4% of total arrivals; Seine-Saint-Denis with 7.6%; Hauts-de-Seine with 4.8%. At the other extreme, there were fewer than 1,000 arrivals in 54 *départements*.

Disparities are less marked when the size of each *département*'s population is taken into account, but the ranking of *départements* does not change much. On the right-hand map in Figure 4, *départements* are classified by the ratio of arrivals to their total population on 1 January 2015. *Départements* in the top quartile are coloured dark green, with ratios between 0.26% and 3.01%. Those in the lowest quartile are pale green, with ratios between 0.05% and 0.12%. In 12 *départements*, the ratio is higher than the national average of 0.32%; three have a ratio above 1%: Mayotte, French Guiana, and Seine-Saint-Denis.

Figure 4. Flow of arrivals of immigrants in each *département* as a share of total arrivals in the country (left-hand map) and in proportion to the population of the *département* (right-hand map) in 2015



Coverage: Whole of France, excluding Saint-Barthélemy, Saint-Martin, and Saint-Pierre-et-Miquelon. Residence permits issued to foreign nationals. See Table 1.
Source: Authors' calculations based on AGDREF data.

This geographical distribution of arrivals is based on the place where each immigrant was issued a first long-term residence permit. However, the distribution of immigrants can change over time, especially since they are more mobile than people born in France (Solignac, 2016).

3. An average age at entry into France below 30 years

Residence permit holders are young: in 2015, 62.5% were aged 18-34 (Table 2) and 69.7% were adults. The share of minors was stable in 2015 at 10.2%. It should be noted that, by definition, minors born in France to foreign parents are not counted in migration flows, so the first line of Table 2 only includes minors born outside France. The AGDREF database gives additional indications that can be used to distinguish children born in France from those born abroad. In May 2017, it was estimated that 41% of children of mothers who received their first residence permit in 2015 were born in France.

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

Age group	First year of residence permit validity					
	2010	2011	2012	2013	2014	2015
0-17 years	9.7	9.9	9.7	9.5	10.3	10.2
18-34 years	65.1	64.5	64.4	62.8	62.2	62.5
35-64 years	23.7	24.2	24.5	26.2	25.7	25.5
65+ years	1.4	1.4	1.5	1.5	1.7	1.7
Total	100	100	100	100	100	100

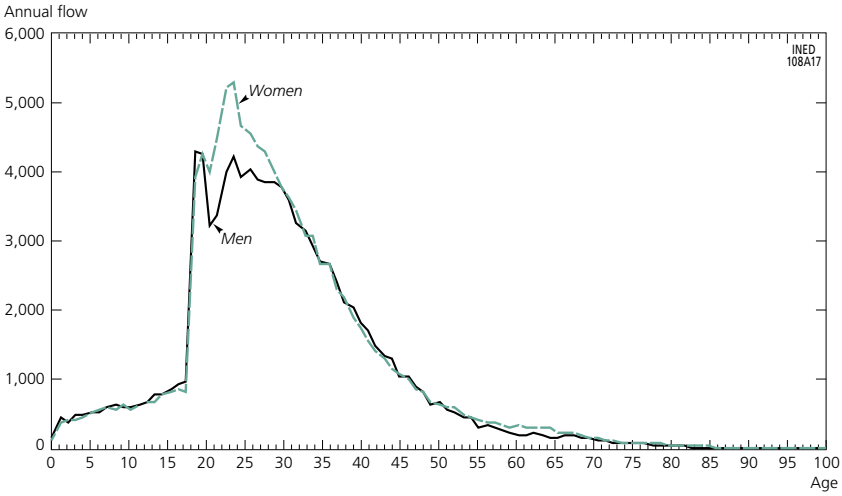
Coverage: Residence permits issued to foreigners. See Table 1.
Source: Authors' calculations based on AGDREF data.

Figure 5 shows the distribution of permits issued in 2015 by age and by sex. There is a peak at ages 18 and 19 because minors who arrive in France often wait until they attain majority to apply for a residence permit. The graph shows that women outnumber men from ages 20 to 31. The average age of receipt of a first permit valid for one year or more was 29.3 years for women and 29.1 years for men.

African nationals constitute by far the largest population group receiving a residence permit: their share has risen slightly since 2011 (Table 3), but it is lower than the levels that prevailed at the beginning of the 2000s (d'Albis and Boubtane, 2015). While the share of migrants arriving from Africa has risen, the share of those from the Americas has dropped.

The majority of immigrants who enter France are women, and in 2015, women made up the majority (51.6%) of recipients of residence permits (Table 4). Their share grew each year after 1998, but it dropped between 2014 and 2015. In 2015, there were slightly fewer women than men among immigrants from Africa, but women were in the majority among immigrants from all other continents. Changes in the proportions of women since 2010 reflect different trends on different continents. The share of women has grown among immigrants from Africa (except for the last year), has remained stable for Europeans and has decreased among people from the Americas and Asia.

Figure 5. Distribution of residence permits issued in 2015 by age and by sex



Coverage: Permits issued to foreign nationals. See Table 1.
Source: Authors' calculations based on AGDREF data.

Table 3. Distribution of holders of a first residence permit of one year or more by continent of origin and first year of permit validity (%)

Continent of origin	First year of permit validity					
	2010	2011	2012	2013	2014	2015
Africa	57.3	56.9	57.0	57.0	58.0	58.2
Americas	12.6	11.9	11.5	10.8	10.5	10.4
Asia	24.1	24.3	24.5	25.3	24.5	24.4
Europe	5.5	6.3	6.3	6.2	6.3	6.3
Oceania	0.4	0.5	0.4	0.4	0.4	0.4
Total	100	100	100	100	100	100

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

Table 4. Proportion of women among holders of a first residence permit of one year or more by continent of origin and first year of permit validity (%)

Continent of origin	First year of permit validity					
	2010	2011	2012	2013	2014	2015
Africa	47.5	47.5	49.0	49.2	49.9	49.3
Americas	59.3	58.7	58.3	58.3	57.7	56.7
Asia	53.8	54.7	54.7	54.1	53.8	53.0
Europe	60.5	60.7	60.4	60.4	60.2	60.0
Oceania	53.7	54.0	52.4	55.4	50.1	52.7
Overall	51.3	51.4	52.2	52.2	52.3	51.6

Coverage: Residence permits issued to foreign nationals. See Tables 1 and 3.
Source: Authors' calculations based on AGDREF data.

4. A small rise in the proportion of permits issued for humanitarian reasons

In 2015, 78% of permits were granted either for family reasons[13] or for purposes of education (Table 5), while few permits were granted for humanitarian reasons (10.2%) or employment-related reasons (7.7%). Foreigners issued permits on humanitarian grounds fall into two categories: first, those with a medical problem (6,152 people in 2015); second, those who have obtained the status of refugee, who are considered stateless or have been granted territorial asylum or subsidiary protection (15,250 people).[14] The number of permits issued for the second type of humanitarian reason rose by more than 18% in 2015. The vast majority (75%) of the 16,132 people granted permits for employment-related reasons in 2015 were salaried or self-employed workers. The others were seasonal or temporary workers, scientists or artists.

Table 5. Distribution of holders of a first residence permit valid for one year or more, by reason for granting of permit and first year of validity (%)

Reason for granting permit	First year of residence permit validity					
	2010	2011	2012	2013	2014	2015
Family	53.1	53.5	55.5	56.1	55.0	52.7
Education	25.8	25.2	23.8	24.0	23.8	25.3
Humanitarian	9.3	9.5	9.7	8.9	9.9	10.2
o/w refugee	*6.1*	*6.0*	*6.1*	*5.6*	*6.4*	*7.2*
Employment	7.5	7.6	6.6	6.7	7.2	7.7
Various and unspecified	4.2	4.2	4.5	4.4	4.2	4.2
Total	100	100	100	100	100	100

Note: The "refugee" line covers permits granted on the following grounds: refugee, stateless, territorial asylum or subsidiary protection.
Coverage: Permits issued to foreign nationals. See Table 1.
Source: Authors' calculations based on AGDREF data.

Women are over-represented among recipients of permits issued for family reasons. They are under-represented among recipients for humanitarian reasons, and even more so among recipients for employment-related reasons (Table 6). Among students, there were slightly fewer women than men.

The reasons for granting permits differ widely depending on recipients' continent of origin (Table 7). Family reasons are over-represented among permits granted to Africans (61.2% of their permits in 2015) and under-represented among permits granted to Asians (35.3%). Educational reasons are over-represented among permits granted to Asians (32.8%) and under-represented among permits granted to Europeans (13.1%). Humanitarian reasons account for a large share

(13) Most permits issued to minors were granted for family reasons.

(14) It is important to distinguish these people from asylum seekers who are considered to be temporary migrants. Residence permits are classified as issued for humanitarian reasons only when given to migrants whose request for asylum has been processed and asylum duly granted. According to the French Office for the Protection of Refugees and Stateless Persons (OFPRA), 79,914 people filed a first application for asylum in 2015.

of permits granted to Europeans (21.3%) and to Asians (17.2%), but a very small share among Americans (1.9%), for whom employment-related reasons are over-represented (13.4%). A growing share of migrants from Africa obtain permits for educational reasons. Migration from the Americas for family reasons has declined in favour of migration for employment-related or educational reasons. Among Asian migrants, the number of permits granted for educational reasons has fallen sharply, while permits granted for humanitarian and employment-related reasons have increased. Last, the number of permits granted to European

Table 6. Proportion of women among holders of a first residence permit of one year of more, by first year of permit validity (%)

Reason for granting permit	First year of residence permit validity					
	2010	2011	2012	2013	2014	2015
Family	57.5	57.3	57.3	57.1	58.3	58.1
Education	49.1	49.9	51.1	50.4	50.0	49.0
Humanitarian	42.8	43.6	43.5	44.1	44.8	44.6
Employment	21.8	22.2	23.5	24.9	23.1	24.8
Overall	51.3	51.4	52.2	52.2	52.3	51.6

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

Table 7. Distribution of holders of a first residence permit valid for one year or more, by reason for granting of permit and first year of validity (%)

Continent of origin and reason for granting	First year of residence permit validity					
	2010	2011	2012	2013	2014	2015
Africa						
Family	61.3	61.5	64.8	64.4	63.5	61.2
Education	21.5	21.2	19.3	20.1	20.2	22.8
Humanitarian	7.7	7.8	7.8	7.4	8.0	7.5
Employment	6.2	6.5	4.9	5.1	5.5	5.7
Americas						
Family	51.0	51.2	48.0	49.1	49.4	45.9
Education	27.0	26.7	28.7	28.6	28.9	29.8
Humanitarian	3.3	3.0	2.9	2.4	2.0	1.9
Employment	9.8	10.4	10.6	10.3	10.5	13.4
Asia						
Family	36.3	37.8	39.0	40.7	37.8	35.3
Education	37.8	36.9	34.6	33.4	33.3	32.8
Humanitarian	13.0	12.0	13.2	12.5	14.6	17.2
Employment	8.8	8.6	8.2	8.5	9.5	10.2
Europe						
Family	46.5	47.2	50.5	55.3	53.8	53.5
Education	17.9	14.8	14.7	13.9	13.0	13.1
Humanitarian	23.4	26.1	23.7	18.5	21.3	21.3
Employment	9.0	7.5	6.7	7.2	6.4	6.5

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

migrants for family reasons has increased sharply, contrasting with a decline in permits granted for educational reasons.

III. Births and fertility

1. A decline in births and in fertility at young ages

In 2016, nearly 784,000 births were registered (745,000 for metropolitan France, Appendix Table A.1). This number has been decreasing since 2010, and the decline has accelerated since 2015 (–20,000 in 2015 and –15,000 in 2016; Bellamy and Beaumel, 2017). The number of births is about the same as at the end of the 1990s.

The number and the proportion of women of childbearing age have both dropped since the early 2000s, resulting in a fall in the number of births. This decline accelerated after 2010, but slowed in 2016. For example, the number of women aged 15-50 fell by 0.25 percentage points in 2016 versus a drop of 0.36 points in 2015; the number of women aged 20-50 fell by 0.37 percentage points in 2016 versus a drop of 0.76 points in 2015 (Bellamy and Beaumel, 2017). Fertility decreased once again in 2016. The average number of children per woman fell from 2.0 in 2014 to 1.96 in 2015 and 1.93 in 2016; data from the first semester of 2017 suggest there will be a further drop in 2017. Despite this new decline, the total fertility rate for France remains high in comparison with other European Union countries; in 2015, fertility was above 1.8 in France, Ireland, Sweden and the United Kingdom, the four European Union countries with the highest rates. At the other extreme, fertility was equal to or less than 1.4 in eight countries: Cyprus, Croatia, Greece, Italy, Poland, Portugal, Spain, and Slovakia (Appendix Table A.6).

The fertility decline has been especially pronounced for women in the 25-29 age group, ages where fertility is high (Table 8, Figure 6). This has a strong impact on the total fertility rate, especially since the fertility of women aged 35 and above has stopped rising. The drop in fertility may be due to the increasing similarity of women's childbearing behaviours. We may posit that women who previously had children "late" were primarily those who entered the labour market at a late age after a long period in education, whereas today, most women have children at later ages, regardless of the age at which they completed their education. If this is indeed this case, then the decline in cohort fertility may be less pronounced than the drop in the total fertility rate observed today (Appendix Table A.5).[15]

In 2016, average age at childbearing was estimated to be 30.4 years, as in 2015. Over the last 20 years, childbearing has become concentrated between

(15) It will also be interesting to examine the projections for all the EU countries as soon as they can be updated using data from the Human Fertility Database. Since Eurostat no longer publishes fertility rates by age or by cohort, we have not updated our longitudinal indicators (Appendix Table A.7).

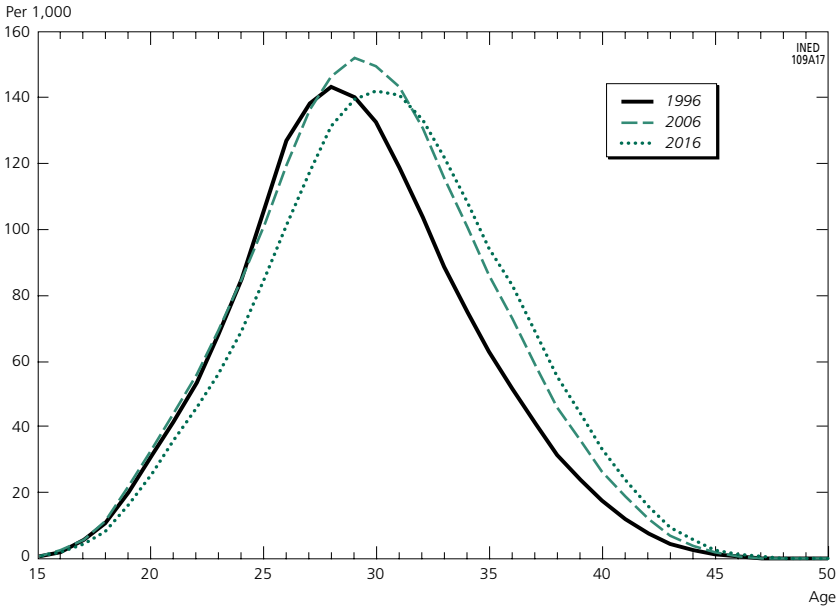
ages 25 and 35 (nearly 70% of births). However, within this age bracket, fertility has shifted to the higher ages: the modal age at childbearing rose from 28 years in 1995 to 31 in 2016 (Figure 6). Fertility remains relatively high, independently of women's age at completing education (Greulich, 2016), but social differences

Table 8. Fertility by age group since 2011 (per 1,000 women)

Age reached in the year	Sum of age-specific rates						Absolute variation				
	2011	2012	2013	2014	2015	2016*	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Below 20	40	40	38	37	35	32	+1	–3	–1	–2	–3
20-24	271	267	257	252	240	233	–4	–10	–5	–12	–8
25-29	634	627	618	612	592	575	–7	–9	–5	–21	–17
30-34	654	656	650	658	648	646	+2	–6	+8	–9	–3
35-39	328	333	338	347	347	345	+5	+5	+9	0	–2
40+	84	85	88	93	93	94	+1	+3	+5	0	+1
Total (TFR)	2,010	2,008	1,988	1,999	1,955	1,925	–2	–20	+11	–44	–30

TFR: total fertility rate, sum of age-specific rates, children per 1,000 women. Due to rounding, the total may differ slightly from the sum, and variations may not correspond to apparent differences.
* Provisional data.
Coverage: Whole of France, including Mayotte since 2014.
Source: INSEE.

Figure 6. Age-specific fertility rate in 1996, 2006, and 2016 (births per 1,000 women)



Coverage: Whole of France, including Mayotte since 2014.
Source: INSEE.

are reflected in individual life histories: women who complete their education at a young age already have family experiences (childbearing, single parenthood, separations from partners) at ages when highly educated women have not yet had children. In the early 2000s, there was a difference of four years in age at the first birth between women with a lower secondary level of education and those who had completed higher education (Davie and Mazuy, 2010). Nonetheless, this gap may be narrowing, since women who leave school at a young age are now having their first child later and later, thus postponing the later stages of family formation, while age at first birth has remained quite stable for highly educated women. The recent drop in the total fertility rate may thus result from a change in timing that has reduced social differences in fertility.

