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Recent Demographic Trends in France. Do Men and Women Behave Differently?

Didier Breton^{*}, Nicolas Belliot[#], Magali Barbieri^{*},
Justine Chaput^{##}, Hippolyte d'Albis^{***}

Abstract

On 1 January 2023, the population of France was 68 million, 200,000 more than on 1 January 2022. The number of births decreased in 2022 while deaths increased. Consequently, natural increase dipped to an all-time low, contributing less to population growth than net migration. France was among just six of the 27 European Union member countries with positive natural increase in 2022, but as net migration was quite low, its population growth was half that of the European Union as a whole. In 2021, admissions of third-country nationals requiring a residence permit were higher than in 2020, returning to the level recorded before the COVID-19 pandemic. In 2022, the total fertility rate fell to 1.8 children per women, its lowest level in 20 years. That said, fertility should reach replacement level up to the 1992 birth cohort at least. Men have higher fertility than women, mainly because of births beyond age 50. The number of abortions increased between 2021 and 2022, and abortion rates were especially high at ages of peak fertility. The share of medical abortions and of abortions managed by a midwife continued to increase. The number of marriages increased in 2022, among different-sex couples especially, due partly to the catch-up of marriages that could not be celebrated in 2020 and 2021. The number of PACS civil unions fell, however, due to a decrease among different-sex couples, although PACS unions between same-sex couples reached a record high. The age difference between partners fell slightly, but still persists, between male same-sex partners especially. Despite a slowing of the COVID-19 pandemic, the number of deaths remained high in 2022. Two flu epidemics and three heatwaves resulted in 45,800 excess deaths. Life expectancy at birth increased in 2022 for both sexes but did not return to its pre-pandemic level. France is still among the Western European countries with the highest gender gap in life expectancy (6 years), although it has been narrowing steadily since 1980.

Keywords

France, demographic situation, migration, fertility, induced abortion, marriage, civil union, divorce, separation, same-sex couples, ageing, mortality, cause of death, COVID-19, pandemic, Europe

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Translated by Catriona Dutreuilh



Overview

Every year, *Population* publishes an article on recent demographic trends in France. This edition focuses on the year 2022. After 2 years of atypical demographic behaviours due to the COVID-19 pandemic, it is again possible to study time trends in the natural growth and migration dynamics of the French population. In 2022, births and fertility continued their downtrend, while mortality, migration, and unions (marriage and civil unions [*pacte civil de solidarité*, or PACS]) moved back towards pre-pandemic levels. In this year's article, we examine the various indicators for each sex to identify possible convergences or divergences in male and female behaviours.

On 1 January 2023, the population of France was 68.04 million, 200,000 more than on 1 January 2022. There were fewer births and more deaths in 2022 than in 2021. Natural increase in 2022 fell to its lowest level since the Second World War, at slightly more than 50,000, compared with 5 times that number just 10 years earlier. It was smaller than net migration for the third year in a row.

While France is one of the six European Union countries where natural increase is still positive, its role as the EU's driver of population growth is weakening. Its rate of increase is half that of the EU-27 as a whole, and migration inflows in 2022 were lower than in countries such as Germany, Spain, and Portugal.

The sex ratio of the French population has been stable for almost 20 years (51.6% of females). Population ageing continued in 2022 and the proportion of females in the population increases with age, so one might expect the share of females to rise. This potential increase was offset, however, by a narrowing of the gender mortality gap.

In 2021, the most recent year for which statistics are available, inflows of third-country nationals who must hold a residence permit to reside in France (251,650 admissions) were higher than in 2020, and almost caught up with pre-pandemic levels. The structure of these inflows changed little with respect to 2020, be it in terms of age, continent of origin, sex, or reason for admission. The share of asylum seekers also remained stable (19%). More women than men were admitted for family reasons, but their distributions by geographical origin were similar.

In 2022, 725,400 children were born in France, 16,600 fewer than in 2021, and almost 28,000 fewer than in 2019, the year preceding the pandemic. This sharp decrease in births was associated with a decline in fertility: the total fertility rate was slightly below 1.8 children per woman in 2022, the lowest level in 2 decades. Since 2014, fertility has been declining at all ages under 32 years and has been stable or rising slightly at older ages. Up to the cohorts born in the early 1990s, fertility should remain close to replacement level, but it is difficult to predict how things will evolve from then on. Despite this

decline, France was the European country with the highest period fertility in 2022. France also had the highest non-marital fertility (63.8% of births).

Since 2010, male fertility (measured between ages 18 and 60) has been higher than female fertility (measured between ages 15 and 50). This gender difference is due almost exclusively to male fertility beyond age 50. Age at parenthood is almost 3 years higher for men, a corollary of the age difference between partners.

After 2 years of stability, the number of induced abortions increased in 2022 (232,000 vs. 216,000 in 2021). The ratio of abortions to births was 1 in 3, up from 1 in 4 in 2017. Abortions are most frequent among women aged 20–34, and the abortion rate is highest at ages 25–29. The increase in abortions is observed in the age groups where fertility is highest; at a time of uncertainty, abortions are probably used more widely as a form of birth control. More than three-quarters of abortions are medical abortions, and a steadily growing share of non-hospital abortions are provided by midwives. The choice of setting varies with age. While hospital abortions are the most frequent option for all women, older women more often choose non-hospital abortions and private clinics, while women aged 25–34 more often turn to midwives.

The number of marriages increased again in 2022 (244,000 marriages; +11.5%), prolonging the 2021 rebound observed after the pandemic. The increase was greater for different-sex couples than for same-sex couples. The number of PACS unions decreased, but for different-sex couples only. For same-sex couples, they reached a record high (10,000) and largely outnumbered marriages. There were more marriages between two women than between two men, probably because lesbian couples may wish to start a family now that they have legal access to medically assisted reproduction. For different-sex marriages (both first marriages and remarriages), age at marriage continued to increase, reaching 35.8 years for women and 38.2 years for men. In 2021, men married 2.4 years later than women, on average. The age difference between spouses was above 4 years for married different-sex and lesbian couples, and above 7 years for gay marriage partners. The age gaps between partners entering a PACS union were slightly smaller but followed the same pattern.

There were an estimated 667,000 deaths in the whole of France in 2022. The crude death rate was 9.8 per 1,000 inhabitants, and life expectancy at birth was 79.3 years for men and 85.2 years for women. Mean length of life has still not returned to its 2019 level, when it stood at 79.7 years for men and 85.6 years for women. Alongside the COVID-19 pandemic, 2022 was marked by two flu epidemics (March–April 2022 and December 2022) and three severe heatwaves during the summer. Consequently, the number of deaths was 45,800 above the expected level.

The gender gap in mortality narrowed again in 2022 (6.0 years vs. 8.3 years in 1980) but remains much higher than in the other countries of Western Europe.

Male excess mortality varies with age. It now peaks at ages 25 and 60, a shift of 5 years compared to 1980, when the peak ages were 20 and 55. Male

excess mortality increases sharply over time beyond age 80, partly explaining the high share of women among centenarians (85%).

While cancer mortality is decreasing, female lung cancer is an important exception. Lung cancer deaths among women have increased steadily, even accelerating in the 1980s, while for men, this cause of death has been trending downward since the 1990s.

I. General population trends and age structure

1. Slow population growth in 2022, below that of 2021

On 1 January 2023, the population of France was 68.04 million, of whom 2.2 million in the overseas departments and regions, or 3.2% of the population (Papon, 2023). In 2022, it increased by 200,000⁽¹⁾ (207,000 in 2021), representing a growth rate of 3.20 per 1,000 (3.60 per 1,000 in 2021).⁽²⁾ While the French population has reached a new maximum, it is growing more slowly, with an annual rate of increase only half that of 2005 (Appendix 1⁽³⁾).

The COVID-19 pandemic had a major impact on the population dynamics of 2020 and 2021 (Breton et al., 2021, 2022). The health crisis was followed by other economic and political upheavals, but also by episodes of extreme weather, all of which had lasting effects on demographic behaviours in 2022 and early 2023.

Quarterly numbers of births reached historical lows for 4 consecutive quarters (last half of 2022 and first half of 2023), probably due in part to the direct and indirect consequences of rising inflation on household living conditions (Adam et al., 2022), but also to the uncertainties linked to the Russian invasion of Ukraine (Figure 1). The climate crisis, whose effect on births is still difficult to measure, had a measurable impact on mortality, with a series of peaks linked to the heatwaves of June, July, and August 2022 (Santé publique France, 2022a, 2022b; Pison, 2023). In 2022, natural increase (difference between births and deaths) was the lowest since the Second World War (+56,000 in 2022); it was even negative for 2 quarters (Q1 and Q4). Immigration is an ever stronger component of the demographic dynamics of France (Lê, 2021) due in part to the shrinking contribution of natural increase. Before or after adjustment for migration, net migration is now between 2.5 and 2.9 times

(1) This figure is the difference between the population counts on 1 January 2023 and 1 January 2022 before adjustment for migration. Taking account of INSEE's adjustment for migration in 2022, the total increase is around 217,000 (Table 1). Following a change in the census questionnaire, an adjustment was introduced to calculate net migration from 2015 to ensure comparability between successive annual population counts. See: <https://www.insee.fr/fr/information/2383177>

(2) These rates are different from those without adjustment for migration traditionally published by INSEE and shown in Table 1 (Papon, 2023).

(3) The database of appendices to this article is available at: http://hdl.handle.net/20.500.12204/_ZzxWlWb-5e4nGnwWpQe

Table 1. Indicators of population change, metropolitan France and whole of France, 1990, 2000, 2010, and since 2015

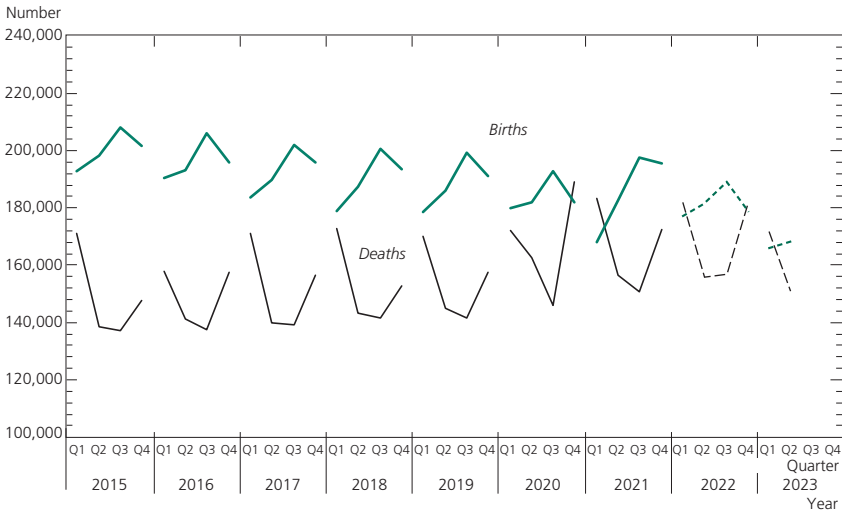
Years	Population on 1 January (thousands)		Births (thousands)		Deaths (thousands)		Natural increase (thousands)		Net migration (thousands)		Adjustment for migration (thousands)		Total net change (thousands)		Crude birth rate		Crude mortality rate (‰)		Total increase before adjustment (‰)		Total increase after adjustment (‰)	
	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	Metro. France	Whole of France
1990	56,577	57,996	762	793	526	534	236	259	80	77	-53	-52	316	336	13.4	13.6	9.3	9.2	5.6	5.8	4.6	4.9
2000	58,858	60,508	775	807	531	541	244	267	70	72	94	94	314	339	13.1	13.3	9.0	8.9	5.3	5.6	6.9	7.2
2010	62,765	64,613	802	833	540	551	262	282	43	39	0	0	305	321	12.8	12.9	8.6	8.5	4.9	5.0	4.9	5.0
2015	64,301	66,422	760	799	582	594	179	205	53	40	-63	-64	232	245	11.8	12.0	9.0	8.9	3.6	3.7	2.6	2.7
2020*	65,269	67,442	697	735	655	669	42	66	173	161	-34	-34	215	227	10.7	10.9	10.0	9.9	3.3	3.4	2.8	2.9
2021*	65,450	67,635	702	742	644	662	58	80	173	161	-34	-34	231	241	10.7	11.0	9.8	9.8	3.5	3.6	3.0	3.1
2022*	65,647	67,843	683	723	651	667	32	56	173	161	-17	-17	205	217	10.4	10.6	9.9	9.8	3.1	3.2	2.9	2.9
2023*	65,835	68,043	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a

Notes: * Estimated data; n.a = data not available. The numbers of births and deaths in 2021 are those published by INSEE on 28 July 2022. They differ slightly from those published in the demographic report in January 2023 (Papon, 2023).

Coverage: Whole of France/metropolitan France.

Source: INSEE, authors' calculations.

Figure 1. Quarterly numbers of births and deaths in France, 2015–2023



Note: Provisional data shown as dotted lines.

Coverage: Whole of France

Source: INSEE, authors' calculations.

higher than natural increase in France as a whole and between 4.9 and 5.4 times higher in metropolitan France (mainland France and Corsica).

Numbers of births and deaths depend partly on population size. To correct for a possible 'size effect', crude rates are calculated as the ratio of demographic events to the mean population: first, the crude death rate, which has been stable since 2021 (9.8 deaths per 1,000 population) but at a much higher level than before the COVID-19 pandemic (9.1 per 1,000 in 2019); and second, the crude birth rate, which has fallen sharply (10.6 per 1,000 in 2022 vs. 11.0 per 1,000 in 2021) and remains below the pre-pandemic level (11.2 per 1,000 in 2019).

2. With fewer migrant inflows, population growth in France in 2022 was weaker than in the rest of the EU-27

On 1 January 2023, the population of the 27 European Union countries (EU-27) was 448 million. After a 2-year decline due to the COVID-19 pandemic, it is now rising again much faster than before the health crisis (three times faster than in 2019). This upturn is due to net migration, since natural increase is strongly negative (1.3 million more deaths than births).

In 2022, France was still the European country with the highest natural increase in absolute terms, but in relation to population size, the increase is much smaller than in Ireland, Cyprus, Luxembourg, or Sweden. Natural increase is positive in just six EU-27 countries, down from nine in 2021 (it is now negative in Belgium, Denmark, and the Netherlands) and 14 in 2012.

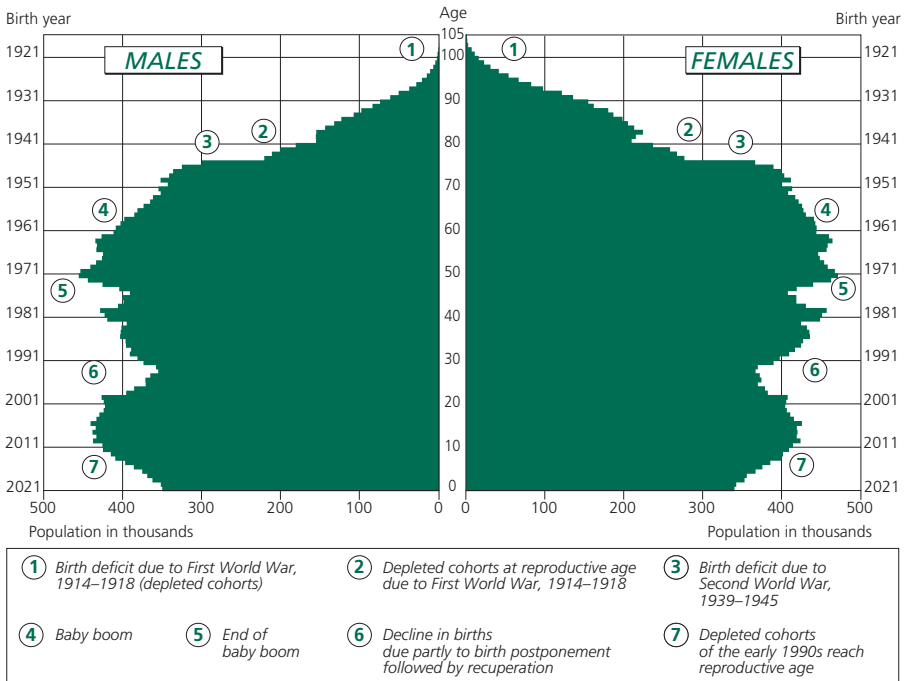
As migration inflows decreased sharply during the COVID-19 pandemic, the record net migration recorded in Europe in 2022 (4.0 million) is probably attributable to a catch-up effect but is also a consequence of political, social, and economic crises in many countries, especially Syria, Afghanistan, and Ukraine. Population growth in many European countries is driven mainly by migration. This is notably the case in Germany, Spain, Portugal, and the Czech Republic. Net migration is negative in just two countries: Greece (−0.2 per 1,000) and Hungary (−4.6 per 1,000).

While the French population grew in 2022, the annual increase was just half that observed across the EU-27. France is among the bottom third of European countries in terms of population growth (18th position). The population is shrinking in seven countries: Hungary, Poland, Bulgaria, and Slovakia in Eastern Europe, but also Italy, Croatia, and Greece.

3. One-tenth of the French population in 2023 is over 75

The age-sex structure of the French population pyramid on 1 January 2023 is increasingly characteristic of an ageing population (Figure 2, Figure 3) with a narrowing base and a summit widening as the baby-boom cohorts advance in age. While the under-20s still outnumber the population aged 65

Figure 2. Population pyramid of France on 1 January 2023



Coverage: Whole of France (including Mayotte).

Source: INSEE.

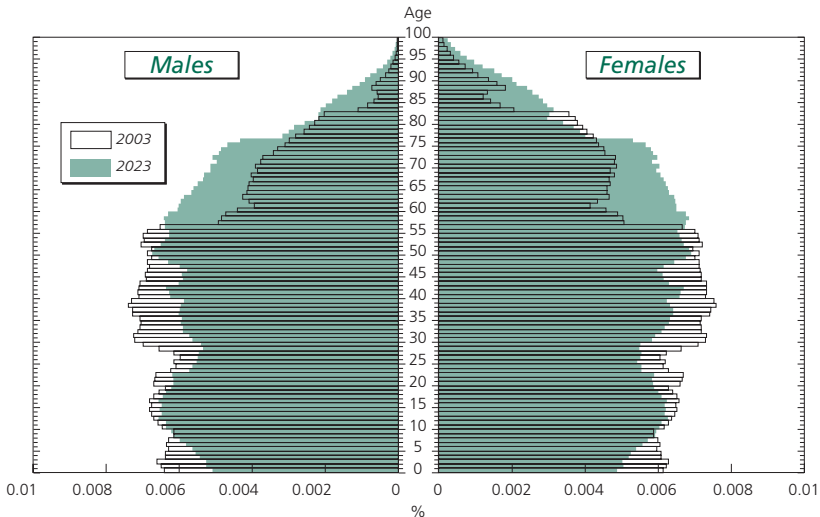
and over, the gap is steadily narrowing. The share of under-20s is now just 2.2 percentage points higher than that of the over-65s, down from 9.3 points in 2003 (Appendix 2). For the first time, the over-75s now represent over 10% of the total population (10.2% vs. 7.6% in 2003). There were more than 30,000 centenarians in 2023 compared with slightly fewer than 12,000 only 2 decades ago. Compared with other European countries, the number and share of centenarians is high and likely to exceed 100,000 by 2040 (Blanpain, 2023).

France is nonetheless still a young country compared to the European Union as a whole; its population has a median age of 42.2 years versus 44.4 years for the EU-27. It ranks 9th in median age; the youngest countries are Cyprus (38.2), Ireland (38.8), Luxembourg (39.7), Malta (40.4), and Sweden (40.7). The three oldest countries are in Southern Europe: Italy (48.0), Portugal (46.8), and Greece (46.1), followed closely by Germany (45.4).

In 2022, France was a European outlier in population age structure, with a relatively high proportion of both under-20s (2nd highest in Europe) and of people aged 65 and over (11th highest) (Figure 3). In half of the EU-27 countries, the share of over-65s is now equal to or greater than the share of under-20s (Figure 4, countries under the diagonal line).

This means that France is the EU-27 country with the highest dependency ratio⁽⁴⁾ (0.81 vs. 0.70 in EU-27, the level observed in France 20 years ago).

