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Two children per woman in France in 2006: are immigrants to blame?

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Fertility in France reached two children per woman in 2006, close to replacement level. Is this due to the foreign population, as is often claimed? Using new data from the 2004 and 2005 census waves, François Héran and Gilles Pison show otherwise. The impact of foreign women on the national fertility rate is modest (+0.1 children), despite rising fertility among recent arrivals. With or without immigration, French fertility is among the highest in Europe.

In January, the French statistical office (INSEE) published its demographic report for 2006, giving separate figures for metropolitan France and the French overseas *départements* and regions (DOM-ROM) [1]. It reveals that the high French fertility is not simply the consequence of higher birth rates overseas. In metropolitan France alone, fertility has risen from 1.71 children per woman on average in 1995 to 1.98 today. Though, the figure stands at 2.5 children per woman in the overseas *départements*, the DOMs represent only 3% of the French population, and 4% of total births, adding just 0.02 children to the national fertility rate.

But aren't immigrant women also pushing up fertility in metropolitan France? This widely-held belief often reflects a fear that native French people will eventually be outnumbered by foreign immigrants. We will leave aside the ideological aspects of this question and focus on the facts.

◆ A large contribution to births, a limited impact on fertility

We will start by examining information on immigrants, focusing on those who arrived in France most recently, i.e. those with foreign nationality. The register of births

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(1) Similar results are obtained when the calculation is based on the father or on both father and mother, counting births to a foreign couple as one and those to a mixed couple as a half.

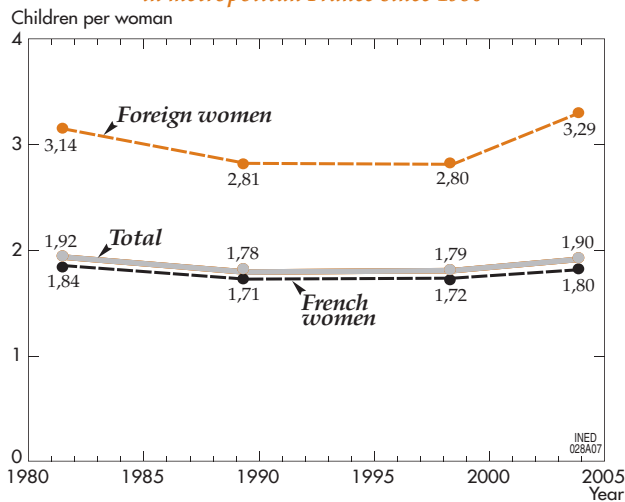
records the nationality of the parents of all children born in France, even if they were married abroad, and whatever their immigration status (legal or otherwise). In 2006, as in 2005, around one baby in eight – 100,000 out of a total of 800,000 – was born to a foreign mother. In half of these cases, the father was French (1). According to the consolidated data for metropolitan France in 2005, this represents 94,310 births out of 774,355, i.e. 12.2% of the total (Table 1). Clearly, the contribution of foreign women to the number

Table 1 – Births by parents' nationality, metropolitan France, 2005

	Number of children	
	Total	Born to foreign mother
Children born to unmarried parents		
French mother	340,849	
Foreign mother	25,945	25,945
Children born to married parents		
2 French parents	311,842	
Foreign father, French mother	27,354	
French father, foreign mother	25,912	25,912
2 foreign parents	42,453	42,453
Total	774,355	94,310

Source: INSEE (www.insee.fr)

Figure 1 - Fertility of French and foreign women in metropolitan France since 1980



(F. Héran and G. Pison, *Population & Societies*, no. 432, Ined, March 2007)

Sources: [3] and INSEE (data from civil records and 2004 and 2005 census waves).

of births in France is large, and deserves to be highlighted. But how is the fertility rate affected?

