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Research Article

Childbearing patterns among immigrant women and their daughters in Spain: Over-adaptation or structural constraints?

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Childbearing patterns among immigrant women and their daughters in Spain: Over-adaptation or structural constraints?

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Abstract

BACKGROUND

Spain, a country with one of the lowest fertility levels in the world, has recently received intense immigration flows that may contribute to fertility recovery.

OBJECTIVE

The objective of this study is to examine whether the childbearing behaviour of immigrant women and their descendants shows a pattern of convergence with that of Spanish women born in or after 1950.

METHODS

After merging data from the Fertility and Values Survey (2006) and the National Immigrants Survey (2007), we analyse the transition to first, second, and third birth using event history models, to identify variations in timing and incidence of birth transitions between native Spanish women and immigrant groups.

RESULTS

First-generation migrant women have an earlier transition to motherhood than Spaniards. By contrast, their overall rates of transition to second birth – with the exception of women born in the Maghreb – are lower than those of Spaniards, while their rates of transition to third birth are again higher. When the analysis is restricted to immigrant women who arrived childless in Spain, all of them delay the transition to first birth even later than Spaniards, with the exception of those born in other EU countries. Among descendants of immigrants, a trend to convergence with natives

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emerges among women of Latin American origin, while those from the Maghreb remain more likely to experience a transition to a second and third birth.

CONTRIBUTION

Previous literature has found that migration disrupts immigrants' fertility only temporarily; however, in the case of Spain, most migrant women who moved before starting family formation do not seem to fully compensate for migration-related disruption of fertility at a later stage. Our findings challenge the widespread belief that immigrants' childbearing alone will allow Spain to leave behind the current lowest-low and latest-late fertility scenario.

1. Introduction

For much of the 20th century, Spain had one of the highest fertility levels in Europe and was a laggard country regarding fertility decline, but in the early 1990s it became a forerunner in lowest-low fertility, exhibiting period fertility rates below 1.3 (Kohler, Billari, and Ortega 2002). Like many other European countries, during the first decade of the 21st century Spain experienced both a large immigration boom and an upturn in fertility (Goldstein, Sobotka, and Jasilioniene 2009). Although this recent fertility upturn was brief and transitory and came to a halt with the economic recession and subsequent austerity policies, the acknowledged role played by immigration in fostering fertility recovery has directed increasing attention, both in academic and political circles, to the linkages between migration and fertility. In this context, policymakers pondered the possibility that immigrants, with their youthful age pyramid and higher fertility levels in countries of origin, could help lessen the consequences of Spain's subfertile and aging population.

The objective of this study is to compare the childbearing behaviour of immigrant women and their descendants with that of Spanish women born in or after 1950. We examine immigrant and native women's fertility behaviour from a life course perspective, using a parity-specific approach, to identify variations in timing and incidence of birth transitions. For immigrant women we examine the entire reproductive life, including premigration birth transitions. Although most studies of migrant fertility focus on births that take place in the host countries, our objective is to assess the (dis)similarities in childbearing trajectories between women with different-origin backgrounds. Furthermore, since most children born in the country of origin have subsequently been reunified with their mothers in Spain, we believe that they should be brought into the picture: Even if they are not included in cross-sectional fertility indicators such as the TFR, they will eventually be counted in cohort fertility measures.

We also conduct a separate analysis of women who migrated childless, in an attempt to disentangle selection, socialization, and adaptation processes. Finally, we compare first- and 1.5-generation migrants in order to assess the extent to which they converge with native Spanish women's childbearing patterns.⁵

The paper is organized as follows. We first present a background section, describing the Spanish fertility and immigration context. We then discuss some theoretical considerations regarding immigrant fertility and present our research questions. Section 4 describes the data and methods used, and we present our results in section 5. Thereafter follows a discussion of the main findings of our study.

