The fertility of immigrant women: family dynamics, migration, and timing of childbearing[1]

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Introduction

The below replacement fertility levels registered in many developed countries has increased attention to the role of immigration in affecting the growth and age structure of national populations. Particularly among European countries the extension of below replacement fertility levels has coincided with dramatic increases in immigration to countries not familiar with the continuous in-flow of immigrants. Still, it is unclear the extent to which immigration can affect the problem of population aging and declining labor force that directly affect the solvency of the systems of social protection and retirement (Roig-Vila and Castro-Martin, 2007; Sobotka, 2008; Del Rey and Cebrián, 2010).

Spain is a case in point. Between 1990 and 2007 the stock of immigrants in the country more than doubled, from around 2 to 4.5 million. At the same time, below replacement fertility became entrenched as the dominant pattern of childbearing. The total fertility rate rapidly declined from 2.2 in 1980 to 1.3 in 1990. It reached an all-time low of 1.1 in 1995 to increase again to 1.4 in 2009. Together the two trends highlight that the demographic prospects for Spain are increasingly tied to immigration. The demographic contribution of immigration however, stems from two sources. The first one, obviously, is immigration itself as the arrival of foreign populations affect receiving countries. The second one is the fertility of immigrant women since the level of immigrant women's fertility might be different from the pattern prevalent among native residents. Still our understanding of the interaction between immigration and fertility is limited preventing a precise assessment of the population contribution of immigration and the extent to which it might counteract the problem of population aging.

In this study, we provide a detailed analysis of the fertility patterns of immigrant women in Spain. Data come from the 2007 National Survey of Immigration that collected unique retrospective information on family dynamics, migration, and fertility histories. The analysis follows a life-course perspective to identify the main transitions connecting migration and fertility behavior. Our main objectives are to: describe the reproductive patterns of immigrant women before and after migration, assess the fertility-specific contribution of immigration to the Spanish population, and elaborate on the implications of the association between migration and fertility for standard demographic analyses. Preliminary results show that migration is a significantly disruptive event that alters the age pattern of childbearing. Specifically, the fertility of immigrant women is low before migration but increases in the years shortly after arrival. The extent of the disruption is connected with family dynamics and issues of spousal separation in association with migration. A main implication is that the failure to recognize the disruptive age pattern of childbearing among immigrant women overstate the level of immigrant fertility and exaggerates the fertility-specific contribution of immigration to population growth. The extent of the disruption though

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varies by national origin group. Overall, results suggest that the fertility of immigrants will not significantly alter the problem of population aging.

Literature review

Studies on the fertility of the immigrant population in the societies are guided by three main concerns. The first one is fertility differential between immigrants and natives. The second one is convergence in fertility levels as part of the process of immigrant assimilation to receiving societies. Finally, studies have also been concern with the link between migration and fertility, specifically issues of disruption in the process of childbearing resulting from migration. Our study crosses these different concerns. The main questions guiding the analysis are how different is the fertility of immigrants from natives; how is the childbearing behavior of immigrant women affected by migration; and how do patterns change with time in Spain.

Classical assimilation theory emphasizes the importance of duration of residence in the country of destination for the process of immigrant incorporation and assimilation (Gordon, 1964). As applied to fertility, the main expectation is that the childbearing behavior of immigrant women will approximate the behavior of natives with time and across generations. The process is somewhat described in terms of acculturation as immigrants are expected to leave behind ideas and values brought from countries of origin and incorporate the behavior of the receiving country. Other structural conditions might also facilitate this change. Specifically for fertility, growing employment opportunities for women in the receiving context could also facilitate the adoption of patterns of behavior prevalent among the mainstream.

More cultural explanations suggest that first generation immigrants could maintain the reproductive norms and patterns of the country of origin and they speculate that the pattern could vary according to national origin (Abbasi-Shavazi and McDonald, 2002; Kahn 1988 and 1994). According to Kahn (1988 and 1994) the proximity and the permanence of contacts in the case of Mexicans in the United States explain the lack of assimilation into the dominant society. This has been recently questioned by Parrado (2011), who shows that the apparent lack of adaptation of the fertility of Mexicans in the United States is as a result of errors in the estimation of the population of women and the lack of consideration of the time of arrival. Other authors explain the lack of adaptation of the immigrant population to the dominant culture as a reaction against the exclusion and socio-economic progress, which defined the segmented assimilation (Portes and Zhou, 1993).