Figure 3. Age structure of the French population, 1 January 2003 and 1 January 2023

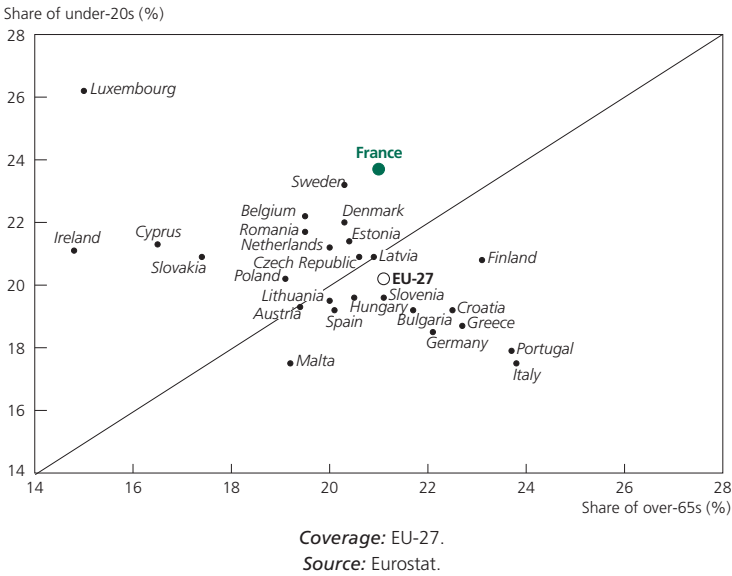


Coverage: Whole of France (including Mayotte).

Source: INSEE.

(4) Ratio of the population aged under 20 and over 65 to the population aged 20–64.

Figure 4. Share of over-65s and of under-20s in the EU-27 on 1 January 2022

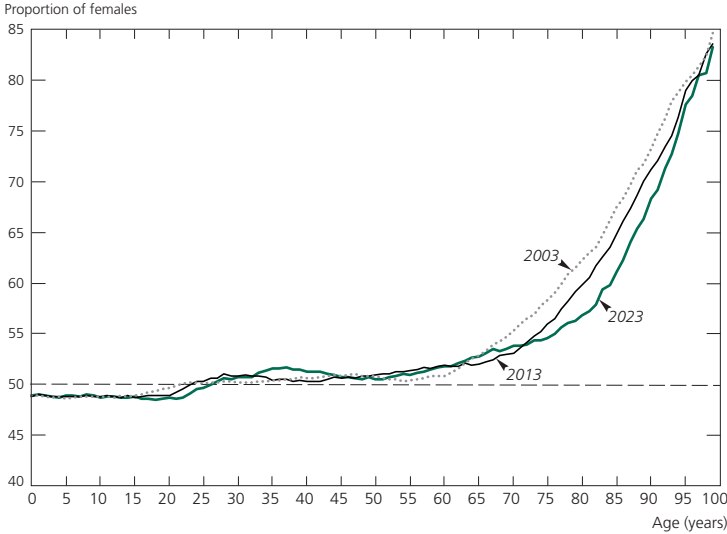


4. More women than men in the population, but a stable proportion over time

On 1 January 2023, women outnumbered men in France, making up 51.6% of the population (35.1 million women vs. 32.9 million men), due mainly to earlier male mortality. The sex distribution of the population varies with age. As slightly more boys are born than girls (105 boys per 100 girls), males outnumber females at birth, but the gap rapidly narrows, and by early adulthood the situation is reversed. Over age 60, the proportion of women increases exponentially (Figure 5). The combination of population ageing and the over-representation of women at older ages should lead to a feminization of the population. This has not yet occurred, however, or is happening very slowly; the share of females has risen from 51.5% to 51.6% in 20 years. The reason for this apparent paradox is that beyond age 70, the proportion of women at each age decreased between 2013 and 2023 (Figure 5) due to a narrowing of the gender gap in life expectancy and the progressive extinction of the depleted cohorts of men who fought in the Second World War. If the population had not aged, the proportion of women in the population would have decreased.

The proportion of women in France is slightly higher than in the EU-27 as a whole (51.6% vs. 51.1%). This is not due to a difference in age distribution. If the French population had the same age structure as that of the EU-27, the proportion would be 51.7% (known as the standardized proportion of females). The Baltic countries, Portugal, and Hungary have the most feminized populations, with more than 52% of females (observed and standardized proportions). Women form a minority in only three countries: Malta (48.2%), Luxembourg (49.6%),

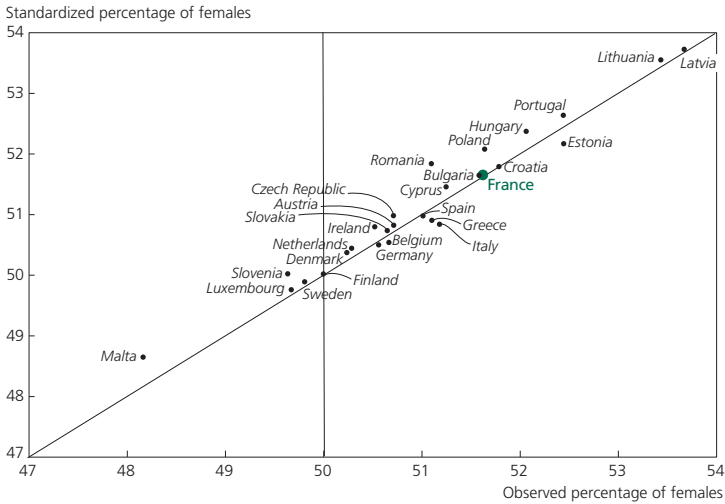
Figure 5. Proportion of women at each age on 1 January 2003, 2013, and 2023, France



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

and Sweden (49.7%) (Figure 6). These cross-country variations are due mainly to the sex composition of migration flows, with a very strong correlation between the proportion of females in the population and mean net migration rates over the 2003–2022 period ($r = -0.8$); countries with a high proportion of females are generally those where migration rates are low, and vice versa.

Figure 6. Proportion of females in the observed and standardized population of the EU-27 countries in 2022

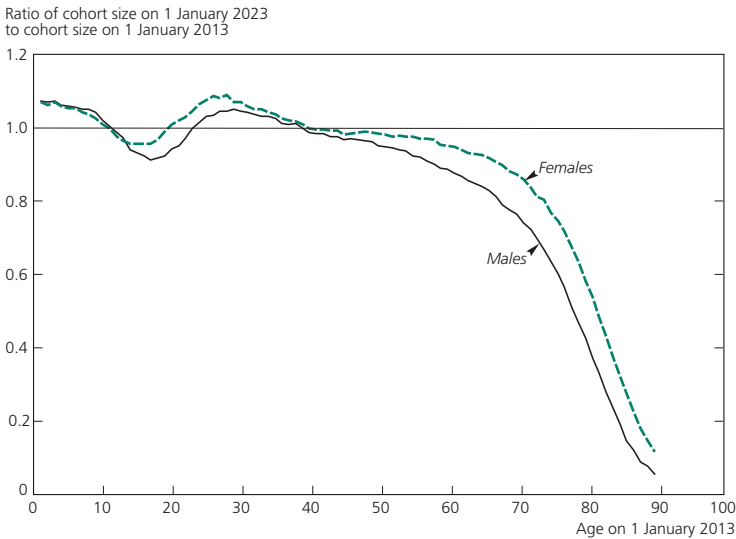


Coverage: EU-27.
Source: Eurostat.

5. The female population is more affected by migration dynamics

The demographic dynamics of male and female populations between two dates can be measured by comparing estimated ‘apparent’ population change using ratios of the size of a single birth cohort on two different dates.⁽⁵⁾ In the absence of migration and mortality, this size would remain unchanged between two dates, giving a ratio of 1, and in the absence of migration, this ratio should always be below 1. Between 2013 and 2023, these ratios vary with age in a generally similar manner for males and females, but with certain disparities (Figure 7). At the youngest ages, ratios are well above 1 (between ages 0 and 10 or 1 and 11), a sign of positive net migration.⁽⁶⁾ This ratio is again above 1 for women aged 19–38 in 2013 and for men aged 22–33. Beyond age 40, the effect of mortality outweighs that of migration; ratios are below 1 and decrease rapidly for men due to excess male mortality.

Figure 7. ‘Apparent’ change in size of birth cohorts between 1 January 2013 and 1 January 2023, France



II. Immigration from third countries

This section describes recent immigration trends⁽⁷⁾ based on residence permit statistics. It concerns third-country nationals who must hold a residence

(5) ‘Apparent’ population change corresponds to the difference in the size of a given birth cohort on two different dates. It combines net migration and natural increase (which is necessarily negative).

(6) Along with the effect of under-enumeration of the youngest children in censuses (Tomkinson, 2021, 2023; Toulemon, 2017).

(7) By definition, immigrants are persons born outside France to non-French parents, whether or not they subsequently acquire French nationality.

permit to reside in France, so immigrants from countries of the European Economic Area⁽⁸⁾ and Switzerland are excluded (see Box 1 for an estimate based on other sources). Following its departure from the European Union, the United Kingdom has been considered as a third country since 1 January 2021. To count migration flows, comparisons must necessarily remain consistent over time, so statistics must be established on a constant geographical basis. This means that (a) we do not count inflows from countries whose nationals were formerly required to hold a residence permit but are now exempted; (b) we do not include flows from the United Kingdom (and British overseas territories) in overall flows in 2021; they are presented separately.

Inflows of third nationals settling legally in France are estimated via the numbers of residence permits and long-term visas valid as residence permits granted by prefectures in France⁽⁹⁾ and by embassies and consulates abroad. The relevant data are drawn from the system used by the French Ministry of the Interior to track the status of foreigners residing in France (Application de gestion des dossiers des ressortissants étrangers en France, or AGDREF) and transmitted annually to INED. The method developed by d'Albis and Boubtane (2015) is used to construct these flows. It applies the basic principle whereby people are counted in the flows of the year in which they receive their first residence permit valid for 1 year or more.⁽¹⁰⁾ This is generally the same as the year of entry, although in some cases it may be later, notably when the person (a) resided legally in France after receiving one or more permits lasting less than a year; (b) resided illegally in France and was later regularized; or (c) entered France as a minor (minors are not required to hold a residence permit). Consequently, the 'inflows' referred to here correspond specifically to the flow of people who obtain permanent migrant status, i.e. individuals legally authorized to reside in France for at least a year. They are not an estimation of physical entries into French territory which, for their part, are neither observed nor recorded in France. Likewise, departures are not measured here. Last, due to the delays in registering certain types of residence permits, migration flows cannot be accurately determined beyond 2021.

1. In 2021, inflows return to the level observed before the COVID-19 pandemic

Table 2 shows inflow data, as defined previously, for the years 2016 to 2021. Totalling 251,650 people, flows in 2021 returned to their 2019 level. After the

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

(9) Excepting New Caledonia, Polynesia, and Wallis and Futuna.

(10) The Ministry of the Interior also publishes a complementary series of migration flow statistics based on a count of all first residence permits issued to adults. Its scope is different as it includes residence permits valid for less than 1 year which will not necessarily be renewed by a longer-term permit. The inflows calculated by the Ministry thus include temporary migration.

Box 1. Estimating inflows from countries whose nationals are not required to hold residence permit

By definition, nationals of these countries cannot be counted using data from residence permit registers. INSEE estimates these entries using census data. These statistics are available at: <https://www.insee.fr/fr/statistiques/7454727#onglet-2>. INSEE estimates that 246,000 people entered France in 2021 (including from countries of the European Economic Area, Switzerland, and the United Kingdom), of whom 101,000 from Africa, 78,000 from Europe, 42,000 from Asia, and 25,000 from the Americas and Oceania. Among Europeans, an estimated 29,000 people entered France from the 27 countries of the European Union.

sharp drop observed in 2020 linked to the restrictions on international mobility imposed during the COVID-19 pandemic, flows are returning to historically high levels (Appendix 3). In addition, 92,904 residence permits were granted in 2021 to nationals of the United Kingdom and its overseas territories. This high number is not necessarily associated with an inflow of people over the year, as it also includes the regularization of British nationals already living in France. The share of immigrants receiving a residence permit valid for 10 years or more (12.3% in 2021) has been increasing slightly since 2018. Residence permits valid for 10 years or more (typically resident cards) are rarely granted as first permits; they are generally granted after one or more permits of less than 10 years.

Table 2. Number of first residence permits valid for more than 1 year by first year of validity and period of validity

Period of validity	2016	2017	2018	2019	2020	2021
Less than 10 years	193,163	208,772	222,155	227,409	186,242	220,798
10 years or more	25,191	28,969	27,319	29,728	25,013	30,861
Total	218,354	237,741	249,474	257,137	211,255	251,650
Share of permits of 10 years or more in the total (%)	11.5	12.2	11.0	11.6	11.8	12.3

Coverage: Permits granted in France and in embassies and consulates abroad to foreign nationals, excluding citizens of the European Economic Area, Switzerland, and the United Kingdom (constant geographical area from 2016 to 2021). Permits granted in year n and included in the AGDREF data extracted in July of the year $n + 2$. Permits of less than 10 years are valid for between 364 and 3,649 days; permits of 10 years or more are valid for more than 3,649 days.

Source: H. d'Albis and E. Boubtane based on AGDREF data transmitted to INED by the Ministry of the Interior.

2. Other measures of inflows

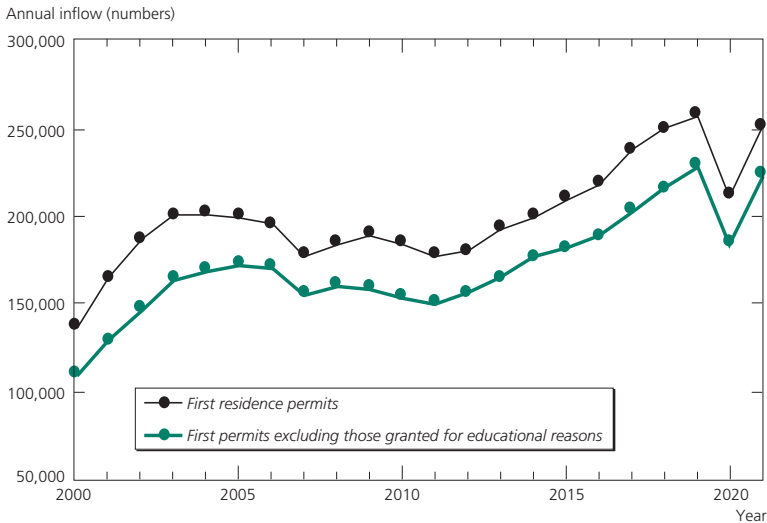
Inflows of foreigners can also be estimated from other statistical sources. INSEE uses population censuses and notably a question on the place of residence in the year preceding the census survey. According to Eurostat, which disseminates INSEE data, 180,252 third-country nationals entered France in 2019,⁽¹¹⁾

(11) Variable MIGR_IMM1CTZ; only available up to 2019 on the Eurostat website at the following address: <http://ec.europa.eu/eurostat/en/data/database> (page accessed on 27 September 2023).

76,885 fewer than the number estimated based on residence permits (Table 2). This low estimate is perhaps due partly to the non-exhaustive coverage of foreign students in the census survey, even if they remain in France for more than 1 year.

Counting students in migration flows is a complex problem. Under certain statistical conventions, they should be counted if they stay for at least 1 year in the host country; this is the approach applied here. Under others, based on the rules of the National Account System, they should not be counted unless they plan to stay in the host country after completing their education. This is the convention applied by the Organization for Economic Cooperation and Development. Flows based on this convention can be estimated using the method proposed by d’Albis and Boubtane (2021b) by applying the rule of the first residence permit valid for more than 1 year to all permits except those granted for educational reasons. Hence, while people who hold a student permit throughout their stay in France are not counted (even if they stay for more than 1 year), those who receive a permit for another reason after holding a student permit are counted in the year of their first change of status. Figure 8 shows inflows since 2000 measured with these two methods. If we ignore first residence permits granted for educational reasons, annual inflows are necessarily smaller (223,245 people in 2021), but the numbers calculated using both methods have been evolving in parallel for the last 2 decades.

Figure 8. Annual inflows based on number of residence permits, including or excluding those granted for educational reasons



Coverage: Permits granted in France and in embassies and consulates abroad to foreign nationals, excluding citizens of the European Economic Area, Switzerland, and the United Kingdom (constant geographical area from 2016 to 2021). Permits granted in year n and included in the AGDREF data extracted in July of the year $n + 2$.

Source: H. d’Albis and E. Boubtane based on AGDREF data transmitted to INED by the Ministry of the Interior.

3. Two-thirds of permits granted to young adults

Whatever the reason for admission, new immigrants counted in total inflows are young. In 2021, people aged 18–34 represented 65.3% of all arrivals (Table 3) and 72.3% of all immigrants aged 18 and over when they received their first residence permit. Since 2020, the share of minors in inflows has fallen. It now stands at 9.6%, or 24,270 people, down from 31,491 in 2019. However, this figure for minors should be treated with caution: by definition, only minors with a residence permit⁽¹²⁾ are counted in inflows. Foreign minors do not have to hold a residence permit but may need to obtain one if they wish to travel outside France, for example. Minors born in France to foreign parents are, by definition, not counted as immigrants. The first row of Table 3 thus only includes minors born abroad who hold a residence permit.

Table 3. Distribution (%) of first residence permits valid for 1 year or more by first year of validity and age group

Age group	2016	2017	2018	2019	2020	2021
0–17*	10.3	10.3	10.8	12.2	9.3	9.6
18–34	63.1	64.5	64.0	62.5	66.0	65.3
35–64	24.9	23.7	23.5	23.6	23.2	23.6
65+	1.8	1.6	1.6	1.7	1.5	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

* Foreign minors are not required to hold a residence permit. The first row includes minors born abroad who hold a first residence permit valid for more than 1 year.

Coverage: Permits granted in France and in embassies and consulates abroad to foreign nationals, excluding citizens of the European Economic Area, Switzerland, and the United Kingdom (constant geographical area from 2016 to 2021). Permits granted in year n and included in the AGDREF data extracted in July of the year $n + 2$.

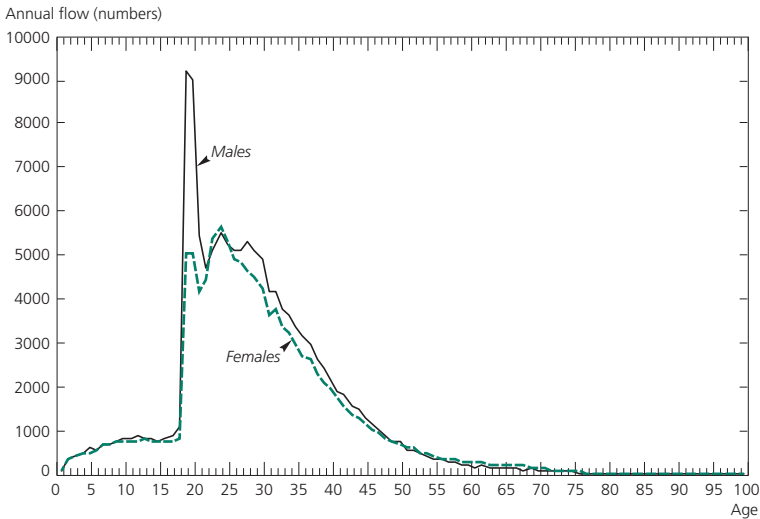
Source: H. d’Albis and E. Boubtane based on AGDREF data transmitted to INED by the Ministry of the Interior.

Figure 9 gives a more detailed representation of inflows by age and sex in 2021. The spike at ages 18 and 19 observed each year corresponds to people who arrived as minors and who apply for a residence permit when they reach age 18, often to enter the labour market. This spike is pronounced for men⁽¹³⁾ and represented more than 28,000 permits at ages 18 and 19 compared with more than 10,000 for women. In all, 18.5% of women and 23.0% of men with a new residence permit are under age 20. Students also contribute to the large share of young people in the age distribution of inflows. Apart from the male spike at ages 18–19, the age distributions of women and men are very similar. Their mean age at arrival was 29.0 and 28.0 years, respectively, in 2020, compared with 29.3 and 29.1 years in 2015, a notable age decrease for men.

