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In France, the number of births and the total fertility rate have declined in recent years, and life expectancy has increased more slowly than in the past. Are these changes linked to the current economic climate or do they signal the emergence of new long-term trends? Gilles Pison describes current patterns and examines their causes.

On 1 January 2017, the population of metropolitan France (mainland France and Corsica) was an estimated 64.9 million – an increase of 255,000 (+0.4%) over 2016 – with a further 2.1 million in the French overseas *départements*, making a total of 67.0 million for France as a whole (Table). Natural growth – the surplus of births over deaths – is continuing its downward trend. It has fallen by more than 100,000 (almost 40%) in the last ten years, from 280,000 in 2006 to 173,000 in 2016. This slowdown reflects a 50,000 decrease in the number of births, and a similar increase in the number of deaths.

## Fewer births than in 2015

The number of births is decreasing (from 781,000 in 2014 in metropolitan France to 760,000 in 2015 and 747,000 in 2016) due to declining numbers of women of reproductive age and a drop in the total fertility rate (TFR) from 1.97 children per woman in 2014 to 1.92 in 2015 and 1.89 in 2016. The lower TFR can be attributed to a lower fertility rates below age 30; above this age they are stable or still increasing slowly. The postponement of childbearing observed over almost four decades is continuing, and the women who gave birth in 2016 were aged 30.5 on average.<sup>(1)</sup> Mean age at childbirth has increased steadily since 1977, when it stood at 26.5 years.

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(1) The mean age at first birth was around 28.5 years in 2016.

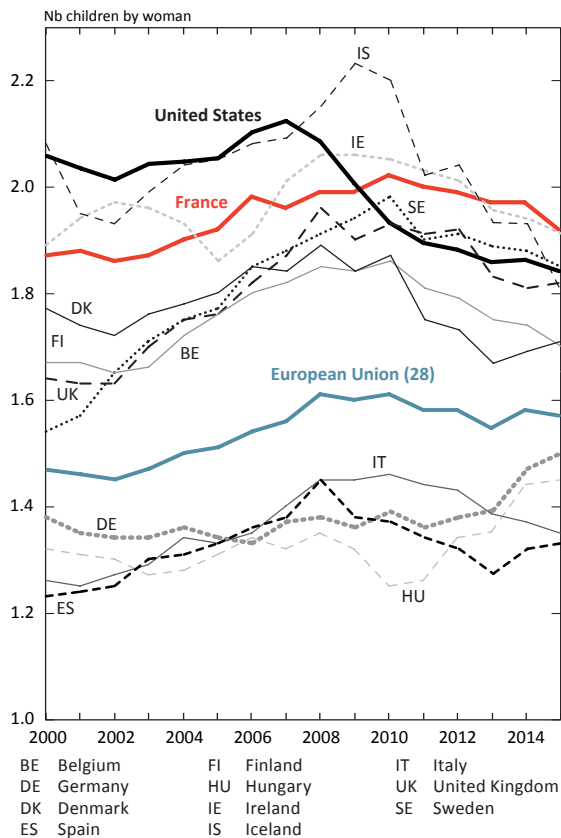
Cohort fertility trends show that the women born in 1966, who turned 50 in 2016 and who have now completed their reproductive life, had 2.02 children on average. Women born in 1976 who turned 40 in 2016 already have 1.97 children, the same number as women born in 1966 at the same age, so the total will probably reach at least 2.0 children at age 50 for this cohort too (see below).

## Why is the total fertility rate decreasing?

The decrease in the TFR was anticipated some years ago by analysts who cited the uncertainty linked to the economic crisis and high unemployment as explanatory factors. Indeed, similar falls have been observed in most industrialized countries (Figure 1). In the United States, for example, between 2007, before the crisis, and 2015 (the last year for which figures are available), the TFR fell by 13%, from 2.12 children per woman to just 1.84. In the United Kingdom, it fell from 1.96 in 2008 to 1.82 in 2015, a drop of 7%. And France is no exception, although the TFR has fallen less sharply than elsewhere (less than 3.5% between 2008 and 2015). The decline also began later, perhaps because the effects of economic recession were initially attenuated by social and economic policies that dampened the initial shock; note that unemployment continued to increase over the period, while decreasing elsewhere. Despite the recent dip, France was the EU country with the highest fertility in 2015.