Births outside marriage continue to increase, accounting for nearly 60% of births in 2016. (Appendix Table A.4). The proportion is above 70% in Nièvre, Manche, Allier, Landes, Côtes d'Armor, Vienne, Indre-et-Loire, Charente-Maritime and surpasses 75% in the overseas *départements*. Only the *départements* that make up the Paris region (Île-de-France) have a lower rate of births outside of marriage, at below 50%.[16] This might be due to the high proportion of couples with at least one foreign partner in that region. Such couples may be more reluctant to have children outside marriage, or more eager to marry, because a civil partnership does not protect a foreign partner as well as marriage.

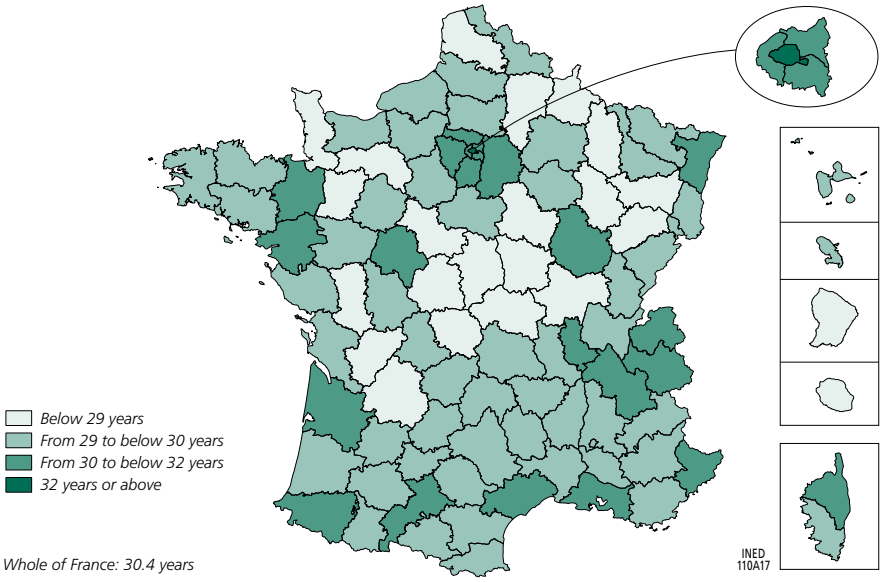
2. Fertility varies by geographical area, but age at childbearing varies little

In most *départements*, the mean age at childbearing is about 30 years; it ranges from 28.1 in French Guiana to 33.6 in Paris (Figure 7). Age at first birth is probably earlier in regions where women complete their education at younger ages, i.e. where there are few university students, where low-skilled jobs are numerous, where women start work at younger ages, and where their careers are more erratic. At the opposite end of the spectrum, women's mean age at childbearing is above 31 in six *départements*: Haute-Garonne, Hauts-de-Seine, Paris, Rhône, Val-de-Marne, Yvelines.

The mean number of children per woman varies much more across France than women's age at childbirth (Figure 8). Trends are similar to those of ten years ago (Prioux and Mazuy, 2009; Figure 4). The zone of high fertility known as the "fertile crescent", running from Brittany and Pays de la Loire to Lorraine, encompassing the north but not Île-de-France, has disappeared. It has been replaced by other zones of high fertility in the north-west of the country, including notably Île-de-France, but not Paris itself, and in *départements* located in the Rhone valley and overseas. In contrast, fertility has long been low in Corsica, in the centre and the south-west, and also in Paris; the total fertility rate is below 1.7 in Corsica, Paris, Cantal, and Côte-d'Or.

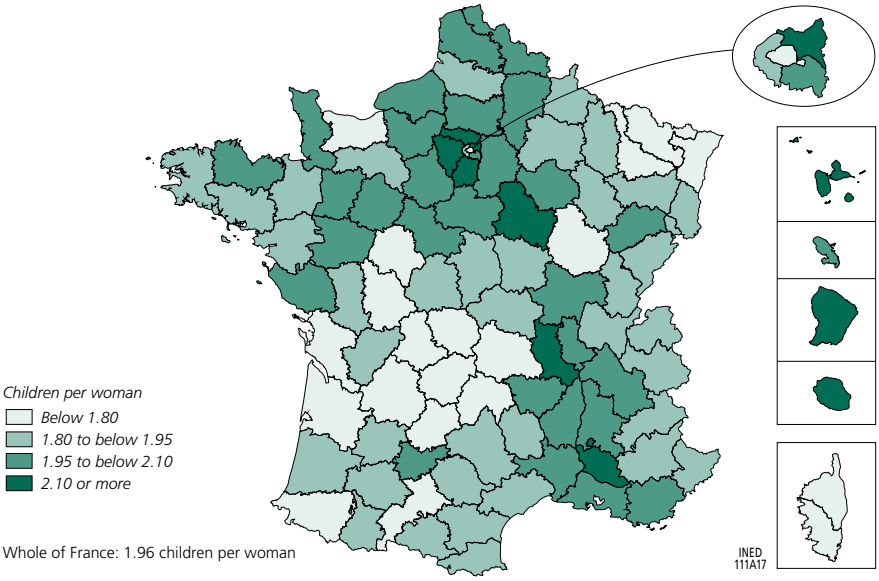
(16) Data available on the INSEE website (https://www.insee.fr/en/accueil).

Figure 7. Mean age at childbearing by French *département*, 2015



Coverage: Whole of France, excluding Mayotte.
Source: Civil registration.

Figure 8. Total fertility rate by French *département*, 2015



Coverage: Whole of France, excluding Mayotte.
Source: INSEE, civil registration.

IV. Induced abortions

1. Fewer abortions among women of all ages

The number of induced abortions has been dropping since 2014 (Vilain, 2017). In 2016, 211,900 abortions were notified (197,800 in metropolitan France, Appendix Table A.8), down from 218,097 in 2015, 227,038 in 2014, and 229,021 in 2013. The drop in the number of women of childbearing age accounted for some of this decrease. In addition, the abortion rate for women of childbearing age – that is, the number of abortions among women aged 15-49 divided by the total number of women in this age group – has also dropped, falling from 15.3 abortions per 1,000 women aged 15-49 in 2014 to 14.9 in 2015 and 14.3 in 2016. The mean number of abortions per woman has also fallen, from 0.54 in 2015 to 0.52 in 2016. All indicators of abortion frequency, like those of births, are shifting downwards. The average number of abortions per woman has followed the same annual trend as the total fertility rate, which is about four times higher (Mazuy et al., 2015; Vilain, 2017).

Abortion has become less frequent at all ages (Table 9), with an especially pronounced drop among very young women (ages 18-24). Abortion among minors has been decreasing steadily since 2011, and the rate in this age group is now close to that of women aged 40-44 (below 7 per 1,000). The rates for women aged 20-24 and 25-29 have also been converging. Among women aged 20-30, 2.5% have an abortion over the course of a year.

2. A higher frequency of abortion in the south-east and the overseas départements

The frequency of abortion varies across France. Available data does not allow analysis by *département*, but it is possible to compare the larger regions.[17] In 2016, four regions of metropolitan France accounted for more than half of all abortions: Île-de-France (23.3%), Auvergne-Rhône-Alpes (10.3%), Provence-Alpes-Côte d'Azur (10%), and Occitanie (9.9%). Depending on the region, the overall abortion rate – the number of abortions per year per 1,000 women aged 15-49 – ranged from 10 to 33 per 1,000. It was lowest in the Pays de la Loire region and highest in the overseas *départements* and regions and in Provence-Alpes-Côte d'Azur (Figure 9). The abortion rate is highly dependent on the quality of the health care system, on access to contraception and on access to the abortion procedure itself.

Pays de la Loire and Brittany, where abortion is least common (Figure 10), are also the regions where abortion is least frequent among minors. The

(17) That is, the 13 regions that make up metropolitan France and the 5 overseas regions.

reorganization of medical services (Combier et al., 2013; DREES, 2016) and the shortage of doctors in rural areas are having an impact on availability of contraception and abortion services, and also on medical follow-up of pregnancy. Increased recourse to medical abortions, a technique currently applied for more than 60% of abortions (Vilain, 2017), probably compensates for regional disparities in availability of medical services. In 2016, midwives were allowed to handle medical abortions, a change that will improve access throughout France.[18] However, since medical abortions must be carried out during the first weeks of pregnancy, they are subject to time constraints which may be an obstacle for young women not followed by a gynaecologist and for those who have little contact with the health care system in general. There are pronounced regional differences in the speed of response to requests for abortion, especially since abortion services are more readily available in large cities (Commission IVG, 2016).[19]

Table 9. Trends in abortion by age group since 2011 (per 1,000 women)

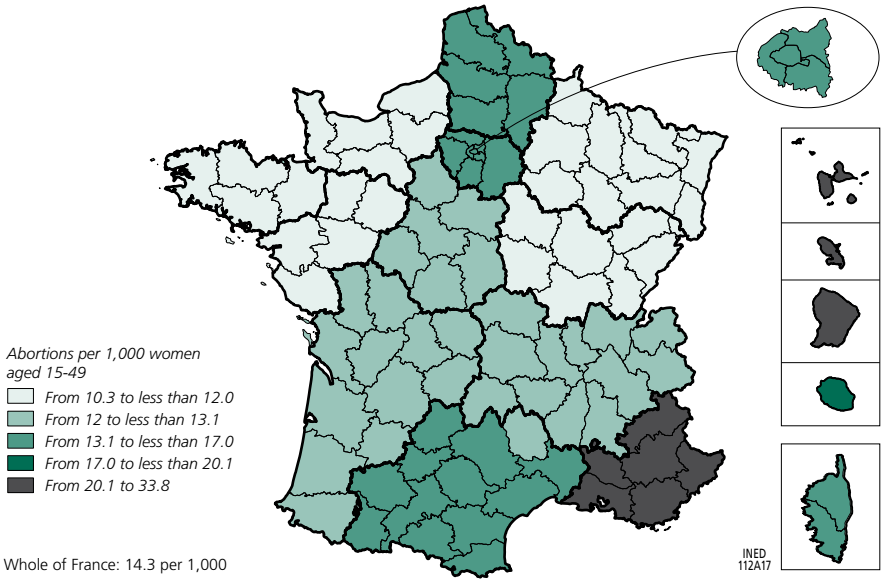
Woman's age	Rate by age group (per 1,000 women in the age group)						Absolute variation				
	2011	2012	2013	2014	2015	2016	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
15-17	10.4	10.0	9.5	8.7	7.7	6.7	–0.4	–0.5	–0.8	–1.0	–1.0
18-19	22.1	22.0	21.8	21.2	19.6	17.8	–0.1	–0.2	–0.6	–1.6	–1.8
20-24	27.6	27.9	28.8	28.3	27.2	26.0	+0.3	+0.8	–0.5	–1.1	–1.2
25-29	24.3	24.3	26.3	26.0	25.8	24.9	0	+2.0	–0.3	–0.2	–0.9
30-34	20.0	19.8	21.0	21.0	20.6	20.2	–0.2	+1.2	0	–0.4	–0.4
35-39	13.8	13.5	14.6	15.1	15.2	14.9	–0.3	+1.1	+0.5	+0.1	–0.3
40-44	6.1	6.0	6.4	6.3	6.2	6.0	–0.1	+0.4	–0.1	–0.1	–0.2
45+	0.6	0.6	0.6	0.7	0.7	0.6	0	0	+0.1	0	–0.1
Abortion rate per 1,000 women	14.9	14.8	15.5	15.3	14.9	14.3	–0.1	+0.7	–0.2	–0.4	–0.6

Note: The last line shows the overall rate for 1,000 women aged 15-49, not the sum of rates by age.
Coverage: Whole of France.
Source: Vilain, 2017.

(18) Decree 2016-43 of 2 June 2016 allows midwives to administer medication for purposes of abortion under the same conditions as doctors. This measure was part of the Health Act of January 2016.

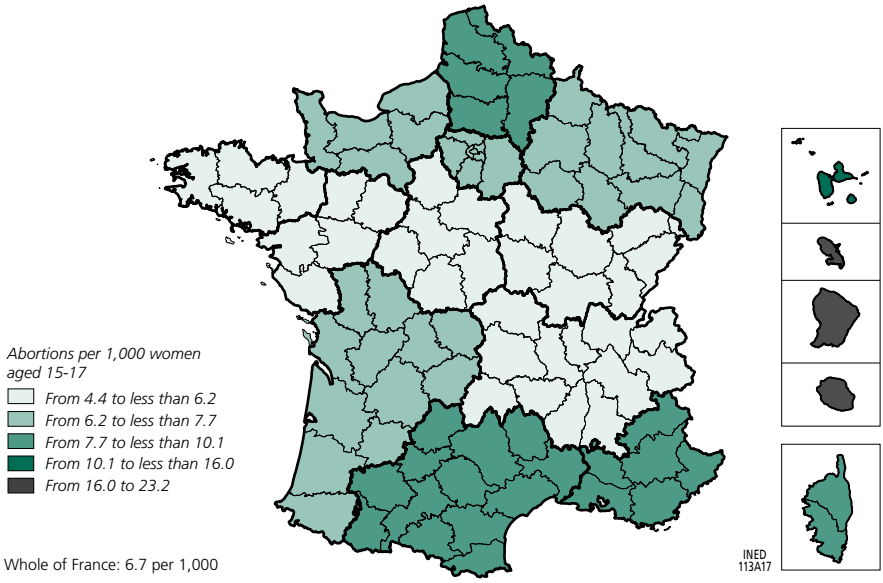
(19) The government office in charge of healthcare provision (DGOS), a division of the Ministry of Health, has financed a survey that reveals regional disparities in waiting times. The results have not yet been published.

Figure 9. Abortion rate by region, 2016



Coverage: Whole of France, excluding Mayotte.
Source: Vilain, 2017.

Figure 10. Abortion rate among minors by region, 2016



Coverage: Whole of France, excluding Mayotte.
Source: Vilain, 2017.

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

1. More civil partnerships, fewer marriages

In 2015, 425,263 new unions[20] – both marriages and civil partnerships (commonly known as PACS)[21] – were registered, 10,243 more than in 2014 (+2.5%) (Appendix Table A.9). This rise was considerably larger than the previous +1.9% increase between 2013 and 2014. Unlike the period 2013-2014, the rise in the number of unions was due exclusively to a strong upsurge in civil partnerships (+15,219), since the number of marriages dropped by about 5,000. More than half of the drop in marriages was due to a decrease in same-sex marriages (Table 10). The number of different-sex marriages reached an all-time low of fewer than 230,000 in 2015. According to INSEE's provisional statistics, this trend continued in 2016 with 228,000 different-sex marriages and 7,000 same-sex marriages (Bellamy and Beaumel, 2017; Appendix Table A.9).[22]

In 2016, 191,537 new PACS unions were registered, up from 188,947 in 2015. The number of civil partnerships has increased steadily since 2011 and is gradually moving closer to the record high of 205,561 recorded in 2010, the

Table 10. Number of unions officially registered in 2015 and 2016, change between 2014 and 2015 and between 2015 and 2016, by type of union and sex of the partners

	2015			Change 2014 - 2015		
	Marriage	PACS	Total	Marriage	PACS	Total
Different-sex	228,565	181,930	410,495	–2,205	14,539	12,334
Same-sex	7,751	7,017	14,768	–2,771	680	–2,091
Total	236,316	188,947	425,263	–4,976	15,219	10,243

	2016			Change 2105-2016		
	Marriages	PACS	Total	Marriage	PACS	Total
Different-sex	228,000*	184,425	412,425*	–565*	2,495	1,930*
Same-sex	7,000*	7,112	14,112*	–751*	95	–656*
Total	235,000*	191,537	426,537*	–1,316*	2,590	1,274*

* Provisional data.
Coverage: Whole of France.
Sources: Ministry of Justice, INSEE, civil registration.

(20) Some couples who are already in a civil partnership get married. The two types of unions rarely occur in the same year, but we do not know how many couples are counted twice for this reason. Finding out would require a special study based on the month and year in which partnerships were dissolved.

(21) PACS stands for *pacte civil de solidarité*, "civil solidarity pact". This form of civil partnership was created by the law of 15 November 1999, which authorized both same-sex and different-sex partnerships.

(22) INSEE has released provisional data on same-sex and different-sex marriages in 2016, but details are not yet available. However, the Ministry of Justice has released detailed statistics on new civil partnerships in 2016. As a result, most of our analyses concern 2015. In any case, indicators for 2015 are given here, since they were absent from the previous *Population* article on recent demographic developments in France, which came out in 2016.

last year in which newly married or registered couples benefited from a tax break on their income in the year when their union was registered. The gap between the number of marriages and the number of civil partnerships – 47,369 in 2015, 43,463 in 2016 – has not been so small since 1999, when the PACS first came into existence (Table 11). The difference is smaller still when the fact that some PACS unions end in marriage is taken into account. When these cases are subtracted, the difference between the number of marriages and the number of PACS unions falls to just 2,793 in 2016 (versus 9,230 in 2015). In 2016, an estimated 17.3% of marriages were thus "conversions" of PACS unions (versus 16.1% in 2015 and 8.1% in 2010), 16.7% for different-sex marriages (15.4% in 2015) and 36.1% for same-sex marriages (37.0% in 2015). The higher number of marriages than PACS unions among same-sex couples should not necessarily be interpreted as a preference for marriage, since many marriages follow on from a PACS. In fact, same-sex couples more frequently choose a PACS rather than marriage (61.0% in 2016, 59.0% in 2015) as the first step toward legal recognition of their relationship.