Variation in the process of adaptation has sometimes been connected with issues of selectivity, both observed and unobserved. This perspective stresses that migration is not a random process, but that the migrants are selected by their economic status, education, occupation, income or marital status (Goldstein, 1973; Abbasi-Shavazi and McDonald, 2000). This can lead to reproductive behavior of the immigrant population which is different from the prevalent at destination and might also account for differences across to national origin groups (Feliciano, 2005; Bledsoe et al, 2007).

Especially important for our objectives are studies that identify the existence of a strong interconnection between the migration and fertility. These studies emphasize a close relationship between life-course transitions that affect the timing of events including migration and childbearing. For instance, Cerruti and Massey (2001) has shown that female migration from Mexico to the United States is in many

cases motivated by a desire to reunite with her husband migrated soon directly tying family dynamics with migration. Moreover, even in the case of women who migrate single studies have found a tendency to form a union shortly after the migration (Parrado and Flipen, 2005). Overall, the main implication is that the two processes might not be dissociated and that overlooking their connection might affect empirical results.

A large body of literature has also identified considerable disruptive effects of migration on other life-course transitions. Overall studies have highlighted the interruption (disruption) at the time of migration by the separation of the spouses or the delay in the formation of marriage (Goldstein and Goldstein, 1983: Massey and Mullan, 1984; Carlson, 1985; Stephen and Bean, 1992; Carter, 2000; Toulemon and Mazuy, 2004; Andersson, 2004). One possible outcome this interruption is that fertility in the early years after migration tends to be very low (Khan, 1988; Stephen and Bean, 1992; Kahn, 1994; Carter, 2000; Frank and Heuveline, 2005; Lindstrom and Giorguli, 2007; Parrado and Morgan, 2008). After the migration a sharp increase in fertility could be evidenced due to family reunification and the formation of couples who continues at the time of migration (Schoorl, 1990; Desplanques and Isnard, 1993; Anderson, 2004; Kulu, 2003; Toulemon, 2004). For instance, in the case of Mexican migrants in the United States, Carter (2000) points out that the first two years of residence are marked by a relative low fertility, increased in the following years and seven years of residence value back down following the logic of the assimilation model. Similarly, among foreign women in France, Toulemon (2004) confirms the strong interrelationship of events and the process of interruption of fertility due to the migration process begins prior to migrating. So watch the fertility of women before the migration is low, but given that the migration is often associated with the formation of the family, fertility rises after their arrival in the country of destination. This behavior varies depending on the number of living children at the time of arrival in the country of destination (Toulemon and Mazuy, 2004).

Review these work highlights the close relationship between reproductive behavior of immigrants with the marital and family status. The presence of children or partner at the time of migration, the mode of mobility of the couple or the type of partner are aspects that should be considered when analyzing the reproductive pattern of the population immigrant in the country of destination. Together they highlight the need for a more dynamic understanding of the connection between migration and childbearing that recognizes conditions at place of destination. They also suggest the need to more precisely connect the two events for analysis of fertility behavior in receiving countries. To the extent that these connections affect estimates of fertility levels they translate into different implications about the fertility contribution of immigration to national populations.

Data and methods

We investigate these issues using data from the National Immigration Survey of 2007 (ENI 2007) conducted by the Spanish National Institute of Statistics (INE). The ENI is an original data set that provides detailed retrospective information about migration, fertility behavior, and family arrangements not available in standard surveys. The ENI is statistically representative of the 4.5 million immigrants residing in Spain in early 2007. The sample includes 15 465 records of immigrants between the ages of 16 years and over. We restrict the analysis to the 8501 women in the sample that had resided for at least one year in Spain. An important advantage of the large data set is that it allows for distinctions across

national origin group facilitating comparisons of the connection between migration and fertility as well as differences in the process of immigrant assimilation according to place of birth.