2. The Spanish context

2.1 Fertility in Spain

For much of the 20th century, Spain had one of the highest fertility levels in Europe. However, from the mid-1970s Spain experienced an extraordinarily steep fertility drop. From nearly 3 children per woman in the early 1970s, the total fertility rate (TFR) dropped below replacement in 1981, then below the lowest-low threshold of 1.3 in 1993, finally reaching an historical low of 1.15 in 1998. At the turn of the century there was a moderate recovery in fertility levels as a result of decelerating birth postponement and increased immigration, with the TFR reaching 1.44 in 2008. This moderate fertility rebound came to an end with the onset of the economic crisis, the sharp rise in unemployment – which peaked at 26.9% in early 2013 – and the drastic reduction of migration inflows. Since 2012 Spain has been recording net emigration for the first time since the 1970s. Meanwhile, since 2011 the total fertility rate has remained at around 1.3 children per woman, indicating a return to a lowest-low fertility scenario, even though the mean desired number of children remains stable at around two (Sobotka and Beaujouan 2014).

The long-term decline in fertility is closely linked to a progressive postponement of childbearing. Increasingly, both women and men want to be established in the labour market before becoming parents. In the period 1980–2015 the mean age at first birth increased from 25 to 31.3 for women and from 30.1 to 34.1 for men. Spain currently has one of the latest ages at first birth in the world (OECD 2016). However, in contrast to other European countries, lowest-low period fertility levels in Spain have not

⁵ The 1.5 generation refers to individuals who were born abroad and who migrated (with one or both parents) during childhood or adolescence. We focus on their migrant background, even if many of them may have acquired Spanish citizenship.

typically been associated with high levels of definitive childlessness. For instance, the level of definitive childlessness among Spanish women born in 1965 (13%) is well below that observed for comparable cohorts in other European countries (Miettinen et al. 2015). Rather than forgone motherhood, it is the low rates of progression to second births that has traditionally explained Spain's very low fertility levels (Castro-Martín and Martín-García 2013). Nevertheless, for the youngest cohorts, definitive childlessness has increased substantially: One out of four women born in 1970 has recently completed her reproductive years without bearing children.

After more than three decades of fertility levels below 1.5 children per woman, there is a certain resignation that (very) low fertility is here to stay, particularly if the failure to address youth unemployment, job precariousness, and work-family balance persists (Esping-Andersen 2013). In this context, future immigration flows – partly contingent on economic evolution – and migrants' fertility are likely to play a crucial role in shaping Spain's demographic future.

2.2 Immigration and fertility in Spain

After being a country of emigration throughout most of the 20th century, between 2000 and the onset of the recent economic crisis in 2008, Spain became one of the main receiving countries in Europe. With a net annual inflow of more than 600,000 foreigners, the share of the foreign-born population increased steeply from 2.3% in 2000 to 13.5% in 2009, although afterwards it declined slightly, to 12.7% in 2015, due to return migration linked to the severe unemployment crisis.⁶ The composition of the foreign-born population has changed significantly in the past two decades. While formerly migration inflows were largely from Western Europe and high-fertility countries (mostly Morocco), since the mid-1990s there have been large migration inflows from medium-fertility countries in Latin America and, more recently, from low-fertility countries in Eastern Europe.

In parallel with the immigration surge in the first decade of the 20th century, the annual number of births in Spain rose dramatically, after decades of uninterrupted decline: from 365,193 in 1998 to 519,779 in 2008. The crude birth rate of foreign women in this period was roughly twice that of Spaniards, although this was mainly due

⁶ Unlike population registers in other countries, the Spanish municipal register – known as *Padrón* – provides reliable coverage of immigrants, for two reasons: first, the relevant advantages that derive for the migrant from registration including the right to medical care and the right of children to schooling until age 16; secondly, and most important, irregular migrants are also allowed (and encouraged) to register. In addition, since 2005 there has also been a deregistration procedure every 2 years, which reduces the problem of over-counting.

to the younger age profile of the immigrants. There was also a significant rise in total fertility, from 1.15 children per woman in 1998 to 1.46 in 2008, which allowed Spain to surpass the lowest-low fertility threshold. Immigrants' children born in Spain, known as the second generation, comprise a growing fraction of the Spanish child population. In 2015, approximately one out of four newborns in Spain (22%) had at least one foreign-born parent. This share has increased rapidly, from 4.5% in 1996.