(12) In most cases, this permit is called a *Document de circulation pour étranger mineur*. It was instituted by a decree published on 24 December 1991.

(13) This difference may be linked to girls applying for a residence permit more frequently than boys before they reach age 18, although the reason for this remains unknown.

Figure 9. Age and sex distribution of first residence permits valid for at least 1 year granted in 2021



Coverage: Permits granted in France and in embassies and consulates abroad to foreign nationals, excluding citizens of the European Economic Area, Switzerland, and the United Kingdom (constant geographical area from 2016 to 2021). Permits granted in year n and included in the AGDREF data extracted in July of the year $n + 2$.

Source: H. d’Albis and E. Boubtane based on AGDREF data transmitted to INED by the Ministry of the Interior.

4. Almost two-thirds of permits are granted to African nationals

Most third-country nationals who enter France are from Africa. Their share has decreased slightly, accounting for 63% of inflows in 2021, down from 64.6% the previous year (Table 4), the highest percentage recorded since this data series began (d’Albis and Boubtane, 2015). By comparison, inflows of Asian nationals are almost 3 times smaller than inflows of African nationals.

5. Inflows for educational and employment reasons at their highest level since 2000

Inflows can be broken down by reason for admission stated on the first residence permit valid for more than 1 year (Table 5). The leading reason for admission in 2021 was family reunion, accounting for 39.6% of entries in that year. The other main reasons were education (27.8%), humanitarian (12.8%), and employment (12.3%). There were 99,704 admissions for family reasons, slightly fewer than in 2019. Among people admitted for this reason, 39.3% were relatives of a French national. A total of 69,901 people were admitted for educational reasons,⁽¹⁴⁾ the highest number since this data series began (i.e. since 2000; cf. d’Albis and Boubtane, 2015). They now account for

(14) All registered students with a residence permit did actually come to France as these permits are validated by the police after arrival.

Table 4. Breakdown and distribution (%) of first residence permits valid for 1 year or more by first year of validity and continent of origin

Continent of origin	2016	2017	2018	2019	2020	2021
Numbers						
Africa	126,171	138,921	147,611	157,886	136,544	158,599
Americas	20,437	21,146	22,961	21,977	16,033	20,647
Asia ^(a)	55,920	61,315	63,224	61,735	46,976	58,496
Europe ^(b)	14,541	15,036	14,423	14,251	10,712	12,697
Oceania	803	924	927	805	632	764
Total ^(c)	218,354	237,741	249,474	257,137	211,255	251,650
Proportion (%)						
Africa	57.8	58.4	59.2	61.4	64.6	63.0
Americas	9.4	8.9	9.2	8.5	7.6	8.2
Asia ^(a)	25.6	25.8	25.3	24.0	22.2	23.2
Europe ^(b)	6.7	6.3	5.8	5.5	5.1	5.0
Oceania	0.4	0.4	0.4	0.3	0.3	0.3
Total ^(c)	100.0	100.0	100.0	100.0	100.0	100.0
<p>(a) Türkiye is included in Asia. (b) Europe includes all European countries outside the European Economic Area, Switzerland, and the United Kingdom. (c) The total is not equal to the sum due to missing values (origin of person unknown). Coverage: Permits granted in France and in embassies and consulates abroad to foreign nationals, excluding citizens of the European Economic Area, Switzerland, and the United Kingdom (constant geographical area from 2016 to 2021). Permits granted in year n and included in the AGDREF data extracted in July of the year $n + 2$. Source: H. d'Albis and E. Boubtane based on AGDREF data transmitted to INED by the Ministry of the Interior.</p>						

27.8% of total inflows. There were 32,187 admissions for humanitarian reasons. They mainly concern two types of situations: (a) people admitted as refugees, stateless persons, or beneficiaries of territorial asylum or subsidiary protection (28,383 people)⁽¹⁵⁾ or (b) foreigners who are ill (3,479 people). The number of permits granted to refugees remains below the peak recorded in 2017, when 30,180 permits were granted in response to the increase in asylum applications since 2014, due largely to the war in Syria (d'Albis and Boubtane, 2018). Admissions for employment reasons, which plummeted in response to travel restrictions imposed during the COVID-19 pandemic, rose sharply in 2021, with 30,995 admissions, the highest number recorded since the data series began. These inflows comprised employees or self-employed people (17,790 admissions), *passport talent*⁽¹⁶⁾ holders (6,444 admissions), and seasonal or temporary workers with a residence permit valid for more than 1 year (6,761 admissions).

(15) Admissions for humanitarian reasons only include people whose asylum application has been processed and approved, so this figure does not include all asylum seekers.

(16) The *passport talent* residence permit is granted to people who are highly qualified, who want to set up a business or invest in France, or who work the arts. It aims to promote qualified migration (d'Albis and Boubtane, 2021a).

Table 5. Breakdown and distribution (%) of first residence permits valid for 1 year or more by first year of validity and reason for admission

Reason for admission	2016	2017	2018	2019	2020	2021
Number						
Family	89,169	89,849	93,969	106,213	86,830	99,704
Education	56,507	63,809	65,786	64,262	59,879	69,901
Humanitarian	25,866	34,233	31,883	33,800	27,128	32,187
<i>including refugee*</i>	19,581	30,180	27,887	29,403	23,922	28,383
Employment	18,151	21,812	27,518	30,888	23,166	30,995
Other	28,661	28,038	30,318	21,974	14,252	18,863
Total	218,354	237,741	249,474	257,137	211,255	251,650
Proportion (%)						
Family (%)	40.8	37.8	37.7	41.3	41.1	39.6
Education (%)	25.9	26.8	26.4	25.0	28.3	27.8
Humanitarian (%)	11.8	14.4	12.8	13.1	12.8	12.8
<i>including refugee* (%)</i>	9.0	12.7	11.2	11.4	11.3	11.3
Employment (%)	8.3	9.2	11.0	12.0	11.0	12.3
Other (%)	13.1	11.8	12.2	8.5	6.7	7.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
<p>* The 'including refugee' row covers permits granted on the following grounds: 'refugee and stateless, territorial asylum, and subsidiary protection'.</p> <p>Coverage: Permits granted in France and in embassies and consulates abroad to foreign nationals, excluding citizens of the European Economic Area, Switzerland, and the United Kingdom (constant geographical area from 2016 to 2021). Permits granted in year n and included in the AGDREF data extracted in July of the year $n + 2$. This table is updated each year to take account of new information on reasons for admission communicated by the Ministry of the Interior.</p> <p>Source: H. d'Albis and E. Boubtane based on AGDREF data transmitted to INED by the Ministry of the Interior.</p>						

Reasons for admission are distributed very differently across continents of origin (Table 6). The main reason for admission from all continents is still family reunion, except for people from Asia, among whom this reason is under-represented (27% of Asian admissions in 2021 compared with 39.6% on average). It is over-represented among European people from outside the European Economic Area, Switzerland and the United Kingdom (50.9%), and among Africans (43.3%). Educational reasons are under-represented among Europeans (11.1% vs. 27.8% on average) and over-represented among people from the Americas (29.3%) and Africa (29.2%). Humanitarian reasons account for a large share of permits granted to Asians, from the Near East especially (27.5% vs. 12.8% on average). They account for a small share of the total among people from Africa (8.2%) and the Americas in particular (6.3%). Due to the large numbers involved, African nationals account for most admissions for all the reasons considered, except humanitarian reasons, for which Asian nationals form the majority.

Table 6. Breakdown and distribution (%) of first residence permits valid for 1 year or more by first year of validity, continent of origin, and reason for admission

Continent of origin and reason for admission	2016	2017	2018	2019	2020	2021
Africa						
Family	60,895	61,468	64,204	71,432	60,766	68,663
Education	31,321	38,288	38,891	39,986	40,367	46,313
Humanitarian	11,329	14,357	13,583	15,563	12,732	12,945
Employment	8,440	10,939	15,307	18,933	14,445	20,359
Africa (%)						
Family	48.3	44.2	43.5	45.2	44.5	43.3
Education	24.8	27.6	26.3	25.3	29.6	29.2
Humanitarian	9.0	10.3	9.2	9.9	9.3	8.2
Employment	6.7	7.9	10.4	12.0	10.6	12.8
Americas						
Family	7,518	7,653	8,279	9,343	7,115	8,426
Education	6,113	6,427	6,806	6,024	4,810	6,055
Humanitarian	416	709	789	980	683	1,306
Employment	2,514	2,717	3,075	3,055	2,135	2,513
Americas (%)						
Family	36.8	36.2	36.1	42.5	44.4	40.8
Education	29.9	30.4	29.6	27.4	30.0	29.3
Humanitarian	2.0	3.4	3.4	4.5	4.3	6.3
Employment	12.3	12.8	13.4	13.9	13.3	12.2
Asia^(a)						
Family	14,791	14,990	15,536	18,192	13,199	15,802
Education	17,261	17,291	18,464	16,749	13,369	15,991
Humanitarian	10,399	15,257	14,366	14,468	11,921	16,069
Employment	6,107	6,901	7,779	7,468	5,439	6,570
Asia^(a) (%)						
Family	26.5	24.4	24.6	29.5	28.1	27.0
Education	30.9	28.2	29.2	27.1	28.5	27.3
Humanitarian	18.6	24.9	22.7	23.4	25.4	27.5
Employment	10.9	11.3	12.3	12.1	11.6	11.2
Europe^(b)						
Family	5,581	5,359	5,554	6,801	5,413	6,463
Education	1,685	1,674	1,495	1,409	1,235	1,412
Humanitarian	3,527	3,700	2,947	2,533	1,578	1,626
Employment	909	1,004	1,127	1,190	948	1,334
Europe^(b) (%)						
Family	38.4	35.6	38.5	47.7	50.5	50.9
Education	11.6	11.1	10.4	9.9	11.5	11.1
Humanitarian	24.3	24.6	20.4	17.8	14.7	12.8
Employment	6.3	6.7	7.8	8.4	8.8	10.5

(a) Türkiye is included in Asia.

(b) Europe includes all European countries outside the European Economic Area, Switzerland, and the United Kingdom.

Coverage: Permits granted in France and in embassies and consulates abroad to foreign nationals, excluding citizens of the European Economic Area, Switzerland, and the United Kingdom (constant geographical area from 2016 to 2021). Permits granted in year n and included in the AGDREF data extracted in July of the year $n + 2$. This table is updated each year to take account of new information on reasons for admission communicated by the Ministry of the Interior.

Source: H. d'Albis and E. Boubtane based on AGDREF data transmitted to INED by the Ministry of the Interior.

6. Asylum seekers admitted for residence account for almost 19% of inflows from third countries

Asylum seekers may be admitted for residence in France (i.e. receive a residence permit of 1 year or more) in several ways. In the first case, if their application is accepted, they obtain a permit on humanitarian grounds and are counted as ‘refugees’ (Row 4, Table 5). The second case concerns those whose application is rejected, some of whom may be admitted for residence on different grounds, most often family reasons. Table 7 shows the annual number of people having submitted an asylum application to the French Office for the Protection of Refugees and Stateless Persons (Office français de protection des réfugiés et apatrides) and admitted for residence, for any reason. They totalled 47,389 people in 2021⁽¹⁷⁾ and represented 18.8% of overall inflows. In that year, the number of asylum seekers admitted for residence reached the highest level since the data series began. Asylum seekers are not admitted solely on humanitarian grounds, so the total number of admissions is higher than the number admitted for this reason alone;

Table 7. Numbers of people admitted for residence after applying for asylum, by first year of validity of first residence permit valid for 1 year or more, and distribution (%) by sex, continent of origin, and reason for admission

	2016	2017	2018	2019	2020	2021
Numbers	35,262	46,174	44,470	47,353	39,497	47,389
Share of women (%)	39.7	36.6	36.5	36.7	35.3	35.5
Continent of origin (%)						
Africa	36.9	38.2	38.8	42.2	44.6	43.3
Americas	3.0	2.8	2.8	3.0	2.5	3.4
Asia ^a	43.9	45.5	46.0	43.4	42.6	44.6
Europe ^b	15.3	12.9	11.9	10.7	9.6	8.1
Reason for admission (%)						
Family	24.2	21.2	24.0	24.8	25.7	27.3
Education	0.3	0.3	0.3	0.2	0.3	0.4
Humanitarian	62.9	68.9	65.3	65.2	63.5	62.9
Employment	6.3	5.1	5.8	5.5	6.3	5.8
(a) Türkiye is included in Asia.						
(b) Europe includes all European countries outside the European Economic Area, Switzerland, and the United Kingdom.						
Coverage: Permits granted in France and abroad to foreign nationals who applied for asylum between 1985 and the first year of validity of the first residence permit valid for 1 year or more. Permits granted in year n and recorded in the data extracted in July of the year $n + 2$.						
Source: H. d’Albis and E. Boubtane based on AGDREF data transmitted to INED by the Ministry of the Interior.						

(17) This is the year when the residence permit was issued. For figures based on the year when the asylum application was lodged, see d’Albis and Boubtane (2018).

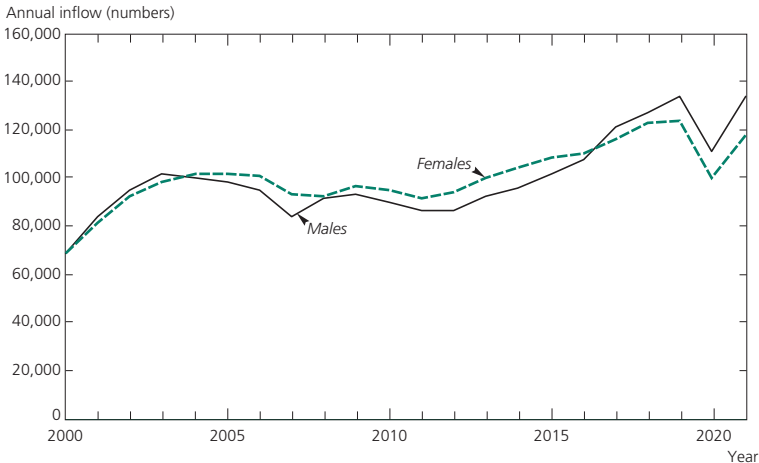
27.3% of asylum seekers who entered France in 2021 were admitted for family reasons.

The share of women among asylum seekers admitted for residence (35.5% in 2020) is lower than among the general population of residence permit holders. This proportion has been falling sharply since 2015, when it stood at 41.1%. Since 2019, people from Africa and Asia have accounted for most of these inflows, in similar proportions.

7. Most women migrate for family reasons, although the share admitted for education and employment reasons has increased sharply since 2006

Annual inflows of men and women have been very similar since 2000 (Figure 10). Women slightly outnumbered men between 2004 and 2016 but have been a minority since 2017.

Figure 10. Annual inflows by sex



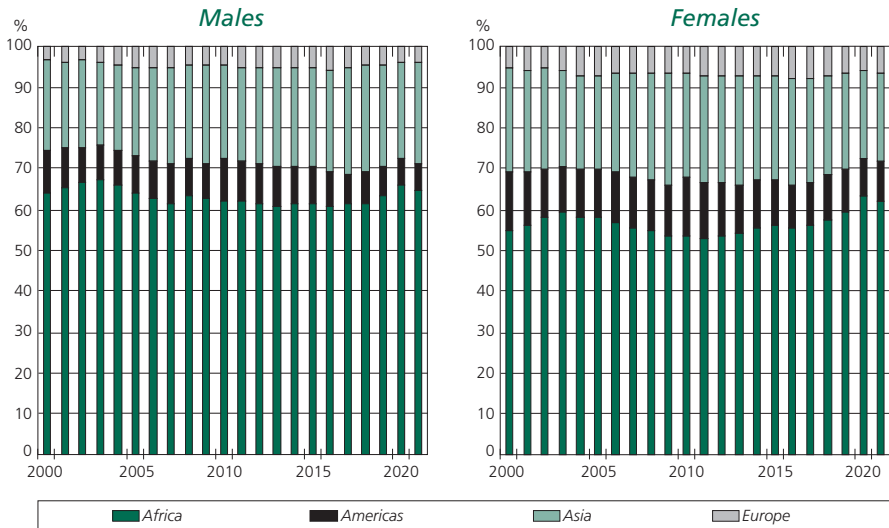
Coverage: Permits granted in France and in embassies and consulates abroad to foreign nationals, excluding citizens of the European Economic Area, Switzerland, and the United Kingdom (constant geographical area from 2016 to 2021). Permits granted in year n and included in the AGDREF data extracted in July of the year $n + 2$.

Source: H. d'Albis and E. Boubtane based on AGDREF data transmitted to INED by the Ministry of the Interior.

Since 2000, the largest share of women entering France has been from Africa. In 2021, African women represented 62% of total female inflows⁽¹⁸⁾ versus 55% in 2000 (Figure 11). The share of women from the Americas has declined slowly over the period, and that of women from Asia has fallen sharply since 2017. In 2021, the breakdown of female inflows by continent of origin was very similar to that of males, which has changed little since 2000.

(18) Excluding Oceania and permits where the country of origin is not recorded.

Figure 11. Distribution (%) of female and male inflows by continent of origin (excluding Oceania and unrecorded origin)



Note: Türkiye is included in Asia, and Europe includes all European countries outside the European Economic Area, Switzerland, and the United Kingdom.

Coverage: Permits granted in France and in embassies and consulates abroad to foreign nationals, excluding citizens of the European Economic Area, Switzerland, and the United Kingdom (constant geographical area from 2016 to 2021). Permits granted in year n and included in the AGDREF data extracted in July of the year $n + 2$.

Source: H. d'Albis and E. Boubtane based on AGDREF data transmitted to INED by the Ministry of the Interior.

Since 2000, family reunion has been the main reason for admission of women to France. In 2021, 54% of first residence permits issued to women⁽¹⁹⁾ were granted for family reasons, a share that has been declining steadily since 2006, when it stood at 68% (Figure 12). The share of female students, on the other hand, increased from 23% in 2006 to 31% in 2021, and that of women admitted for employment reasons rose from 2% to 5% over the same period. The gender gap in the share of admissions for family reunion remains large, and the differential has been widening since 2014; in 2021, it was 22 points higher for women than for men. Regarding admissions for humanitarian and employment reasons, the opposite situation is observed: the share of men exceeded that of women by 9 and 16 percentage points, respectively, in 2021. Among admissions for educational reasons, the shares of men and women are similar.

(19) Excluding admissions for other reasons or for which the reason is not recorded.

Figure 12. Distribution (%) of female and male inflows by reason for first admission (excluding other and unrecorded reasons).



Coverage: Permits granted in France and in embassies and consulates abroad to foreign nationals, excluding citizens of the European Economic Area, Switzerland, and the United Kingdom (constant geographical area from 2016 to 2021). Permits granted in year n and included in the AGDREF data extracted in July of the year $n + 2$.

Source: H. d'Albis and E. Boubtane based on AGDREF data transmitted to INED by the Ministry of the Interior.

III. Births and fertility

1. An accelerating decrease in births since September 2022

According to the latest INSEE estimates, there were 725,400 births in France in 2022,⁽²⁰⁾ 16,600 fewer than in 2021, 10,000 fewer than in 2020 and almost 28,000 fewer than in 2019, the most recent reference year, given the impact of the COVID-19 pandemic on fertility in 2020 and 2021 (Breton et al., 2022). A similar disruption was observed across Europe (Bujard and Andersson, 2022; Pomar et al., 2022). Births are concentrated between ages 25 and 35, and it was the women born between 1987 and 1997 who contributed most to birth numbers in 2022. France experienced a dip in births in the early 1990s, so these cohorts of women are small⁽²¹⁾ (Appendix 1). If fertility remains stable over the coming years, the number of births should start rising again when

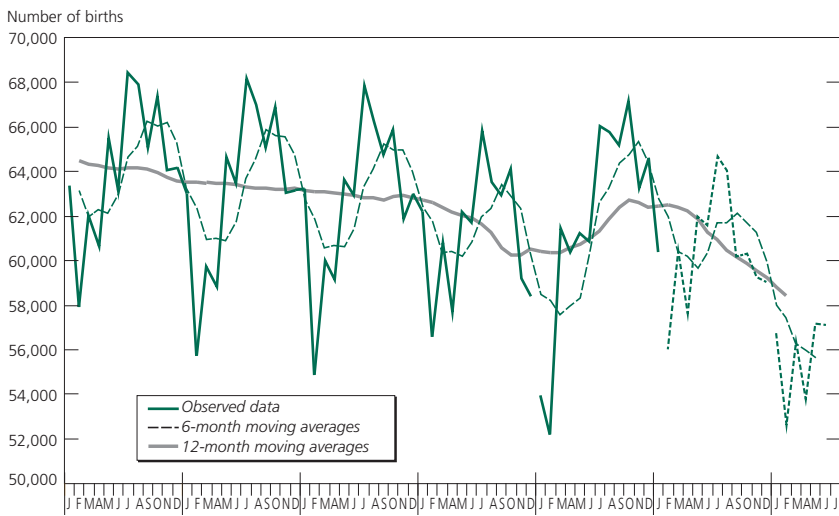
(20) This figure was obtained by summing the monthly birth estimates published on 27 July 2023. It is slightly higher (+0.3%) than the figure of 723,000 births published in early January. This figure will be readjusted throughout 2023.

