More Than 10 Years of Declining French Fertility in the European Context of Low Fertility. What Recent Census Microdata Tells Us.

Didier Breton[1], Sandra Florian[2], John Tomkinson[3]

EXTENDED ABSTACT

Abstract

Throughout the last decades, France has exhibited one of the highest fertility rates in Western Europe, having a TFR close to replacement level. However, births rates in France have been steadily declining since 2010. The French TFR has dropped from 2.03 children per woman in 2010 to 1.68 in 2023. Although part of this decline was initially due to a continuing trend of childbearing postponement, recent observations suggest that a recuperation of birth rates at older ages may be increasingly unlikely. Childlessness has been slightly, but steadily raising for all age groups, and this increase has accelerated since 2016. The proportion of childless women in cohabiting couples in the 35-39 age group increased from 21.0% in 2011 to 22.4% in 2021. This study aims to measure the evolution of French fertility by parity in recent cohorts and identify the demographic groups that continue postponing childbearing. Our hypothesis is that the French fertility model is converging towards the two-child family model, after years of strong resistance. We evaluate whether this decline is driven by most educated women, or whether it is a pervasive behavior across all educational levels.

Keywords
Fertility decline, birth rates by parity, childlessness, educational fertility gradient, France, Europe

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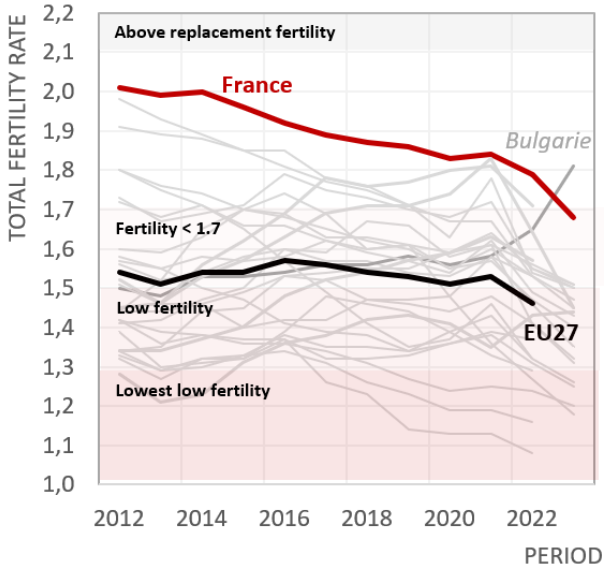
Background

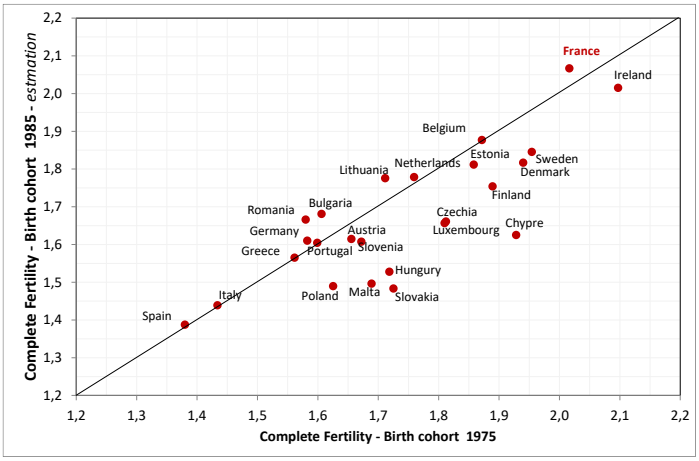
In France, 678,000 children were born in 2023, almost 155,000 fewer than in 2010 (-20%). This steady decline in the birth rate over the last decade or so is causing a shrinkage of the base of the population pyramid, which is taking on a shape increasingly similar to that of its European neighbours (Solaz et al., 2024). While at the start of the period part of this decline was explained by an age-structure effect (fewer women of childbearing age), this is no longer the case since 2018 (Breton et al., 2020). The drop in the number of births is solely the result of the decline in fertility, which has fallen from 2.03 children per woman in 2010 to 1.68 in 2023 and will probably be less than 1.65 in 2024 based on data from the first half of the year. The French exception of relatively high fertility is less and less evident, and since 2023 France is no longer the most fertile country in the EU27 (Figure 1). France is now one of the countries with a relatively high fertility rate on the EU27 scale, but well below the population replacement threshold.