The methodology follows standard demographic techniques but adapted to recognize the disruptive effect of migration on childbearing. In particular, we will focus on age-specific fertility rates (ASFR), the total fertility rate (TFR), and the completed fertility rate (CFR). One advantage of the retrospective information is that it allows us to compute cohort and period measures for the same indicators and compare results. An important extension of our analysis is the consideration of the interconnection between events for understanding the meaning of fertility measures. Specifically, we will investigate how ASFR vary before and after migration according to time prior and after arrival to Spain. We will also elaborate on how this variation affects estimates of fertility levels and differentials across groups.

Preliminary results

Figure 1 demonstrates the rapid growth and changing national origin composition of the immigrant population in Spain. In 1990s the majority of immigrants came from other European countries and did not amount to a sizeable portion of the Spanish population. Immigration increased dramatically after 2000 mainly driven by the rapid inflow of immigrants from Latin America. Throughout the whole period Africans maintained a significance presence in immigration flows and currently comprise an important portion of the immigrant population. This rapid growth and variable national composition connects with variation in fertility outcomes.

Figure 2 tracks changes in the TFR during the same period. As discussed above the period fertility level for native Spanish women is well-below replacement. After reaching a lowest-low level in mid 1990s the TFR slightly increased over time but still only 1.5 in 2009. The period fertility estimates for immigrant women show considerable fluctuation and interesting results. While still below 2.1 the TFR for immigrant women fluctuated considerably before the period of dramatic immigration and increased by .4 children between 2000 and 2002 in conjunction with rapid inflows of Latin American immigrants. Since then it has stabilized around replacement levels.

The demographic rationale for these trends is not apparent. Figure 3 reports ASFR for Spanish-born women and immigrants from different regions. Results document considerable differences in the age pattern of childbearing between immigrants and natives. For native women, fertility rates increased very rapidly and peak at the late ages of 30-34 and then rapidly decline. The age pattern of childbearing among immigrant women, on the other hand, increases very rapidly at early ages. For most groups, except Africans it peaks at ages 20-24 but remains high until ages 30-34. For Africans, high ASFR are actually evidenced throughout the whole reproductive period. The typical implication is that the fertility of immigrant women is much higher than natives. If these ASFR are aggregated to compute the TFR , period fertility is indeed much higher.

However, the fertility rates for immigrant women are strongly affected by migration. Figure 4 documents the dramatic differences in rates among immigrant women before and after migrating to Spain. Results show declining fertility rates in the years prior to migration and a dramatic increase within the first

few years of residence in Spain. In fact the TFR for immigrant women 3 years after arriving to Spain reaches the level of 2.5 which is dramatically higher than the rates for native women.

We argue that the association between migration and fertility distorts the usefulness of the TFR as a measure of fertility levels. Moreover, we expect this association to be variable according to place of origin of the immigrant population. Figure 5 documents these differences. Higher TFR after migration are particularly pronounced among Africans but overall they are higher among all immigrant origin groups. From a population perspective, the fertility contribution of immigration refers to the number of children that immigrant women are going to have in Spain, which is not the same as the total number of children they are going to have since many children maybe born in countries of origin.

Discussion

Overall, the analysis will highlight the difficulties in understanding the fertility contribution of immigrant women and will calculate the number of children than women have in Spain and separate those from the total number of children. Overall we will assess the potential of immigration and the fertility of immigrants to counteract population aging.