(21) Variations in birth numbers over time are partly explained by changes in the number of women from one birth cohort to the next. Postponement of childbearing, without any real decline in cohort fertility, gave rise to a first dip in the mid-1970s (Breton and Brée, 2023).

the larger cohorts born between 1993 and 2008 reach their peak reproductive ages (Breton and Brée, 2023). That said, the drop in 2022 is linked above all to a decrease in period fertility, as the number of women of reproductive age is practically stable.⁽²²⁾ However, it is difficult to determine whether this fertility decline reflects temporary postponement of childbearing plans (for first births especially), abandonment of plans to have a child or another child, or a more frequent desire to remain childless or not have any more children.

While the decline in births accelerated in 2022, their seasonality is similar to that of previous years, before 2020 at least.⁽²³⁾ But birth numbers fell much more sharply from September and, contrary to the habitual pattern, fewer births occurred in December than in November (Figure 13). This downtrend continued until June 2023 at least. Births in September, October, and November 2022 correspond to conceptions at the beginning of that same year, a difficult time to make the long-term commitment associated with the birth of a child. COVID-19 cases were on the rise again in January 2022, inflation had been creeping up since the first quarter of 2021, and in February the escalating tensions between Russia and Ukraine culminated in open war.

Figure 13. Monthly variation in births in France, January 2016 to June 2022



Note: Provisional data shown as dotted lines.

Coverage: Whole of France.

Source: INSEE, civil records and population census, author's calculations.

(22) The size of the mean cohort of women of reproductive age is stable. It is calculated by combining the components of fertility timing in the year with the age structure of women in the same year. For more details, see Breton et al., 2021, pp. 557–558. Details are not given here, but the size of the mean cohort has fallen from 404,772 to 403,640.

(23) It is difficult to compare monthly births in 2022 with those of 2020 and 2021 due to the major fluctuations in seasonality linked to the COVID-19 pandemic (Breton et al., 2022).

2. Period fertility at a 20-year low

The total fertility rate (TFR) in 2022 was slightly below 1.80 children per woman (1.796) for France as a whole and 1.76 for metropolitan France. It remains well above the values observed in the early 1990s (1.66 in 1993) but is at its lowest level for 20 years (1.80 in 1999). Excluding 2021, when it was exceptionally high,⁽²⁴⁾ the TFR has been decreasing steadily for 13 years, a trend already observed between 1964 and 1976, and then between 1982 and 1993 (see above). The pace of decline is much slower than in the first period, however, with -0.24 children per woman between 2010 and 2022 compared with -1.1 between 1964 and 1976.

The TFR is obtained by summing fertility rates by age (or age group). For each age group, the trends observed between 2013 and 2019 continued in 2022. Between 2019 and 2022 (2020 and 2021 are excluded for the same reasons as above), fertility rates decreased in all age groups before age 35, and the slight rise above that age was insufficient to make up for the shortfall (Table 8).

Table 8. Fertility by age group in France, 2017–2022

Age reached in the year	Sum of age-specific rates (per 1,000 women)						Absolute variation*				
	2017	2018	2019	2020	2021 (p)	2022 (p)	2017-2018	2018-2019	2019-2020 (p)	2020-2021 (p)	2021-2022 (p)
Below 20 years	30	29	28	26	24	24	-1	-1	-2	-2	0
20-24 years	224	215	212	201	188	184	-9	-3	-11	-13	-4
25-29 years	559	545	537	522	516	503	-14	-8	-15	-6	-13
30-34 years	636	634	632	622	644	622	-2	-2	-10	22	-22
35-39 years	345	347	350	347	363	357	2	3	-3	16	-6
40-44 years	92	94	96	95	97	98	1	2	-1	2	1
45+ years	6	7	7	7	7	8	0	1	0	0	1
Total (TFR*)	1,893	1,870	1,862	1,820	1,839	1,796	-23	-8	-42	19	-43
Mean age	30.5	30.6	30.7	30.8	30.9	30.9	0.1	0.1	0.1	0.1	0.0

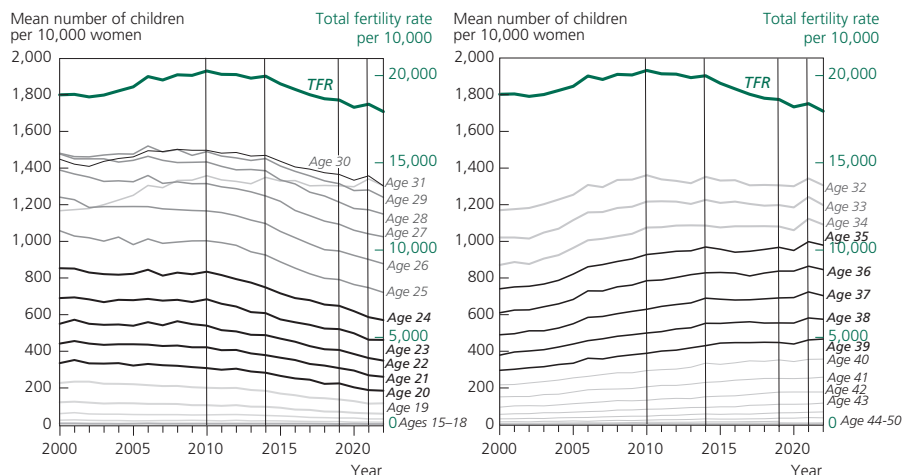
Notes: * TFR: total fertility rate (sum of age-specific fertility rates) expressed as a mean number of children per 1,000 women. Due to rounding, the total may differ slightly from the sum, and the variations may not correspond exactly to apparent differences. (p): provisional data.
Coverage: Whole of France.
Source: INSEE, authors' calculations.

A more detailed analysis by age over a 20-year period shows that since 2014—excluding the ‘parenthesis’ in 2020 and 2021—fertility rates have declined steadily at all ages under 32 while remaining stable or increasing very slightly above that age (Figure 14). This is the first time over the last 40 years

(24) Reflecting the recuperation of births that followed the postponement of conceptions during the first lockdown (Brée et al., 2021; Sobotka et al., 2022).

that such a pattern has been observed, in metropolitan France at least. Even between 1980 and 1993, when fertility rates under age 30 fell sharply (lowest TFR), rates over age 30 were still rising steadily. Any stabilization or increase in period fertility over the coming years will depend mainly on an increase in fertility rates after age 30.⁽²⁵⁾ Assuming that fertility at the youngest ages remains stable, rates over age 30 would need to increase by 0.2 children per woman to reach 2.0. Fertility among women aged over 30 would thus reach 1.2 children per woman, an attainable level currently observed in Ireland.

Figure 14. Age-specific fertility in France since 2002



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

Source: INSEE, civil records and census.

3. Fertility close to replacement level, until the 1992 birth cohort at least

Variations in the intensity of fertility or in the degree of population replacement should not be gauged via period fertility⁽²⁶⁾ (sum of fertility rates in a given year, or TFR) but rather via cohort fertility (sum of fertility rates measured in a birth cohort, or completed fertility). But this measure cannot be obtained until the women in a given cohort have reached age 50, the age beyond which fertility is practically zero. The completed fertility of the 1972 cohort, the most recent cohort to have reached this age, is 1.99 children per woman, close to the population replacement level. Completed fertility varies slowly and steadily. It reached its highest level in the 20th century, at 2.6 children per woman, in the cohorts born between 1925 and 1935, and stood at 2.2 children per woman for the 1945 cohort born just after the Second World War (Appendix 5). This

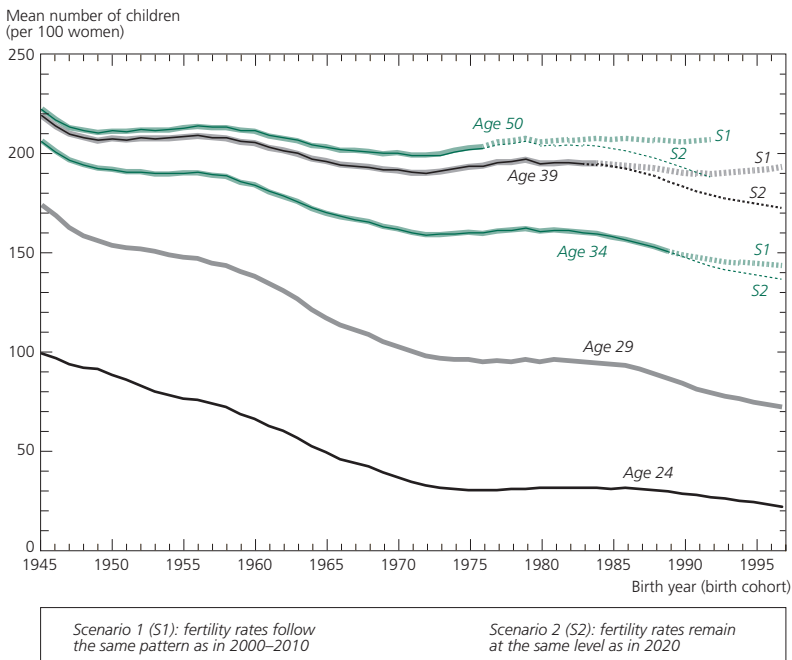
(25) Excluding the very unlikely prospect of an increase in fertility below age 30.

(26) This does not mean that the total fertility rate is unimportant. It partly determines the number of births, and shapes many aspects of public policy (Breton and Brée, 2023).

pattern is very different from that of the TFR which, between 1960 and 2022 (when the cohorts born between 1945 and 1972 had their children), it ranged between 2.91 in 1964 and 1.66 in 1993.

Completed fertility in future cohorts (those still of childbearing age) will depend on fertility rates in the next 10 to 20 years. These rates can be estimated for two possible scenarios (Figure 15). Under the first scenario, fertility rates at different ages increase at the same rate as observed between 2000 and 2010, the most recent period of rapid recovery of age-specific fertility beyond age 30 (S1). Under the second, more classical scenario, the fertility observed at each age in 2022 remains unchanged over subsequent years (S2). Whatever the scenario, the completed fertility of 1992 cohort is likely to be quite close to replacement level (1.89 children per woman under scenario S2) or above it (2.07 under scenario S1). But how will things evolve in the future? It is not straightforward to answer this question as the components of future trends are hard to predict. We do not know how the desire for children will evolve among future cohorts, what family policies will be implemented, how gender relations will change, or what the future economic, social, political, and climate conditions

Figure 15. Cumulative cohort fertility at different ages, 1945–1997 cohorts, France



Interpretation: Cumulative fertility at age 39 of women born in 1984 is 195 children per 100 women. If age-specific fertility rates remain stable after 2022, in the 1997 cohort this cumulative fertility will be 173 children per 100 women, and if rates follow the pattern observed between 2000 and 2010, it will be 193 children per 100 women.

Coverage: Metropolitan France.

Source: INSEE, civil records and population census, authors' calculations.

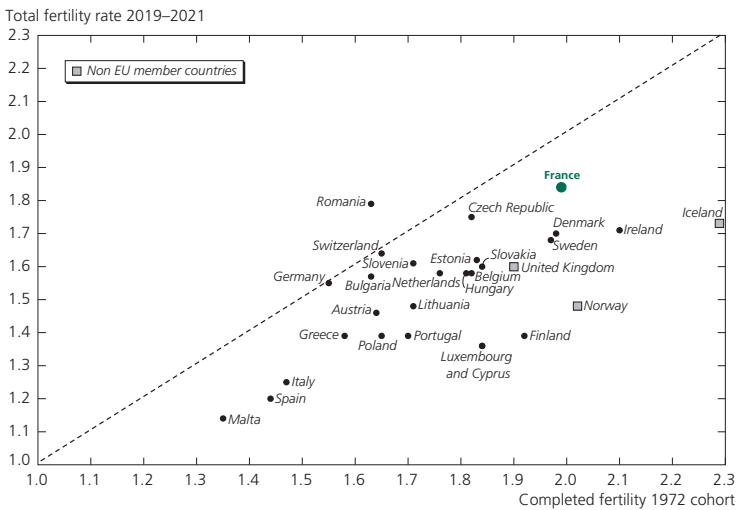
will be. Another difficulty is that data on birth order in French civil records are unreliable (Breton and Prioux, 2009), making it impossible to produce fertility projections based on the necessary combination of mother’s age and child’s birth order.

In the absence of projections, the current situation in France can be compared with that of other European countries to gauge how the French fertility model is liable to evolve in the coming years.

4. France still ranks first in Europe for period fertility, but not for cohort fertility

An overview of European fertility can be obtained by plotting the TFR of the 2019–2021 period against the completed fertility of the 1972 cohort (Figure 16), as these indicators are partly and significantly correlated ($R^2 = 0.45$). For all countries except Romania,⁽²⁷⁾ the completed fertility of the 1972 cohort is higher than the TFR.⁽²⁸⁾ This correlation shows that there is a relatively

Figure 16. Completed fertility of the 1972 cohort and total fertility rate in Europe, 2019–2021



Note: The countries in italics are not members of the EU-27.

Coverage: Europe.

Sources: Eurostat and authors’ calculations for EU-27; Human Fertility Database for Norway, United Kingdom, and Iceland.

(27) Fertility rates in Romania have increased sharply at all ages in recent years for reasons that remain unexplained, with a TFR that has risen from 1.50 to 1.80 in just 10 years (Breton et al., 2022).

(28) It would have been preferable to compare completed fertility with period fertility adjusted using the methodology proposed by Bongaarts and Feeney (1998), which partly corrects for the effect of changes in fertility timing on TFR, and is thus a better predictor of the fertility of cohorts still of childbearing age. Unfortunately, this formula cannot be applied without reliable statistics on birth order, which in certain countries, including France, are lacking. This indicator is given in the Human Fertility Database (<https://www.humanfertility.org>).

strong recent link between past and present fertility: it is quite high in Northern Europe and France, and quite low in Southern Europe and the Germanic countries. Despite a decline in recent years, period fertility in France is still the highest in Europe. Regarding cohort fertility, France still ranks behind Iceland and Norway (outside the EU-27), with a level quite similar to those of Denmark, Sweden, and Finland.

As is the case for period fertility, it is difficult to predict future trends in European cohort fertility. Based on cumulative fertility at age 30 (between 11% and 44% lower in the 1991 cohort than in the 1972 cohort), it will almost certainly be below replacement level in a large majority of countries.⁽²⁹⁾ Barring an implausibly rapid change in behaviours—trends tend to evolve slowly across cohorts—it will doubtless be only partially offset beyond age 30.

5. Men's period fertility is later and slightly higher than that of women. This is not the case for cohort fertility.

While fertility is generally studied in the female population, it can also be calculated for men. Certain recent editions of our demographic report include this information (Mazuy et al., 2015; Breton et al., 2021). In most countries, the gender difference in fertility models is explained by a sex ratio imbalance at reproductive ages, later male age at union, but also different variations in fertility timing and union timing across cohorts (Schoumaker, 2019; Dudel and Klüsener, 2021).

The indicators presented here use male and female age-specific fertility rates⁽³⁰⁾ published annually by INSEE. Male fertility in France is studied between ages 18 and 60, and female fertility between ages 15 and 50. In France, men's TFR was equal to or below that of women until 2010 but then overtook it (Figure 17A). If we compare fertility in the age range common to both sexes (18–50 years), the gender difference persists until 2014 but then disappears (Figure 17A). Adolescent female fertility has practically no impact on the gender gap. The difference is due almost exclusively to male fertility beyond age 50.

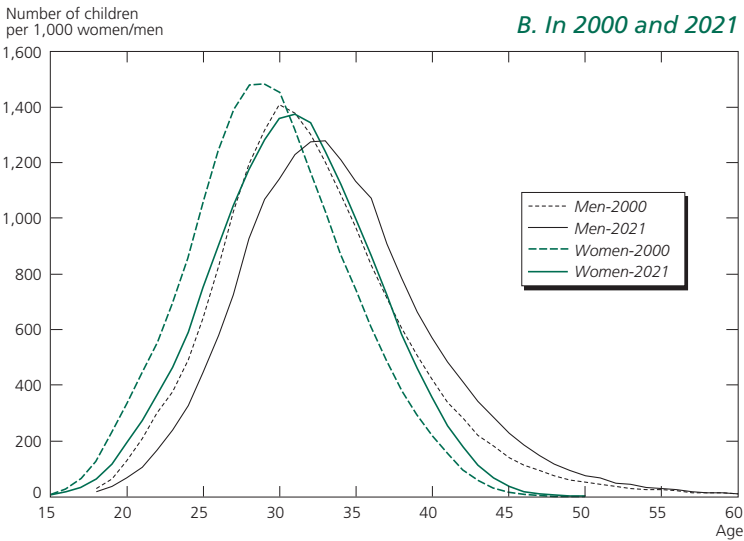
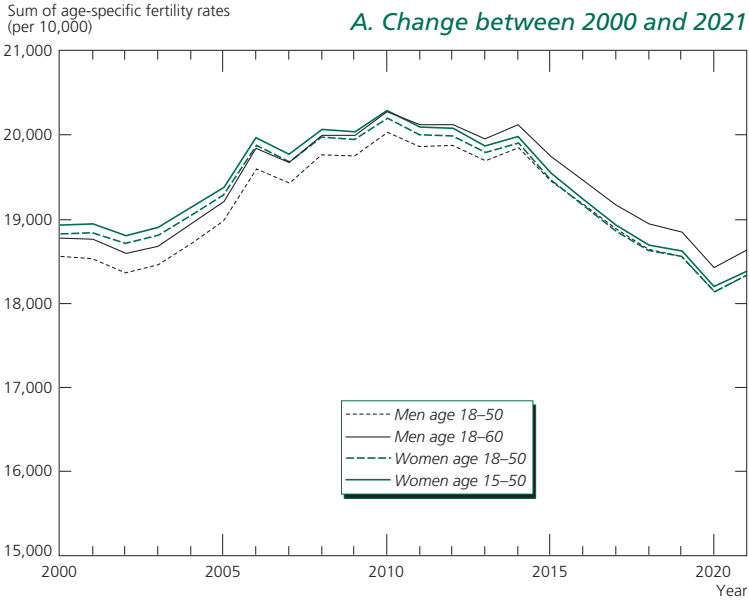
The age-specific fertility curves of men and women are different, however, even between ages 18 and 50, and have evolved similarly over recent years, with a shift rightward (later timing) and downward (lower intensity) (Figure 17B). The gender gap in age at childbearing remains stable, at close to 3 years,⁽³¹⁾ and is mainly due to age difference at union formation (Breton et al., 2021).

(29) Calculations based on age-specific fertility rates published in the Eurostat database (and not presented here). The smallest declines are in Romania (–11%) and the Netherlands (–14%) and the largest in Greece (–44%) and Hungary (–39%).

(30) For certain births, no father is recorded (a rare situation in France, concerning around 5% of births in 2015; INSEE, 2016). In these cases, an estimated age is attributed to the father by applying the age distribution observed among births with a declared father.

(31) The age difference calculated for the fertility age range common to both sexes (18–50 years) was 2.5 years in 2021, the same as in 2000.