Surprising though it may seem, immigration has a strong impact on births but a limited impact on fertility. This can be illustrated by an example. Imagine 75 French women with two children per woman on average and 25 foreign women with the same average. Foreign women account for 25% of births, but have no effect on the fertility rate, and their contribution to the number of births simply stems from the fact that they represent 25% of mothers. This is because the number of births is the product of two independent factors: the number of women of childbearing age and their propensity to have children. It is mistaken to believe that foreign women's contribution to their host country's fertility rate is proportional to the number of babies they have (2).

Now let's imagine a different situation, a country where 99% of women have two children, while a 1% minority have seven. This small minority of large families would have a very limited effect on the national fertility rate, raising it by just 0.05 children from 2.00 to 2.05. For foreign women to push up the fertility rate and not simply the number of births, not only must they represent a large proportion of mothers, but their fertility must also be much higher than the average (3).

◆ Foreign mothers add 0.1 children per woman to the national fertility rate

What is the situation in France? The most recent data for metropolitan France date back to 1998-1999, and confirm those of 1990 (Figure 1). Determined using the civil records, cross-matched with data from the 1999 census and the Family survey [3], they indicate that French mothers had 1.7 children per woman and foreign mothers 2.8, i.e. a difference of 1.1 children. For the population as a whole, the fertility rate in France was close to 1.8. This means that foreign mothers added less than 0.1 children to the national rate. Given that they already accounted for 12% of births,

Box 1

Record natural growth in 2006: a temporary peak

According to INSEE estimates, the population of France on 1 January 2007 was 63.4 million: 61.5 million in metropolitan France and 1.9 million in the overseas *départements* and regions [1]. In 2006, the population in metropolitan France increased by 276,500 due to natural growth (796,800 births minus 520,300 deaths) and by an estimated 95,000 due to net migration (arrivals minus departures).

From 2005 to 2006, life expectancy rose by four months to 77.2 years for men and by three months to 84.1 years for women. The change in attitudes towards old people since the 2003 heatwave has raised life expectancy above the trend level observed before that year, resulting in an extra gain of almost five months.

Net migration remains moderate. Even when revised upward to 3‰ (from 1.6) to take account of illegal immigrants, France is still towards the bottom of the European league table: net migration is close to 4‰ in the United Kingdom, 6‰ in Austria and Switzerland, 8‰ in Ireland, 11‰ in Italy and even 15‰ in Spain [5].

But these figures do not herald any lasting change in the trends already visible in the population pyramid. Notwithstanding the current record, the natural surplus is destined to shrink in years to come. The baby boom ended in 1974 and, as a consequence, the number of women of childbearing age will fall slightly before levelling off, as will the number of births, even if current levels of fertility are maintained. Conversely, as the baby-boom generations grow old, the number of deaths will increase. In other words, net migration is set to exceed natural growth within the next generation, or even earlier, and thereby to become the main component of population growth in France, whatever the future – and largely unpredictable – level of migration. This will not reflect high immigrant fertility or a specific migration policy, but rather the culmination of the baby-boom era.

why then was their contribution so small? The explanation lies in the fact that foreign women represented only 7% of the female population of childbearing age, so their additional child contributed to the national fertility rate by a proportion of only 7%, i.e. 0.07 children.

Immigration to Europe, from Southern countries especially, has risen sharply since 1999. Though most immigrants head for the Mediterranean countries of Europe, France is also affected, but to a lesser extent (4) (Box 1). According to the combined data of the 2004 and 2005 census waves, which give an initial picture of the situation in 2004 (Figure 1) (5), this immigrant inflow has been accompanied by increased fertility among foreign women (Box 2). While the fertility of French mothers in metropolitan

(2) Of course, a rule of three can be applied to decompose the fertility rate proportionally to the number of births by mother's nationality, but this does not give the respective fertility rates. The rate of 1.90 in 2004, for example, was the sum of a French component (1.67) and a foreign component (0.23) [2]. In other words, under the fertility conditions of 2004, 100 women of childbearing age would have had 190 children in their lifetime, 167 to French mothers and 23 to foreign mothers. But this does not signify that French women would have 1.67 children on average and foreigners 0.23. Indeed, out of these 100 women, 93 are French and 7 are foreign.