However, several studies have shown that the aggregate impact of migrants on overall fertility levels, though not trivial, is rather modest (Roig and Castro-Martín 2007). This pattern of immigrants' high contribution to the total number of births but small impact on the period total fertility is observed in most European countries (Sobotka 2008). Castro-Martín and Rosero-Bixby (2011) estimate that immigrants' contribution to Spain's TFR in 2004–2006 was just 6.6%, or 0.08 children. This surprisingly small contribution results from the relatively low immigrant share in the childbearing population and a sustained decline in foreign women's fertility rates over time.

Period total fertility rates of foreign women residing in Spain fell from 2.05 children in 2002 to 1.66 in 2015, which is above the fertility level of native women (1.28) yet nonetheless quite low.⁷ Despite the common perception among Spaniards that immigrants have high fertility, this is seldom the case. Migrants' self-selection in terms of education, material resources, and social mobility aspirations, the predominance of work-related migration, and the scarcity of family-work conciliation policies in the host society likely explain the relatively low fertility of the migrant population. Moreover, the downward trend in immigrant fertility can be partly attributed to the ongoing change in the composition of the foreign population – a high proportion of recent immigrants come from low-fertility countries in Eastern Europe – and to the pervasive fertility decline in immigrant-sending countries over recent decades. Additionally, as observed in other countries (Andersson 2004), the longer immigrants stay, the more their fertility converges with that of the native population (Roig and Castro-Martín 2007).

Although the actual contribution of immigrants' fertility to overall fertility in Spain has been relatively modest, it is important to note that immigrant women's younger childbearing calendar – in 2015 their mean age at first birth was 27.6 compared to 31.2 among Spanish women – has contributed significantly to slowing down the persistent rise in the mean age at motherhood, and hence decelerated the aggregate process of fertility postponement.

⁷ These figures are provided by the Spanish Statistical Institute, which estimates fertility rates for the whole foreign population but not for different nationality or country-of-birth groups. TFR data before 2002 is considered less reliable because of under-registration of some immigrant groups and over-registration of others in the population register.

Since the onset of the economic crisis there has been a notable decline in immigration flows and in the union formation and fertility of both Spaniards and immigrants (Castro-Martín et al. 2015). Emigration has substantially increased, while immigrants who arrived during the boom are gradually aging, which suggests a parallel decrease in their fertility rates. In addition, it is not clear whether immigrants' descendants will maintain their parents' patterns of family-building. Despite the intensity of recent immigration flows and the relatively rapid process of family reunification in Spain (González-Ferrer 2011), most descendants of immigrants have not reached marriageable age, so it is difficult to anticipate their childbearing behaviour. In the 2011 Population Census there are approximately 2 million descendants of immigrants, of which only 800,000 correspond to the second generation, while the rest came to Spain during their childhood. Only 700,000 of all the descendants were older than 15 in 2011, with just 144,678 from the second generation and 545,000 from the 1.5 generation (González-Ferrer et al. 2015). Thus, any analysis of the fertility patterns of immigrants' descendants will inform us only about the behaviour of the older members who represent less than half of the total, and for this reason the results obtained should be approached with caution.

3. Theoretical framework and research questions

The main focus of research on migrant fertility has been assessing the influence of past and current social environments and disentangling the role of socioeconomic and cultural factors in shaping migrants' childbearing patterns (Kulu and González-Ferrer 2014). Various major hypotheses have been proposed in the literature to depict the relationship between migration and fertility: socialization, adaptation, selection, disruption, and interrelation of events (Andersson 2004; Kulu 2005; Lindstrom and Giorguli Saucedo 2007; Milewski 2007; Roig and Castro-Martín 2007). Numerous studies attest that the relative importance of these explanatory hypotheses varies substantially across immigrant groups, as well as across socioeconomic, institutional, and policy settings (Kulu and González-Ferrer 2014).

The underlying assumption of the socialization hypothesis is that an individual's childbearing behaviour is largely shaped by the cultural values and norms internalized during childhood (Milewski 2007). According to this hypothesis, first-generation migrants preserve the dominant fertility patterns of their country of origin, and only migrants who arrive at a very young age and members of the second generation converge with the patterns of the majority population.