Figure 17. Male and female fertility in France, in 2000 and 2021



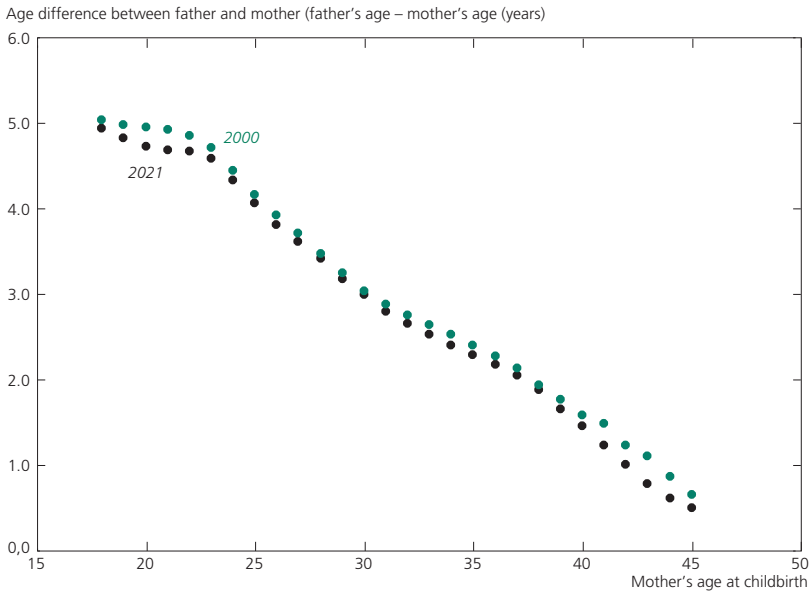
Women	2000 : Mean age: 29.3 years. TFR: 1.89 children per woman 2021 : Mean age: 30.9 years. TFR: 1.84 children per woman
Men	2000 : Mean age: 32.2 years. TFR: 1.88 children per man 2021 : Mean age: 33.9 years. TFR: 1.86 children per man

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

Source: INSEE, civil records and census, authors' calculations.

Taking the child's viewpoint, the mean age difference between the parents can also be calculated. It is close to 5 years when the mother is aged under 20, then falls to almost 0 as the mother's age at the child's birth increases (Figure 18).⁽³²⁾ This difference in parents' age at the child's birth has been falling slightly since 2020, at all ages.

Figure 18. Age difference between parents by mother's age at the birth in 2000 and 2021



Note: Third-order moving averages.

Coverage: Whole of France (including Mayotte).

Source: INSEE, detailed census data sets, authors' calculations.

A similar indicator is the share of births to a mother who is at least 2 years older than the father.⁽³³⁾ This share increases regularly with age. It is low before age 30 (4.3%) but exceeds 25% at age 45. These proportions are identical to those observed in 2000.

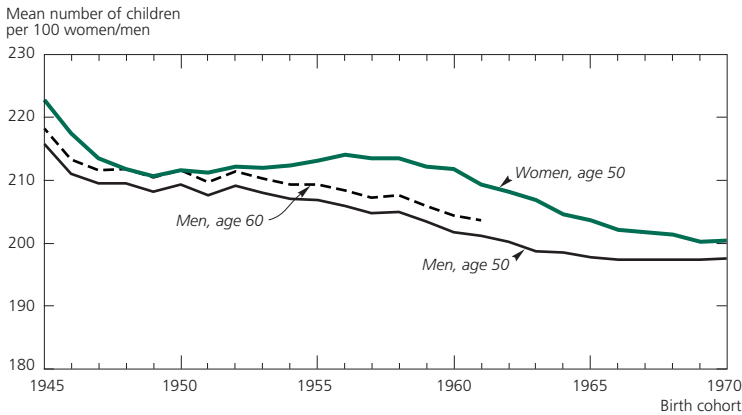
Even if men have a longer reproductive lifespan, they do not have more children than women do—in fact, slightly fewer. The completed fertility of men born in 1972 is not yet fully known because, unlike women of the same age, they still have around 10 years of reproductive life ahead of them. For the 1961 cohort, on the other hand, the completed fertility of men and women can

(32) Mean age differences are calculated on positive or negative values, so the mean tends to be smaller. Moreover, in the civil records available on the INSEE website, parents aged 46 or over at the time of the birth are grouped together in a single over-46 category. For men aged 46 or over, we therefore attributed the mean age at fatherhood beyond age 46, calculated from age-specific fertility rates: 49.5 years in 2021 and 50.0 years in 2000. For this reason, the mean may be slightly overestimated in our calculations.

(33) To limit the effect of negative values on means.

be compared: 1.96 children per man and 2.09 children per woman (Figure 19). At age 50, the gender gap in cumulative fertility narrows after the 1960 cohort, suggesting that the completed fertility of men born in the early 1970s will probably be equal to, or slightly above, that of women of the same cohorts.

Figure 19. Completed and cumulative fertility of men and women in France, 1945–1970 birth cohorts



Coverage: Metropolitan France.

Source: INSEE, detailed census data sets, authors' calculations.

6. The proportion of non-marital births, the highest in Europe, is still increasing in France

The COVID-19 pandemic had a strongly negative impact on marriages in 2020 due to the mass cancellation of weddings planned for the summer of 2020 (Breton et al., 2021, 2022). The decrease does not seem to have affected the uptrend in the share of non-marital births,⁽³⁴⁾ which have increased by 30 percentage points over 3 decades, accounting for 63.8% of all births in 2022. Having a child within marriage is now a minority behaviour in France. Civil records do not indicate whether unmarried parents are in a PACS union, but this information can now be obtained from census data. Among children born in France and aged 1 at the 2020 census,⁽³⁵⁾ 45% were living with a married couple.⁽³⁶⁾ Among the remainder, 25% were with a couple in a consensual union, 19% with a couple in a PACS union, 10% with a lone parent, and 1%

(34) We might have expected this share to rise further had we assumed that couples initially wishing to marry before having a child postponed their childbearing plans or, on the contrary, that married couples postponed or abandoned their childbearing plans more frequently than other couples.

(35) The 2020 census data are a compilation of five annual census surveys conducted between 2018 and 2022.

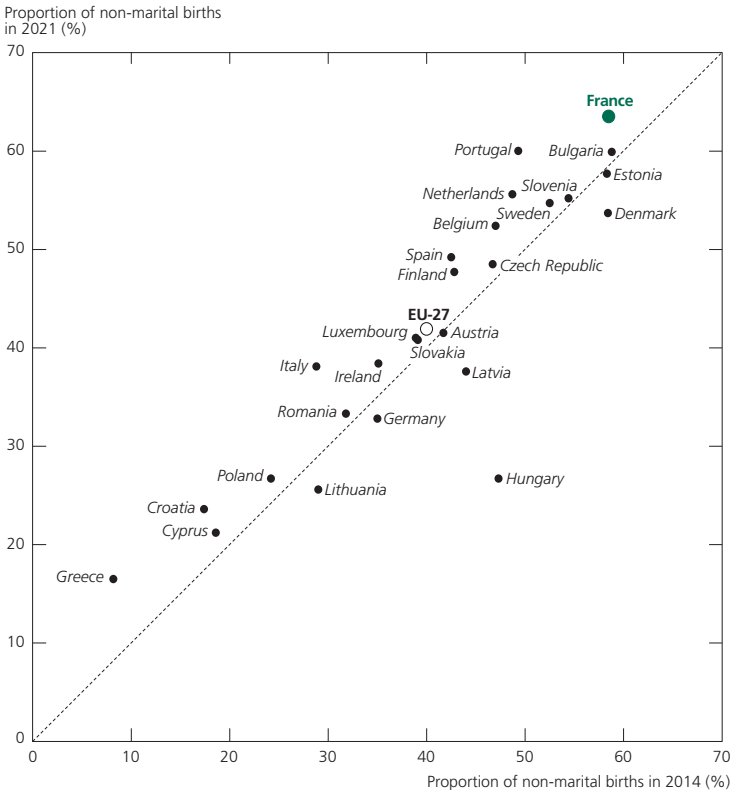
(36) This share is much higher than that obtained from civil records over the same period (38%), for multiple reasons. These include the under-reporting of very young children in the census, especially in situations of residential insecurity (early parental separation, vulnerable status of the mother, etc.), but also the impossibility of attributing parents to children born outside ordinary households (who less often have married parents).

with a widowed or divorced parent. Hence, based on these census data, one-third of children aged 1 whose parents were not married were probably born to a couple in a PACS union.⁽³⁷⁾

France has the highest share of non-marital births in Europe. While this share is at a historic high, it was lower than in Bulgaria until 2007, Sweden until 2009, and Estonia until 2014. And it was in 2014 that, while remaining relatively low, the correlation between period fertility level and the share of non-marital births was highest in Europe ($r^2 = 0.25$). This correlation is now non-significant and has fallen to almost zero ($r^2 = 0.07$).

Since 2014, the share of non-marital births has increased in most European countries, but much more slowly than in France (Figure 20). It has even fallen in some, notably Hungary and Latvia, but also in Germany, Austria, Lithuania and Slovenia (Figure 20, countries under the dotted diagonal line). This fall

Figure 20. Comparison of proportions of non-marital births in European countries in 2014 and in 2021



Note: For certain countries, comparisons are made for other years (Belgium, 2011–2018; Estonia, Ireland, and Cyprus, 2012–2019; Sweden and EU-27, 2013–2020).

Source: INSEE, civil records, authors' calculations.

(37) Certain parents may have entered a PACS union after the birth.

has not been accompanied by a decrease in period fertility, or much less so than in France. This slower growth in the share of non-marital births in certain European countries may be due to the increase in age at childbearing, which is progressing faster than the increase in age at marriage.

The COVID-19 pandemic led to wedding cancellations in many countries, including France, but only in Slovenia, Italy, and Spain⁽³⁸⁾ was the decrease in marriages associated with a decrease in the share of non-marital births in 2020, followed by an upturn in 2021.

7. A double family name for slightly more than 1 in 7 newborns

The share of newborns given a double family name is still increasing and reached 12.9% in 2021. It is generally the father's name followed by the mother's (10.1%; Table 9). Among infants who have their father's name, 13.8% had a double name in 2021, up from 11.0% in 2014.⁽³⁹⁾ Data available in civil records cannot provide an exact profile of the parents who prefer to give a double name, except for geographical region, parents' age at birth, size of urban unit, and parents' place of birth and nationality (Bellamy, 2015; Breton et al., 2021, 2022). That said, the most discriminating variable is birth within or outside marriage. The double name prevalence index is 18.5% for children born outside marriage versus 6.3% among those born to married parents. After controlling for this variable, only the mother's age (double names are most frequent for mothers aged over 40) and the parents' place of birth (a double name is least frequent when both parents are foreign-born and most frequent when both are French-born) continue to have a significant effect.⁽⁴⁰⁾

(38) Results not shown here, but the data are available on the Eurostat website.

(39) This is because the proportion of children with the mother's name only is correlated with that of births not recognized by the father and with non-marital births (Breton et al., 2021).

(40) The proportions are not shown here but are given by cross tables with the strength of the inter-correlation measured by a Cramér's V.

Table 9. Family name attribution in France in 2014 and since 2019

	2014			2019			2020			2021		
	Children born within marriage	Children born outside marriage	Overall	Children born within marriage	Children born outside marriage	Overall	Children born within marriage	Children born outside marriage	Overall	Children born within marriage	Children born outside marriage	Overall
Father's name	95.2	74.4	83.0	93.9	73.5	81.5	93.8	73.3	81.1	93.2	73.4	80.7
Mother's name	0.2	11.0	6.5	0.4	10.6	6.6	0.4	10.8	6.9	0.4	9.7	6.3
Father's name followed by mother's name	3.3	11.4	8.0	4.1	12.4	9.2	4.3	12.3	9.3	4.7	13.2	10.1
Mother's name followed by father's name	1.2	3.0	2.3	1.5	3.3	2.6	1.4	3.4	2.6	1.6	3.5	2.8
Other name or coding problem	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Double name prevalence index (%)	4.5	16.2	11.0	5.6	17.6	12.6	5.7	17.6	12.8	6.3	18.5	13.8

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

Source: INSEE, civil records, detailed data sets, authors' calculations.

IV. Induced abortions⁽⁴¹⁾

1. An increase in induced abortions, especially at ages of high fertility

In 2022, there were 232,000 induced abortions⁽⁴²⁾ in France, of which 216,000 in metropolitan France (Table 10, Appendix 6), marking a renewed upturn after a 2-year dip (215,000 in 2020 and 216,000 in 2021). While it appeared that the decrease in 2020 and 2021 with respect to 2019 (224,000) was linked to a drop in conceptions during the COVID-19 pandemic, following the same pattern as births (Breton et al., 2022; Vilain et al., 2022), the sharp increase in abortions in 2022 did not coincide with an upturn in births. While the ratio of abortions to births had been close to 1 per 4 since the 1990s (Mazuy et al., 2015), it has been increasing again since 2017 (Breton et al., 2020), reaching almost 1 abortion per 3 births in 2022.

Table 10. Abortion numbers and annual rates between 2019 and 2022

	2019	2020	2021	2022
Number of abortions	224,000	215,000	216,000	232,000
<i>Number of abortions before removal of duplicates*</i>	233,000	222,000	223,000	241,000
Annual rate of variation (%)		-4	0.2	7.8
Number of abortions per 100 births	29.7	29.3	29.1	32.1
Abortion rate per 1,000 women aged 15–49	15.5	14.9	14.9	16.1
15–19	13.7	12.2	11.6	13.0
20–24	26.4	24.7	24.1	26.6
25–29	27.4	26.3	26.3	28.6
30–34	23.1	22.6	23.0	24.6
35–39	16.6	16.5	17.0	17.8
40–44	7.0	7.0	7.2	7.5
45–49	0.7	0.7	0.7	0.7
Total abortion rate	0.53	0.51	0.51	0.56

* Duplicates concern abortion aftercare that is now excluded from annual counts (see Box 2).
Note: Annual numbers are rounded and were updated in 2022, so they may be slightly different from the estimates presented in previous years. Remote consultations are included.
Coverage: Whole of France.
Sources: SNDS data (PMSI-MCO and CNAM); authors' calculations.

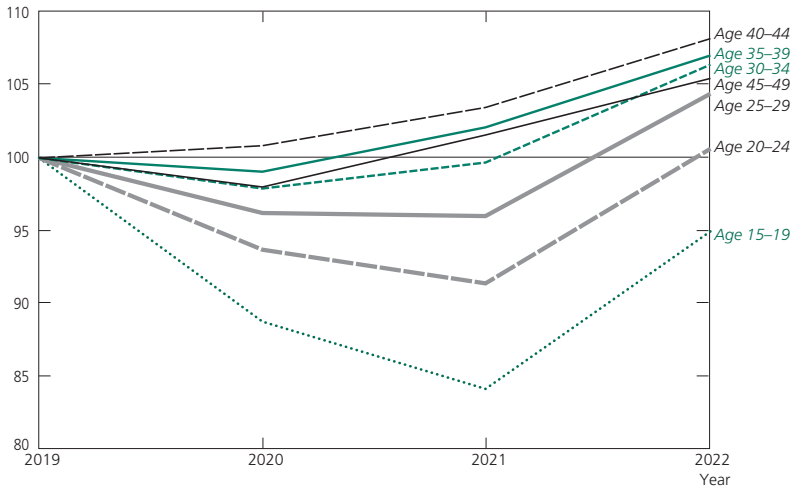
Abortions are concentrated around ages 20–34, and the abortion rate is highest at ages 25–29 (28.6 per 1,000, Table 10). The increase in abortions in 2022 is observed at all ages, but the 2 previous years were affected by the

(41) Elodie Baril and Magali Mazuy contributed to the preparation of this section.

(42) This includes all medical and surgical abortions, both hospital and non-hospital, whose numbers are detailed in Box 2.

COVID-19 pandemic. Between 2019 and 2021, the rates fell by 16 percentage points for the 15–19 age group, by 8 points for the 20–24 age group, and by 4 points for the 25–29 age group (Figure 21). Conversely, among women over 35, despite a slight decrease in 2020, the rates were between 1.6 and 3.4 points higher in 2021 than in 2019. In 2022, the abortion rate was 5 points lower than in 2019 for the 15–19 age group, at a similar level to 2019 for the 20–24 age group, and 4–7 points higher than in 2019 among the over-25s. Abortion has thus increased mainly at early childbearing ages and beyond. After a 2-year decline in conceptions due to the pandemic (during the first lockdown especially), the social and economic climate remained difficult in 2022, particularly for young people. This situation certainly provides a partial explanation for the increase in abortions at ages where fertility is highest: recourse to abortion as a form of birth control may increase when unfavourable circumstances weigh against the decision to continue a pregnancy (Vilain, 2020).

Figure 21. Abortion rates between 2019 and 2022 (baseline 100 in 2019)



Interpretation: In 2022, the abortion rate in the 15–19 age group was 5 points lower than in 2019.

Coverage: Whole of France.

Sources: SNDS data (PMSI-MCO and CNAM); authors' calculations.

In addition, the legal deadline for abortion was extended by 2 weeks, from 12 to 14 weeks of pregnancy, in March 2022.⁽⁴³⁾ Although the impact of this extended deadline can be estimated, it cannot be analysed with precision due to the poor quality of the data on duration of pregnancy at abortion. Based on our estimates (Box 2), around 5% of surgical abortions, representing around 1.5% of total abortions, are performed at between 12 and 14 weeks. It is too early to say whether these proportions will remain stable, as the new legal framework will take time to fully implement (with the need to progressively

(43) The duration of pregnancy is sometimes measured in weeks of amenorrhoea (since the first day of the last menstrual period), adding 2 weeks to the total.

Box 2. Abortion data in the French national health data system and their statistical processing

A change in total abortion counts

The national health data system (Système national des données de santé, or SNDS) groups data from hospitals (Programme de médicalisation des systèmes d'information, PMSI) and non-hospital healthcare services (Caisse nationale de l'Assurance Maladie, or CNAM). It covers 99% of the population (Tuppin et al., 2017) and receives data on all abortions occurring in France.

Following a change to the coding instructions in March 2019, more exhaustive abortion data can now be retrieved, although this may have led to a few artificial variations in total numbers (Vilain and Fresson, 2023). In Villain and Fresson (2023), certain records have been removed to avoid duplication. We now exclude non-hospital abortions if a hospital abortion is recorded for the same identifier within the following 64 days; when two procedures follow in close succession, it is assumed they concern the same termination. All abortion records are included, however, when a facility uses a single identifier for more than one woman.

Anonymous abortions remain stable

As of January 2021, anonymous abortion is no longer restricted solely to women under age 18. Despite this change, the share of anonymous abortions remained stable in 2022. They have accounted for 0.3% of abortions since 2015. Most of these anonymous abortions likely still concern women under 18, as was the case before the change in the law.

Duration of pregnancy: imprecise variables at the margins

Information on duration of pregnancy is only available for hospital abortions. Two variables are used to describe amenorrhoea, i.e. the time since the first day of the last menstrual period: AGE_GES gives the number of weeks, and DEL_REG_ENT gives the number of days. While the first is incomplete (63% of missing data in 2022), the second is complete, although it includes some aberrant data (4% of pregnancy durations under 2 weeks and 1% over 14 weeks). Despite these inaccuracies, the same tendencies are observed for both variables. We therefore use DEL_REG_ENT for greater statistical power, although detailed analysis at the extremes of the distribution is not possible.

roll out provision of later hospital abortions, provide training to healthcare professionals and ensure they agree to carry out the procedure), but they will probably continue to be small. The international literature shows that the number of abortions decreases with duration of pregnancy (Kortsmit, 2022; Department of Health and Social Care, 2023). These later abortions may have contributed, but only marginally, to the increase in 2022. The main consequence of the deadline extension has been to improve abortion conditions for women whose pregnancy is already advanced.