Different-sex marriage is still the predominant type of union, but is losing ground, accounting for 53.4% of all unions in 2016, versus 53.7% in 2015 and 55.6% in 2014.

Table 11. Number of PACS dissolutions by reason, 2010 to 2015

Year	Number of dissolutions	Reason for PACS dissolution				
		Mutual consent	Requested by one partner	Marriage*	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 marriage may concern two people already united by a PACS or one person who leaves a PACS partner to marry someone else. In the absence of more detailed data, it is assumed here that PACS dissolution followed by marriage corresponds to a marriage of two PACS partners and not the end of a union.
Coverage: Whole of France.
Source: Ministry of Justice.

2. A decline in new same-sex unions

Since same-sex marriage was first authorized in 2013 (Law 2013-404 of 17 May 2013), the annual number of same-sex weddings has steadily decreased,[23] falling to 7,751 in 2015 and 7,000 in 2016 (Bellamy and Beaumel, 2017). This decline (–2,771 between 2014 and 2015, –751 between 2015 and 2016) is not offset by the increase in PACS unions between two men or two women (+680 between 2014 and 2015, +95 between 2015 and 2016, Table 10). Same-sex

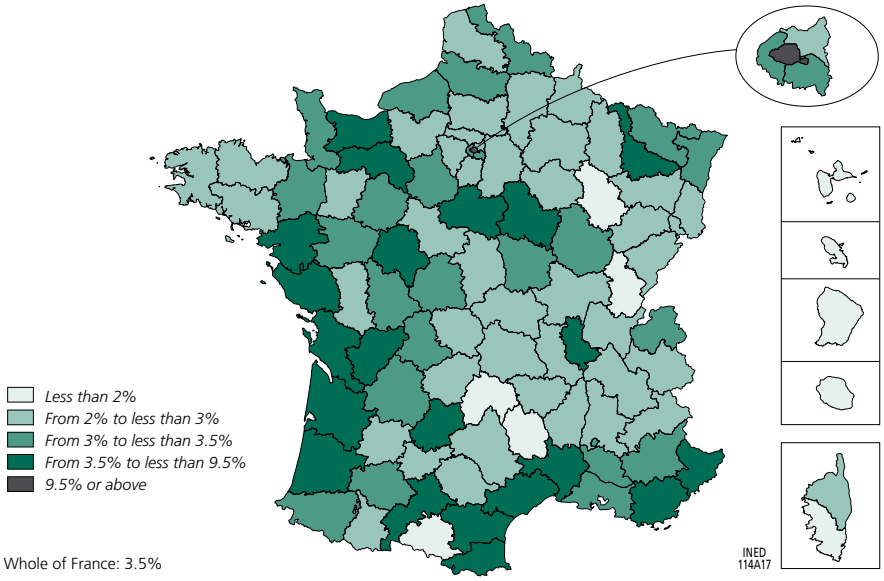
(23) The decline since 2013 was measured using monthly averages, since the PACS was introduced in the middle of the year.

unions represented 3.5% of all unions registered in 2015, compared to 3.3% in 2016 and 4.1% in 2014. The proportion falls to 3% in 2016 if marriages between former PACS partners are excluded.

In 2015, as in 2014, the share of same-sex unions – both PACS unions and marriages – increased with the partners' age. However, the share of same-sex unions dropped for people aged 55 or older, accounting for less than 7% of men's unions in 2015, compared to 10.4% in 2014 (Mazuy et al., 2016).

The share of same-sex couples among registered unions differs by place of residence.[24] In 2015, the proportion was particularly high in Paris, at 9.8%, well above Hérault, the *département* with the second highest proportion, where it stood at 4.9% (Figure 11). The proportion is higher along the Atlantic coast (from Landes to Loire-Atlantique) and the Mediterranean (from Pyrénées-Orientales to Alpes-Maritimes). The share of same-sex unions was above 3.5% in 23 *départements* and 4% or higher in only 6 *départements*. At the opposite extreme, the share was below 2% in 10 *départements*; it was even below 1.5% in the overseas *départements* of the Americas – Guadeloupe, French Guiana, and Martinique – as well as in Ariège. Differences across *départements* stem not only from differences in the proportion of same-sex couples who live in them, but also from differences in couples' propensity to make their union official.

Figure 11. Share of same-sex unions among total unions registered (marriage and PACS), by *département* of residence in 2015



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

(24) These data are based on the *département* where the couple resides, not where the union was officialized.

It is difficult to determine whether men or women are more inclined to register their same-sex unions without knowing the size of the populations concerned. More unions are registered between men than between women (Table 12). However, the difference has been shrinking each year, especially for marriage. Between 2013 and 2015, the share of all new same-sex unions that concerned women rose from 43.1% to 45.7% (it declined slightly for the PACS, from 45.0% to 44.0%, but rose from 41.5% to 47.3% for marriages).

Table 12. Number of PACS unions and marriages by sex of the partners, 2011 to 2016

	2011	2012	2013	2014	2015	2016*
PACS						
Two men	4,156	3,750	3,348	3,353	3,932	3,862
Two women	3,338	3,223	2,733	2,733	3,085	3,250
Man and woman	144,682	153,759	162,698	167,469	181,930	184,425
Total	152,176	160,732	168,779	173,731	188,947	191,537
Marriages						
Two men			4,307	5,666	4,085	na
Two women			3,060	4,856	3,666	na
Man and woman	236,826	245,930	231,225	230,770	228,565	228,000
Total	236,826	245,930	238,592	241,292	236,316	235,000

* Provisional data.
na: not available.
Coverage: Whole of France.
Source: Ministry of Justice; INSEE, civil registration.

3. A preference for civil partnership among young people

Among couples aged 25 or younger, civil partnerships have outnumbered marriages for some time. In 2015, this also became the case for people aged 25-29 (53% of men and 50% for women in 2015, versus 50% and 47%, respectively, in 2014). This holds whatever the sex of the two partners. A PACS union is increasingly seen as a first step in formalization of unions for men and for women. After age 30, the proportion of PACS unions decreases with age; it is slightly above 30% at ages 44-55. The ratio of PACS unions to marriages is underestimated because marriage often follows on from a pre-existing PACS, a phenomenon that is probably more common for older age groups and hence results in overestimation of the age effect.

Since 2011, a PACS can be registered before a notary, as well as in a district court (*tribunal d'instance*).[25] The share of couples who choose a notary has increased each year, reaching 15.5% in 2015 (14.4% in 2014, 11.3% in 2011). PACS unions between two women are most commonly registered before a notary: 24.8% for female same-sex couples versus 18.2% for male same-sex

(25) Law 2016-1547 of 18 November 2016 on "Modernization of justice for the 21st century" has transferred responsibility for registering PACS unions from district courts to municipal registry offices.

couples and 15.3% for heterosexual couples. The share registered before a notary varies widely from one *département* to another – ranging from 28% in Côte-d'Or to 5% in Hautes-Pyrénées or Mayotte – and does not appear to depend on the level of urbanization,[26] geographical factors, or the proportion of same-sex unions.[27]

4. A rising proportion of marriages in which one or both spouses are foreign nationals

In 2015, 18% of weddings celebrated in France (42,900) involved at least one non-French person: 14% between a French citizen and a foreigner and 4% between two foreigners. In addition, about 42,000 mixed-nationality marriages – between a French and a non-French citizen – were registered abroad and transcribed into the French marriage register (Bellamy, 2017). Information on both spouses is available only for weddings celebrated in France. Among those marriages, both partners are more often single before the wedding than for marriages between two French citizens. On average, the partners are younger, and the age gap between them is usually larger (Bellamy, 2017). The age gap in mixed-nationality marriages varies by nationality and age of the spouses (Figures 12A and 12B). From both the woman's and the man's point of view, the age gap between spouses widens with age. It is largest for marriages between a foreign woman and a French man, the husband being considerably older.

While the husband is younger than the wife in an increasing proportion of marriages between French citizens (13.5% in 2012, Daguet, 2016), this is rare for mixed-nationality couples, except when the wife is relatively old (over 35) and of French nationality, and the husband is foreign (Figure 12B). It is difficult to explain this without more information about the spouses' migration histories and past marital status. Vital records show that mixed-nationality marriages are less homogamous in terms of age than marriages between two French citizens, and that the link between the spouse's nationality and the age gap depends on whether the French citizen is the husband or the wife.

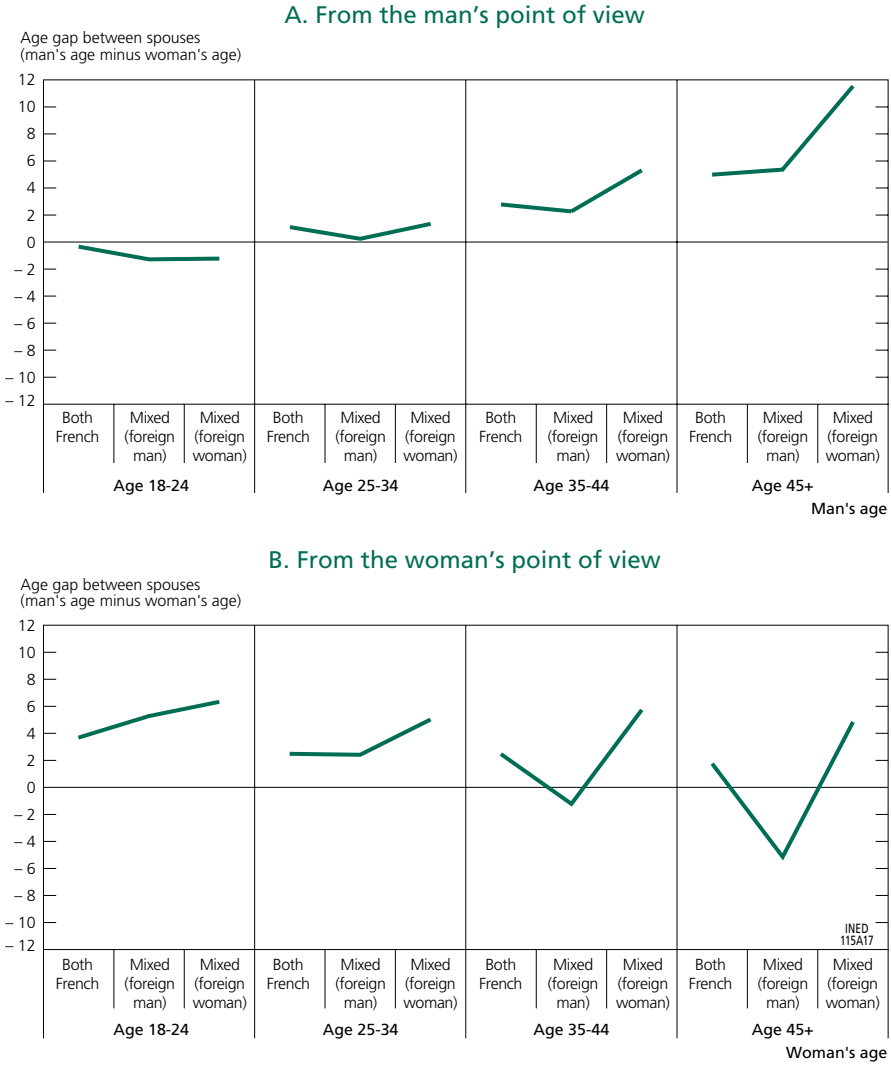
5. Marriage age preferences

The probability of a first marriage (see Box on methodology) – that is, the probability of getting married for a person who is single and has never been married – varies with age (Figure 13). It is low for young people, then reaches a maximum at age 30, both for men and for women; it then falls to about the same level as for people aged 20-25. Until age 32, the probability of first marriage is higher for women than for men; the situation reverses at higher ages. Over

(26) The share of PACS unions registered before a notary varies in three urban *départements*: it is very high (26%) in the Rhône *département*, which encompasses the city of Lyon; about average in Gironde, where Bordeaux is located; and low (12%) in Bouches-du-Rhône, which encompasses Marseille.

(27) Correlation coefficients are insignificant for all of these combinations.

Figure 12. Age gap between spouses by nationality and spouses' ages, 2015



Coverage: Whole of France (including Mayotte since 2014).
Source: INSEE.

the last ten years, three discontinuities have appeared at the "rounded" ages of 30, 40 and 50; they are more pronounced for women than for men. The most marked discontinuity occurs at age 40, when first marriage probabilities increase slightly. This peak appears to result from the specific behaviour of people who probably already have a partner and who choose to marry when they reach the landmark age of 40. Such behaviour is in keeping with recent sociological findings (Maillochon, 2016).

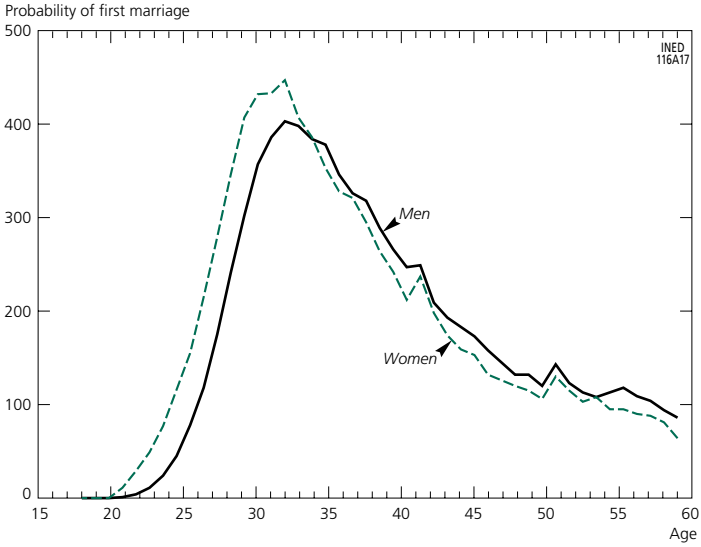
Box: The different age-specific marriage indicators

To measure the intensity and timing of phenomena that are comparable over time and space, demographers calculate different indicators, usually by age, and then put them together to form a synthetic indicator (Table 13). This can be done for a given cohort or for a given year; in the latter case, the indicators are attributed to a fictitious cohort that is assumed to experience the conditions prevailing during that year throughout its lifetime.

Table 13. Age-specific marriage indicators calculated for a given year

	Numerator	Denominator	Synthetic indicator	
			Intensity	Timing
Probability of first marriage at age *x* (Figure 13)	Number of first marriages at age *x*	Number of singles who have reached age *x* on 1 January of year *t*	Probability of marrying at least once in a lifetime for a fictitious cohort	Mean age at first marriage
Rate of first marriage at age *x* (sum of age-specific rates)	Number of first marriages at age *x*	Averaged population of age *x* regardless of matrimonial status	Average number of first marriages in a fictitious cohort	Mean age at first marriage
Rate of marriage at age *x* (Figure 14)	Number of marriages at age *x*	Averaged population of age *x* regardless of matrimonial status	Average number of marriages in a fictitious cohort	Mean age at marriage

Figure 13. Probability of first marriage by age and sex in 2015 (per 10,000 single people)



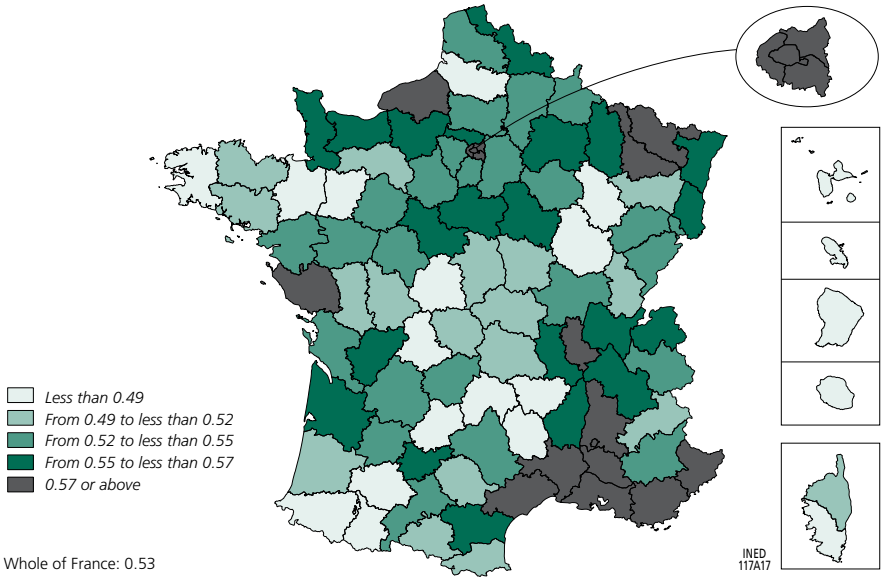
Coverage: Whole of France.
Source: INSEE, civil registration and census; authors' calculations.