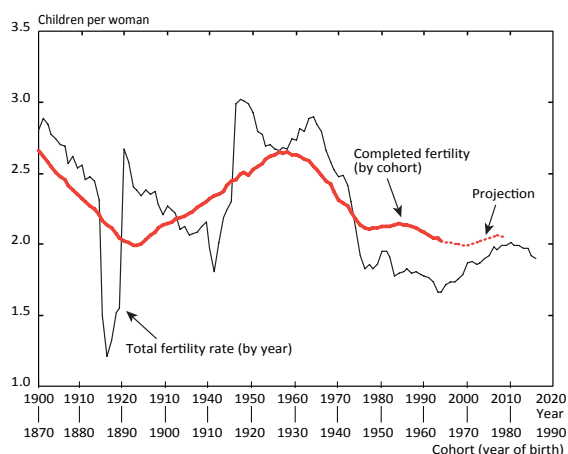
How will fertility evolve in the coming years? Analysis of recessions in industrialized countries in recent decades shows that they have little effect on

**Figure 1. Total fertility rate (TFR) from 2000 to 2014 in the United States and in Europe (selected countries)**



Gilles Pison, *Population & Societies* n° 542, INED, March 2017.  
Sources: European countries: Eurostat; United States: CDC.

**Figure 2. Fertility in France since 1900**



Gilles Pison, *Population & Societies* n° 542, INED, March 2017.  
Sources: [1, 3]  
Notes: - Women's years of birth were shifted by 30 years, which was the mean age at childbearing in the late 2000s; assumption used for the projection: age-specific fertility rates not yet observed are equal to those observed in 2015.

completed fertility; their main impact is on the timing of births [2]. When times are bad, some couples postpone their childbearing plans until the economic situation has improved, thereby reducing the TFR in the years following the downturn. When things get better, these couples start having children again, so fertility increases once the crisis is over. In other words, a crisis does not reduce the overall number of births, it simply delays them. If the current economic downturn follows the same pattern, the fall in unemployment, if sustained, should be followed by a stabilization of fertility or even a rebound. However, if part of the fertility decline corresponds to a new trend unrelated to the economic climate, then the TFR may not recover after a return to economic growth.

**Stable cohort fertility, at around two children per woman**

It is useful at this point to consider the other indicator of fertility, that of completed fertility, which applies not to a calendar year, but to a cohort of women born in the same year. It changes less abruptly than the TFR (Figure 2) and unlike the TFR, which refers to a fictitious cohort, the cohort measure applies to real women. However, it can only be measured for cohorts of women who have reached aged 50 or above. For this reason, we do not yet know the completed fertility of women born in 1976, who turned 40 in 2016 and who already have 1.97 children on average, as mentioned above. Projections suggest that they will have had 2.05 children by age 50<sup>(2)</sup> [3]. The women born in 1981, who turned 35 in 2016, and who have already had 1.71 children, are also projected to reach this total.

The curve of projected completed fertility has a dip at around 2.00 children for the cohorts born in the late 1960s and early 1970s (who reached their mid-40s in 2016), followed by a rise to 2.05 for the subsequent cohorts (Figure 2). How can we explain this dip? The women born in the late 1960s and early 1970s delayed the birth of their first child, in line with a trend that affected all subsequent cohorts throughout the industrialized world from the 1970s and which continues to this day. They later made up for this delay, but slightly less so than their elders or their juniors, perhaps because of the economic situation at that time; when they reached childbearing age, in the mid and late 1990s, conditions were less favourable than today. Family policies were already in place to help women reconcile work and family life, but there was less childcare provision and the range of options was more limited. The following cohorts enjoyed more favourable conditions in the 2000s, notably thanks to the introduction of a special childcare allowance (*prestation d'accueil du jeune enfant*) [4].

(2) The projection is based on the assumption that at each age above 40, the fertility of these women will be the same as that observed among women of the same age in 2015.