Figure 1. Total Fertility Rate - EU27 countries, 2012 to 2023



Universe: European Union EU27.
Source: Eurostat, National Statistics Institutes, various countries.

Figure 2. Completed Fertility for Cohorts Born in 1975 and 1985 (estimation) - EU-27 countries



Interpretation: French cohorts born in 1985 will have at the end of their reproductive lives 2.07 children on average, compared with 2.02 for those born in 1975
Universe: Europe 27 - excl. Latvia and Croatia. Author's calculations

Sources: Eurostat - authors' calculations

Things are a little different when we look at completed cohort fertility (CFR). The CFR in France remains close to 2.0 children per woman for the 1985 birth cohort, representing an exception alongside Ireland in this respect (Figure 2). However, while French demographers initially interpreted the drop in TFR as a postponement effect, as was observed in the 1990s, it now seems quite clear that the current

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drop in fertility will be reflected in future cohort fertility rates, given the continuous rise in the age at childbirth, particularly for first births, and lower parity progression to higher order births (Tomkinson, Breton, 2021). Socioeconomic factors that have been associated with the postponement and the decline of fertility include the expansion of female education, female employment, divorce and separation, the postponement of union formation, economic uncertainty, changes in family aspirations, among others (Lesthaeghe, 1995; Sobotka, 2017). Other reasons include changes in values, public policies and continuous economic crises (Brée and Breton, 2023).

In 2018, scholars proposed 5 different combinations of parity fertility rates associated with a cohort fertility rate of 1.60 children per woman or less: (1) a benchmark model, (2) the high childlessness model, (3) the one-child model, (4) the two-children family model, and (5) a polarized model with high childlessness and families with 3 or more children (Zeman et al., 2018). While most European countries can be classified in one of these models, this is not (yet) the case in France, due to a relatively low proportion of childless women, that is, a high parity progression ratio from 0 to 1 (PPR01) and a relatively high probability of transition from 2 to 3 children (PPR23) (Breton and Prioux 2005; 2009). But what is the case in more recent cohorts?

Objectives

The aim of this paper is to obtain a measure, albeit indirect, of the evolution of fertility by birth order in the most recent generations, and identify the demographic groups that have recently delayed childbearing. Our hypothesis is that the French fertility model is converging towards the two-child family model, after years of strong resistance. We also hypothesize that this decline is being driven by both most and least educated women, associated with changing values and a lesser trust in the welfare state.

Data and methods

In France, the parity declared in the civil registry data is not of sufficient quality to carry out a fertility analysis by birth order. This is one of the reasons why birth cohort parity progression ratios are not published in the Human Fertility Data Base. Another limitation of birth-order fertility analysis is the lack of information in the census on the number of children already born. The preferred sources for the study of fertility by birth order are the Family Surveys coupled with the census (Breton and Prioux, 2005; 2009; Toulemon and Mazuy, 2001). The last Family Survey was conducted in 2011, and the next will be carried out in 2025.

We therefore propose to use census microdata to estimate cohort fertility by the number of children of cohabiting mothers. The Own Children method (Grabill and Cho, 1965), considers today's children as yesterday's births. The CFR obtained is underestimated due to factors such as child mortality (between birth and the census date), the fact that some children do not live with their mother after a separation, and the fact that older children often move out of the parental home. In order to limit this underestimation as far as possible, we include only women under 40, as beyond this age group the cohort fertility underestimation would be larger mainly because many children have already left the parental home (Breton et al., 2020 - Box 1. p 476).