The indicators for 2015 confirm both of the main trends relative to marriage in general and first marriage in particular. First, total first marriage rates have decreased steadily since 2000, reaching a new low, both for women (0.53) and for men (0.51; Appendix Table A.9). Second, average age at first marriage – 32.7 years for men, 31.0 for women – has risen by about four years over the last two decades for both sexes. These trends are consistent with those observed across cohorts (Appendix Table A.10).

6. Civil partnerships and marriages by *département*

The total number of marriages within a geographical area depends in part on the size of the population and its age structure. Age-specific marriage rates, along with the sum of these rates, (Table 13) can be used to construct indicators by *département* that are more comparable than simple crude marriage rates, since they can be interpreted as the average number of marriages per person under the conditions prevailing during the year in question, in this case 2015 (Figure 14).[28] The propensity to marry is particularly strong in the south-east, on the Mediterranean coast, in the Rhône valley, in Île-de-France, and in the north-east and north-west of France, as well as in some isolated *départements* such as Vendée. An area of lower propensity to marry runs in a rough diagonal from the south-west to the Vosges mountains, along with the four *départements*

Figure 14. Marriage rates by French *département* in 2015



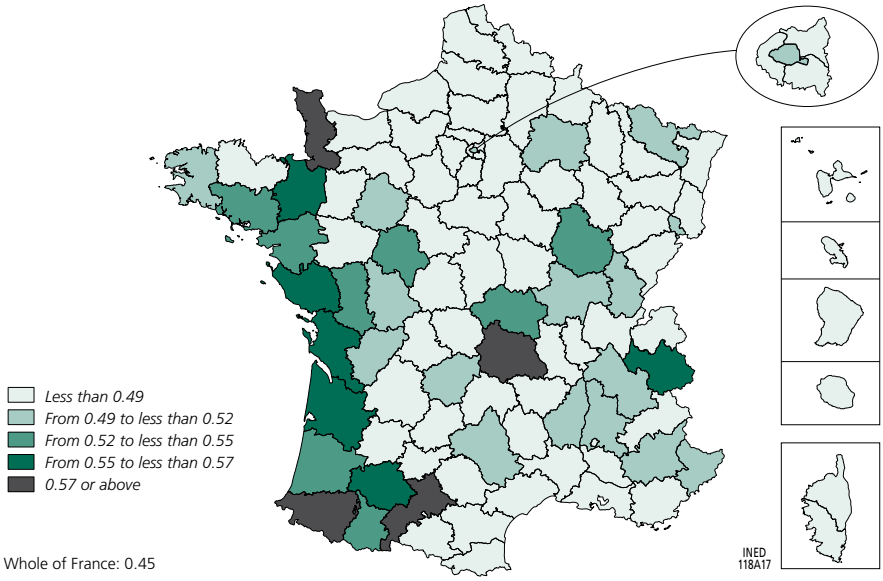
Coverage: Whole of France, excluding Mayotte.
Sources: Ministry of Justice, INSEE, census; authors' calculations.

(28) These indicators concern people aged 18-69. Generally, marriage is no longer authorized below age 18 (until 2005, the age limit was 15). Very few weddings take place after age 69.

that make up Brittany. The higher marriage rates (0.57 or more per person) in Île-de-France, the Rhône valley, and on the Mediterranean could be linked to the high probabilities of divorce in these areas (see Figure 18 page 587); this leads to a high frequency of new marriages and produces an apparent paradox: "Marriage is especially popular in the regions where it is most unstable" (Dittgen, 1991).[29]

If the two forms of union – marriage and PACS – are considered to be alternatives or in competition, the map of marriage rates can be compared to that of PACS rates (Figure 15).[30] The PACS rate is particularly high – 0.49 or more PACS unions per person – in areas bordering on the Atlantic, including the western Pyrénées, the former Poitou-Charentes region, and central France (Allier, Corrèze, Puy-de-Dôme). Few *départements* have a high marriage rate and a high PACS rate, Paris and Vendée being exceptions. Rates are low for both marriage and PACS unions in Cantal and Haute-Loire, as in the overseas *départements* of Guadeloupe, French Guiana, Réunion, and Martinique.[31] It

Figure 15. PACS rates by French *département* in 2015



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

(29) The coefficient of determination (R^2) between the sum of age-specific marriage rates and the divorce rate (Figure 18) is significant at 5% but relatively small (R^2 = 0.204). In contrast, it is zero for the proportion of marriages where at least one partner has already been married (R^2 = 0.001).

(30) The age-specific PACS rates are determined not by single year of age but by age group, because of the nature of the data supplied by the Ministry of Justice. The method for calculating PACS rates is described in the 2016 *Population* article on demographic developments in France (Mazuy et al., 2016)

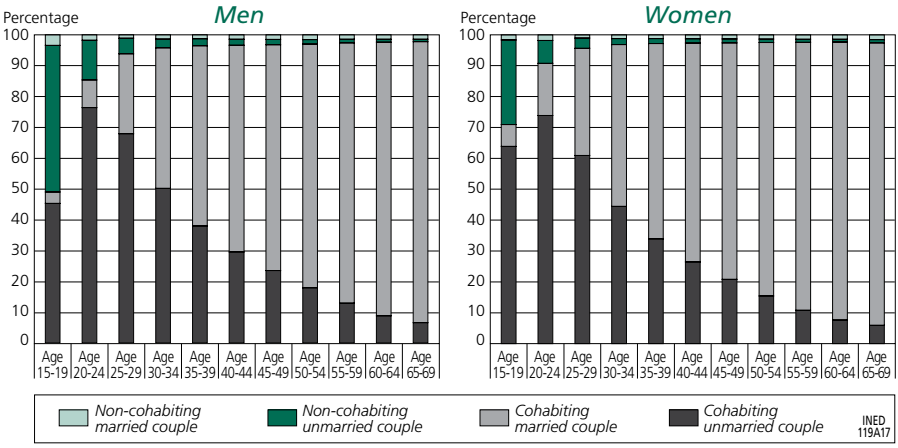
(31) Mayotte is not included in this analysis because the number of civil marriages there is small. Customary marriages still account for the majority of unions in this *département* (Marie et al., 2017).

is difficult to explain the stronger preference than elsewhere for PACS unions in the west of France. Given the recent increase in inflows of internal migrants from other parts of the country, salaried employees, notably civil servants, may enter a PACS union in the hope of obtaining a rapid professional transfer to join their partner already working in the region. This may be the main motivation for concluding a PACS in many cases (Levy and Dzikowski, 2017). Another explanation might lie in the large proportion of same-sex couples registered in this region (Figure 11). However, if this is a factor, why is the situation not similar in areas along the Mediterranean coast? These questions call for analysis based on cross-checking with other indicators, notably those associated with levels of conservatism (political opinions, membership of political groups, religious practices).

7. Few non-cohabiting couples recorded in the census

In the French census, all individuals aged 14 or more are asked to indicate if they live with a partner (Question 8, Individual questionnaire), and to give their legal marital status (Question 9, Individual questionnaire). In the housing module, respondents are asked to describe their relationship with the household reference person. After coding, a variable describes the relationships between all individuals living in a household, notably family and marital ties. Census variables on family situations contain errors, but more so in relation to family ties than to marital ties (Trabut et al., 2015), so data on unions can be usefully analysed. Very few people who report to census takers that they are in a union do not live with their partner, except for people below age 25 (Figure 16). At

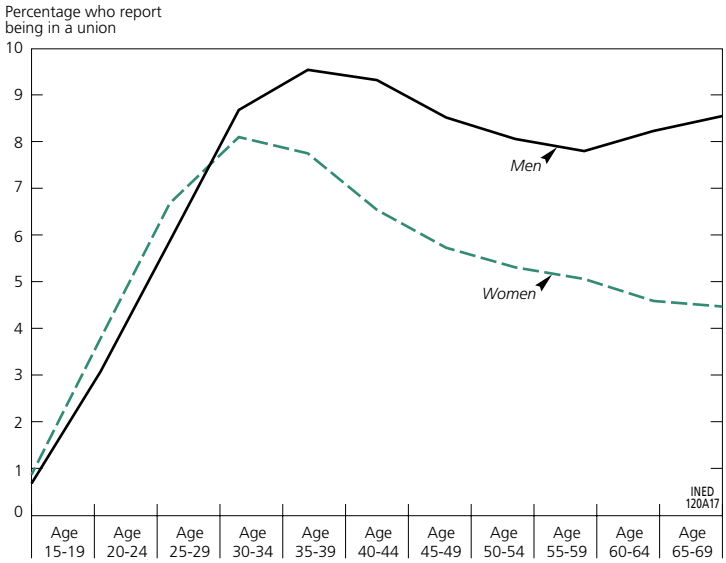
Figure 16. Proportion of people who report being in a union, by marital status and presence or absence of a cohabiting partner, by age group, 2014



Coverage: People who reported being in a union in the census. Whole of France, excluding Mayotte.
Source: INSEE census, (principal analysis); authors' calculations.

these young ages, men are more often in a non-cohabiting relationship (married or otherwise) than living with a spouse. Nonetheless, the census probably underestimates the number of non-cohabiting couples, given that some surveys yield higher estimates (Regnier-Lollier et al., 2009). Yet their numbers are by no means negligible, as suggested by the proportion of people with no partner in the household who nonetheless report being in a union (Figure 17). This proportion varies little with age, at least for people aged 35 or more, and it is higher among men.

Figure 17. Proportion of people who report being in a union among those with no partner identified in the household, by age group, 2014



Coverage: People with no partner identified in the census. Whole of France, excluding Mayotte.
Source: INSEE census (principal analysis); authors' calculations.

8. A slight increase in divorce

For the first time since 2010, the number of divorces pronounced in 2015 increased slightly (+0.1% compared to 2014). This increase is linked to a greater intensity of divorce rather than to population structure. In 2015, the total divorce rate was 44.7 divorces per 100 marriages, versus 44.1 in 2014 (Appendix Table A.9). This slight increase in the risk of divorce mainly concerns marriages that have lasted for four to six years;[32] the risk has decreased slightly for shorter marriages.

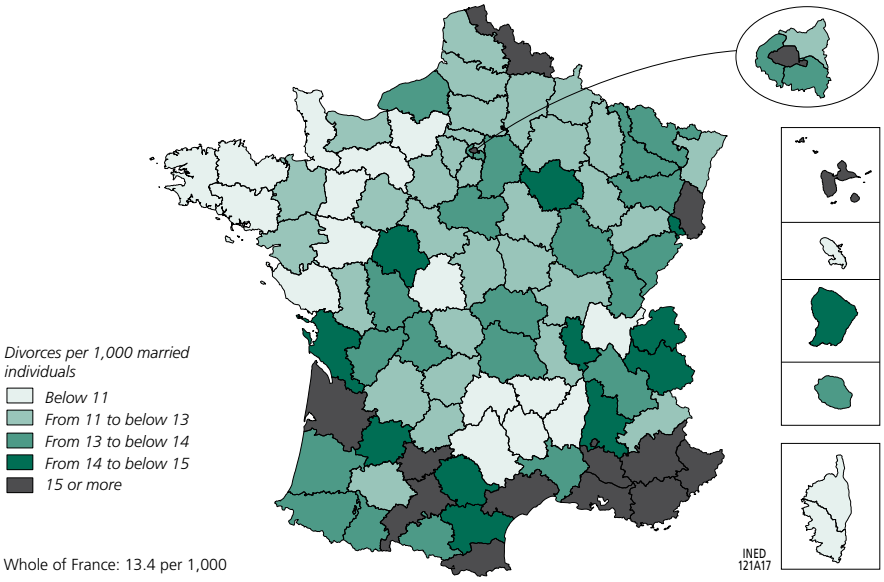
Over time, legislation has simplified divorce procedures and divorce has become more commonplace in French society. This trend is illustrated by the

(32) Data not presented here.

decline in contested divorces. While in 1999, fault divorces represented the largest proportion of all divorces (42.6%), they accounted for only 7% of divorces pronounced in 2015, the lowest level ever recorded. In 2015, the number of divorces by mutual consent increased, accounting for more than half of divorces pronounced (54.9%) but only 44.9% of divorce petitions. The difference is partly due to the length of legal procedures, which are shorter in cases of mutual consent, and also to the fact that divorce suits where one partner is accused of fault are sometimes dropped (Belmokhtar, 2012). On 1 January 2017, it became possible to obtain a divorce by mutual consent without going before a judge. This new possibility should further speed up divorce proceedings, resulting in a sharp temporary increase in the number of divorces, as occurred in 2005 and 2006 following the reform of May 2004 (Prioux and Mazuy, 2009).

To measure the frequency of divorce by *département*, divorce rates (Figure 18) were calculated in the same way as for the periods 2006-2008 (Prioux and Mazuy, 2009) and 1974-1975 (Muñoz-Perez, 1981).[33] The geographical distribution of divorce for 2013-2015 is quite close to those of the two earlier periods, but the correlation between two periods has decreased: the coefficient of correlation between 2006-2008 and 2013-2015 is 0.7, compared to 0.8 between the more distant periods of 2006-2008 and 1974-1975. Divorce is still particularly

Figure 18. Divorce rate (per 1,000) by French *département*, 2013-2015



Note: Number of new divorces per 1,000 married individuals below age 70 in 2006.
Coverage: Whole of France, excluding Mayotte.
Sources: Ministry of Justice, INSEE, census; authors' calculations.

(33) This is the ratio between mean number of divorces from 2013 to 2015 in each *département* and the number of married people below 70 years of age recorded in the 2013 census.

common in Paris, in the south-east, especially along the Mediterranean coast, and also in the south-west (Gironde, Haute-Garonne, Lot-et-Garonne). Divorce remains relatively rare in the rural areas of the south of the Massif Central (Cantal, Haute-Loire, Lozère), and in the north-west (Côte d'Armor, Manche, Mayenne, Morbihan, Orne, Vendée). The two factors behind the differences in divorce rates between *départements* identified in earlier analyses, i.e. degree of urbanization and local levels of religiosity,[34] still appear to be valid (Muñoz-Perez, 1981; Prioux and Mazuy, 2009).[35] The main changes between 2006-2008 and 2013-2015 were a drop in the divorce rate in the two *départements* of Corsica and in Martinique (from 13 to 7 per 1,000), and a rise in the divorce rate in Vosges and Île-de-France (from 9 to 14 per 1,000) and in Creuse, Cher, Ardennes, and Lot (from 9 to 12 per 1,000). Not only do divorce rates vary from one *département* to another, but the reasons for divorce differ. For example, "abandonment of the marital home" is often cited in overseas *départements*.[36] It is the reason for 18% of divorces in French Guiana and 26% in Guadeloupe, compared to a national average of 8%. Similarly, in Doubs and Cantal, the proportion of fault divorces (above one in five) is more than twice the national average. More detailed analysis would be needed to account for these regional variations.

In 2015, the number of minor children whose parents divorced dropped a little further (113,337 in 2015 compared to 113,876 in 2014), while the number of divorces rose slightly. A little more than one in two divorces involved at least one minor child (52.7%), continuing the pattern of steady decline over the last 20 years (60.9% in 1996, 56.9% in 2007) (Lermenier and Timbart, 2009).

VI. Mortality

1. In 2016 life expectancy at birth reversed the decline of 2015

After the mortality spike in 2015, where an exceptional flu epidemic as well as several heat waves resulted in approximately 34,000 additional deaths (Mazuy et al., 2016), the number of deaths totalled 587,000 in 2016, 7,000 fewer than the previous year.[37] These figures reflect the long-term trend of demographic ageing and the fact that the large cohorts born after World War I – following the depleted cohorts born in 1915-1920 – are now reaching ages of high mortality

(34) Religiosity is measured by the proportion of children enrolled in private schools. This indicator is not ideal, and its relevance may be decreasing over time. We used it as a proxy of religiosity for lack of another indicator applicable at the *département* level.

(35) The correlation coefficient is negative (–0.29) but not significant at the 5% level. However, it becomes significant after excluding the two *départements* of Corsica, where divorce is infrequent and the proportion of students in private schools is low, and Paris, where divorce is frequent and the proportion in private schools is high.

(36) Cohabitation is a marital obligation. Abandonment of the marital home can be considered as a fault in a divorce suit.

(37) Unless indicated otherwise, all data presented are for the whole of France.

(Pison and Toulemon, 2016). In 2016, close to 20% of the population was age 65 or above. The age structure thus explains why the crude death rate barely declined between 2015 and 2016, falling from 8.9 to 8.8 deaths per 1,000, even though life expectancy at birth continued to increase. According to provisional figures from INSEE, life expectancy for the whole of France (including Mayotte) reached 79.3 years for men and 85.4 years for women in 2016 (see Appendix Table A.11 for metropolitan France), thereby reversing the decline in 2015 to regain the level observed in 2014 (Bellamy and Beaumel, 2017).

If these provisional estimates are confirmed, they indicate a slowing of the increase in life expectancy at birth over the last decade, for women in particular. While men's life expectancy increased by 2.3 years and that of women by 2.5 years between 1976 and 1986, by 2.6 years and 2.4 years between 1986 and 1996, and by 3.1 years and 2.1 years between 1996 and 2006, the increases were just 2.2 and 1.2 years between 2006 and 2016, with women's gain barely more than half that of men. Whereas throughout the second half of the twentieth century mortality fell much more quickly for women than for men, the pace of decline became nearly identical for the two sexes during the 1980s, and it has been more rapid for men for the past two decades. The convergence between male and female mortality is reflected in a narrowing of the gender gap in life expectancy; it was 6.0 years in 2016, compared to 8.3 years in 1992 (when the gap was widest).