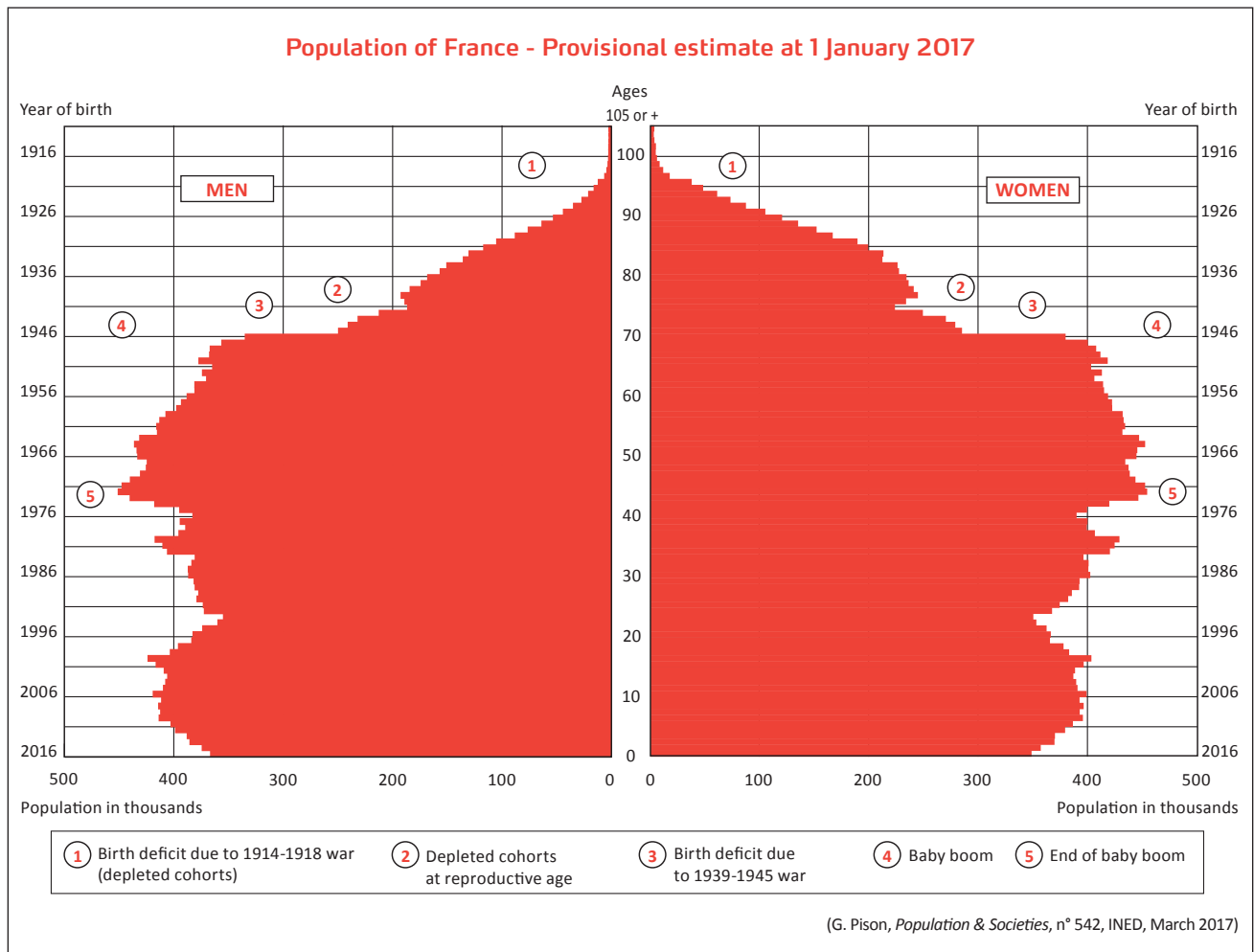
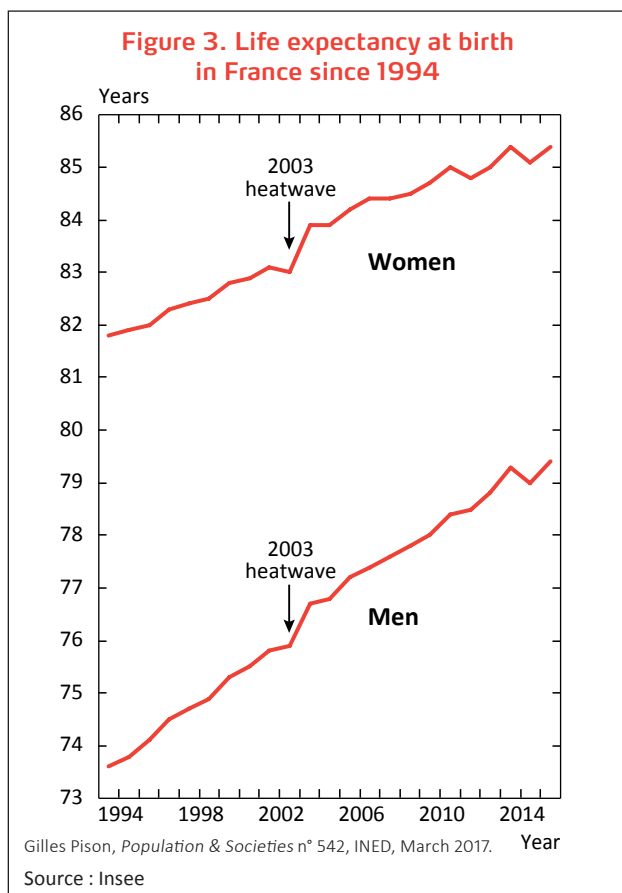