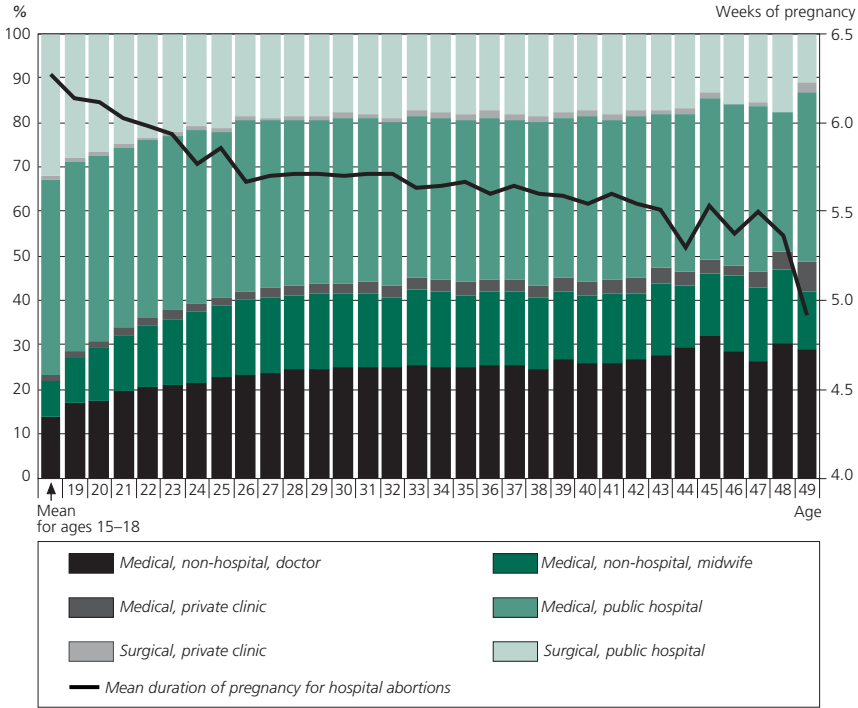
2. Abortion methods and care settings that differ with age

Abortions can take a variety of forms. Under French law, they can involve different techniques (medical or surgical), care settings (public hospital or private clinic, doctor's surgery, family planning clinic, healthcare centres), and care providers (general practitioners, specialist practitioners, midwives). In 2022, 38% of abortions⁽⁴⁴⁾ were medical abortions outside a hospital setting,

(44) This proportion is based on the distribution of abortion rates per 1,000 women.

40% were hospital medical abortions, and 22% were surgical abortions (Figure 22). Medical abortions thus account for three-quarters of the total, continuing the long-term uptrend in recourse to this technique.

Figure 22. Distribution of abortion rates per 1,000 women by method, healthcare professional, and care setting in 2022 (%), and mean duration of pregnancy (in weeks) at each age



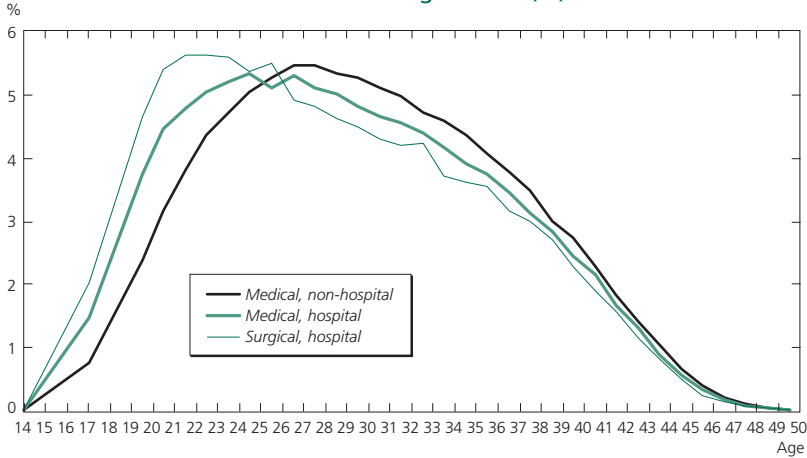
Coverage: Whole of France
Sources: SNDS data (PMSI-MCO and CNAM); authors' calculations.

In 2022, 39% of non-hospital abortions were provided by midwives, a proportion that has also been increasing since midwives were first authorized to handle these procedures in 2016. Only 6% of abortions are performed in a private clinic, a share trending downward over the long term (Breton et al., 2022).

The type of abortion varies considerably with age (Figures 22 and 23). At all ages, most abortions take place in hospitals, although the oldest women more frequently have non-hospital abortions (46% at ages 45–49 vs. 26% at ages 15–19) and in private clinics (8% at ages 40–49 vs. 4% at ages 15–24). Midwife abortions are most common among women aged 25–34 (17%, compared with 10% at ages 15–19 and 15% at ages 45–49). However, the proportion of surgical abortions is higher among young women (29% at ages 15–19 vs. 15% at ages 45–49). The mean duration of pregnancy for hospital abortions

decreases with age, from more than 6 weeks of pregnancy before age 20 to less than 5.5 weeks.

Figure 23. Distribution of abortion rates by age, for each method and care setting in 2022 (%)



Note: Rates before age 19 are an average estimated for the 15–18 age group.

Coverage: Whole of France.

Sources: SNDS data (PMSI-MCO and CNAM); authors' calculations.

Thus, while methods and care settings are diverse, the types of abortion vary considerably with age. Young women's preference for abortions in a public hospital may be explained by the greater visibility of hospitals compared to non-hospital settings, and their anonymity compared to doctors' surgeries that may be frequented by family or friends. Given the stigma still associated with abortion and pregnancies conceived outside the reproductive norm, many women prefer to keep their abortion secret (Mathieu and Thizy, 2023). In addition, younger women may be less independent and have less knowledge about how to obtain an abortion. This, combined with less regular menstrual cycles at a time of high fecundity, may lead to delays in seeking help and a longer duration of pregnancy at the time of abortion. This might explain the greater frequency of surgical abortion at the youngest ages. Older women, on the other hand, have fewer economic constraints and greater freedom to make their own choices. As women over 25 more frequently follow recommendations for regular gynaecological check-ups with a doctor or midwife, or have already been followed up for sexual or reproductive health reasons, they may have built a relationship of trust with a professional to whom they can turn if they need an abortion. This greater autonomy certainly speeds up the process of obtaining an abortion at an earlier stage of pregnancy.

Now that abortions can be obtained via a wider range of channels, the system is more flexible, providing a useful and necessary support network during health crises such as the COVID-19 pandemic. Inequalities persist,

however, both across geographical regions (Breton et al., 2022) and by age, with the youngest women facing the greatest difficulties.

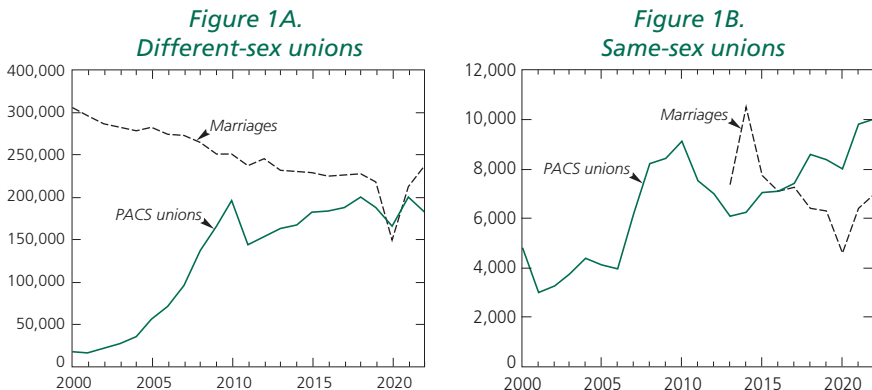
V. Marriage and PACS unions

1. Confirmation of the expected marriage rebound in 2022, but a decrease in PACS unions

According to initial estimates,⁽⁴⁵⁾ 244,000 marriages were celebrated across the whole of France in 2022 (Papon, 2023), 11.5% more than in 2021. This confirms the rebound that began in 2021 following a historic low in 2020 due to the COVID-19 pandemic. With the end of the restrictions and uncertainties linked to the health crisis, a catch-up of weddings postponed or cancelled in 2020 and 2021 was observed in 2022. This upturn was slightly stronger for different-sex couples (237,000 marriages, an increase of 11.6%) than for same-sex couples (7,000 marriages, up by 9.3%). In 2022, marriages between a man and a woman exceeded their pre-pandemic level, with the highest recorded number since 2012 (Figure 24). Same-sex marriages, on the other hand, seem to have been less affected by the COVID-19 pandemic, with a more moderate decrease in 2020 (Breton et al., 2022) and a smaller subsequent upturn in 2021 and 2022.

PACS unions—registered and celebrated more simply, and often with fewer festivities—were less affected by the pandemic than marriages. According to

Figure 24. Annual numbers of marriages and PACS unions by partners' sex, 2000–2022



* Provisional data for marriages in 2022 and PACS unions from 2018 to 2022.

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

Source: Civil records, INSEE, Ministry of Justice.

(45) For 2022, these figures are estimates based on the numbers of marriages registered over the first 10 months of 2022. The final figures are published in January of the year $n + 2$ (INSEE, 2023).

INSEE estimates, 192,000 PACS unions were registered in 2022, 8.3% fewer than in 2021. This decrease only concerns different-sex PACS unions (182,000, a decrease of 8.8%). Same-sex PACS unions, for their part, have reached record levels, with an estimated total of 10,000 in 2022. The legalization of same-sex marriage has had little impact on the popularity of same-sex PACS unions, whose number has increased by 64%⁽⁴⁶⁾ since 2013 and whose share of all PACS unions has risen from 3.6% to 5.2% over the same period. Since 2018, PACS unions between same-sex couples have far outnumbered marriages (Table 11).

2. First marriages account for a large share of the increase in 2021

Detailed final figures of marriages in 2021 are now available. Most marriages postponed in 2020 and finally celebrated in 2021 were first marriages, for both men and women. For 81.5% of the men and 82.5% of the women who married in 2021, it was a first marriage, while for 17.5% of men and 16.5% of women, the marriage in 2021 followed a divorce. Just 1% of spouses, both men and women, were widowed. This is an all-time low, due mainly to the decrease in numbers of widows and widowers at ages when marriages are most frequent.⁽⁴⁷⁾ The declining frequency of remarriage in the cohorts of divorcees, a trend already highlighted in a previous demographic report (Breton et al., 2020) and confirmed by more recent data, is driving this increase in the share of first marriages.

By calculating age-specific rates and summed rates at all ages (Box 3), we can eliminate the ‘spurious’ effects of population size and structure to measure marriage rates. This total marriage rate, for all types of marriage, rebounded in 2021 to reach 533 per 1,000 men and 528 per 1,000 women (Appendix 7B), although it is still slightly below the pre-pandemic level (549 for men and 541 for women in 2019). The increase with respect to 2020 is mainly due to first marriages and marriages between two women. It is more moderate for remarriages (at least one of the spouses is widowed or divorced) and marriages between two men. The share of remarriages in the total marriage rate also fell to its lowest level in 2021, at 15.9% for women and 16.9% for men among dif-

Box 3. Measuring marriages and PACS unions

The total marriage rate corresponds to the number of marriages that would be observed in a cohort of 1,000 people if, at each age (including after age 50), they experienced the same marriage frequencies as those observed in a given year. It can be calculated by marriage order (first marriage vs. remarriage) or by spouse’s sex. It can also be calculated for PACS unions. The distinction by spouse’s sex can be used to calculate two ‘components’ (same-sex or different-sex) for both men and women. For example, the total same-sex male PACS rate corresponds to the number of PACS unions with another man observed in a cohort of 1,000 men, under the prevailing conditions in a given period. This indicator eliminates the effects of gender differentials in age structure.

(46) Over the same period, from 2013 to 2022, the number of different-sex PACS unions increased by 11.9%.

(47) This is due mainly to the decrease in first marriage and the increase in life expectancy since the 1950s.

Table 11. Annual numbers of marriages and PACS unions by partners' sex, 2013–2022

Year	Marriages				PACS unions					
	Between a man and a woman	Between two men	Between two women	Total	Share of same-sex couples (%)	Between a man and a woman	Between two men	Between two women	Total	Share of same-sex couples (%)
2013	231,225	4,307	3,060	238,592	3.1	162,714	3,354	2,734	168,802	3.6
2014	230,770	5,666	4,856	241,292	4.4	167,487	3,519	2,745	173,751	3.6
2015	228,565	4,085	3,666	236,316	3.3	181,949	3,933	3,085	188,967	3.7
2016	225,612	3,672	3,441	232,725	3.1	184,444	3,863	3,251	191,558	3.7
2017	226,671	3,637	3,607	233,915	3.1	188,233	4,084	3,252	195,569	3.8
2018*	228,349	3,268	3,118	234,735	2.7	200,282		8,589	208,871	4.1
2019*	218,468	3,061	3,211	224,740	2.8	188,014		8,356	196,370	4.3
2020*	149,983	2,241	2,357	154,581	3.0	165,911		7,983	173,894	4.6
2021*	212,413	2,856	3,550	218,819	2.9	199,651		9,810	209,461	4.7
2022*	237,000	7,000		244,000	2.9	182,000		10,000	192,000	5.2

Note: * Provisional data for marriages in 2022 and PACS unions from 2018 to 2022.
Coverage: Whole of France (including Mayotte since 2014).
Source: INSEE, Ministry of Justice.

ferent-sex marriages, and just 7.7% for men and 9.4% for women among same-sex marriages.

3. A sharp increase in marriages between two women, at young ages especially

In 2021, a much larger number of marriages were registered between two women (3,550) than between two men (2,856). This is the largest difference ever recorded, with female same-sex marriages accounting for more than 55% of all same-sex marriages in 2021. Unlike the downturn observed for other types of marriages, the female same-sex marriage rate increased by more than 20% with respect to 2019 (before the COVID-19 pandemic) at ages 25–34. This has contributed to a decrease of almost a year in the mean age at marriage of women in same-sex unions, from 37.3 years in 2020 to 36.4 years in 2021. Following the legalization of medically assisted reproduction for female couples (married or not), this increase in marriages of lesbian couples, notably at young ages, likely reflects a desire to officialize their relationship before having a child.

4. A continued increase in age at marriage and more marriages beyond age 40

Despite the catch-up in marriages in 2021, the age at marriage continued to increase. For different-sex couples, the mean age at marriage⁽⁴⁸⁾ in 2021 was 35.8 years for women and 38.2 years for men (Appendix 7B). This increase also concerns first marriages (33.6 years for women and 35.6 years for men) and remarriages (47.7 years for women and 51.4 years for men (Figure 25).

For the reasons mentioned above, the age at marriage of lesbian couples is the youngest ever recorded. This decrease in age has been continuous since 2014, both for first marriages (mean age, 35.4 years) and remarriages (45.8 years). Men in same-sex couples marry much later (42.1 years for first marriages, 53.1 years for remarriages), and these ages have remained quite stable over recent years.

Marriages after age 40 or age 50 are at an all-time high, and an increasing proportion are first marriages (Figure 26). In 2021, for different-sex marriages, those after age 40 represented 36.1% of the total marriage rate for men and 29.5% for women (18.1% and 13.4%, respectively after age 50), the highest proportion since 2014. Moreover, first marriages, whatever the sex, accounted for 58% of the total marriage rate after age 40 (45% after age 50). This is also an all-time high. A growing proportion of marriages after age 40 or age 50 are thus first marriages, although at these ages the aim is not to start a family but rather to protect the spouse in the event of death (inheritance, survivor's pension, shared home, etc.).

As same-sex marriage was not legalized until 2013, most of these marriages after age 40 or 50 are first marriages. This is slightly less often the case for

(48) Mean age at marriage is calculated here based on marriage rates at all ages, including after age 50.

Figure 25. Mean age at marriage by sex of partners and marriage order, 2014–2021

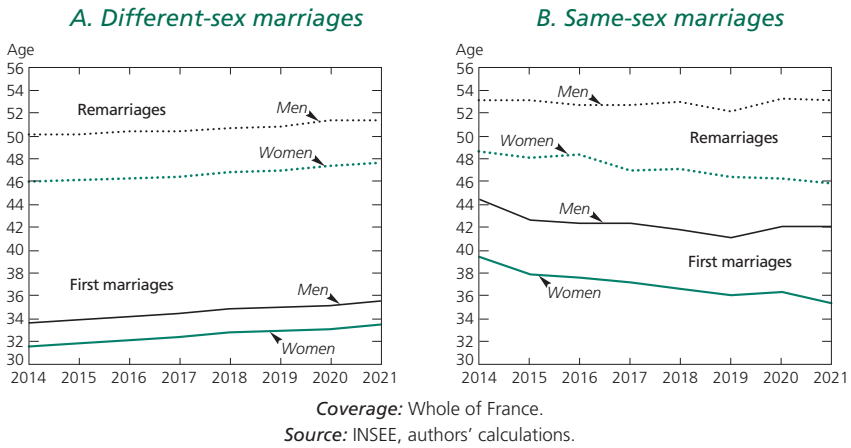
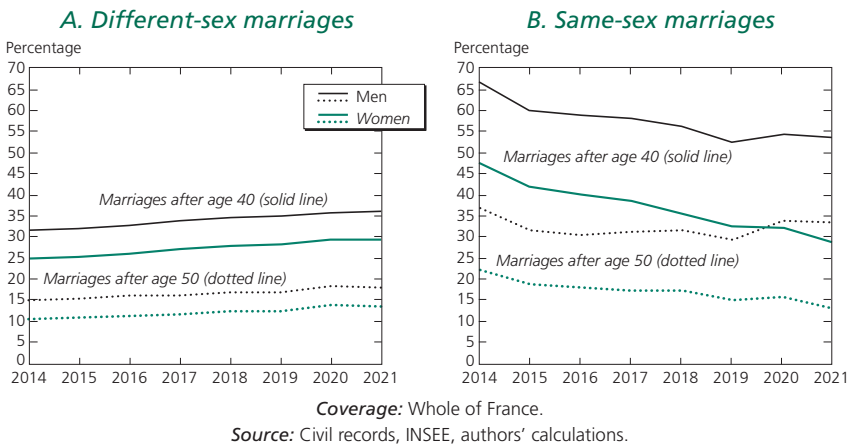


Figure 26. Contribution of marriages after age 40 and age 50 to the total marriage rate



lesbian couples who have more often already been married, before 2013 especially, in most cases to a man. Since 2013, with the dwindling ‘stock’ of existing unmarried gay couples, the share of marriages after age 40 (and after age 50) in the total marriage rate is decreasing.

5. One-third of men and women in the 1970 cohort are never-married

First marriage intensity is now known for the 1970 cohort, who reached age 49 in 2019.⁽⁴⁹⁾ At this age, 70.9% of women and 65.9% of men in this cohort have

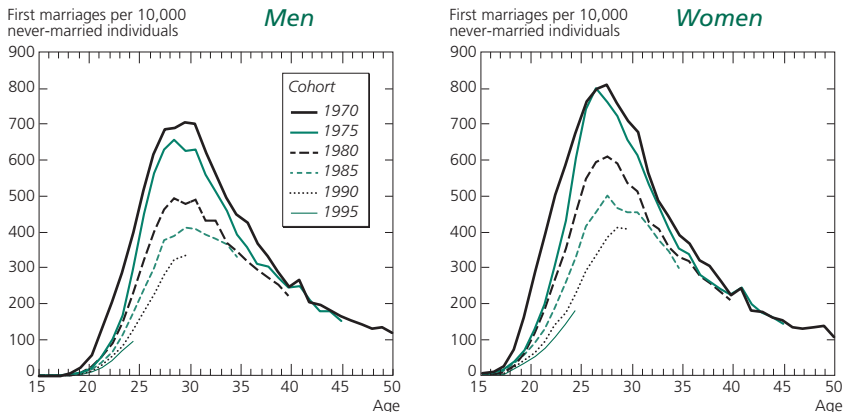
(49) The year 2019 is the most recent for which the age-specific first marriage rates calculated by INSEE are available. This time lag is due to the time required to determine population size by marital status, a key component of the calculation.

married at least once (Appendix 9). The proportions are 91% and 87%, respectively, in the 1950 cohort, one with the largest recorded share of married individuals. Around 1 in 3 people in the 1970 cohort are ‘never-married’, although, with the rise in non-marital unions since the 1970s, this concept is less meaningful than in the past. In parallel, between the 1950 and 1970 cohorts, mean age at first marriage⁽⁵⁰⁾ increased by almost 5 years, from 22.6 to 27.8 years for women and from 24.6 to 30.1 years for men (Appendix 9).