2. France is still well placed among its European neighbours

Apart from several Eastern countries (Bulgaria, Hungary, Latvia, Lithuania, and Romania), all European countries have reached life expectancy at birth of more than 80 years for women, and even 85 years in the three most advanced countries, including France, which ranked beside Switzerland and just after Spain in 2015 (Appendix Table A.12). The difference with respect to Bulgaria, the country with the lowest female life expectancy in Europe, is 7.6 years. Dispersion of male life expectancy is much greater, with a difference of 12 years in 2016 between Lithuania, at 69.2 years, and Iceland, at 81.2 years. Out of 29 countries ranked from most to least favoured in terms of male life expectancy, France ranks 11th and is above the European average (77 years). The gender gap in life expectancy during the 1980s and early 1990s was close to that now observed in the Eastern countries. It is still above 8 years in Poland, Estonia, Latvia, and in Lithuania, where it has reached the record level of 10.5 years. In France it is moving closer to the average (5.7 years in 2015).

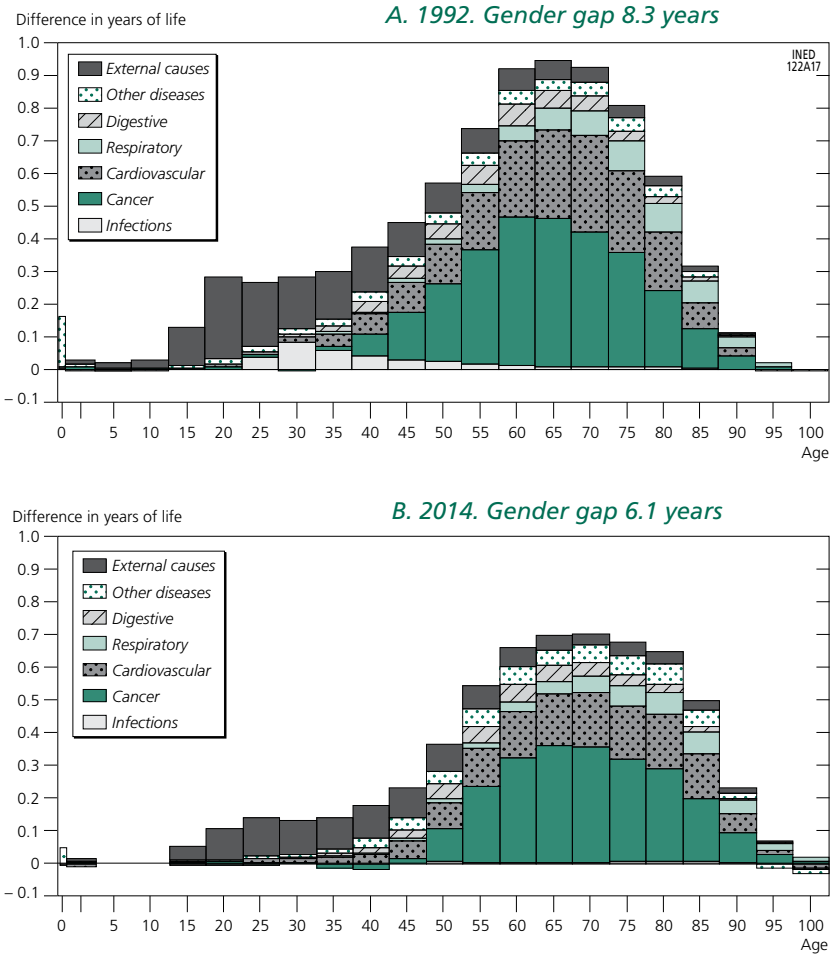
The Eastern countries are also those where infant mortality is highest, with a rate of 7.6 deaths per 1,000 births in Romania. In all the other European countries, the probability of dying before age 1 was no higher than 4 per 1,000 in 2015 (in Greece) and less than 2.5 per 1,000 in several northern countries (Slovenia, Finland, Iceland and Norway, in increasing order). With a rate of 3.7 per 1,000 (3.5 in mainland France), France has somewhat elevated infant

mortality, but it remains below the levels recorded in Switzerland and the United Kingdom, where it is 3.9 per 1,000 (Appendix Table A.13).

3. A slower decline in mortality from cancer and heart disease over the past 20 years

Analysis of mortality changes by age group and by cause of death sheds light on the reasons behind the progressive convergence of male and female mortality. Here we examine the changes between 1992, the year with the largest

Figure 19. Contribution of age groups and causes of death to the gender gap in life expectancy at birth



Note: See Appendix Table A.15 for the definitions of the cause-of-death groups.

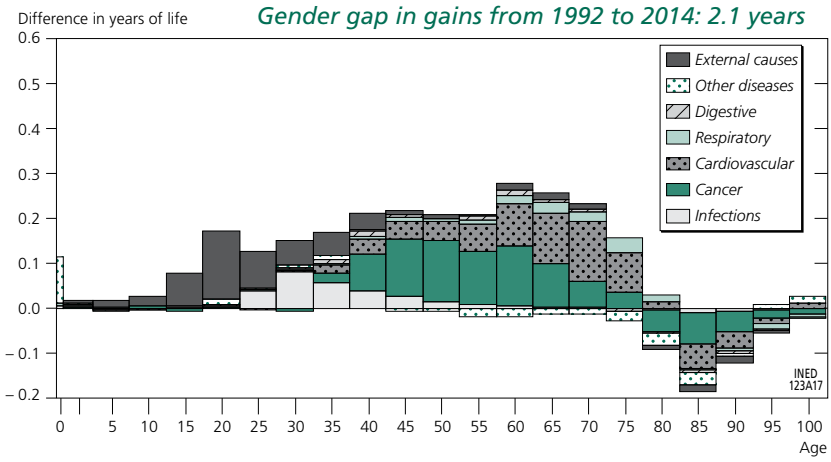
Coverage: Metropolitan France.

Sources: Authors' calculations based on INSEE triennial mortality tables by sex for 1992 and 2014 and detailed data on causes of death from CepiDc-INSERM for the same years.

gender gap in life expectancy (8.3 years), and 2014, the most recent year for which detailed data on causes of death are available for France. The contribution of each age group and of each broad group of causes of death to the gender gap in life expectancy was calculated for 1992 and for 2014, using both triennial mortality tables published by INSEE and deaths by medical cause produced by INSERM for the same years.[38] On Figures 19A and 19B, the positive values show the age groups and causes favourable to women, while the negative values indicate those that favour men. Figure 20, which shows the difference between Figures 19A and 19B, identifies the age groups and causes for which the improvements were smaller for women than for men from 1992 to 2014. Here, the positive values show the age groups and causes contributing to faster male mortality reduction between 1992 and 2014, while negative values show those where female mortality declined more quickly.

The gender gap in life expectancy fell from 8.3 years to 6.1 years between 1992 and 2014, but the age structure remained similar overall. The gender difference increases progressively with age, up to a maximum at ages 65-74, then narrows rapidly at the end of life (Figures 19A and 19B). This age pattern, however, is more spread out in 2014 than in 1992: although the maximum gaps are smaller, they cover a greater number of age groups in 2014 (from ages 60-64 to 80-84) than in 1992 (from ages 60-64 to ages 70-74). In fact, the gender gap has narrowed, between ages 60 and 75 especially, even though female mortality has declined more slowly than that of men at all ages between 15 and 80. On

Figure 20. Contribution of age groups and causes of death to the narrowing of the gender gap in life expectancy at birth from 1992 to 2014



Note: See Appendix Table A.15 for the definitions of the cause-of-death groups.

Coverage: Metropolitan France.

Sources: Authors' calculations based on INSEE triennial mortality tables by sex for 1992 and 2014 and detailed data on causes of death from CepiDc-INSERM for the same years.

(38) After a proportional redistribution of deaths from ill-defined causes in each age group and for each sex.

the other hand, beginning at age 80, mortality decline has been more rapid for women (resulting in negative values in Figure 20).

With some exceptions, the same causes of death contribute to the sex differences in life expectancy in 2014 as in 1992, i.e. external causes between ages 15 and 40 and cancer and heart diseases after age 40. Among young people and adults under 40, mortality due to external causes has long been much higher for men than for women, so the narrowing of the gender gap reflects not so much a slowing of progress among women as the success of preventative measures for risky behaviour, traditionally more prevalent among men (especially on the road). Likewise, with regard to infectious diseases, the apparently slower progress of women between 1992 and 2014 in fact reflects the decline in HIV/AIDS mortality, which mainly affected men.

Above age 40, a more detailed analysis of the causes of death behind the differential trends in male and female mortality shows that in terms of cardiovascular mortality, ischaemic heart disease has declined more quickly for men than for women. With regard to cancer, the most worrisome trend is observed in smoking-related cancers, most notably cancers of the throat, lung, and bronchus, for which female mortality has increased steadily; it has been declining for men since the late 1980s. This is a consequence of sex differences in smoking behaviour. Since the 1970s, men have increasingly given up cigarettes, while smoking among women continued to increase into the 1990s, and continues to do so among those aged 56-64 (Guignard et al., 2015).

Women still have a mortality advantage at advanced ages. The gender gap in residual life expectancy at age 80 continues to grow, albeit very slowly; between 1992 and 2014 it increased from 1.9 to 2.1 years. In 2014, an 80-year-old man's residual life expectancy was 9 years, compared to 11.1 years for a woman of the same age. Women retain an advantage over men at very advanced ages, regardless of the cause of death, with the exception of the residual category of "other diseases" for which male mortality is slightly lower from age 95 on.

4. Persistent geographic inequalities in mortality

With demographic data from INSEE on deaths by age and sex by *département* of residence, along with departmental population estimates for 1 January, we calculated annual mortality indicators for each French *département*[39] up to 2014, the last year for which data are available at the departmental level, using the methodology proposed by Wilmoth et al. (2007). The method, borrowed from Kannisto (Thatcher et al., 1998), uses a logistic function to smooth mortality rates at advanced ages where random fluctuations are substantial. This methodology was developed for national populations. To take account of the small numbers in some *départements*, we used the simple mean for three

(39) Except for the new overseas *département* of Mayotte, for which data are not available.

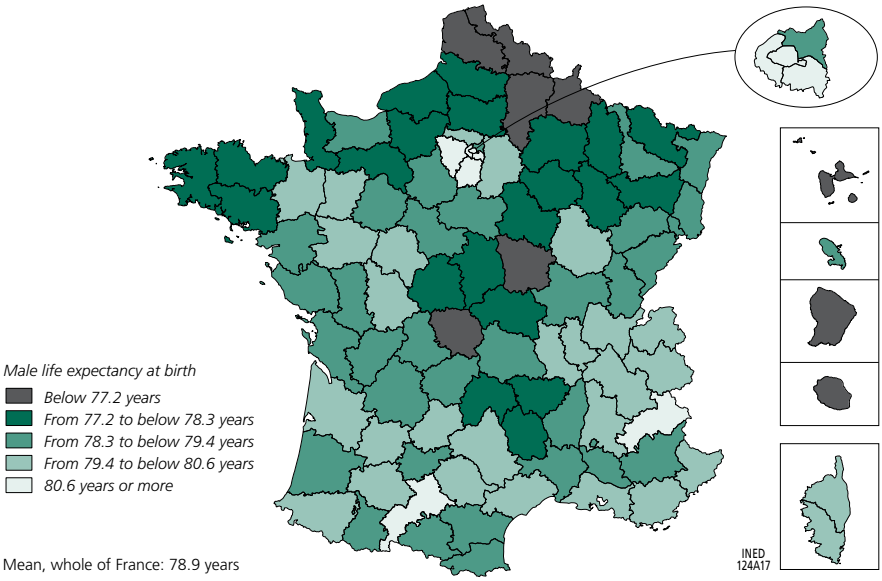
consecutive years for each indicator (five years for infant mortality, for which numbers were very small). For simplicity, we refer below to the central year for each period. Hence, 2013 refers to the period 2012-2014 (and for infant mortality, 2012 corresponds to the period 2010-2014).

In 2013, life expectancy at birth in France was 78.8 years for men and 85.1 years for women. These overall means conceal large differences between *départements*. The difference between the extremes of the distribution was 5.6 years for men (with life expectancy ranging from 75.7 years in Pas-de-Calais to 81.3 years in Paris and in Hauts-de-Seine) and 3.5 years for women (83.2 years in Pas-de-Calais and 86.7 years in Paris). The difference between the *départements* at the extremes of the ranking is smaller now than 40 years ago: in 1977, it was 5.9 years for men and 4.2 years for women. However, there is no steady trend: among men, the gap was narrowest in the early 1990s, and among women, in the 2000s, and has been increasing since then for both sexes (Barbieri, 2013).

Figures 21 and 22 show life expectancy at birth in France in 2013 for each sex. The *départements* are divided into five groups based on their distribution. The middle group is built around the mean, with a range of plus to minus half the standard deviation. The adjacent groups extend on both sides to ±1.5 times the standard deviation. The extreme categories are bounded, respectively, by the minimum and maximum values of life expectancy. In looking at these maps, it is important to note that the ranges that define the groups are distinctly smaller in absolute value for women than for men. Further, while all values are shown, given the small number of deaths in some *départements* with small populations, the relatively high or low mortality observed in these *départements* may be due to chance, and not necessarily reflect the actual health status of the populations in question.

The maps show a partitioning of the high mortality crescent which bypasses the Île-de-France and traditionally stretches along the western northern, and eastern borders of the country, from Loire-Atlantique to Haut-Rhin, and which extends inland to include Mayenne, Oise, Marne, and Haute-Marne. Based on the most recent available data, the shortest life expectancies are still concentrated mainly in a few *départements* of the regions of Hauts-de-France and of Grand Est (Pas-de-Calais, Nord, Aisne, and Ardennes for both sexes, including Oise and Moselle for women). The other *départements* with high mortality are Nièvre and Creuse for men and Territoire de Belfort for women. Somewhat better off but still exhibiting below-average life expectancy at birth are several *départements* in the west, in Brittany (especially Finistère and Côtes d'Armor), Normandy (Seine-Maritime, Eure, and Orne, as well as La Manche for men only), and a series of *départements* along a corridor covering most of Grand Est (except for the most easternmost *départements*). Also included are the western limits of Bourgogne-Franche-Comté, and the Centre (Yonne, Nièvre, Cher, Indre, and Corrèze for both sexes; Allier for men). A last area of relatively high mortality

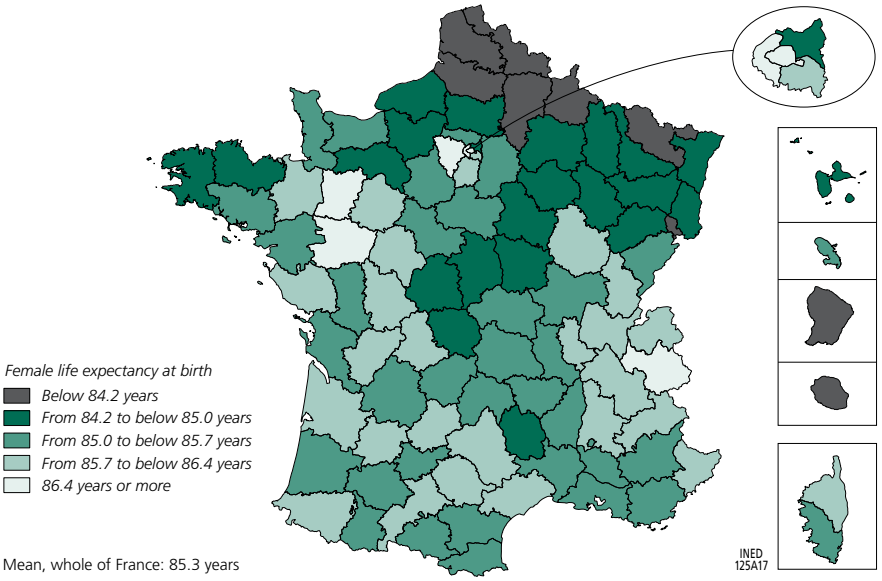
Figure 21. Male life expectancy at birth by French *département* in 2012-2014



Coverage: Whole of France, excluding Mayotte.

Source: Map is based on mortality tables calculated by the author (data on *département* populations and deaths by age, sex, and calendar years kindly provided by the INSEE's regional, local, and urban statistics division).

Figure 22. Female life expectancy at birth by French *département* in 2012-2014



Coverage: Whole of France, excluding Mayotte.

Source: Map is based on mortality tables calculated by the author (data on *département* populations and deaths by age, sex, and calendar years kindly provided by the INSEE's regional, local, and urban statistics division).