Table - Demographic indicators 1950 to 2016, metropolitan France															
	1950	1960	1970	1980	1990	2000	2008	2009	2010	2011	2012	2013	2014(p)	2015(p)	2016(p)
Births (m)	858	816	848	800	762	775	796	793	802	793	790	782	781	760	747
Deaths (m)	530	517	540	547	526	531	532	538	540	535	559	558	547	582	574
Natural increase (m)	328	299	308	253	236	244	264	255	262	258	231	223	234	179	173
Net migration (m)	35	140	180	44	80	70	67	44	43	47	91	107	82	82	82
Total growth (m)	363	439	488	297	316	314	331	299	305	305	322	330	316	261	255
Adjustment <sup>(1)</sup> (m)	-	-	-	-	-	94	-	-	-	-	-	-	-	-	-
Birth rate (t)	20.5	17.9	16.7	14.9	13.4	13.1	12.8	12.7	12.7	12.5	12.4	12.2	12.2	11.8	11.5
Death rate (t)	12.7	11.3	10.6	10.2	9.3	9.0	8.5	8.6	8.6	8.5	8.8	8.7	8.5	9.0	8.9
Infant mortality rate (r)	51.9	27.4	18.2	10.0	7.3	4.4	3.6	3.7	3.5	3.3	3.3	3.5	3.3	3.5	-
Total fertility rate (e)	2.93	2.73	2.47	1.94	1.78	1.87	1.99	1.99	2.02	2.00	1.99	1.97	1.97	1.92	1.89
Life expectancy:															
Male (a)	63.4	67.0	68.4	70.2	72.7	75.3	77.6	77.8	78.0	78.4	78.5	78.8	79.3	79.0	79.4
Female (a)	69.2	73.6	75.9	78.4	80.9	82.8	84.4	84.5	84.7	85.0	84.8	85.0	85.4	85.1	85.4
Marriages <sup>(2)</sup> (m)	331	320	394	334	287	298	259	245	245	231	240	233	235	230	230
Marriage rate (t)	7.9	7.0	7.8	6.2	5.1	5.0	4.2	3.9	3.9	3.7	3.8	3.7	3.7	3.6	3.6
Population <sup>(3)</sup> (m)	42,010	45,904	51,016	54,029	56,893	59,267	62,466	62,765	63,070	63,376	63,698	64,028	64,344	64,605	64,860
Under 20 <sup>(2)</sup> (m)	12,556	14,665	16,748	16,419	15,632	15,068	15,369	15,407	15,440	15,458	15,513	15,589	15,658	15,691	15,706
65 and over <sup>(2)</sup> (m)	4,727	5,288	6,174	7,541	8,036	9,561	10,421	10,540	10,667	10,973	11,302	11,649	11,990	12,306	12,593
Under 20 <sup>(2)</sup> %	29.9	31.9	32.8	30.4	27.5	25.4	24.6	24.5	24.5	24.4	24.4	24.3	24.3	24.3	24.2
65 and over <sup>(2)</sup> %	11.3	11.5	12.1	14.0	14.1	16.1	16.7	16.8	16.9	17.3	17.7	18.2	18.6	19.0	19.4

