

Migration and fertility in Portugal, evidences from ESS 2010

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EXTENDED ABSTRACT

INTRODUCTION

The last decades had been characterized by a continuous decline in fertility among the countries of Southern Europe, which includes Portugal. Even if between 2003 and 2008 there may have been a reversal of this trend in the majority of European countries (Goldstein, Sobotka & Jasilioniene, 2009), the current economic crisis may push to “new” fertility declines (Kreyenfeld, Andersson, & Pailhe, 2012). Since 2001 the total fertility rate (TFR) in Portugal remains below 1.50, reaching 1.28 children per woman in 2012.

Migration flows, whether emigration or immigration, have impacts not only on population dimension and structure but also in some other demographic patterns, namely on births, more than on mortality, which could be related to the age profile of migrants (Peixoto, 2009), traditionally more concentrated in active ages and therefore in reproductive ages in the case of women, than in older ages.

Considering the high levels of immigration in Portugal during the 90's and first years of the new century is not unexpected the evolution of the contribution to live births, with the proportion of live births to mothers of foreign nationality raising from 2.2% in 1995 to 10.6% in 2010. After that date they declined to 10.3% in 2011 and 9.8% in 2012, simultaneously with lower levels of immigration. Although the greater difficulty to measure the impact of emigration on births, it is also noteworthy that the most recent decline in fertility in Portugal, namely after 2008, is simultaneous with increasing emigration levels.

Considering that the intention of individuals to have (more) children can be a good predictor of fertility decisions in the next future (Bumpass, 1987; Rindfuss, Morgan & Swicegood, 1988; Thomson, 1997; Westoff & Ryder, 1977 *in* Schoen *et al*, 1999), beside the importance of other variables, such as economic factors or individual characteristics (Maciel *et al*, 2012), it seems pertinent to try to understand how individual characteristics such as country of residence, birth and citizenship, beside gender, age, level of education, living (or not) with a partner and having

(or not) a paid work, have (or not) significant differences in the intention to have (more) children in the next three years, given special attention to migrants.

DATA AND METHODS

It will be used data from fifth round of the European Social Survey, which took place in 2010 (ESS_2010) and covered 28 countries, including Portugal. The target population of the survey refers to persons aged 15 years and over, living in private households, regardless of their place of birth, nationality or legal status.

From the original data two different datasets have being created, distinguished mainly by a new categorization: (1) "immigrants": "Yes" or "No"; and (2) "emigrants": "Yes" or "No". In both cases the variable "intention to have a child" (based on the question "Do you plan to have a child within the next three years?" and recoded as: "0" = "No" and "1" = "Yes") is the dependent variable. The other chosen variables are "sex", "age group", "Portuguese citizenship" ("Yes" or "No"), "native-born" ("Yes" or "No"), "partner" ("Yes" or "No", including into "Yes" those living with a husband/wife/partner), "higher level of education" ("Yes" or "No"), "paid work" ("Yes" or "No", including into "Yes" those who have had "any paid work ... in the last seven days").

With the main objective of comparing the intention of having (more) children in the next three years between (1) immigrants and no-immigrants and between (2) emigrants and no-emigrants, taking into account a number of other selected socio demographic characteristics, it was adjusted a logistic regression model to each dataset. In both cases, to adjust the model it was followed the methodology recommended by Hosmer-Lemeshow (2000). The final models showed a goodness of fit (Hosmer-Lemeshow test) and a good discriminative capacity (AUC of the ROC curve).

RESULTS AND IMPLICATIONS

In the first case study - immigrants *versus* no-immigrants - the target population was the residents in Portugal and it was considered as immigrants the foreign born and as no-immigrants the ones that are native born. The sample include 708 individuals of which: 42.2 % were male and 57.8 % female; 24.2% were in the 15 to 24 age group, 24.9% in the 25 to 33 age group, 25.4% in the 34 to 40 age group, and 25.6% in the 41 to 46 age group; 92.1% had Portuguese citizenship and 7.9% had foreign citizenship; 87.3% were born in Portugal and 12.7% were born abroad, 48.4% live with a husband/wife/partner and 51.6% do not live with a husband/wife/partner; 82.3% had not completed a higher level of education and 17.7% had completed a higher level of education; 37.3% have not "any paid work ... in the last seven days" (prior to the survey) and 62.7% have had "any paid work ... in the last seven days".