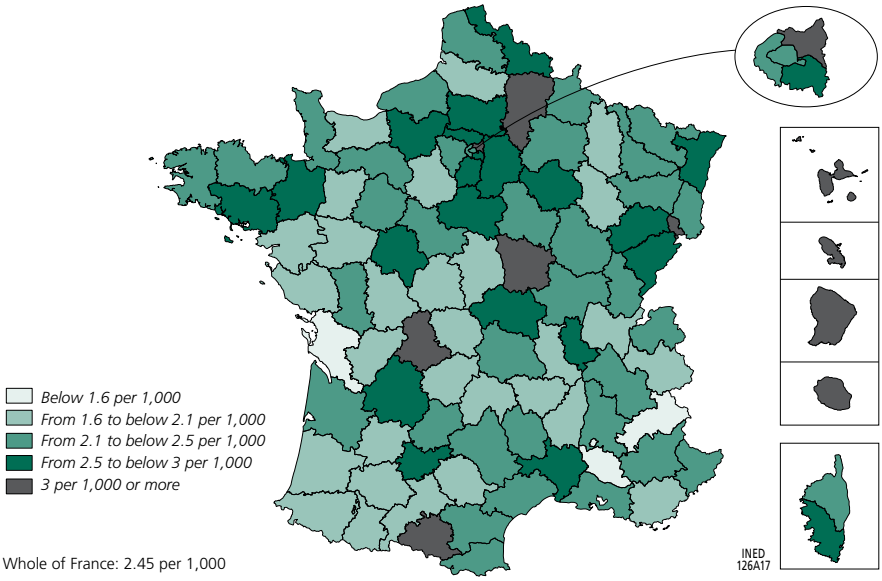
is in the south (Lozère and, for women only, Cantal and Haute-Loire). Finally, mortality is also above average for women in Seine-Saint-Denis.

By contrast, five groups of *départements* are relatively advantaged. A first group covers the greater part of Auvergne-Rhône-Alpes, except for the westernmost *départements*, and also includes Jura for women and Côte-d'Or for both sexes; a second group is to the west, and covers Ille-et-Vilaine, Mayenne, Maine-et-Loire, Indre-et-Loire, and Vienne, and also includes, for women, Loire-Atlantique and Vendée to the west, as well as Haute-Vienne and Charente. The third group is located on either side of the border between Occitanie and Nouvelle-Aquitaine; and a fourth group comprises the *départements* of Île-de-France (especially for men). Finally, the fifth group is in the far south-east of the country (Alpes-Maritimes, Var, Haute-Corse, as well as Bouches-du-Rhône and Corse du Sud for men). We note, however, that the areas with lower mortality are more fragmented than the disadvantaged areas.

A detailed analysis of departmental mortality reveals the role of individual behaviours in the observed differences (Barbieri, 2013). Before age 60, the causes of death with the most striking geographic contrasts are smoking-related cancers (especially lung cancer), alcohol-related diseases, and suicides. These causes of death, that mainly concern men, likewise explain the geographic disparities between the sexes. Beginning at age 60, cancers are the primary explanation for departmental differences in mortality, and from age 80 on, respiratory illnesses and cardiovascular disease also play a role. The differences are strongly linked to the socioeconomic context (especially in the north of France), perhaps offset (mainly in the south-east) by other factors, such as a healthier diet. Selective migration may also play a role, with young people and high-educated or wealthier adults (especially at retirement), who are generally in better health, leaving high mortality areas more frequently than others (Barbieri, 2013).

The fragmentation observed for adult mortality is even greater for infant mortality, where the map shows a mosaic that is hard to describe in a general manner (Figure 23). Note, however, that the geography of infant mortality is highly uncertain as the number of deaths of very young children has become very small, with around 2,600-2,700 deaths per year since 2009 in the entire country, only about half the numbers recorded 20 years earlier. Random annual fluctuations are thus quite large and weaken the comparisons, even when several calendar years are combined. This is especially the case in *département*s where the number of births is low and where no infant deaths are recorded in some years. Except for overseas *département*s where, in 2010-2014, the infant mortality rate was close to 6 deaths per 1,000 births (Martinique) or above (Reunion, Guadeloupe, and French Guiana at 7 per thousand), the rate everywhere else was below 4.5 per 1,000. This is the level reached in metropolitan France in 1999, and in certain high-income European

Figure 23. Infant mortality rates per 1,000 live births by *département* in 2010-2014



Coverage: Whole of France, excluding Mayotte.

Source: Map is based on mortality tables calculated by the author (data on *département* populations and deaths under age 1, by sex, and calendar years, kindly provided by the INSEE's regional, local, and urban statistics division).

countries like the United Kingdom and Switzerland by the end of the 2000s (Appendix Tables A.11 and A.12).

Overview

On 1 January 2017, the population of France was just below 67 million. Natural increase continues to be the main driver of population growth, but has slowed again this year. The population has been decreasing along a growing "empty diagonal" that spans from the south of the Massif Central to the north of Île-de-France. Population ageing continues, with an old-age dependency ratio that surpassed 0.5 for the first time (fewer than two people aged 20-59 for one person aged over 60) at both national level and in the vast majority of *départements*.

The inflow and outflow of foreign migrants continued to increase in 2015. Newly arrived foreigners with a residence permit made up 0.32% of the total population of France in 2015. The average age at which migrants obtain a first residence permit was 29.3 years for women and 29.1 years for men. Women migrants continue to outnumber men. The distribution of migrants by continent of origin and by reason for admission is fairly stable, but the number of permits

issued to refugees or to people granted territorial asylum has risen by 18%. The geographic distribution of immigrants who hold a residence permit is highly concentrated in certain *départements*, including Mayotte, French Guiana, and Seine-Saint-Denis.

Births and fertility both dropped again in 2016, but at a slower pace than in 2015. The fertility decline was especially marked at young ages (below 30), probably due mainly to birth postponement. Fertility is high in this age group, so the impact on total fertility is substantial. The mean age at childbearing has now reached 30.8 years; it ranges from 28.0 to 33.6 years across the different *départements*.

The various abortion indicators show that abortion is decreasing in all age groups, and particularly at the youngest ages. Abortion has become increasingly rare among adolescents, although there are still large regional differences.

In 2016, the number of marriages dropped and the number of PACS unions increased. Almost one marriage in five (18%) concerns a French citizen and a foreign national. The age gap between spouses is large in these marriages, especially when the man is relatively old and a French citizen. The number of same-sex unions – especially marriages – has continued to fall. The proportion of same-sex unions is highest in the *départements* of Île-de-France (nearly one in ten) and, to a lesser extent, in the *départements* along the Atlantic and Mediterranean coasts. In the Mediterranean region, marriage and divorce propensities are both relatively high.

Mortality increased in 2015 due to the influenza epidemic, but it fell back again in 2016, in keeping with a long-term trend. Over the last 20 years, improvements in life expectancy have mainly benefited men. The gender gap in life expectancy peaked at eight years in the late 1980s and early 1990s and is now gradually narrowing because mortality due to cancer and cardiovascular disease is dropping more slowly for women than for men.

Regional inequalities in mortality persist; in 2014, the gap between *départements* with the highest and the lowest mortality was 5.6 years for men and 3.5 years for women. As was the case 50 years ago, mortality is highest along the northern border of France, from Brittany to Alsace, and in several *départements* lying on a diagonal band that stretches from the north-east corner of France (the Grand Est region) to the Centre region.

Acknowledgements: The authors thank Floriane Varieras, an engineer at Université de Strasbourg, for designing the maps, Elodie Baril and Arnaud Bringé of the Statistical Methods department at INED for their help in preparing the databases and the initial analyses, and Ekrame Boubtane, a lecturer in economics at CERDI (Ecole d'Economie, Université Clermont Auvergne) for her assistance in processing the data on immigration.

Appendix

Figure A.1A. The French *départements*

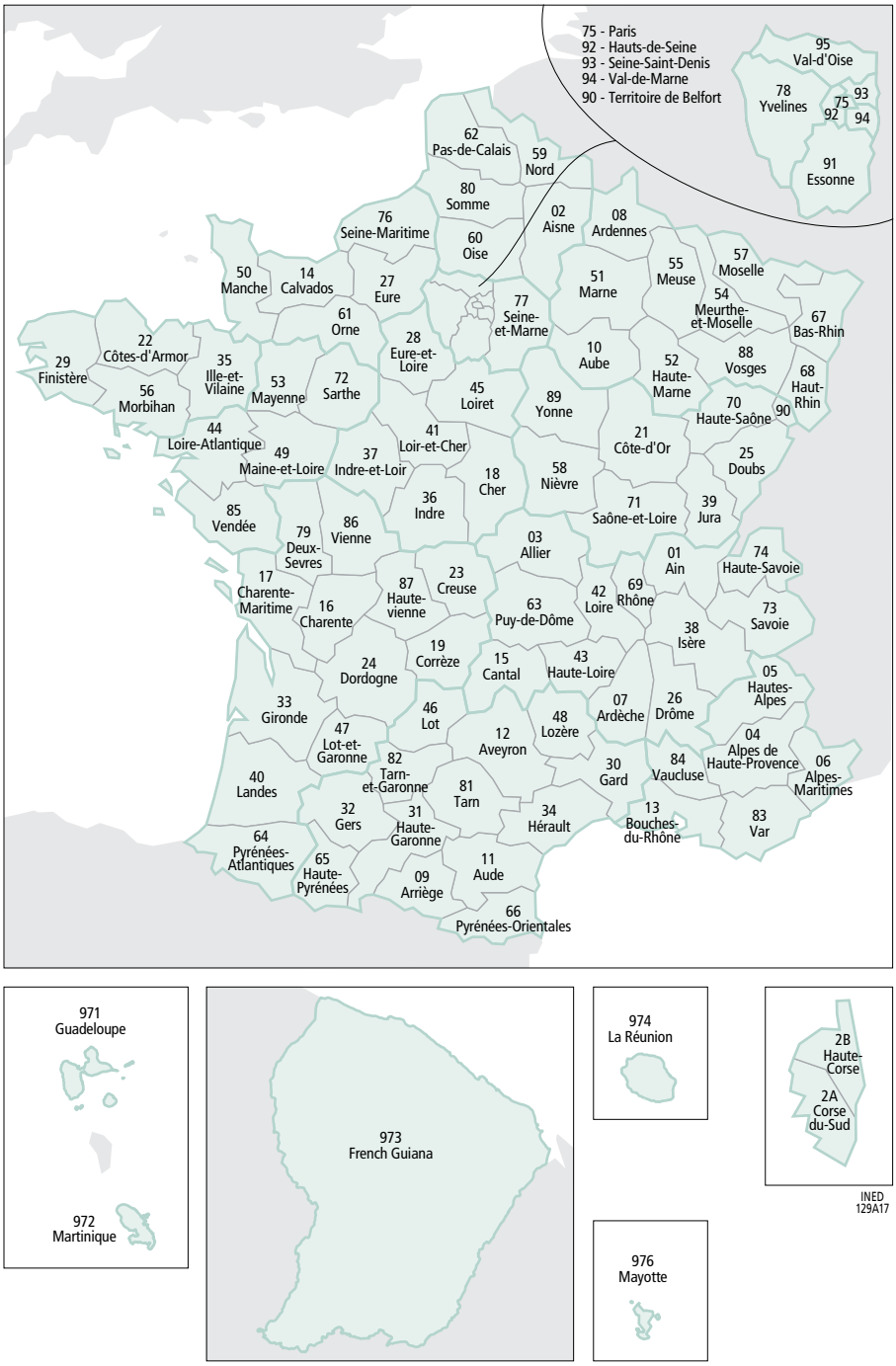


Figure A.1B. The French regions and their capitals

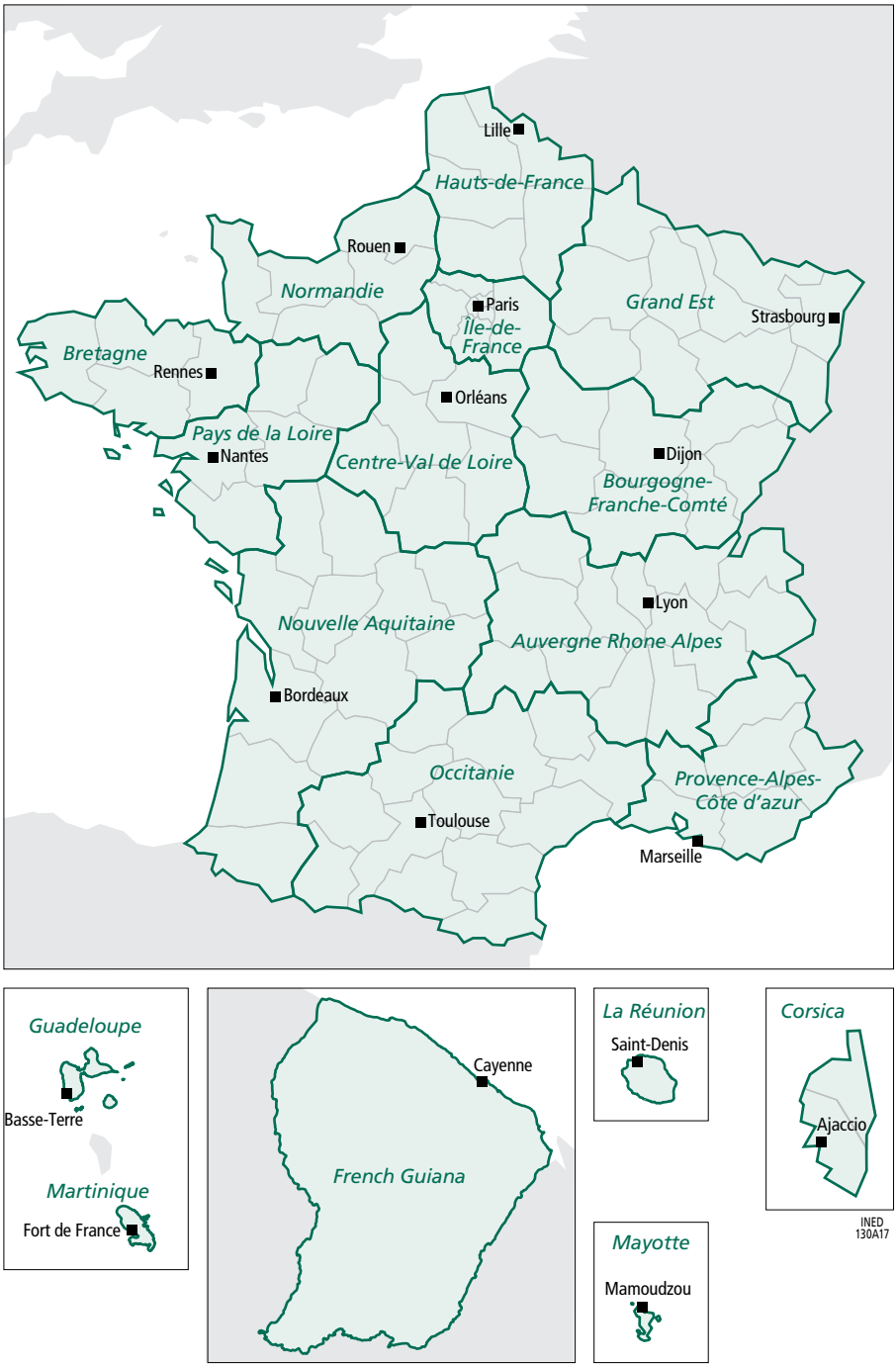
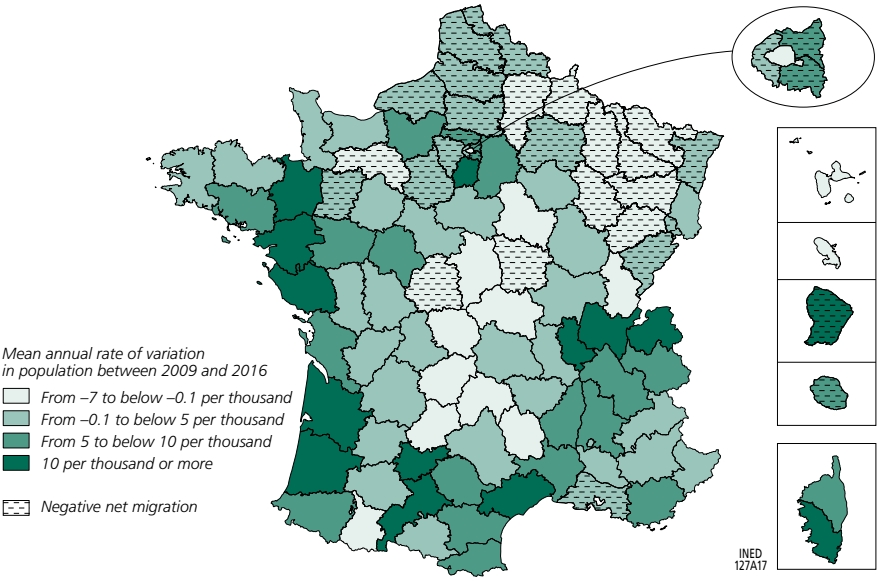
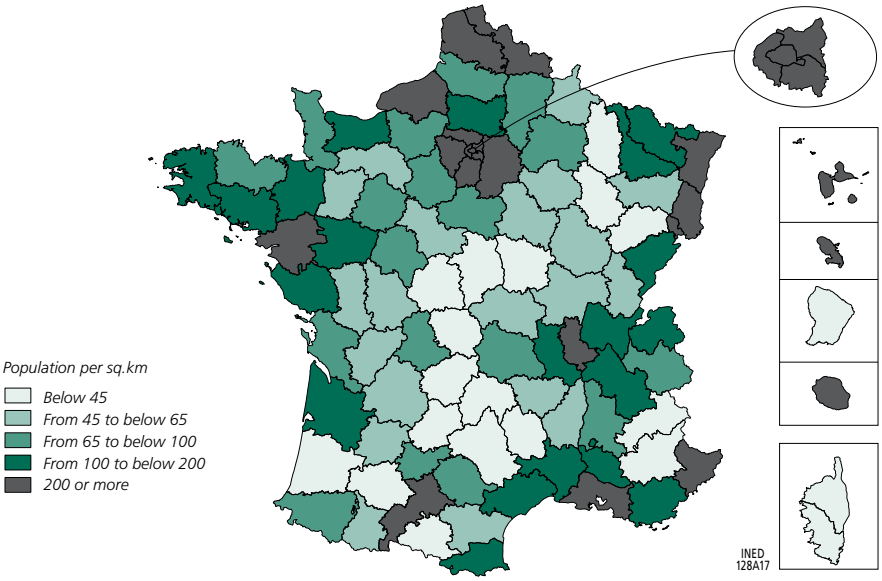