(a) . years – (e) children per woman – (m) in thousands – (p) provisional – (r) per 1,000 live births – (t) per 1,000 population.  
 (1) Population estimates for 2000 were adjusted to establish accounting consistency between the 1999 and 2006 censuses (see Vanessa Bellamy and Catherine Beaumel, 2017 [1]).  
 (2) Including same-sex marriages from 2013.  
 (3) At year-end.  
 Source: INSEE. Division des enquêtes et études démographiques ([www.insee.fr](http://www.insee.fr)).



### Is life expectancy increasing more slowly?

There were 574,000 deaths in 2016, 1.4% fewer than in 2015 (582,000), even though the population increased by 0.4% and the proportion of older adults increased. Calculating life expectancy provides a means to eliminate components of mortality linked to variations in population size and age distribution, so that only fluctuations linked to changes in the risk of dying are taken into account. Life expectancy at birth reached 79.4 years for males and 85.4 years for females in 2016, versus 79.0 years and 85.1 years, respectively, in 2015. This represents an increase of 0.4 years for men and 0.3 years for women. This gain is notable, but the level in 2015 was low. Life expectancy fell by 0.3 years in that year with respect to 2014, due mainly to a severe flu epidemic, compounded by a July heatwave and a cold spell in October. The 2016 increase simply brings us back to the 2014 level for women (85.4 years), with an increase of 0.1 year for men (79.4 years versus 79.3). But 2014 was a year of low mortality, marked by a

sharp increase in life expectancy with respect to 2012 and 2013, when gains were small due to major flu outbreaks.

To put 2016 life expectancy into perspective, it should be viewed in relation to the general trend since 1994 (Figure 3). The effect of the 2003 heatwave is clearly visible, along with its counter-effect in 2004 and the rapid rise in life expectancy in the following years linked to a new approach to elder care. The trend is less clear from 2012 due to major annual fluctuations in life expectancy reflecting the highly variable impact of seasonal flu epidemics in recent years. The increase in life expectancy appears to have slowed since 2012 (Figure 3). This trend could be confirmed in 2017, since the start of the year has already been marked by a flu epidemic even more deadly than that of 2015.<sup>(3)</sup>

### References

- [1] Vanessa Bellamy and Catherine Beaumel, 2017, "Bilan démographique 2016: à nouveau en baisse, la fécondité atteint 1,93 enfant par femme en 2016", *Insee Première*, 1630.
- [2] Gilles Pison, 2011, "Two children per woman in France in 2010: Is French fertility immune to economic crisis?", *Population & Societies*, 476, 4 p.
- [3] Magali Mazuy, Magali Barbieri, Didier Breton, Hippolyte d'Albis, 2016, "Recent demographic developments in France: A decline in fertility, an increase in mortality", *Population, English Edition*, 71(3), pp. 395-454.
- [4] Solveig Vanovermeir, 2012, "L'accueil des jeunes enfants: axe majeur de la politique familiale française depuis les années 1970", *DREES, Dossier Solidarité Santé*, 31.

### Abstract

The number of births fell by 4.5% in France between 2014 and 2016 due to declining numbers of women of reproductive age and a decrease in the total fertility rate (TFR) from 1.97 children per woman in 2014 to 1.89 in 2016. Similar decreases in TFR have occurred in most developed countries, but the drop in France is smaller and occurred later than elsewhere thanks to social and family policies which dampened the impact of the crisis.

(3) The estimated number of deaths in January 2017 is 66,000, some 10,000 higher than the expected number (around 55,000). Such an exceptional level of excess mortality (20%) has not been recorded in a winter month for more than 40 years (January 1973).