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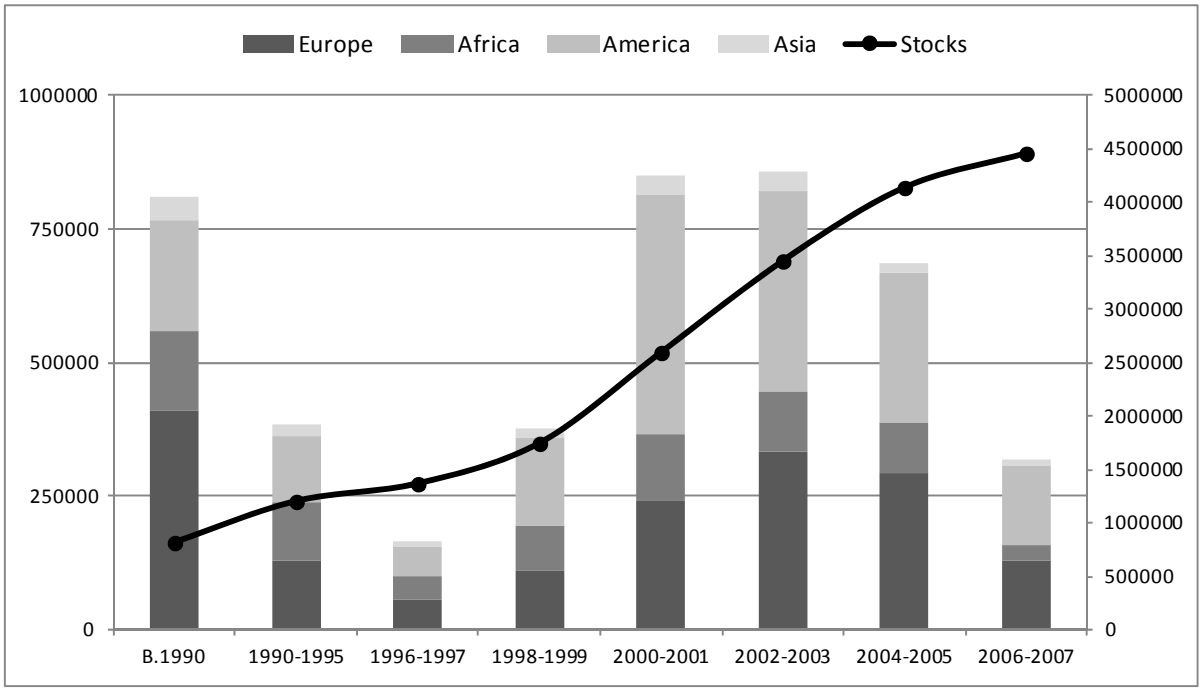
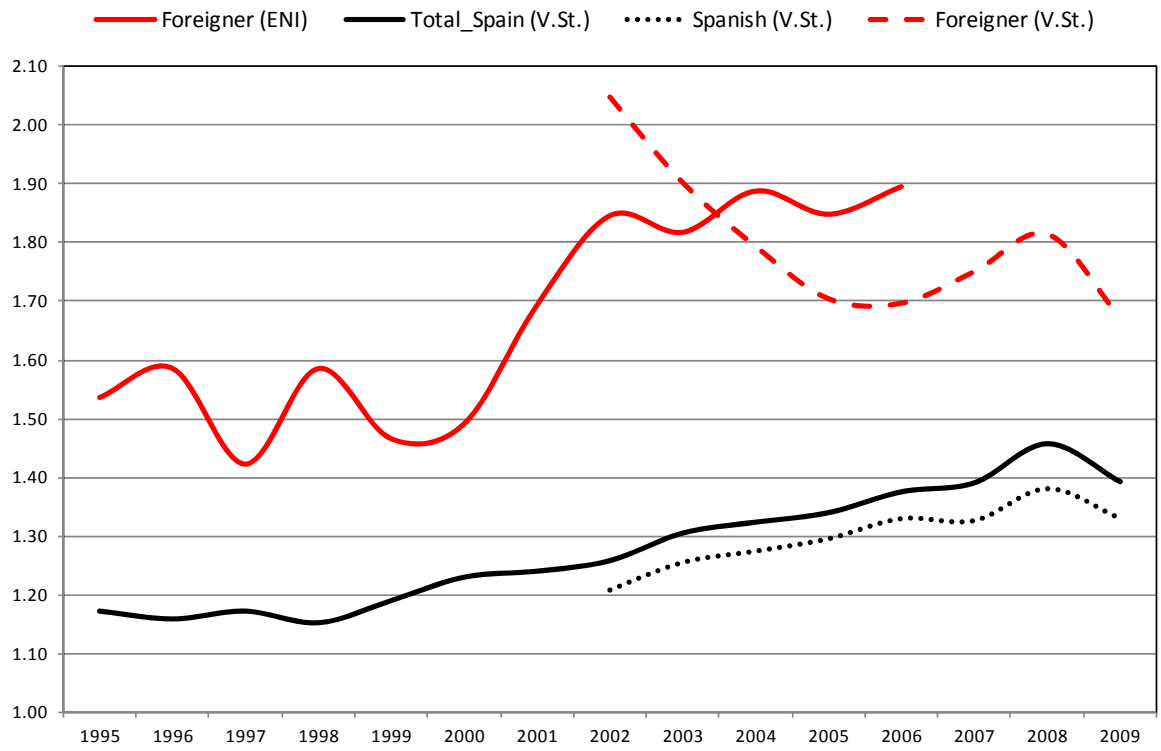
Figure 1. Flux and stocks of immigrant women in Spain by region of origin



