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 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>
<thead>
<tr>
<th>Children born to unmarried parents</th>
<th>Number of children</th>
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<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>French mother</td>
<td>340,849</td>
</tr>
<tr>
<td>Foreign mother</td>
<td>25,945</td>
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</table>

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<thead>
<tr>
<th>Children born to married parents</th>
<th>Number of children</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>2 French parents</td>
<td>311,842</td>
</tr>
<tr>
<td>Foreign father, French mother</td>
<td>27,354</td>
</tr>
<tr>
<td>French father, foreign mother</td>
<td>25,912</td>
</tr>
<tr>
<td>2 foreign parents</td>
<td>42,453</td>
</tr>
<tr>
<td>Total</td>
<td>774,355</td>
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</tbody>
</table>

Source: INSEE (www.insee.fr)
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 accounts 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).

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

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</thead>
<tbody>
<tr>
<td>Births (m)</td>
<td>858</td>
<td>816</td>
<td>848</td>
<td>800</td>
<td>762</td>
<td>727</td>
<td>738</td>
<td>745</td>
<td>775</td>
<td>771</td>
<td>762</td>
<td>761</td>
<td>768</td>
<td>774</td>
<td>797</td>
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<tr>
<td>Deaths (m)</td>
<td>530</td>
<td>517</td>
<td>540</td>
<td>547</td>
<td>526</td>
<td>530</td>
<td>534</td>
<td>538</td>
<td>531</td>
<td>531</td>
<td>535</td>
<td>552</td>
<td>520</td>
<td>59</td>
<td>95</td>
</tr>
<tr>
<td>Natural increase (m)</td>
<td>328</td>
<td>299</td>
<td>308</td>
<td>253</td>
<td>236</td>
<td>196</td>
<td>204</td>
<td>207</td>
<td>244</td>
<td>240</td>
<td>226</td>
<td>209</td>
<td>258</td>
<td>247</td>
<td>276</td>
</tr>
<tr>
<td>Net migration (m)</td>
<td>35</td>
<td>140</td>
<td>180</td>
<td>44</td>
<td>80</td>
<td>40</td>
<td>45</td>
<td>60</td>
<td>70</td>
<td>85</td>
<td>95</td>
<td>100</td>
<td>105</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>Total growth (m)</td>
<td>363</td>
<td>439</td>
<td>488</td>
<td>297</td>
<td>316</td>
<td>236</td>
<td>249</td>
<td>267</td>
<td>314</td>
<td>325</td>
<td>321</td>
<td>309</td>
<td>363</td>
<td>342</td>
<td>371</td>
</tr>
<tr>
<td>Adjustment (1) (m)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-53</td>
<td>-53</td>
<td>86</td>
<td>86</td>
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<td>86</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
</tbody>
</table>

- Birth rate (l) | 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 | 13.0 |
- Death rate (l) | 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 (t) | 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 (l) | 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 | 60,067 | 60,060 | 60,062 | 60,065 | 61,073 |
- Under 20 (2) (m) | 12,556 | 14,665 | 16,748 | 16,419 | 15,632 | 15,027 | 15,018 | 15,044 | 15,054 | 15,060 | 15,096 | 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 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...

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(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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**REFERENCES**


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**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.

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(1) The INED website features an animation which explains how the fertility rate is calculated ([www.ined.fr](http://www.ined.fr), “Measuring fertility”).

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**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.