

The fertility of foreign immigrants after their arrival: The Italian case

Eleonora Mussino¹ and Salvatore Strozza²

Introduction

This work presents an analysis of the reproductive behavior of foreign women with particular attention to those that migrated to Italy. Migrant fertility influences the period fertility rate (TFR) and by using a micro and macro approach, this study shows that the effect varies by country of origin, which demonstrates that the contribution of migrant fertility is complex and that foreigners do not always have high fertility. The study is of special value in the Italian context, where the decline in the TFR in recent decades has been particularly strong, even compared to many other European countries. It is generally known that Italian fertility is one of the lowest in the world (Delgado Perez and Livi Bacci, 1992). The slight increase recorded in the last few years in Italy is in part attributed to the presence of foreign women, and the significant increase in the foreign female population of childbearing age raises questions about the future influence of their fertility patterns.

In Italy, several studies have focused on the impact of foreigners on period TFR for the country, but fewer studies analyze the determinants and the influence of the migration on the propensity to have children in Italy. The international literature highlights a strong impact on period fertility effect due to the high risk shortly after the migration (Alders, 2000), so an increase in the number of immigrants may have a direct influence on the TFR. But different citizenship groups have different propensities (Andersson, 2004, Sobotka, 2008), so the composition of the immigrant flow has to be taken into account. Clearly, the fertility of foreign women is a central factor for the increase of fertility (Billari, 2008). Even if it contributes only in part to the recent increase in total fertility, it has had a more important role in pushing the TFR in Italy than in other European countries (Goldstein et al., 2009).

This study describes the propensity to have a child in the host country, with particular attention to the impact of citizenship on the choice of having a child. Owing to the lack of specific data, record linkage procedures were implemented in order to consider different administrative sources. By this means, it was possible to construct longitudinal datasets and to follow the individual trajectories. The originality of this work is the use of a longitudinal approach to Italian administrative data on births and migration by implementing deterministic and probabilistic record linkage procedures;

¹ Phd Student - Department of Social Economic, Actuarial and Demographic Studies – "Sapienza" University of Rome

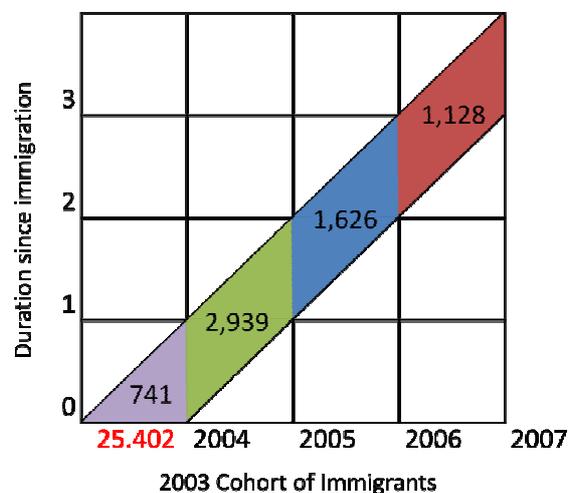
² Full Professor - Department of statistical Science – Federico II, University of Naples

consequently, the creation of a dataset *ad hoc*, making it possible to study for the first time not only the reproductive behavior of the foreign parent, but also to follow a cohort of immigrants and study the transition to their first child in Italy.

Data

The aim of this work is to study the reproductive behavior of foreign mothers in Italy. The literature shows that migration and fertility may be strongly connected and that the migration history and duration of stay should be included in an analysis of reproductive behavior of foreign women (Milewsky, 2010, Toulemon and Mazuy, 2004). However, the official sources available today in Italy do not allow us to study more than one of these two demographic behaviors simultaneously, especially as part of a longitudinal approach. To overcome these limits in the data and to give proper importance to the information from administrative sources, therefore, we implemented a record linkage between two different datasets for different years: the Survey on Live Births of the resident population in Italy between 2003 and 2006 and resident permit registers of 2003. More in detail we linked all women who arrived in Italy in 2003 with the Survey on Live Births. In this way, we added information on fertility for a recently-immigrated cohort of foreign women. Using this approach, we followed 25,402 women from Albania, Romania, and Morocco recorded in 2003 in Italy, and who later gave birth to their first child in the host country. A total of 6,436 mothers were individualized through this procedure. The follow figure shows the Lexis diagram where calendar time for the years 2003–2007 is plotted on the horizontal axis, and duration in years since immigration on the vertical. We follow the 2003 cohort of foreign immigrants and plot their events (represented by the areas) that are their first births in Italy .

Figure 1: Lexis diagram for the 2003 cohort of immigrant women



Method

Using the data on the 2003 cohort of foreign immigrants, we estimated the hazard ratio of having a first birth in Italy using the piecewise-exponential model (Blossfeld and Rohwer, 2002, Allison, 1984). For the process of having a first birth, the entry in the process was the arrival time in Italy, which was assumed to be constant within each segment after 0, 12, 18, 24, and 36 months but might vary across them. We started by considering all women in the sample. In later models, we also included only women aged less than 20 years³ because we assumed that for them the first birth in Italy is also the first child in general. Women who did not have a child during the observation window were right-censored at the end of 2006. It was not possible to censor those who left Italy or died during the observation at the exact time when the event happened. Therefore we decided to run another model just for women for whom it was possible to control whether they were still living in Italy at 1 January 2007. This last model has to be considered just as a control study because the assumptions made for the record linkage procedure were too weak.