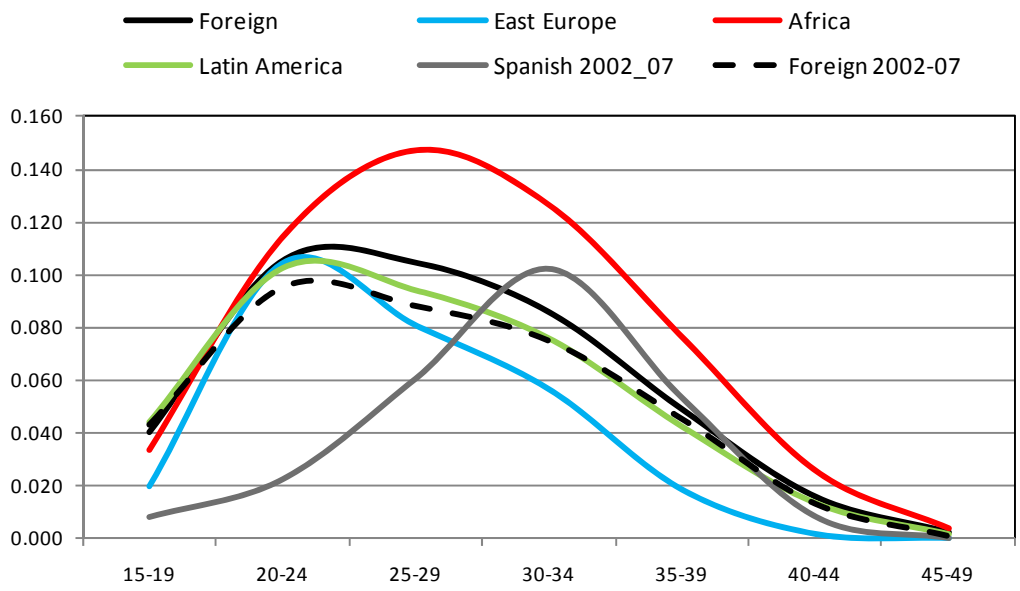
Source: National Immigration Survey 2007 (INE).