Plotting longitudinal trends in first marriage probabilities across cohorts provides an interesting result (Figure 27). At all ages below 35 for women and 40 for men, first marriage probabilities have decreased since the 1970s cohorts without being offset by an increase in probabilities above these ages, for the cohorts born before 1985 especially. Even though first marriages may become slightly more frequent above age 35, we can estimate first marriage intensity in upcoming cohorts by applying the rates at the oldest ages to those calculated in 2019. Under this assumption, first marriage intensity should continue to fall (Figure 28), with only 52% of women and 48% of men experiencing a first marriage before age 50 in the 1990 cohort, and at ever later ages; age at first marriage is likely to exceed 31 years for women and 33 years for men.

Despite the increase in age at first marriage, the age with the highest probability of marriage remains similar across cohorts, at around 30 years, or slightly below, for women. The decline in first marriage is not associated with an increase in the age at which marriage is most frequent. While it remains customary for a share of the population to marry at around age 30, an age at

Figure 27. Age-specific first marriage probabilities by sex



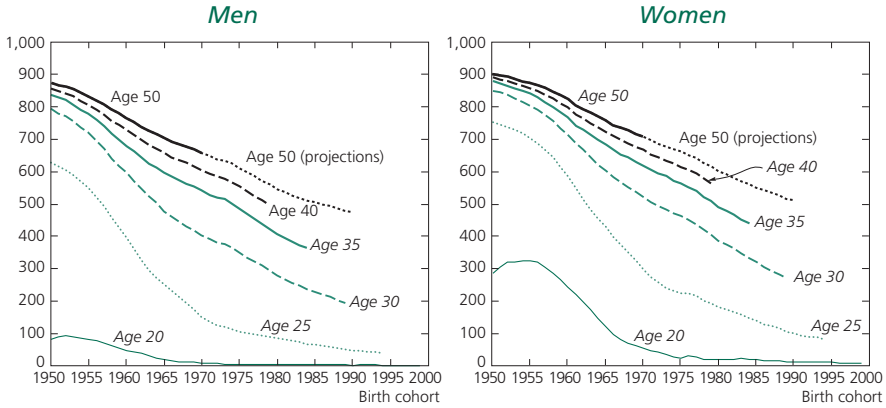
Number of marriages of never-married individuals per 10,000 never-married individuals of the age reached in the year.

Coverage: Metropolitan France.

Source: INSEE.

(50) This standard indicator only concerns first marriages before age 50.

Figure 28. Proportions of ever-married at different ages by sex and cohort (per 1,000 never-married at age 15)



Coverage: Metropolitan France

Source: INSEE, authors' calculations based on overall marriage probabilities calculated each year by INSEE.

which many want to start a family, marriage is postponed or even considered unnecessary by others.

6. A mean age difference between marriage partners of 4.2 years, with the man more often older than the woman

Men marry later than women (2.4 years later, on average, for marriages in 2021), and are more often older than their spouse. The mechanisms behind these choices, observed in many societies, have been widely studied and discussed (Mignot, 2010; Bergström, 2018). For different-sex couples, in a context of unequal gender relations, they may reflect differences in men's and women's aspirations and strategies for the choice of a life partner, especially for first unions and in early adulthood when women are more mature than men (Bozon, 2006).

For different-sex couples, the mean age difference between spouses⁽⁵¹⁾ was 4.2 years for couples who married in 2021 (Table 12).⁽⁵²⁾ The age difference is smaller (3.3 years) when both partners are never-married than when at least one partner has already been married (6.5 years). This is because remarriages necessarily take place at older ages, and the mean age difference between spouses increases with the spouses' age at marriage (Figure 29). While the age gap is a year or less for almost one-third of marriages, the man is more

(51) The age difference between spouses at marriage is the difference between the spouses' years of birth (variables given in the detailed dataset of marriages published by INSEE).

(52) It is not abnormal for this mean age difference between spouses to differ from the difference between mean ages at marriage. Mean ages are calculated using rates (age differences are based on observed ages at marriage). Moreover, the older spouse is not always the man (the age difference is the absolute value of the difference between the spouses' ages).

Table 12. Age difference between spouses by type and year of marriage

Type of marriage	Year	Mean age difference (in years)			Distribution (%) of age difference between spouses		
		All marriages	First marriage for both spouses	Remarriage of one spouse	Spouses the same age*	Older man	Older woman
Different-sex marriage	2001	4.4	3.5	7.3	28.3	55.6	16.0
	2011	4.4	3.4	6.7	29.6	55.1	15.3
	2021	4.2	3.3	6.5	31.9	52.6	15.4
Marriage between two women	2021	4.6	4.1	6.6	26.8		
Marriage between two men	2021	7.3	6.8	9.9	18.2		

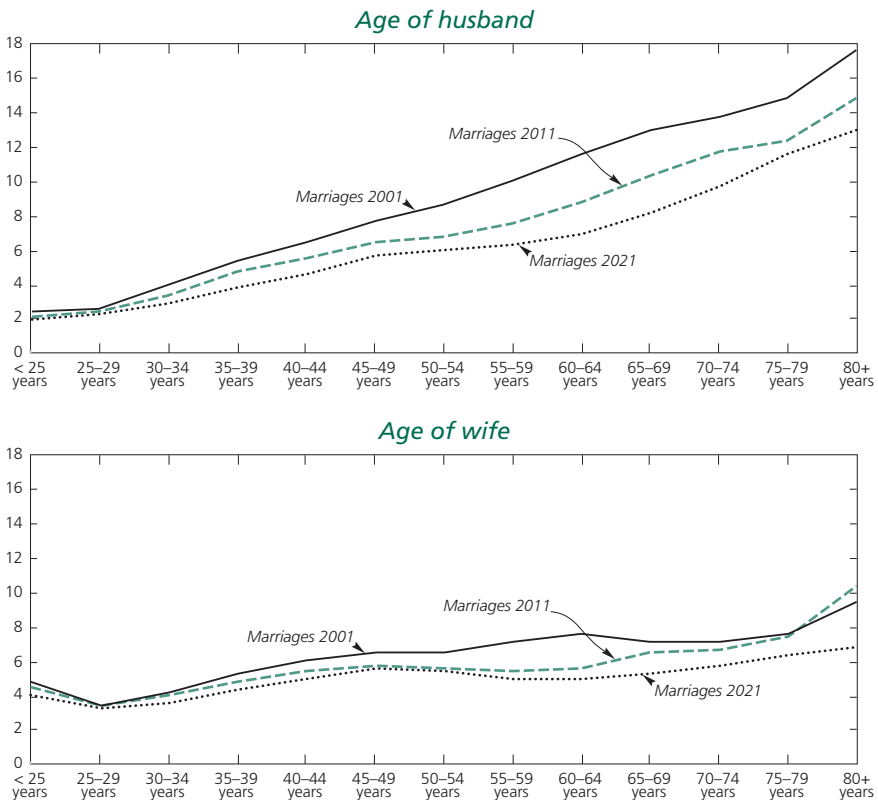
* Here, spouses have the same age if born in the same or consecutive years.

Note: The age difference is the difference between the spouses' years of birth.

Coverage: Whole of France, including Mayotte after 2014.

Source: Civil records, INSEE (authors' calculations).

Figure 29. Mean age difference (years) between spouses by age of each spouse at marriage



Coverage: Different-sex marriages, whole of France.

Source: Civil records, INSEE, authors' calculations.

than a year older than his wife in 52% of cases, while the reverse is true in just 15%. Over the last 20 years, the share of couples where the partners are the same age has increased, while the share where the man is older has decreased. Across cohorts (Daguet, 2016),⁽⁵³⁾ the age difference between spouses has narrowed slightly in recent decades. It was 4.4 years for couples who married in 2001 and has been decreasing since then, for both first marriages and remarriages.

This trend is more pronounced for spouses of a given age, after 40 years especially (Figure 29).

For same-sex couples, the age difference between spouses is larger, and the spouses are less often the same age. The mean age difference is particularly large for marriages between two men (7.3 years), especially when one of the spouses has already been married (9.9 years). These particularities may be linked to these couples' characteristics and the smaller range of potential partners (Meslay, 2019).

The age difference between spouses also differs by calendar month of marriage. This is observed in both 2001 and 2021, whatever the spouses' sex, excepting marriages between women (Figure 30). Partners who marry in the summer (June–September) are more similar in age than those who marry in winter. The choice of wedding date is doubtless linked to the couples' characteristics and aspirations, although the same seasonal variations and a smaller age gap are observed for first marriages, partners who are French nationals, and when the man is relatively young (Figure 30). Perhaps couples who are closer to the norm, in terms of age difference especially, are more inclined to organize a festive wedding with friends and family, and hence to choose a date in late spring or summer. For same-sex marriages, especially between two women, marriage order and the partners' nationalities have less impact on disparities in the age difference between spouses.

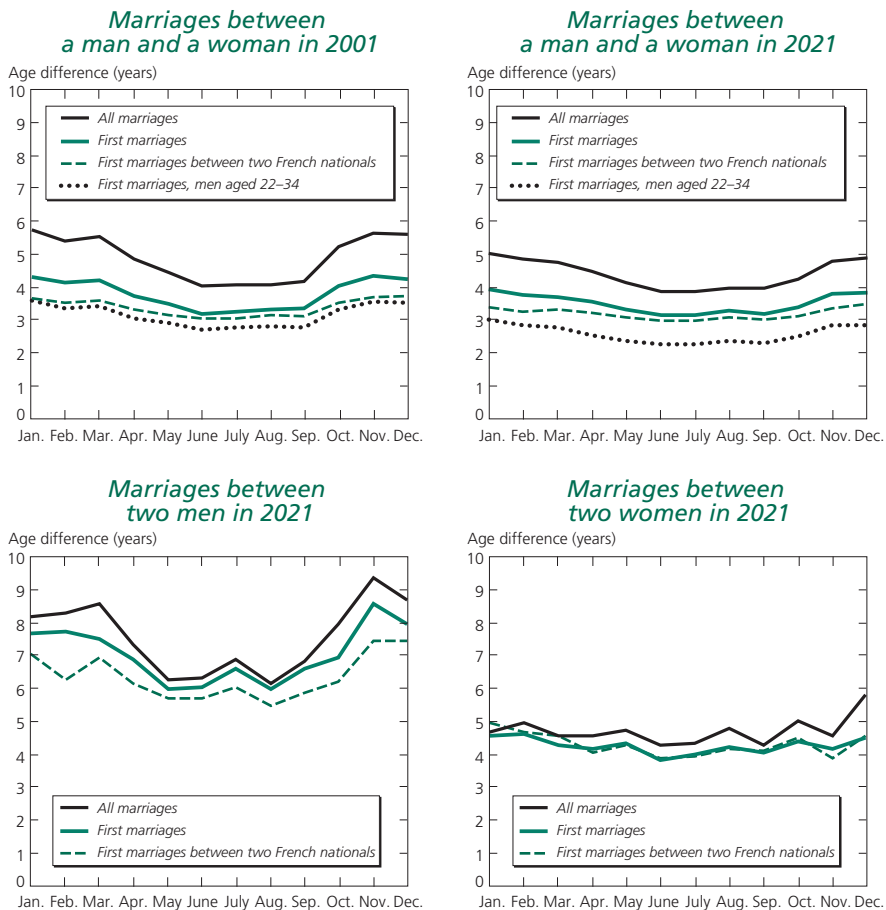
For PACS unions, not surprisingly, the results by type of couple are similar. Among PACS unions registered in 2016, the mean age difference between partners was 3.6 years for different-sex couples and 4.4 years for female couples. Again, it was much larger, at 6.6 years, for male couples.⁽⁵⁴⁾ These age differences are slightly smaller than those observed for marriages. This can be expected, given that couples who contract a PACS union are younger, on average, than those who marry, whatever the type of couple, be it same-sex or different-sex (Breton et al., 2019).

Finally, due to recent legislative changes, there are still no new statistics on PACS unions and divorces. For PACS unions, no detailed statistics are

(53) Daguet (2016) analyses age differences between spouses among couples enumerated in the 1999 and 2011 censuses, and not age differences at marriage, as here. Differentials in the survival probabilities of couples after marriage explain why age differences at marriage are higher: couples with the largest age differences are probably at higher risk of union dissolution (through widowhood especially).

(54) Figures published and accessible on the Ministry of Justice website, 2016 being the last available year.

Figure 30. Mean age difference between spouses by type and month of marriage in 2001 and 2021



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

available beyond 2016⁽⁵⁵⁾ and no figures on PACS dissolutions have been published since then⁽⁵⁶⁾ (the latest figure was 85,000 dissolutions in 2016). Public statistics on divorce have been incomplete since 2017, when it became possible to register a divorce out of court (under certain conditions) with a notary. In statistical terms, this has halved the number of divorces pronounced by a judge (Breton et al., 2022), and the most recent complete estimate of the total divorce rate is 46.7 divorces per 100 marriages in 2016.

(55) Since 1 November 2017, PACS unions have been registered in town and city halls, but no procedure exists for transmitting PACS data, like those on births and deaths, to INSEE. This issue is compounded by the complicated problem of transmitting data on PACS unions registered by notaries.

(56) A steady increase in PACS dissolutions is to be expected, however. Applying the dissolution rate for 2016 to the number of PACS unions registered since 1999, we can estimate that around 110,000 PACS unions were dissolved in 2021.

VI. Mortality

According to provisional INSEE estimates, 667,000 deaths occurred in France in 2022, of which 651,000 in metropolitan France and 16,000 in the overseas departments and territories. The crude death rate was 9.8 per 1,000 population (9.9 per 1,000 in metropolitan France), corresponding to a life expectancy at birth of 79.3 years for males and 85.2 years for females (79.4 years and 85.3 years in metropolitan France).

1. Life expectancy has still not fully recovered

Mean length of life has still not returned to the level recorded in 2019, when it was 79.7 years for men and 85.6 years for women in the whole of France, and 79.8 years and 85.6 years in metropolitan France (not counting the overseas departments and territories). This trend is very similar to that observed in other European countries for which 2022 data are already available (Human Mortality Database, 2023). Sweden is the only country where life expectancy at birth in 2022 returned—but only just—to its 2019 level.

According to INSEE, an estimated 45,800 more deaths occurred in 2022 than were expected. Taking account of population ageing, which increases the number of people exposed to the risk of death, and the rate of mortality decline observed between 2010 and 2019 (Blanpain, 2023), the expected number of deaths would have been 621,200 in the absence of COVID-19. Paradoxically, while there were fewer excess deaths in 2022 than in 2020 (48,400), their number was higher than in 2021 (42,700), despite the sharp decline in COVID-19-related mortality. It was nonetheless below the number of deaths with COVID-19 mentioned on the death certificate. According to provisional national statistics published by CepiDc–INSERM, the body responsible for coding death certificates and disseminating information on causes of death in France, 50,211 COVID-related deaths occurred in 2022 compared with 76,800 in 2020 and 69,114 in 2021 (CepiDc–INSERM, 2023). Unlike previous years, however, the COVID-attributable deaths in 2022 were only partially offset by lower mortality from other causes.

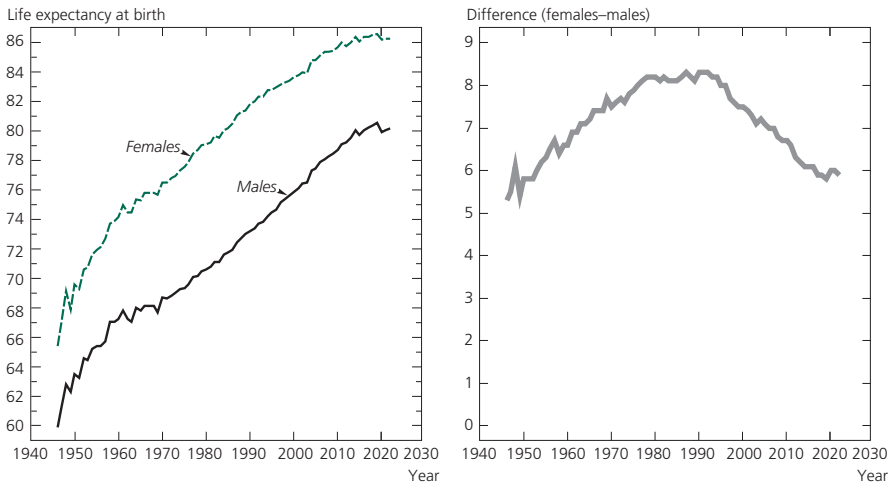
Alongside COVID-19, two other epidemiological events contributed to the death toll in 2022. The first was a double flu epidemic. There were relatively few flu deaths in 2021, but the pattern in 2022 was unusual, with a late epidemic in the winter of 2021–2022 and an early epidemic in the winter of 2022–2023. A first wave of flu deaths affected the whole of metropolitan France between March and April 2022, followed by a second wave in December 2022 (Bernard-Stoecklin, 2022). In addition, three successive heatwaves marked the summer of 2022, the hottest ever recorded until that of 2023, whose impact on mortality is not yet known. While the whole of Europe was affected by the 2022 heatwaves, France was the country with the largest record deviations from the seasonal temperature norms. Around 5,000 of

the estimated 61,000 heatwave-related deaths across Europe occurred in France. This high excess mortality concerned women more than men, those over age 65 especially (Ballester et al., 2023; see Van Steen et al., 2019, for another study on greater female vulnerability). Last, other causes of death may have been affected by some indirect (and delayed) effects of COVID-19, including the greater fragility of survivors of the most severe forms of the disease or delays in testing or treatment for other health problems during the height of the pandemic. It will not be possible to draw up a detailed epidemiological picture of the year until complete cause-of-death statistics become available for deaths in 2022.

2. The gender mortality gap is narrowing again

As excess mortality in 2022 affected females more than males, the sex difference in life expectancy at birth, which remained stable in 2020 and 2021, started shrinking again, resuming a downtrend that began in the late 1990s and that reversed the secular widening of the gender gap observed in preceding decades (Figure 31).

Figure 31. Male and female life expectancy at birth and gender differences in life expectancy in France, 1946–2022



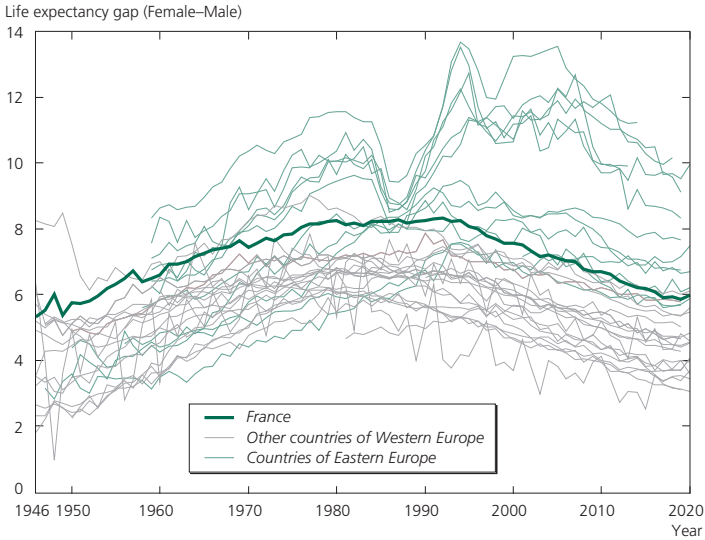
Coverage: Metropolitan France.
 Source: INSEE 2023, detailed figures of the *Bilan Démographique 2022*.

Throughout the modern era, in France as elsewhere in Europe, women have lived for longer than men on average, but their advantage remained small until the 19th century, with a difference in life expectancy at birth that fluctuated over time between 0.5 and 2.5 years (Henry, 1987). The gap then widened slowly until the Second World War and more rapidly after 1945 until it peaked at 8.3 years in 1980. The trend reversed in the following decade, and by 2022 the life expectancy gap had fallen to below 6 years (Figure 31).

3. France's large gender gap in life expectancy is an exception in Western Europe

The gender gap in life expectancy is historically higher in France than in all other Western European countries except Finland. The pattern observed in France is similar to that of its neighbours, however, with a widening of the gap until around 1980 followed by trend reversal (Figure 32).