The available independent variables do not cover all the aspects but allow to contribute to the international debate. Diverse fertility behavior can be associated with cultural differences between the countries of origin (Andersson, 2004). As an indicator of this cultural effect, we inserted the variable citizenship of the mother into the models, assuming it to be the most important factor to explain the heterogeneity between the groups. Toulemon showed (2004) that the age at arrival can have different impact on the reproductive behaviors. This variable was categorized into five age groups (≤ 20 , 21–25, 26–30, 31–35, 36+). Another aspect of the duration of stay was considered by including in the analysis the deadline for the residence permit: we categorized this as “determinate” if any date was specified, otherwise “indeterminate.” We also considered the place of arrival, as previous Italian studies had shown that immigrants have different patterns and behaviors in Italy (Blangiardo, 2009, Terzera, 2006). Italian territory was divided into the geographical divisions of North-East, North-West, Central, and South & Islands. Milewsky (2010) assumes that, for the first immigrant generation, marriage before migration influences fertility after the move. Accordingly, marital status at arrival is also included in the analysis (“married” vs. “other”). Different motivations for migration can have different impacts on reproductive behavior. Generally, this is studied as the interrelation between process, and thus strongly linked with data quality (Courgeau and Lelievre, 2006). In this case, we had the information on the reason for residence permit, which helped to understand at least formally the individual’s choice of migration. The reasons were categorized as “work,” “family,” “health,” and “other.”

³ This was always under the assumption that is important to distinguish by parity in the study of fertility of immigrants.

Results

The analysis of the propensity to have a first child in Italy confirms that it is important to distinguish among the citizenships of the three groups of women. The residence permit characteristics may affect the decision to have a child and the opportunity to stay for a longer period is positively linked with the hazard ratio. The high risk for family reasons and the fact that there are permits issued for pregnancy reasons proves the hypothesis of interrelated events: women move for reasons of family formation. This is also confirmed by the greater risk of childbearing for already married women. The variable duration of stay for this recent cohort of foreign immigrants does not confirm the disruption hypothesis but is more of an arrival effect. The hazard is higher shortly after migration and then slowly decreases. The short period of observation window does not allow the testing of adaptive behavior. The propensity to have a first child in the host country decreases with the increase of age at arrival, and this is linked with the biological factor. Further results will be available in time for the PAA meeting.

Discussion

From the Italian overview at macro level (e.g. ISTAT, 2007) and from the individual results reported, this work confirms that the factor that mainly influences and explains the strong heterogeneity in the reproductive behavior of foreign women is the country of origin (Alders, 2000, Andersson, 2004, Schoorl, 1990, Sobotka, 2008). Besides the strong arrival effect for the new cohort of foreign immigrants on the risk of having a birth in Italy can be explained by the strong *interrelation* between the migration and family behaviors (reunification, union, and fertility). This is also confirmed by the high risk of childbearing for women who come for family reasons and for women who are already married when they migrate. These results help to understand how the trend for Italian women could be increasing while the TFR of foreign women is slowly declining. In fact recent immigrants are increasingly coming from lower-fertility countries, especially from Eastern and South-Eastern Europe. Developments such as these would facilitate population forecasts or local planning concerns such as programming access to kindergarten.

References

- Alders, M. (2000) Cohort fertility of migrant women in the Netherlands. *BSPS-NVD-URU Conference*. Utrecht, the Netherlands.
- Andersson, G. (2004) Childbearing after migration: Fertility patterns of foreign-born women in Sweden. *International Migration Review*, 38, 747-774.
- Billari, F. C. (2008) Lowest-low fertility in Europe: Exploring the causes and finding some surprises. *Japanese Journal of Population* 6, 2-18.
- Blangiardo, G. C. (2009) Immigrazione straniera e fecondità: un rapporto in evoluzione. *Neodemos*. Firenze.

- Courgeau, D. & Lelievre, E. (2006) Motivations for Migration. In Caselli, G., Vallin, J. & Wunsch, G. (Eds.) *Demography: analysis and synthesis*. Burlington, San Diego, London, Elsevier.
- Delgado Perez, M. & Livi Bacci, M. (1992) Fertility in Italy and Spain: the Lowest in the World. *Family Planning*, vol. 24, No. 4, 32-51.
- Goldstein, J. R., Sobotka, T. & Jasilioniene, A. (2009) The end of "lowest-low" fertility? *Population and Development Review*, 35, 663-699.
- ISTAT (2007) La popolazione straniera residente in Italia al 1° gennaio 2007. In Cultura, P. I. E. (Ed.) *Statistiche in Breve*. Roma, Istat.
- Milewski, N. (2010) *Fertility of Immigrants: A Two-Generational Approach in Germany* Heidelberg, Dordrecht, London, New York, Springer.
- Schoorl, J. J. (1990) Fertility Adaptation of Turkish and Moroccan Women in the Netherlands. *International Migration* 28, 477-495.
- Sobotka, T. (2008) The rising importance of migrants for childbearing in Europe. *Demographic Research*, 19, 225-247.
- Terzera, L. (2006) Famiglia e fecondità. In Paterno, A., Strozza, S. & Terzera, L. (Eds.) *Sospesi tra due rive: migrazioni e insediamenti di marocchini e albanesi*. Milano, Franco Angeli
- Toulemon, L. (2004) Fertility among immigrant women: new data, a new approach. *Population and Societies*, 400.
- Toulemon, L. & Mazuy, M. (2004) Comment prendre en compte l'âge à l'arrivée et le durée de séjour en France dans la mesure de la fécondité des immigrants? *Documents de travail* Paris, INED.