Figure A.2. Total population change and net migration between 01/01/2009 and 01/01/2016 in the French *départements*



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

Figure A.3. Population density of the French *départements* on 1 January 2016



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

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

Year	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	5.0
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	5.9
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	4.5
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	5.7
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	5.9
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	5.8
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	5.5
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	6.3
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	5.9
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	6.7
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	5.8
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	5.5
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	4.9
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	5.1
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	4.9
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	5.1
2013	63,863	65,736	782	812	558	569	224	243	107	100	331	343	12.2	12.4	8.7	8.7	3.5	3.7	5.2	5.4
2014	64,186	66,290	781	819	547	559	234	260	82	67	316	327	12.2	12.4	8.5	8.4	3.7	4.0	4.9	5.1
2015*	64,474	66,590	760	799	582	594	178	205	82	67	260	272	11.8	12.0	9.0	8.9	2.8	3.1	4.0	4.2
2016*	64,732	66,858	745	784	574	587	171	197	82	67	253	264	11.5	11.7	8.9	8.8	2.6	2.9	3.9	4.1

* Provisional data end 2016.
Coverage: Whole of France.
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	2011	2012	2013	2014	2015*	2016*	2017*
0-19	29.2	27.8	26.1	25.6	25.0	24.5	24.5	24.4	24.4	24.3	24.3	24.3	24.2
20-59	52.7	53.2	53.8	53.8	54.1	52.7	52.2	51.9	51.5	51.3	50.9	50.6	50.3
60+	18.1	19.0	20.1	20.6	20.9	22.8	23.3	23.7	24.1	24.4	24.8	25.1	25.5
including:													
65+	12.8	13.9	15.0	16.0	16.5	16.8	16.9	17.3	17.7	18.2	18.6	19.0	19.4
75+	6.3	6.8	6.1	7.2	8.1	8.9	9.0	9.1	9.2	9.2	9.3	9.3	9.2
Overall	100.0	100.0	100.0	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		1995	2000	2005	2010	2011	2012	2013	2014	2015*	2016*	2017*
0-19		26.4	25.8	25.3	24.8	24.7	24.6	24.5	24.5	24.6	24.6	24.5
20-59		53.8	53.8	54.0	52.6	52.3	52.0	51.6	51.2	50.9	50.5	50.2
60+		19.9	20.4	20.7	22.6	23.0	23.4	23.9	24.2	24.5	24.9	25.3
including:												
65+		14.9	15.8	16.3	16.6	16.7	17.1	17.6	18.0	18.4	18.8	19.2
75+		6.0	7.1	8.0	8.8	8.9	9.0	9.0	9.1	9.1	9.1	9.1
Overall		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Provisional data.
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	199,779	31,128
2006	194,936	27,205
2007	177,304	24,766
2008	184,200	20,561
2009	189,428	18,524
2010	184,429	17,980
2011	177,669	17,594
2012	180,010	17,500
2013	192,398	18,247
2014	199,885	20,688
2015	210,040	21,493

Note: Member countries of the European Union on 30 June 2013, as well as nationals of Vatican City State, Iceland, Liechtenstein, Norway, the principalities of Andorra and Monaco, the Republic of San Marino, and Switzerland are excluded.
Coverage: Permits granted in France and abroad to citizens of countries not listed in note. Permits granted in the year *n* and registered in the database extraction performed in July of the year *n*+2, except for the year 2009, for which extraction was performed in July 2012.
Source: Authors' calculations based on AGDREF data.

Table A.4. Fertility since 1970

Year	Sum of age-specific rates (per 100 women)			Mean age at childbearing		Non-marital fertility	
	Ages 15-27	Ages 28 and over	Total (TFR)	All births	First births[1]	Sum of age-specific rates (per 1,000 women)	Share in total fertility (%)
1970	143	104	247	27.2	23.9	16	6.4
1975	118	74	193	26.7	24.1	16	8.5
1980	116	78	194	26.8	24.5	22	11.4
1985	99	82	181	27.5	25.2	36	19.6
1990	84	94	178	28.3	26.0	53	30.1
1995	69	102	171	29.0	26.8	65	37.9
2000	69	119	187	29.4	27.4	81	43.2
2001	69	119	188	29.4		83	44.3
2002	67	119	186	29.5		84	44.7
2003	66	121	187	29.5		86	45.6
2004	67	123	190	29.6	27.6	89	46.8
2005	66	126	192	29.7	27.7	92	47.9
2006	67	131	198	29.8	27.8	98	49.7
2007	65	131	196	29.8	27.9	100	50.9
2008	66	133	199	29.9	27.9	103	51.6
2009	66	134	199	29.9	28.0	104	52.9
2010	66	136	202	30.0	28.1	109	54.2
2011	64	136	200	30.1		110	55.2
2012	63	136	199	30.1		112	56.0
2013	61	136	197	30.2		112	56.6
2014*	59	138	197	30.3		114	57.7
2015*	57	136	193	30.4		-	-
2016*	54	136	191	30.6		-	-

* Provisional data published by INSEE.
Coverage: Metropolitan France.
Sources: INSEE. Surveys and Demographic Studies Division. Series revised after the 2013 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	202	29.1
1968	42	109	166	193	201	29.2
1969	39	105	163	192	200	29.4
1970	37	103	162	192	200	29.5
1971	35	100	160	191	199	29.7
1972	33	98	159	191	199	29.8
1973	32	97	159	191	200	29.9
1974	31	96	160	192	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		206	30.2
1979	31	96	163		206	30.1
1980	31	95	161		204	30.1
1981	32	96	162		205	30.1
1982	32	96	162			
1983	31	95				
1984	32	95				
1985	31	94				
1986	31	94				
1987	31	92				
1988	30					
1989	30					
1990	29					
1991	28					
1992	27					

* For the 1930-66 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 2016.
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	2011	2012	2013	2014	2015
Austria	1.65	1.47	1.46	1.41	1.36	1.41	1.44	1.43	1.44	1.44	1.47	1.49
Belgium	1.68	1.51	1.62	1.56	1.67	1.76	1.86	1.81	1.79	1.75	1.74	1.70
Bulgaria	2.05	1.97	1.82	1.23	1.26	1.37	1.57	1.51	1.50	1.48	1.53	1.53
Croatia	1.50	1.55	1.48	1.51	1.46	1.50	1.55	1.48	1.51	1.46	1.46	1.40
Cyprus	-	2.43	2.41	2.03	1.64	1.48	1.44	1.35	1.39	1.30	1.31	1.32
Czech Republic	2.08	1.95	1.90	1.28	1.15	1.29	1.51	1.43	1.45	1.46	1.53	1.57
Denmark	1.55	1.45	1.67	1.80	1.78	1.80	1.87	1.75	1.73	1.67	1.69	1.71
Estonia	2.02	2.13	2.05	1.38	1.36	1.52	1.72	1.61	1.56	1.52	1.54	1.58
Finland	1.63	1.64	1.78	1.81	1.73	1.80	1.87	1.83	1.80	1.75	1.71	1.65
France	-	-	-	-	1.89	1.94	2.03	2.01	1.99	1.99	2.00	1.96
France metro.	1.95	1.81	1.78	1.71	1.87	1.92	2.01	2.00	1.99	1.97	1.97	1.92
Germany	1.56	1.37	1.45	1.25	1.38	1.34	1.39	1.39	1.41	1.39	1.47	1.50
Greece	2.23	1.67	1.39	1.28	1.25	1.34	1.48	1.40	1.34	1.29	1.30	1.33
Hungary	1.91	1.85	1.87	1.57	1.32	1.31	1.25	1.23	1.34	1.35	1.44	1.45
Ireland	3.21	2.48	2.11	1.84	1.89	1.86	2.05	2.03	2.00	1.96	1.94	1.92
Italy	1.64	1.42	1.33	1.19	1.26	1.34	1.46	1.44	1.43	1.39	1.37	1.35
Latvia	-	-	-	-	1.25	1.38	1.36	1.33	1.44	1.52	1.65	1.70
Lithuania	1.99	2.08	2.03	1.55	1.39	1.29	1.50	1.55	1.60	1.59	1.63	1.70
Luxembourg	1.50	1.38	1.60	1.70	1.76	1.63	1.63	1.52	1.57	1.55	1.50	1.47
Malta	1.99	1.95	2.04	1.77	1.68	1.38	1.36	1.45	1.43	1.38	1.42	1.45
Netherlands	1.60	1.51	1.62	1.53	1.72	1.71	1.79	1.76	1.72	1.68	1.71	1.66
Poland	-	-	2.06	1.62	1.37	1.24	1.41	1.33	1.33	1.29	1.32	1.32
Portugal	2.25	1.72	1.56	1.41	1.55	1.41	1.39	1.35	1.28	1.21	1.23	1.31
Romania	2.43	2.31	1.83	1.33	1.31	1.40	1.59	1.47	1.52	1.46	1.52	1.58
Slovakia	2.32	2.26	2.09	1.52	1.30	1.27	1.43	1.45	1.34	1.34	1.37	1.40
Slovenia	-	1.71	1.46	1.29	1.26	1.26	1.57	1.56	1.58	1.55	1.58	1.57
Spain	2.20	1.64	1.36	1.17	1.23	1.33	1.37	1.34	1.32	1.27	1.32	1.33
Sweden	1.68	1.74	2.13	1.73	1.54	1.77	1.98	1.90	1.91	1.89	1.88	1.85
United Kingdom	1.90	1.79	1.83	1.71	1.64	1.76	1.92	1.91	1.92	1.83	1.81	1.80
Iceland	2.48	1.93	2.30	2.08	2.08	2.05	2.20	2.02	2.04	1.93	1.93	1.80
Norway	1.72	1.68	1.93	1.87	1.85	1.84	1.95	1.88	1.85	1.78	1.75	1.72
Switzerland	1.55	1.52	1.58	1.48	1.50	1.42	1.52	1.52	1.52	1.52	1.54	1.54

Source: Eurostat (site accessed in August 2017).

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*	na	203,463		26.7	14.5	0.52
2016*	na	197,800		26.6	13.9	0.51

* Provisional data.
na: 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				
1986	265,678				0.52	0.53	0.69	0.72	26.5	24.5	108,380		31.1				
1987	265,177				0.51	0.52	0.68	0.71	26.8	24.8	106,527		31.0				
1988	271,124				0.52	0.53	0.68	0.71	27.1	25.0	106,096		31.3				
1989	279,900				0.54	0.55	0.68	0.72	27.3	25.3	105,295		31.5				
1990	287,099				0.55	0.56	0.69	0.72	27.6	25.6	105,813		32.1				
1991	280,175				0.54	0.55	0.67	0.70	27.8	25.8	108,086		33.2				
1992	271,427				0.52	0.53	0.65	0.69	28.1	26.1	107,994		33.5				
1993	255,190				0.49	0.50	0.62	0.66	28.4	26.4	110,759		34.8				
1994	253,746		260,866		0.48	0.49	0.61	0.65	28.7	26.7	115,658		36.7				
1995	254,651		261,813		0.48	0.50	0.61	0.64	28.9	26.9	119,189	121,946	38.2				
1996	280,072		287,144		0.53	0.55	0.65	0.68	29.4	27.4	117,382	119,699	38.0				
1997	283,984		291,163		0.54	0.56	0.65	0.68	29.6	27.6	116,158	118,284	38.0				
1998	271,361		278,525		0.52	0.54	0.63	0.66	29.8	27.7	116,515	118,884	38.4				
1999	286,191		293,544		0.56	0.58	0.64	0.68	29.9	27.8	116,813	119,549	38.9	6,139	6,151	7	7
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*	na	na	228,000*	235,000*	na	na	na	na	na	na	na	na	na	189,756	191,537	83,937*	84,662

* Provisional data; na: Not available.
(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

Male 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	

Women

Male 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	

* 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, 1946-2016

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	nd	574	681
1947	61.2	66.7	12.3	14.5	71.1	nd	589	703
1948	62.7	68.8	12.5	15.0	55.9	nd	599	727
1949	62.2	67.6	11.8	14.0	60.3	nd	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, 1946-2016

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	19.3	23.3	3.3	2.3	846	923
2015*	79.0	85.1	19.1	23.0	3.5	2.5	844	923
2016*	79.4	85.4	19.4	23.3	3.5	na	na	na

* Provisional data end 2016.
na: Not available.
(1) Deaths under one year per 1,000 live births.
(2) Deaths before 28 days per 1,000 live births.
Coverage: Metropolitan France.
Source: INSEE, Demographic Surveys and Studies Division.

Table A.12. Life expectancy at birth in Europe in 2015

Country	Life expectancy at birth (years)		
	Male	Female	Difference (F – M)
Austria	78.8	83.7	4.9
Belgium	78.7	83.4	4.7
Bulgaria	71.2	78.2	7.0
Croatia	74.4	80.5	6.1
Czech Republic	75.7	81.6	5.9
Denmark	78.8	82.7	3.9
Estonia	73.2	82.2	9.0
Finland	78.7	84.4	5.7
France (incl. Mayotte)	79.0	85.1	6.1
Germany	78.3	83.1	4.8
Greece	78.5	83.7	5.2
Hungary	72.3	79.0	6.7
Iceland	81.2	83.8	2.6
Ireland*	79.6	83.4	3.8
Italy	80.3	84.9	4.6
Latvia	69.7	79.5	9.8
Lithuania	69.2	79.7	10.5
Luxembourg	80.0	84.7	4.7
Netherlands	79.9	83.2	3.3
Norway	80.5	84.2	3.7
Poland	73.5	81.6	8.1
Portugal*	78.1	84.3	6.2
Romania*	71.5	78.7	7.2
Slovakia	73.1	80.2	7.1
Slovenia	77.8	83.9	6.1
Spain	80.1	85.8	5.7
Sweden	80.4	84.1	3.7
Switzerland	80.8	85.1	4.3
United Kingdom*	79.2	82.8	3.6

* Provisional data for 2015.
Source : Eurostat (Table 00025, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database, accessed 11 June 2017), except France (INSEE).