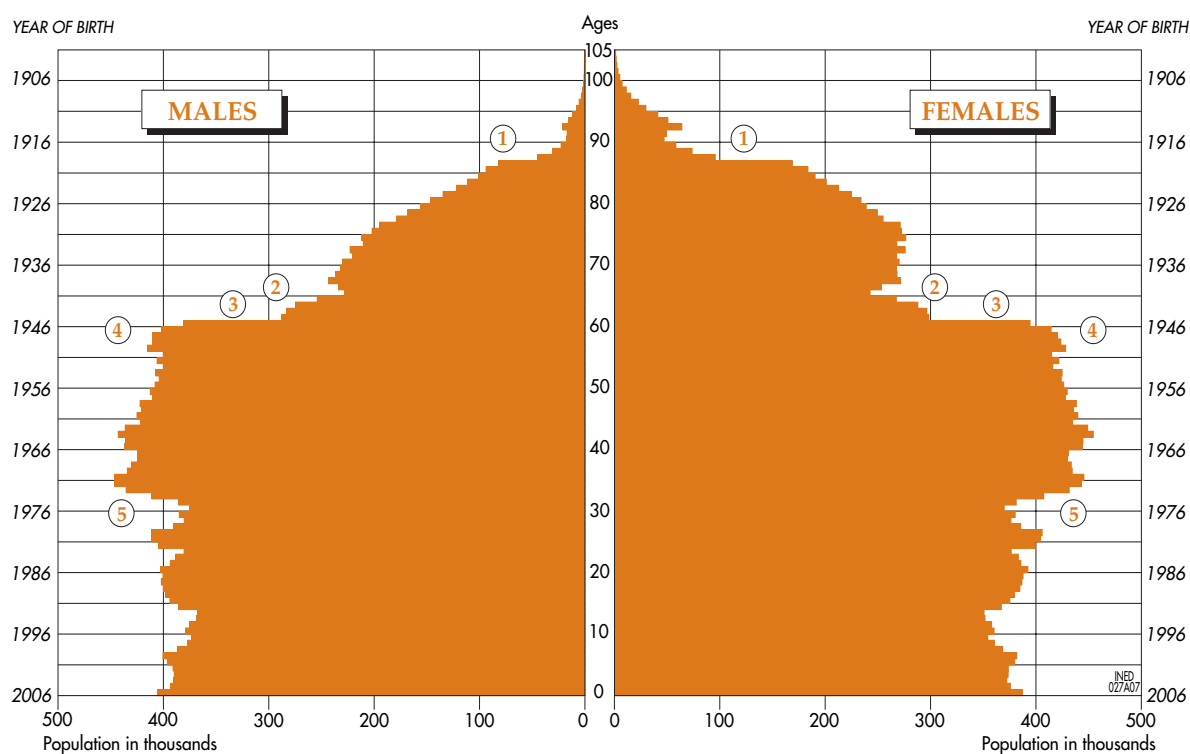
(3) To simplify, we assume here that French and foreign women have the same age-specific fertility rates.

(4) See the INED website www.ined.fr: "Statistiques détaillées sur les flux d'immigration" (calculations by X. Thierry).

(5) Provisional data, calculable since February 2007, to be finalized by INSEE at the end of the first new census cycle (2004-2008). They update the estimates given in F. Héran, *Le Temps des immigrés*, Seuil/La République des idées, 2007, chap. 3.

POPULATION OF FRANCE

PROVISIONAL ESTIMATE ON 1 JANUARY 2007



- ① Birth deficit due to World War I (depleted cohorts) ③ Birth deficit due to World War II
 ② Depleted cohorts reach reproductive age ④ Baby boom
 ⑤ End of baby boom

(F. Héran and G. Pison,
Population & Societies,
 no. 432, INED, March 2007)
 Source: INSEE.