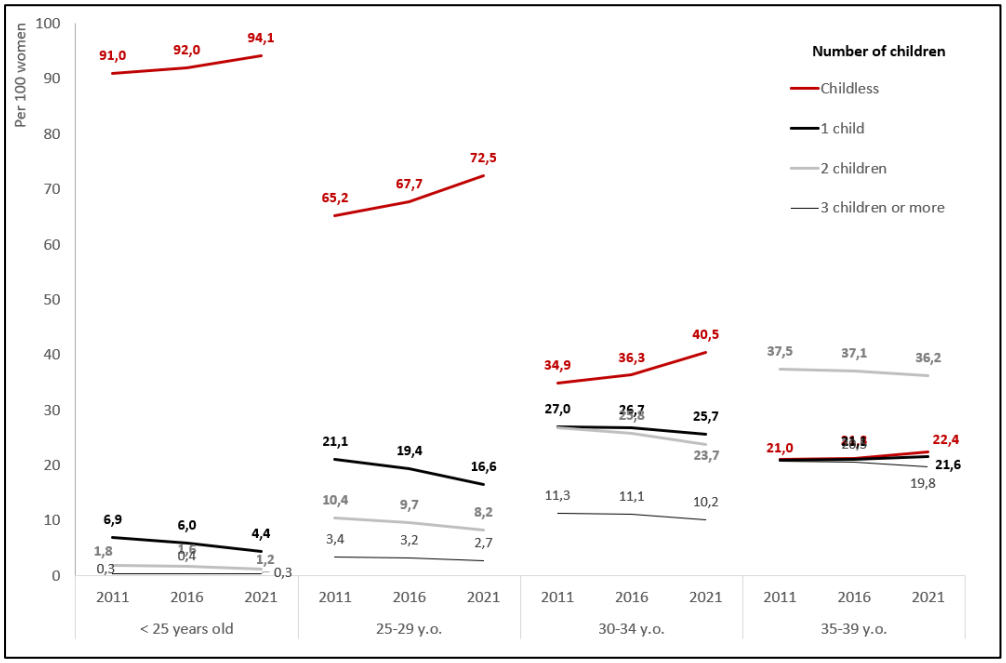
Nevertheless, the aim here is not to measure fertility levels *per se*, but to analyse the variation in the fertility indicators between the 2011 and 2021 censuses, and to identify the demographic groups among which the share of women without children and those with 3 or more children have changed the most over those 10 years. We will test the effect of various socio-economic and demographic variables, such as education, employment status, marital status, and place of residence (size of the urban area). Then, we will build different multivariate models to investigate which variables are most associated with being childless in 2011 and 2021, and to assess the changes in their effects.

Preliminary findings

(1) An increase in childlessness, regardless of age

Between 2011 and 2021, the proportion of women without cohabiting children increased, particularly in the 25-29 and 30-34 age groups (Figure 3). It increased by 7.3 percentage points among 25-29 year-olds, from 65.2% to 72.7%, and by 5.6 points among 30-34 year-olds (from 34.9% to 40.5%). It is unwise, however, to interpret this increase as a definitive rise in childlessness but, at the very least, it reflects a postponement of parenthood in these age groups, whether by choice or by constraint (Beaujouan & Sobotka, 2019). This proportion increased the least among the 35-39 age group. The assumption of a catch-up is therefore not impossible, but it would have to be particularly significant beyond the age of 35, whereas fertility rates at these ages have been stable or even falling in 2023. The proportion of women without cohabiting children is increasing, to the detriment of all other family sizes (1, 2, or 3 or more children).