Table A.13. Infant mortality in Europe 1980-2014 (rate per 1,000 live births)

Country	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Austria	14.3	11.2	7.8	5.4	4.8	4.2	3.6	3.7	3.7	3.8	3.9	3.6	3.2	3.1	3.0	3.1
Belgium	12.1	9.8	8.0	6.0	4.8	3.7	4.0	3.9	3.7	3.5	3.6	3.3	3.8	3.5	3.4	3.3
Bulgaria	20.2	15.4	14.8	13.3	13.3	10.4	9.7	9.2	8.6	9.0	9.4	8.5	7.8	7.3	7.6	6.6
Croatia	na	na	na	na	7.4	5.7	5.2	5.6	4.5	5.3	4.4	4.7	3.6	4.1	5.0	4.1
Czech Republic	16.9	12.5	10.8	7.7	4.1	3.4	3.3	3.1	2.8	2.9	2.7	2.7	2.6	2.5	2.4	2.5
Denmark	8.4	7.9	7.5	5.1	5.3	4.4	3.8	4.0	4.0	3.1	3.4	3.5	3.4	3.5	4.0	3.7
Estonia	17.1	14.1	12.3	14.9	8.4	5.4	4.4	5.0	5.0	3.6	3.3	2.5	3.6	2.1	2.7	2.5
Finland	7.6	6.3	5.6	3.9	3.8	3.0	2.8	2.7	2.6	2.6	2.3	2.4	2.4	1.8	2.2	1.7
Whole of France (1)	na	na	na	5.0	4.5	3.8	3.8	3.8	3.8	3.9	3.6	3.5	3.5	3.6	3.6	3.7
France metro. (1)	10.0	8.3	7.3	4.9	4.4	3.6	3.6	3.6	3.6	3.7	3.5	3.3	3.3	3.5	3.3	3.5
Germany	12.4	9.1	7.0	5.3	4.4	3.9	3.8	3.9	3.5	3.5	3.4	3.6	3.3	3.3	3.2	3.3
Greece	17.9	14.1	9.7	8.1	5.9	3.8	3.7	3.5	2.7	3.1	3.8	3.4	2.9	3.7	3.7	4.0
Hungary	23.2	20.4	14.8	10.7	9.2	6.2	5.7	5.9	5.6	5.1	5.3	4.9	4.9	5.0	4.5	4.2
Iceland	7.7	5.7	5.9	6.1	3.0	2.3	1.4	2.0	2.5	1.8	2.2	0.9	1.1	1.8	2.1	2.2
Ireland	11.1	8.8	8.2	6.4	6.2	4.0	3.6	3.1	3.8	3.3	3.8	3.5	3.5	3.5	3.3	3.4
Italy	14.6	10.5	8.2	6.2	4.5	3.8	3.6	3.5	3.3	3.4	3.2	3.2	2.9	2.9	2.8	2.9
Latvia	15.3	13.0	13.7	18.8	10.4	7.8	7.6	8.7	6.7	7.8	5.7	6.6	6.3	4.4	3.8	4.1
Lithuania	14.5	14.2	10.2	12.5	8.6	6.8	6.8	5.9	4.9	4.9	4.3	4.2	3.9	3.7	3.9	4.2
Luxembourg	11.5	9.0	7.3	5.5	5.1	2.6	2.5	1.8	1.8	2.5	3.4	4.3	2.5	3.9	2.8	2.8
Netherlands	8.6	8.0	7.1	5.5	5.1	4.9	4.4	4.1	3.8	3.8	3.8	3.6	3.7	3.8	3.6	3.3
Norway	8.1	8.5	6.9	4.0	3.8	3.1	3.2	3.1	2.7	3.1	2.8	2.4	2.5	2.4	2.4	2.3
Poland	25.4	22.1	19.4	13.6	8.1	6.4	6.0	6.0	5.6	5.6	5.0	4.7	4.6	4.6	4.2	4.0
Portugal	24.2	17.8	11.0	7.5	5.5	3.5	3.3	3.4	3.3	3.6	2.5	3.1	3.4	2.9	2.9	2.9
Romania	29.3	25.6	26.9	21.2	18.6	15.0	13.9	12.0	11.0	10.1	9.8	9.4	9.0	9.2	8.4	7.6
Slovakia	20.9	16.3	12.0	11.0	8.6	7.2	6.6	6.1	5.9	5.7	5.7	4.9	5.8	5.5	5.8	5.1
Slovenia	15.3	13.0	8.4	5.5	4.9	4.1	3.4	2.8	2.4	2.4	2.5	2.9	1.6	2.9	1.8	1.6
Spain	12.3	8.9	7.6	5.5	4.4	3.8	3.5	3.5	3.3	3.2	3.2	3.1	3.1	2.7	2.8	2.7
Sweden	6.9	6.8	6.0	4.1	3.4	2.4	2.8	2.5	2.5	2.5	2.5	2.1	2.6	2.7	2.2	2.5
Switzerland	9.0	6.7	6.7	5.0	5.3	4.2	4.4	3.9	4.0	4.3	3.8	3.8	3.6	3.9	3.9	3.9
United Kingdom	13.9	11.1	7.9	6.2	5.6	5.1	4.9	4.7	4.6	4.5	4.2	4.2	4.0	3.9	3.9	3.9

na: 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 2017), except (1).

Table A.14. Standardized death rates (per 100,000) by sex and groups of causes of death[1]

Males

Cause of death	1980	1985	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
23 groups of causes															
Lung cancer	63	67	70	70	66	64	63	62	60	60	58	58	56	55	54
Stomach cancer	20	17	14	12	10	8	8	8	7	7	7	7	7	7	7
Cancer of the intestine	31	29	29	28	25	24	23	22	22	22	22	21	21	20	20
Prostate cancer	28	30	32	29	26	23	22	22	21	20	20	19	18	17	16
Other cancers	176	180	171	160	152	139	136	134	131	129	125	121	119	116	116
Ischaemic heart diseases	117	118	96	85	76	62	58	56	54	51	48	46	45	43	40
Other heart diseases	130	115	93	90	81	71	69	69	68	66	64	59	58	57	54
Cerebro-vascular diseases	123	103	71	59	47	37	35	34	33	31	30	29	28	27	25
Other diseases of the circulatory system	38	35	29	26	21	16	16	15	15	13	13	11	11	10	10
Tuberculosis (all forms)	5	3	2	2	2	1	1	1	1	1	1	1	0	1	0
AIDS	0	0	8	13	3	2	2	2	2	1	1	1	1	1	1
Influenza	2	2	3	1	2	1	0	0	0	0	0	0	1	1	0
Other infectious and parasitic diseases	11	12	10	11	12	11	11	11	11	11	11	11	11	10	9
Other diseases of the respiratory system	83	79	71	69	53	47	42	42	42	42	39	39	40	39	36
Alcoholism and cirrhosis of the liver	56	46	35	29	28	24	24	23	23	22	22	21	20	19	18
Diabetes	11	11	9	9	15	14	13	13	13	13	12	12	12	12	11
Other mental disorders and diseases of the nervous system	28	28	31	30	40	42	41	41	42	42	42	41	43	42	40
Other diseases of the digestive system	41	35	29	25	20	19	19	18	18	18	18	16	16	16	15
Other diseases	56	50	40	37	36	32	32	31	32	31	31	27	28	28	26
Transport accidents	30	26	26	20	19	13	12	12	11	11	10	9	8	7	7
Suicides	29	34	30	29	26	25	24	23	23	24	23	23	21	21	19
Other external causes	63	54	51	44	36	31	31	31	31	31	31	30	30	29	28
Unspecified or ill-defined causes of death	74	70	56	48	46	45	43	44	46	47	55	53	60	59	53
6 broad groups of causes															
Cancer	318	324	317	300	280	258	251	247	241	239	232	226	220	216	213
Cardiovascular diseases	409	371	288	260	225	187	177	173	169	161	156	145	142	137	129
Infectious and parasitic diseases, diseases of the respiratory system	101	97	95	95	72	62	56	56	56	55	52	53	54	51	47
Other diseases	193	169	143	131	138	132	129	126	128	126	124	118	120	117	111
External causes	123	114	106	93	81	69	67	66	66	66	64	63	60	57	55
Unspecified or ill-defined causes of death	74	70	56	48	46	45	43	44	46	47	55	53	60	59	53
All causes	1,217	1,145	1,005	928	842	753	723	713	705	694	684	657	656	638	608

Females

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

(1) 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

References

Baccaïni B., Levy D., 2009, "Les migrations entre départements : le Sud et l'Ouest toujours très attractifs", *Insee première*, 1248, 4 p.

Barbieri M., 2013, "Mortality in France by *département*", *Population*, *English Edition,* 68(3), pp. 375-418.

Bellamy V., 2017, "236 300 mariages célébrés en France en 2015, dont 33 800 mariages mixtes", *Insee première*, 1638, 4 p.

Bellamy V., Beaumel C., 2016, "Bilan démographique 2015. Le nombre de décès au plus haut depuis l'après-guerre", *Insee première*, 1581, 4 p.

Bellamy V., Beaumel C., 2017, "Bilan démographique 2016. À nouveau en baisse, la fécondité atteint 1,93 enfant par femme en 2016", *Insee première*, 1630, 4 p.

Belmokhtar Z., 2012, "Divorces : une procédure à deux vitesses", *Infostat Justice,* 117, 8 p.

Combier E., Charreire H., Le Vaillant M., Michaut F., Ferdynus C. et al., 2013, "Temps d'accès aux maternités bourguignonnes et indicateurs de santé périnatale", *Journal de gestion et d'économie médicales*, 31(6), pp. 348-368.

Commission IVG, 2016, "IVG : état des lieux et perspectives d'évolution du système d'information", Ministère des Affaires sociales et de la santé, 115 p.

Davie E., Mazuy M., 2010, "Women's fertility and educational level in France: Evidence from the annual census surveys", *Population*, *English Edition,* 65(3), pp.415-450.

d'Albis H., Boubtane E., 2015, "Characteristics of migration flows to France based on residence permit data (1998-2013)", *Population, English Edition,* 70(3), pp. 461-496.

d'Albis H., Boubtane E., Coulibaly D., 2016, "Immigration policy and macro-economic performance in France", *Annals of Economics and Statistics*, 121-122, pp. 279-308.

d'Albis H., Boubtane E., Coulibaly D., 2017, "International migration and regional housing markets: Evidence from France", IZA Discussion Paper, 10516, 36 p.

Daguet F., 2016, "De plus en plus de couples dans lesquels l'homme est plus jeune que la femme", *Insee première*, 1613, 4 p.

Dittgen A., 1991, "Les mariages religieux en France. Comparaison avec les mariages civils", *La nuptialité. Évolution récente en France et dans les pays développés*, Paris, INED, collection Congrès et Colloque, 7, pp. 137-157.

DREES, 2016, "Les établissements de santé", *Panoramas de la Drees*, 186 p.

Greulich A., 2016, "'Rebond de la fécondité' dans les pays développés, automatisme ou apanage de quelques rares privilégiés ?", *Revue d'économie financière*, 122(2), pp. 57-68.

Guignard R., Beck F., Wilquin J.-L., Andler R., Nguyen-Thanh V. et al., 2015, "La consommation de tabac en France et son évolution : résultats du Baromètre santé 2014", *Bulletin épidémiologique hebdomadaire*, 17-18, pp. 281-288.

INED, 1978, "Septième rapport sur la situation démographique de la France", *Population*, 33(2), pp. 279-348.

Laroche N., 2017, "12 millions de Franciliens au 1er janvier 2014", *Insee, Flash – Île-de-France*, 15, 2 p.

Lermenier A., Timbard O., 2009, "Les divorces prononcés de 1996 à 2007", *Infostat Justice*, 104, 4p.

Levy D., Dzikowski C., 2017, "En 2014, un quart de la population qui déménage change de département", *Insee première*, 1654, 4 p.

Maillochon F., 2016, *La passion du mariage*, Paris, Presses universitaires de France, Le Lien social, 400 p.

Marie C.-V., Breton D., Crouzet M., Fabre E., Merceron S., 2017, "Migrations, natalité et solidarités familiales. La société de Mayotte en pleine mutation", *Insee analyses*, La Réunion-Mayotte, 12, 6 p.

Mazuy M., Toulemon L., Baril E., 2015, " Recourse to abortion is decreasing, but repeat abortions are more frequent", *Population and Societies*, 518, 4 p.

Mazuy M., Barbieri M., Breton D., d'Albis H., 2016, "Recent demographic developments in France: A decline in fertility, an increasein mortality", *Population*, 71(3), pp. 423-485.

Muñoz-Perez B., 1981, "La répartition géographiques des divorces de 1970 à 1975", in Baillon D., Costecalde N., Godin G., Muñoz-Perez B., *Le divorce en France*, Ministère de la Justice/Insee, collections de l'Insee, D85-86, Vol. 1, pp. 99-108.

Oliveau S., Doignon Y., 2016, "La diagonale se vide ? Analyse spatiale exploratoire des décroissances démographiques en France métropolitaine depuis 50 ans", *Cybergeo: European Journal of Geography* - Espace, Société, Territoire, document 763.

Pison G., 2015 " France and the United Kingdom: demographic stability on the continent, stop-and-go across the Channel", INED, *Population and Societies*, 520, 4 p.

Pison G., 2017 " Fewer births in France in 2016", INED, *Population and Societies*, 542, 4 p.

Pison G., Toulemon L., 2016, " The number of deaths in France will increase over the coming years", INED, *Population and Societies*, 531, 4 p.

Prioux F., Mazuy M., 2009, "Recent demographic developments in France: Tenth anniversary of the PACS civil partnership and over a million contracting parties", *Population, English Edition,* 64(3), pp. 393-442.

Régnier-Loilier A., Beaujouan E., Villeneuve-Gokalp C., 2009, "Neither single, nor in a couple: A study of living apart together in France", *Demographic Research*, 21(4), pp. 75-108.

Solignac M., 2016, "L'émigration des immigrés, une dimension oubliée de la mobilité géographique", Working Paper halshs-01422323, 39 p.

Temporal F., Brutel C., 2016, "La mesure des flux migratoires entre la France et l'étranger : et si on parlait (aussi) d'émigration ?", *Revue européenne des migrations internationales*, 32(3-4), pp. 215-229.

Thatcher A.R., Kannisto V., Vaupel J.W., 1998, "The force of mortality at ages 80 to 120", *Odense Monographs on Population Aging*, Vol. 5, Odense, Denmark, Odense University Press, 104, 20 p.

Trabut L., Lelièvre E., Bailly E., 2015, "Does the household-based census capture the diversity of family configurations?", *Population*, *English Edition,* 70(3), pp. 603-630.

Vilain A., 2017, "211 900 interruptions volontaires de grossesse en 2016", DREES, *Études et résultats*, 1013, 6 p.

Wilmoth J.R., Andreev K., Jdanov D., Glei D.A., Boe C. et al., 2007, "Methods protocol for the human mortality database", University of California, Berkeley, and Max Planck Institute for Demographic Research, 9, pp. 10-11, http://mortality. org [version 31/05/2007]

Didier Breton, Magali Barbieri, Hippolyte d'Albis, Magali Mazuy • **Recent Demographic Developments in France: Marked Differences between *Départements***

On 1 January 2017, the population of France was 67 million, an increase of 0.4% with respect to 2016. The total fertility rate continued to drop in 2016, notably among women aged 25-29, the age group with the highest fertility. The number of residence permits issued rose slightly and reached its highest level since 1998. Newly arrived foreigners with a residence permit represented 0.32% of the French population on 1 January 2015, compared to 0.30% the previous year. Unlike the number of civil partnerships (PACS), the number of marriages – both different-sex and same-sex – continued to decline. Mixed nationality couples (one French and one foreign partner), who account for 18% of new unions, have a larger age gap between partners than couples where both partners are French. After a severe flu epidemic in 2015, mortality fell back again in 2016. The gender gap in life expectancy narrowed slightly in 2016, to 6.1 years. Demographic behaviours differ greatly from one *département* to another, probably because of social and economic disparities, as well as geographic differences (notably whether or not the département is located on a border), and cultural differences that influence mortality and union formation.

Didier Breton, Magali Barbieri, Hippolyte d'Albis, Magali Mazuy • **L'évolution démographique récente dela France : de forts contrastes départementaux**

Au premier janvier 2017, la France comptait près de 67 millions d'habitants, soit un accroissement annuel de 4,0 ‰. L'indice conjoncturel de fécondité poursuit sa baisse en 2016, notamment chez les femmes de 25 à 29 ans, groupe d'âges dans lequel la fécondité est la plus forte. Le nombre de titres de séjour délivrés augmente légèrement et est à son plus haut niveau depuis 1998. Les ressortissants bénéficiant de ces titres représentent 0,32 % de la population française au 1er janvier 2015 (contre 0,30 % en 2014). Le nombre de mariages continue de baisser pour les couples hétérosexuels et les couples de même sexe, alors que les pacs augmentent. Les couples mixtes, composés d'un conjoint de nationalité française et l'autre de nationalité étrangère (18 % du total des unions) se distinguent par un plus grand écart d'âge entre conjoints. En 2016, la mortalité recule de nouveau après une année 2015 marquée par une épidémie de grippe. L'écart d'espérance de vie entre les femmes et les hommes diminue encore et atteint 6,1 ans en 2016. D'un département à l'autre, les comportements démographiques présentent de fortes disparités, probable reflet d'inégalités sociales et économiques des territoires, ainsi que géographiques (départements frontaliers) et culturelles (mortalité et nuptialité).

Didier Breton, Magali Barbieri, Hippolyte d'Albis, Magali Mazuy • **La evolución demográfica reciente en Francia: fuertes contrastes entre los departamentos**

El 1° de enero de 2017, la población de Francia alcanzaba casi los 67 millones de habitantes, esto es un crecimiento anual de 4,0 por 1000. El índice coyuntural de fecundidad ha continuado su descenso en 2016, en particular en las mujeres de 25 à 29 anos, edad de más fuerte fecundidad. El número de permisos de residencia acordados ha aumentado ligeramente y alcanza su más alto nivel desde 1998. Las personas que benefician de dichos permisos representan 0,32 % del conjunto de la población el 1°de enero de 2015 (contra 0,30 % en 2014). El número de matrimonios continúa su descenso, tanto para las parejas heterosexuales que para las del mismo sexo, mientras los pacs (pactos civiles de solidaridad) aumentan. Las uniones mixtas, compuestas de un cónyugue de nacionalidad francesa y el otro de nacionalidad extranjera (18% del total de las uniones) se distinguen de las demás por una diferencia de edad más grande entre los cónyuges. En 2016, la mortalidad ha bajado de nuevo, después de un año –2015– marcado por una epidemia de gripe. La diferencia de esperanza de vida entre los hombres y las mujeres ha disminuido todavía un pocopara alcanzar 6,1 años en 2016. Los comportamientos demográficos varían fuertemente entre los departamentos, lo que refleja probablemente las desigualdades sociales y económicas de los diferentes territorios, así como las diferencias geográficas (departamentos fronterizos) y culturales (mortalidad y nupcialidad).

Keywords: France, demographic situation, ageing, migration, fertility, conjugality, marriage, civil partnership, divorce, same-sex couples, mortality, *départements*

Translated by Lucy apRoberts and David Shapiro