Table 2 - Population indicators from 1950 to 2006, metropolitan France

	1950	1960	1970	1980	1990	1997	1998	1999	2000	2001	2002	2003	2004	2005(p)	2006(p)
Births (m)	858	816	848	800	762	727	738	745	775	771	762	761	768	774	797
Deaths (m)	530	517	540	547	526	530	534	538	531	531	535	552	509	528	520
Natural increase (m)	328	299	308	253	236	196	204	207	244	240	226	209	258	247	276
Net migration (m)	35	140	180	44	80	40	45	60	70	85	95	100	105	95	95
Total growth (m)	363	439	488	297	316	236	249	267	314	325	321	309	363	342	371
Adjustment (1) (m)	-	-	-	-	-	-53	-53	86	86	86	86	86	-	-	-
Birth rate (t)	20.5	17.9	16.7	14.9	13.4	12.5	12.6	12.7	13.1	13.0	12.7	12.6	12.7	12.7	13.0
Death rate (t)	12.7	11.3	10.6	10.2	9.3	9.1	9.1	9.2	9.0	8.9	8.9	9.2	8.4	8.6	8.5
Total fertility rate (r)	51.9	27.4	18.2	10.0	7.3	4.7	4.6	4.3	4.4	4.5	4.1	4.0	3.9	3.6	3.7
Total fertility rate (e)	2.93	2.73	2.47	1.94	1.78	1.73	1.76	1.79	1.87	1.88	1.86	1.87	1.90	1.92	1.98
Life expectancy:															
male (a)	63.4	67.0	68.4	70.2	72.7	74.6	74.8	75.0	75.3	75.5	75.8	75.9	76.8	76.8	77.2
female (a)	69.2	73.6	75.9	78.4	80.9	82.3	82.4	82.5	82.8	82.9	83.0	82.9	83.9	83.8	84.1
Marriages (m)	331	320	394	334	287	284	271	286	298	288	279	276	272	276	268
Marriage rate (t)	7.9	7.0	7.8	6.2	5.1	4.9	4.6	4.9	5.0	4.8	4.7	4.6	4.5	4.5	4.4
Population (2) (m)	42,010	45,904	51,016	54,029	56,893	58,299	58,497	58,850	59,249	59,660	60,067	60,462	60,825	61,167	61,538
Under 20 (2) (m)	12,556	14,665	16,748	16,419	15,632	15,027	15,018	15,044	15,054	15,060	15,069	15,124	15,151	15,175	15,204
65 and above (2) (m)	4,727	5,288	6,174	7,541	8,036	9,164	9,285	9,422	9,543	9,667	9,779	9,871	9,991	10,059	10,111
Under 20 (2) %	29.9	31.9	32.8	30.4	27.5	25.8	25.7	25.6	25.4	25.2	25.1	25.0	24.9	24.8	24.7
65 and above (2) %	11.3	11.5	12.1	14.0	14.1	15.7	15.9	16.0	16.1	16.2	16.3	16.3	16.4	16.4	16.4

(a) in years - (e) children per women - (m) in thousands - (p) provisional - (r) per 1,000 live births - (t) per 1,000 population

(1) the population estimates for the period 1990-2003 were adjusted to establish consistency between the censuses of 1990 and 1999 and the census surveys of 2004, 2005 and 2006 (see Richet-Mastain, 2007 [1]) - (2) at year-end.

Source: INSEE, Division des enquêtes et études démographiques (<http://www.insee.fr>).

France has risen from 1.7 to 1.8 children per woman since 1999, that of foreign mothers has risen from 2.8 to 3.3, i.e. a difference of 1.5 children. But as foreign women represent only a small minority of women of childbearing age (7%) the resulting increase in fertility for metropolitan France in 2004 is barely more than one-tenth of a child, i.e. 1.8 children for French women alone and 1.9 for women of all nationalities. In the 1982, 1990 and 1999 censuses, foreign women raised national fertility by around 4%. Since then, their contribution has increased to 6% (6), representing a significant, though moderate, rise.