The variable sex does not prove to be statistically significant in the intention to have children in the next 3 years, reason why it was not included in the initial model. Regarding the variable citizenship, it was not included in the model due to collinearity with the variable country of birth

that presented a lower *p-value* and therefore has been chosen. The interactions that are significant have not interpretability in the context of the study, so a model without interactions has been chosen. When paired with the other covariates, only the age group of 34-39 years left to be significant, all other remained statistically significant, confirming the importance of age, educational level, employment status, partnership status and migrant status in the intention to have (more) children in the next three years.

According to the results obtained and assuming constant the other covariates, it can be concluded that the possibility of having intention to have (more) children in the next three years is:

- 2.4 times higher in individuals with a partner than in individuals without a partner, (95% CI=[1.5,3.6]);
- 2.2 times higher in immigrants (individuals foreign-born) than no-immigrants (individuals born in Portugal), (95% CI=[1.3,3.7]);
- 2.0 times higher in individuals of 25-33 years than in individuals aged 15-24, (95% CI=[1.1,3.5]);
- 1.7 times higher in individuals with higher education than in individuals who do not have higher education, (95% CI=[1.1,2.7]);
- 1.6 times higher in individuals with paid work than in individuals without paid work, (95% CI=[1.0,2.5]) .

Moreover, based on the odds ratio, it can be recognized that the most likely profile of who have intention to have (more) children in the next three years are “immigrants, aged between 25 and 33 years old, with a partner, with lower education and paid work”.

In the second case study - emigrants *versus* no-emigrants - the target population was those individuals that had born in Portugal or has Portuguese citizenship (no matter the country of the questionnaire), and it was considered as no-emigrants those residing in Portugal and as emigrants those residing abroad. The sample include 599 individuals, of which: 43.1% were male and 56.9% female; 25.5% were in the 15 to 24 age group, 23.0% in the 25 to 33 age group, 26.0% in the 34 to 40 years age group, and 25.4% in the 41 to 46 age group; 48.6% live with a husband/wife/partner and 51.4% do not live with a husband/wife/partner; 82.5% had not completed a higher level of education and 17.5% had completed a higher education level; 36.9% have not “any paid work ... in the last seven days” and 63.1% have had “any paid work ... in the last seven days”; 95.8% were Portuguese or were born in Portugal and live in Portugal and only 4.2% had were Portuguese or were born in Portugal but do not live in Portugal.

The variables sex, age group and partner do not prove to be statistically significant in the intention to come to have children in the next 3 years and therefore they are not included in the model. It was checked the possible interactions between covariates. The interactions that are significant have not interpretability in the context of the study, so a model without interactions

has been chosen. When paired with the other covariates, all the variables included in the model maintained statistical significance, confirming the importance of educational level, employment status and migrant status, on the intention to have (more) children in next 3 years.

According to the results obtained and assuming constant the other covariates, it can be concluded that the possibility of having intention to have (more) children in the next three years is:

- 3.2 times higher among immigrants than in no-immigrants, (95% CI=[1.2,8 3]);
- 2.4 times higher in individuals with paid work than in individuals without any paid work, (95% CI=[1.4,4.2]);
- 2.1 times higher in individuals with higher education than in individuals who do not have higher education (95% CI=[1.3,3.5]);

In synthesis, according to the results, without declining the importance that other variables such as having or not a partner, having or not a paid work, having or not higher level of education can have on the intention to have (more) children in the next three years, immigrants residing in Portugal are more likely to have intention to have (more) children in the next three years than no-immigrants; and Portuguese emigrants are, also, more likely to have intention to have (more) children in the next three years than those no-emigrants, stressing the negative effect that lower levels of immigration and high levels of emigration implied by the current economic and financial crises may have on fertility in the next future in Portugal.

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