Figure 32. Gender differences in life expectancy at birth in France and 34 other European countries, 1946–2020



Coverage: Western Europe: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Switzerland, Sweden, and the United Kingdom; Eastern Europe: Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Russia, and Ukraine.

Source: Human Mortality Database, www.mortality.org, consulted 10 June 2023.

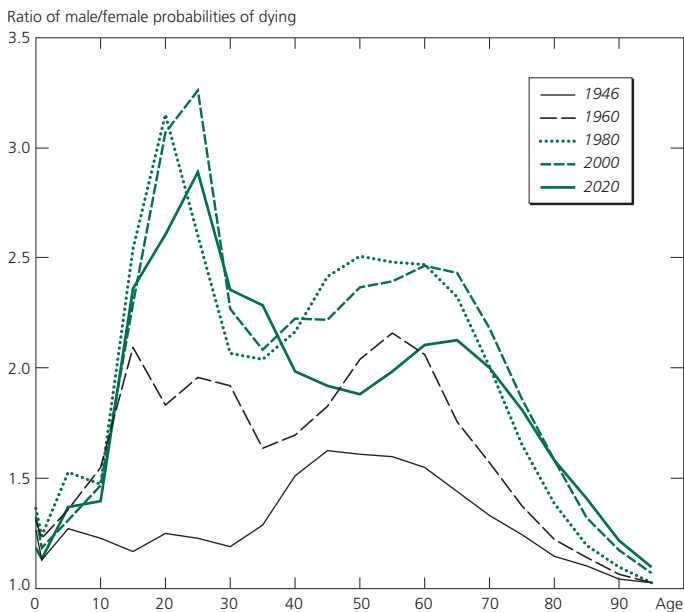
The countries with the smallest gender gap in mean life expectancy are Denmark, Ireland, and the Netherlands before 1980, the United Kingdom and Iceland after 1980, and Sweden for the entire period. In Sweden, the gender gap in life expectancy at birth increased from 2.3 years in 1946 to a peak of 6.2 years in 1978 before shrinking gradually to 3.7 years in 2020.

While the gender gap in life expectancy in Eastern European countries rarely exceeded 5 years in the 1940s and 1950s, it then increased rapidly from the 1970s to an initial peak of 8–11 years, depending on the country. After falling back to below 8 years, it then peaked again in the 1990s and 2000s, notably in Belarus, Latvia, Hungary, Poland, Ukraine, and especially Russia, where the gender gap in life expectancy reached 13.5 years due to very high excess male mortality associated with cardiovascular disease and external causes (accidents, homicides, and suicides).

4. Large variations by age in the gender mortality gap

In the aftermath of the Second World War, women aged 40–60 years had a large mortality advantage over men of the same age. This excess male mortality increased considerably until 1980, with a hazard ratio that rose from around 1.5 to 2.5 (Figure 33). The increase was even more dramatic for young adult men, whose excess mortality was quite low in the mid-1940s, with a 25% higher risk of death among those aged 20–24 years, but whose hazard ratio had risen to more than 3 by 1980. Practically all age groups were concerned by this relative deterioration in male mortality. Only boys (under age 15), and the oldest men (80 and older) were relatively spared. The increase in male excess mortality between the mid-1940s and 1980 is due to a much faster decrease in female than in male mortality over this period.

Figure 33. Male excess mortality ratios by 5-year age group in metropolitan France, 1946, 1960, 1980, 2000, and 2020



Interpretation: The ratio of the probabilities of dying gives the ratio between the male and female probabilities of dying by age group and for each of the 5 years concerned. For example, in 1980, the probability of dying in the year was more than 3 times greater for a man aged 20–24 years than for a woman of the same age.

Coverage: Metropolitan France

Source: Human Mortality Database, www.mortality.org, consulted 10 June 2023.

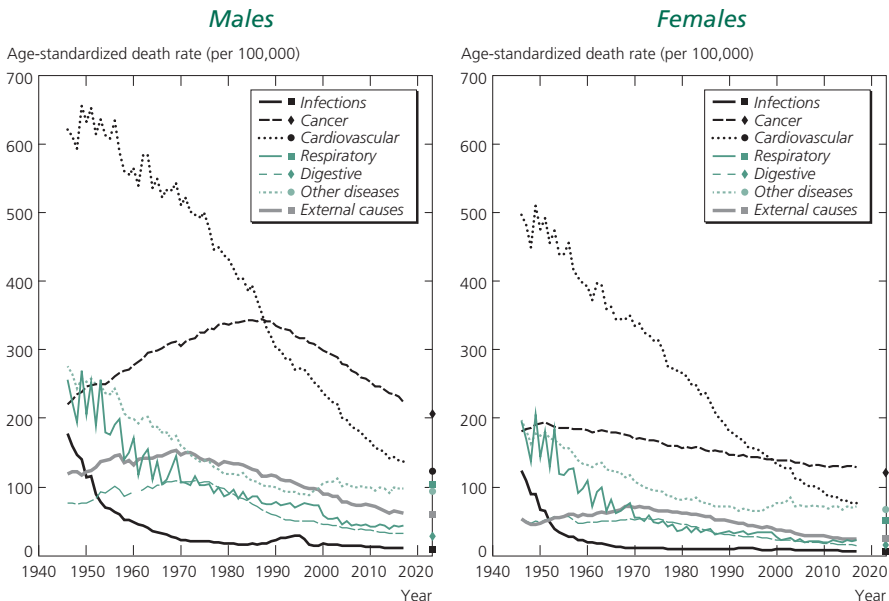
While the risk of death was still much higher for men than for women in 2020 compared to 1946 for all ages between 15 and 80, male excess mortality has nonetheless decreased substantially for adults aged 40–65 since 1980, and since the 2000s especially. At ages 50–55 years, for example, the hazard ratio has fallen by more than 20% (from 2.5 in 1980 to 1.9 in 2020). The curve of the gender gap in mortality has shifted towards older ages. Among young adults,

the peak moved from ages 15 to 20 years between 1960 and 1980, and then to age 25 years from 2000. Among older adults, a second peak has moved from age 55 in 1960 to age 60 in 1980 and 2000, and age 65 in 2020. While the increase is small, the gender gap in mortality is still widening beyond age 80, however. The cumulative effect of male excess mortality at all ages explains why women account for the overwhelming majority (85%) of centenarians.

5. Contribution of causes of death to the gender gap in mortality

The widening of the gender gap in mortality between 1946 and 1980 is due mostly to differential mortality trends for three main medical causes of death—deaths from external causes at young adult ages, cardiovascular diseases, and cancers after age 45—that reflect the increase among men in behaviours harmful to health over this period (Figure 34). The role of other pathologies is small and, apart from digestive diseases, largely determined by alcohol consumption and smoking. Their contribution to the gender gap decreased over the period (Figure 35). The mortality differences between men and women have thus been aggravated by the increasing role of cardiovascular diseases and social diseases linked to occupational risks and high-risk behaviours such as driving, smoking, and alcohol consumption. Moreover, it was women who benefited first from new preventive health policies and the cardiovascular revolution of the 1960s and 1970s (Meslé, 2004).

Figure 34. Standardized mortality rates by cause for each sex, 1946–2020

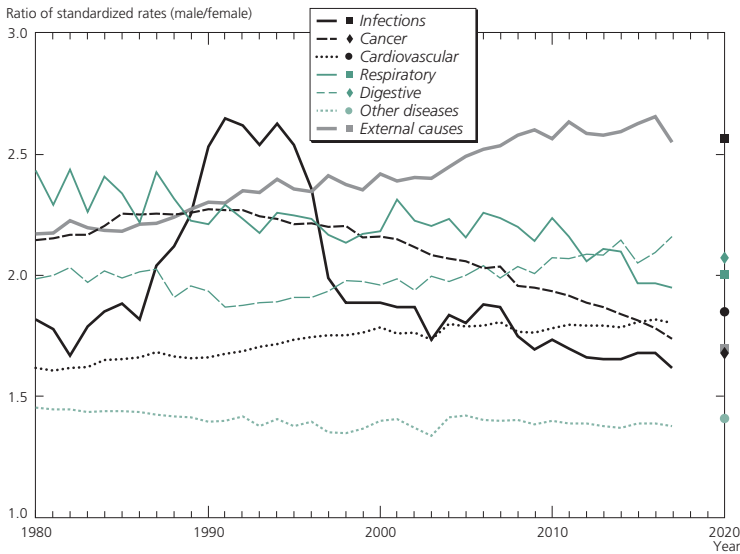


Note: Cause-of-death data for 2018 and 2019 are not yet available.

Coverage: Metropolitan France.

Source: Authors' calculations based on data from CepiDC-INSERM and the Human Mortality Database, www.mortality.org.

Figure 35. Male/female ratio of standardized mortality rates by cause since 1946



Note: Data on causes of death for 2018, 2019, and since 2021, are not yet available.

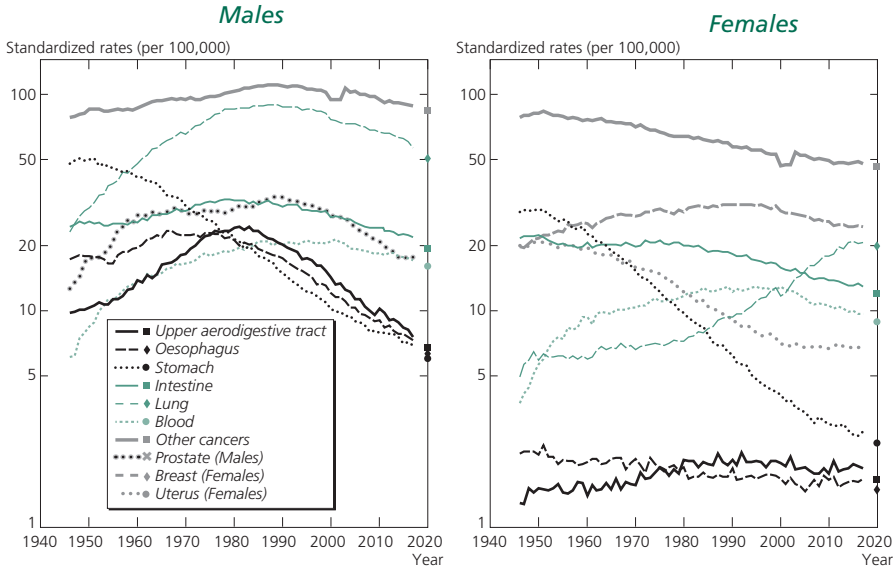
Coverage: Metropolitan France.

Source: Authors' calculations based on data from CèpiDc-INSERM and the Human Mortality Database, www.mortality.org.

During the following period (1980–2020), male and female behaviours gradually became more similar, and the gender gap in mortality narrowed, although behaviour differences still confer a female survival advantage. Excess male mortality at young adult ages is still due largely to a disproportionate number of male deaths in road traffic accidents. While the contribution of cardiovascular diseases to the gender gap in life expectancy stabilized over this period, the narrowing of the gap at ages 45–64 is due mainly to the decline in male cancer mortality. A breakdown of cancer deaths gives a clearer picture of the trends at play (Figure 36).

The standardized mortality rates for the main cancers and their trends over the period 1946–2020 reveal a generally favourable tendency for the most deadly cancers in recent years, for men and women alike. These cancers have evolved in three different ways. First, deaths from certain highly lethal cancers, including cancers of the stomach, uterus, and the residual category of other female cancers, began to decline from the 1950s. Second, for most other types of cancers (intestine for both sexes, lung, oesophagus, prostate, and upper aerodigestive tract for men), a trend reversal occurred in the 1980s and early 1990s. Last, death rates from a few types of cancer remained stubbornly high until the 2000s or 2010s (blood cancers for both sexes, breast cancer for women, and the residual category of other cancers for men).

Figure 36. Standardized male and female cancer mortality rates since 1946 (log scale)



Note: Data on causes of death for 2018, 2019, and since 2021, are not yet available.

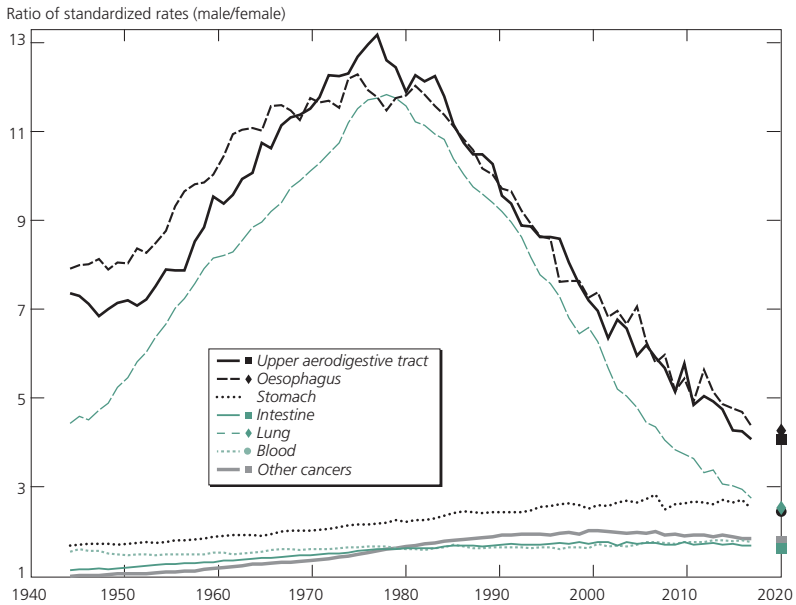
Source: Authors' calculations based on data from CepiDc-Inserm and the Human Mortality Database, www.mortality.org.

These improvements are due in part to medical advances and to the gradual decline in behaviours harmful to health. The arrival of antibiotics in the late 1930s had a major impact on cancers of infectious origin, such as stomach and cervical cancer, in the decades following the Second World War. Better food conservation and general dietary improvements also contributed to a rapid decrease in stomach cancers over the same period. From the late 1960s, and in the 1970s especially, healthier individual behaviours (less smoking and alcohol consumption among men) along with mass screening to detect prostate cancer among men, and breast and cervical cancer among women, further accelerated the downtrend in cancer mortality for both sexes.

While cancer mortality is decreasing in general for men, the pattern is different for women due to the rise in lung cancer. Female lung cancer deaths increased steadily from the 1960s, with an acceleration in the 1980s. This increase, observed throughout Europe, contrasts with the downturn observed among men from the 1990s and is explained by gender differences in smoking behaviour. While smoking among men started decreasing from the 1960s, it increased among women until the early 2000s (Douchet, 2022) (Figure 36). These trends largely explain the stagnation in female cancer mortality and the convergence between the two sexes. Cancers now have a larger impact on the gender gap in mortality than all the other major causes of death (Figure 35).

The convergence of male and female cancer mortality rates is due mainly to the convergence of rates of cancers of the upper aerodigestive tract, the oesophagus, and the lung (Figure 37). For these three cancers, the ratio of standardized rates reached 12 or more around 1980 before decreasing rapidly thereafter. In 2020, mortality from cancers of the upper aerodigestive tract and of the oesophagus was around 4 times higher among men than women; it was 3 times higher for lung and stomach cancer and less than 2 times higher for other types of cancer.

Figure 37. Male/female ratio of standardized cancer mortality rates, since 1946



Note: Data on causes of death for 2018, 2019, and since 2021, are not yet available.

Source: Authors' calculations based on data from CepiDc-INSERM and the Human Mortality Database, www.mortality.org.

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Résumé

Didier BRETON, Nicolas BELLIOU, Magali BARBIERI Justine CHAPUT, Hippolyte D'ALBIS • L'ÉVOLUTION DÉMOGRAPHIQUE RÉCENTE DE LA FRANCE.

Les comportements des femmes et des hommes sont-ils si différents ?

En janvier 2023, la France comptait 68 millions d'habitants, soit 200 000 de plus qu'en janvier 2022. Les naissances ont diminué et les décès augmenté : le solde naturel baisse, atteignant un niveau historiquement faible et inférieur au solde migratoire. En 2022, la France fait partie des 6 pays européens parmi les 27 dont le solde naturel est positif, mais son solde migratoire est relativement faible : l'accroissement de la population française est deux fois moindre que celui de l'UE27. En 2021, les flux d'entrées de personnes venant de pays tiers avec un titre de séjour augmentent par rapport à 2020, pour retrouver leur niveau d'avant la crise sanitaire. En 2022, l'indice conjoncturel de fécondité diminue (1,8 enfant par femme) et atteint son niveau le plus bas depuis 20 ans. Toutefois, le renouvellement des générations nées jusqu'en 1992 semble assuré. La fécondité des hommes est plus forte que celle des femmes, principalement du fait des enfants nés après leur 50 ans. Le recours à l'avortement est en augmentation entre 2021 et 2022, et plus fréquent dans les groupes d'âges auxquels la fécondité est élevée. La part des IVG réalisées par la méthode médicamenteuse continue sa progression, tout comme celles pratiquées par les sages-femmes.

En 2022, le rattrapage des mariages qui n'ont pas pu être célébrés en 2020 et 2021 se poursuit. Le nombre de mariages augmente ; en revanche, le nombre de pacs diminue dans les couples hétérosexuels. Cependant, le nombre de pacs augmente pour les couples de même sexe et n'a jamais été aussi élevé. L'écart d'âge entre les conjoints diminue légèrement, mais subsiste notamment pour les couples d'hommes. Le nombre de décès reste important en 2022 malgré une amélioration de la situation sanitaire : 2 épidémies de grippe et 3 épisodes caniculaires expliquent une surmortalité de 45 800 décès. L'espérance de vie à la naissance augmente en 2022 pour les hommes et pour les femmes, mais ne retrouve pas son niveau d'avant la pandémie. La France reste l'un des pays d'Europe de l'Ouest dont l'écart d'espérance de vie entre les hommes et les femmes est parmi les plus importants (6 ans), même si cet écart diminue constamment depuis 1980.

Resumen

Didier BRETON, Nicolas BELLIOU, Magali BARBIERI Justine CHAPUT, Hippolyte D'ALBIS • CAMBIO DEMOGRÁFICO EN FRANCIA. ¿SON TAN DIFERENTES LOS COMPORTAMIENTOS DE HOMBRES Y MUJERES?

En enero de 2023, Francia tenía 68 millones de habitantes, 200.000 más que en enero de 2022. Los nacimientos han disminuido y las defunciones han aumentado: el saldo natural desciende, hasta un nivel históricamente bajo e inferior al saldo migratorio. En 2022, Francia será uno de los 6 únicos países de los 27 europeos con un saldo natural positivo, pero su migración neta será relativamente baja: el crecimiento demográfico francés será la mitad que el de la UE27. En 2021, la afluencia de personas con permiso de residencia procedentes de países no comunitarios aumentará con respecto a 2020, volviendo a su nivel anterior a la crisis sanitaria. En 2022, la tasa global de fecundidad descenderá a 1,8 hijos por mujer, alcanzando su nivel más bajo desde hace 20 años. Sin embargo, la renovación de las generaciones nacidas hasta 1992 parece asegurada. La fecundidad masculina es superior a la femenina, debido sobre todo al número de hijos nacidos después de los 50 años. El recurso al aborto aumentará entre 2021 y 2022, y será más frecuente en los grupos de edad en los que la fecundidad es elevada. La proporción de abortos médicos sigue aumentando, al igual que los practicados por comadronas. En 2022, continúa la recuperación de los matrimonios que no pudieron celebrarse en 2020 y 2021. El número de matrimonios aumenta, mientras que el de uniones

civiles disminuye entre las parejas heterosexuales. Sin embargo, el número de uniones civiles entre parejas del mismo sexo aumenta y nunca ha sido tan alto. La diferencia de edad entre los cónyuges se reduce ligeramente, pero sigue siendo especialmente amplia entre las parejas masculinas. El número de muertes seguirá siendo elevado en 2022 a pesar de la mejora de la situación sanitaria: 2 epidemias de gripe y 3 olas de calor serán responsables de un exceso de 45.800 muertes. La esperanza de vida al nacer aumentará en 2022 tanto para los hombres como para las mujeres, pero no volverá a su nivel anterior a la pandemia. Francia sigue siendo uno de los países de Europa Occidental con una de las mayores diferencias de esperanza de vida entre hombres y mujeres (6 años), a pesar de que esta diferencia no ha dejado de reducirse desde 1980.