If we consider *immigrant women* (including women who have acquired French nationality) rather than *foreign women*, the contribution to births increases, since around 15% of births in 2004 were to immigrant women. But the effect on the country's fertility rate is more limited, since naturalized immigrant women, who have often been in France for many years or arrived at an early age, are more frequently in mixed unions and more closely resemble native French women in terms of fertility. They have 2.1 children on average, compared with 2.6 for immigrant women as a whole and 3.3 for foreign women (Box 2).

◆ With or without immigration, French fertility is among the highest in Europe

If the high fertility in France compared with other European countries were to be explained by immigration, then this would imply that immigration is higher in France than elsewhere. Yet over the last ten years, most of our neighbours have absorbed a much larger number of migrants than France: their population growth is driven entirely by migration, whereas in France it accounts for only one-quarter of overall growth (Box 1). Fertility in Europe

(6) Though detailed data for 2006 are not yet available, we can assume that if the fertility rate of metropolitan France has reached 1.98 children per woman, the fertility of French women alone is close to 1.9.

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is close to 1.5 children per woman. Calculated for European nationals alone, it would be even lower, and, far from closing, the gap with respect to France would be even wider. For example, according to the latest census in Switzerland, Swiss nationals have 1.2 children per woman, and foreigners close to 2. Foreigners therefore raised the Swiss fertility rate, but only from 1.2 to 1.4. Germany and southern Europe are in a similar situation. In short, it is not the fertility of foreign women that needs to be explained, but rather that of French women. Part of this explanation inevitably lies in the policy of family and child support practiced consistently in France, with broad popular backing, for the last sixty years. But that's another story...

Box 2

What is the best way to measure immigrant fertility?

The census waves of 2004-2006 confirm that migrant women tend to wait until they reach France before having their first child, a strong pattern already highlighted in this journal by Laurent Toulemon [5] and since confirmed [6]. From the dates of birth of children counted in the census (own-children method used by INSEE [7]), we can deduce that the total fertility rate (TFR) of immigrant women is very low before they arrive in France (around 1 child per woman) and that it rises very sharply in the year which follows (around 4 children), before flattening out at a level close to that of completed fertility (between 2 and 3).

The TFR measures the completed fertility that would be reached in a year if all women experienced throughout their reproductive life the fertility rates observed in that year at all ages (1). It is therefore very sensitive to effects of timing and geography. By estimating period fertility solely on the basis of births occurring in France and after a wave of recent arrivals, it overestimates immigrant fertility because it overlooks low fertility prior to arrival and is calculated too soon to take account of the subsequent return to normal. And by focusing on recent arrivals, the period indicator assumes that immigrant women will continue to behave like new arrivals throughout their reproductive life. To get around this comparability problem, Laurent Toulemon suggests that women's entire childbearing history be taken into account in all populations. Immigrant fertility rates decrease as a consequence and the difference with respect to non-immigrants is halved.

But how can we capture these complex trajectories? It was not possible with the cross-sectional data obtained from the traditional census, though it is becoming partly possible now that data is collected on a yearly basis. But to determine the true contribution of immigration to French fertility, demographers need retrospective surveys covering several decades. Though we cannot ignore the heated debate surrounding such questions today, time, patience and impartiality is needed to establish the facts.

(1) The INED website features an animation which explains how the fertility rate is calculated (www.ined.fr, «Measuring fertility»).

ABSTRACT

Foreign women account for 12% of births in France, and immigrant women, including naturalized French citizens, 15%. The fertility of foreign women is higher than that of French women (3.3 children versus 1.8 in 2004), but since only a small minority of the population is concerned, the effect on overall fertility is minimal. These extra births increased the fertility rate of metropolitan France by just 0.1 children in 2004, from 1.8 to 1.9. With or without immigration, French fertility is among the highest in Europe.