Figure 3. Proportion of women childless, and with 1, 2 and 3 or more children by age group at the French censuses of 2011, 2016 and 2021

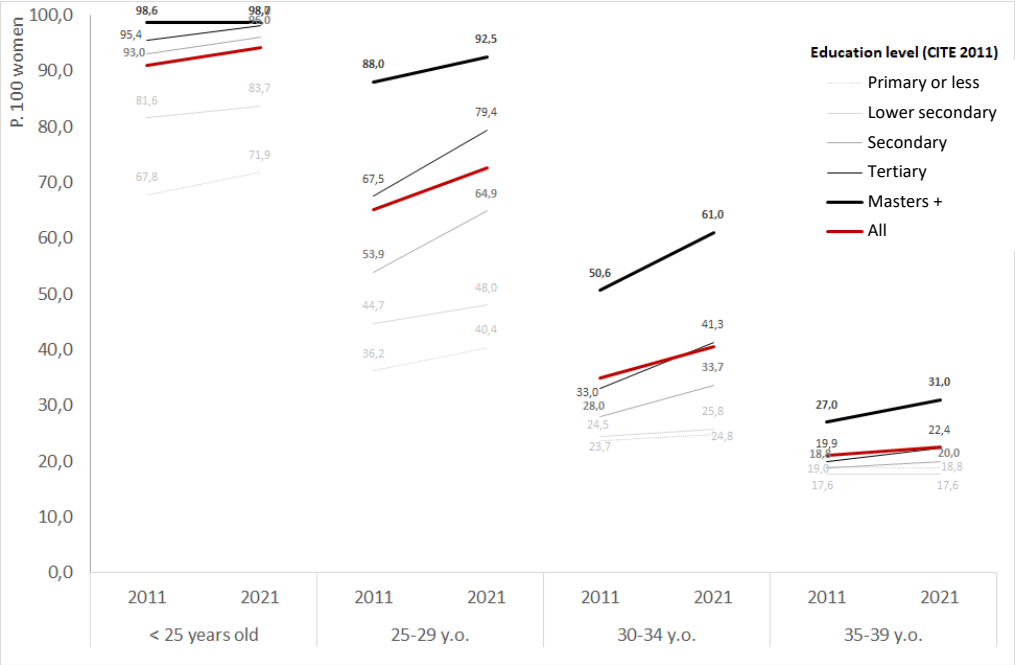


Universe: People living in households in France
Sources: French Population Census - authors' calculations

(2) An increase in childlessness, regardless of education

In France, as in most countries, fertility depends on women's level of education (Davie and Mazuy, 2010). Thus, in both 2011 and 2021, the proportion of women without children cohabiting at the time of the census was higher at higher levels of education, regardless of age (Figure 4). Moreover, this proportion increased between 2011 and 2021, for all ages and educational attainment. The effect of education was the greatest in the 25-29 and 30-34 age groups: The proportion of women without cohabiting children raised by 10.4 points in the 30-34 age group, from 50.6% to 61.0%, and by 11.9 points in the 25-29 age group, from 67.5% to 79.4% (Figure 4).

Figure 4. Proportion of women with no cohabiting children at the time of the census by education - France 2011 and 2021



Universe: People living in households in France
Sources: French Population Census - authors' calculations

Next Steps & Discussion

We will present a more detailed analysis of a number of variables available in the census, mainly those mentioned above. For example, the proportion of women in couples in the < 25 and 25-29 age groups declined between 2011 and 2021 (-5 points), while the latter were more likely to be childless, and the proportion of childless women increased between 2011 and 2021, irrespective of union status. The link between estimated childlessness and labor market status was also verified: childlessness was higher among working women in non-permanent employment, irrespective of year and age. We will present the results of multivariate models stratified by age and census year, in order to assess the main factors behind the decline in fertility in France since 2011.

This study will provide some initial insights into the causes of fertility decline in France, the last country in Europe to have had a fertility rate close to or above 2.0 children per woman in recent decades. These preliminary results, derived from an indirect method, will be discussed and put into perspective with those obtained in European countries that experienced a similar decline during the 1990s and 2000s. We will also present the initial results of the Generation Gender Survey (GGS-2, data collected in 2024 and expected to be available in early 2025), including estimates of the probability of higher parity transitions in French cohorts. France, along with Belgium, is currently one of the only European countries unable to calculate these indicators from population census and civil registry data alone, due to a bias in the reporting of birth order in the civil registry (data not available in the Human Fertility Database).

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