Figure 2. TFR in Spain, 1995-2009: Total, Spanish and Foreigner women



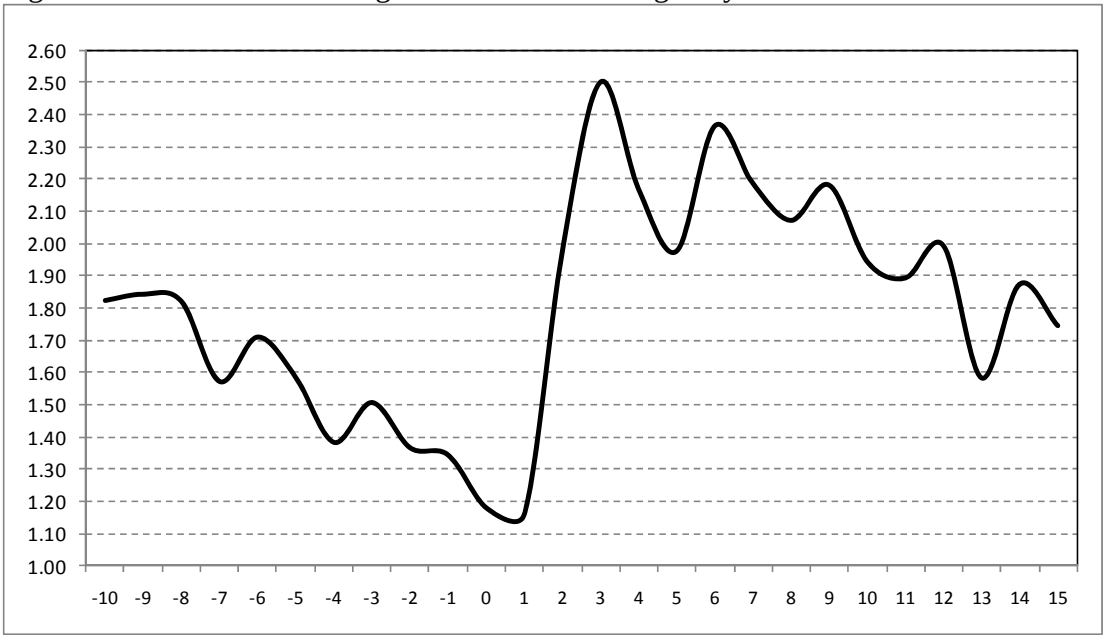
Source: (ENI)-National Immigration Survey 2007 (INE) and (V.St.)-Vital Statistics (ENI)

Figure 3. Period age-specific fertility rate for foreign-born women and by region of origin



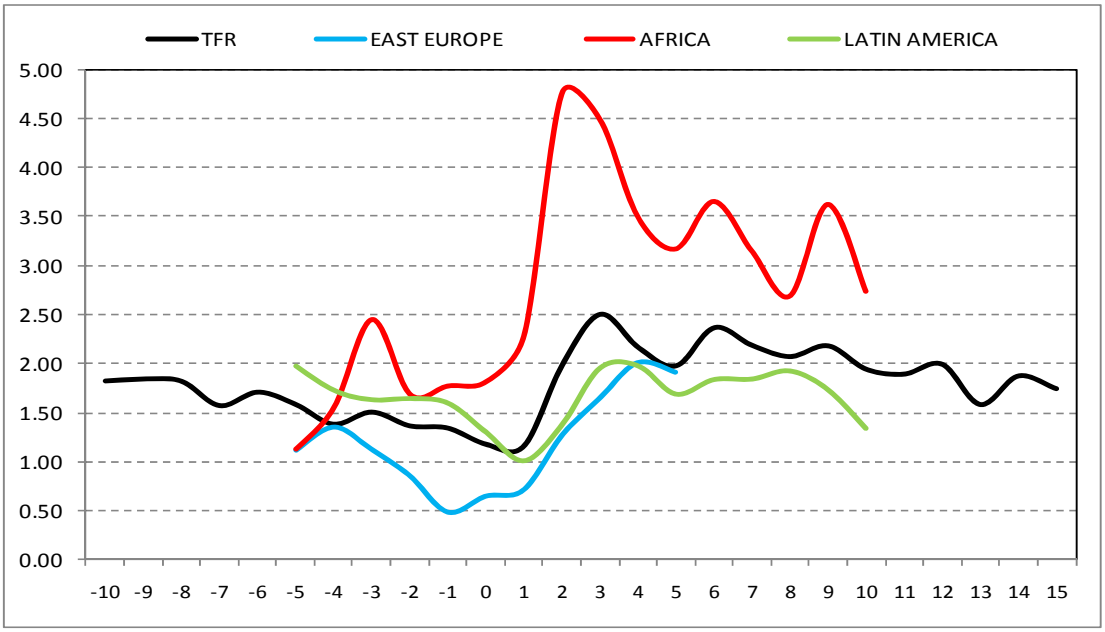
Source: Foreign (total), East Europe, Africa and Latin American using ENI 2007 survey (INE); Spanish$^{2002\text{-}07}$ and Foreign$^{2002\text{-}07}$ using vital statistics (INE).

Figure 4. Period TFR of immigrant women according the year of arrival



Source: National Immigration Survey 2007 (INE).

Figure 5. Period TFR of immigrant women according the year of arrival and region of origin



Source: National Immigration Survey 2007 (INE). Years of TFR computed according number of registers.