Focusing on adult life instead of childhood, the adaptation hypothesis assumes that migrants gradually adapt their fertility preferences and behaviour to the new economic,

social, and cultural environment at destination. According to this view, the longer a migrant resides in the host society, the more her or his fertility patterns resemble those of the native population. This convergence does not necessarily imply a process of acculturation but can result from adjustment strategies intended to cope with the social, economic, and labour-market circumstances in the new country. Moving to a country with better job prospects for women and higher living costs increases the costs of children and childrearing for migrants from less-developed areas (Frank and Heuveline 2005).

The selection hypothesis posits that migrants are a selected group in terms of educational attainment, marital status, socioeconomic resources, and social mobility aspirations for themselves and their children (Feliciano 2005; Adserà *et al.* 2012). Because of these characteristics, the childbearing patterns of migrants are expected to be closer to those of natives in the host society than to those of nonmigrants remaining in the country of origin.

The disruption and interrelation of events hypotheses focus on the short-term impact of migration on family formation events. According to the disruption hypothesis, in the time immediately before and after migration, immigrants have low fertility levels as a result of the separation of spouses or due to economic stress. The interrelation of events hypothesis argues that high fertility shortly after migration is closely linked to family reunification or couple formation (Toulemon 2004).

Previous studies on migrant fertility in Spain have shown that these hypotheses are complementary rather than mutually exclusive (Roig and Castro-Martín 2007). The fertility of Latin American migrant women residing in Spain is considerably lower than that prevailing in the countries of origin. The observed differential could be partly attributed to selective migration, since the proportion of women with secondary or higher education is considerably larger among Ecuadorian, Colombian, and Peruvian women residing in Spain than among women in their home countries (Castro-Martín and Rosero-Bixby 2011; Kraus and Castro-Martín 2017). Among the largest migrant groups, only women coming from Morocco maintain a substantially higher fertility level than Spaniards, which is closely related to their distinct migration and partnership patterns. A significant proportion of first generation Moroccan women came to Spain as marriage migrants, that is, after marrying a Moroccan migrant who has been living in Spain for a relatively long time.⁸ This type of marriage-at-a-distance has been found to be associated with more traditional family behaviours in other groups (Turkish immigrants) and countries (Germany, Denmark, Netherlands), as shown by Lievens (1999) and González-Ferrer (2007, 2011), among others.

⁸ In 2007, 27% of Moroccan women who migrated to Spain as adults (16 or older) were marriage migrants (González-Ferrer 2011).

However, the extent to which these fertility patterns of first-generation immigrant women will persist among their daughters in Spain is still unknown. For instance, women who came to Spain as children will not face the concurrent partnership formation, migration, and fertility that many Moroccan first-generation women experienced. Similarly, disruption arguments and selectivity issues are less relevant for migrants' descendants because they did not make the decision to migrate themselves, though the indirect influence of parental selective migration may still influence their behaviour.

Given the very young ages of descendants of recent immigrants in Spain, their childbearing patterns have not yet been analysed. The second generation is born and raised in the host country, but within an immigrant family, which plays an important role in the intergenerational transmission of cultural values (Milewski 2011). Members of the 1.5 generation occupy a "socio-cultural middle ground" (Holland and de Valk 2013) between their countries of origin and destination, and we can presume that their family formation norms and behaviour are shaped by both societal contexts. Previous studies in different contexts, such as Germany (Milewski 2007, 2010), Sweden (Scott and Stanfors 2011), the Netherlands (Garssen and Nicholaas 2008), and the United Kingdom (Dubuc 2012), have documented a convergence tendency in the fertility behaviour of immigrant children toward that of natives. However, the pace of convergence may differ according to origin, age at arrival, language fluency, and country of destination, among other factors. Descendants of Turkish migrants, for instance, have been found to converge at a slower rate than other groups. Some authors have explained this pattern by emphasizing the strength of family values in Turkish culture (Milewski 2010). Important variation in the fertility patterns of descendants of Turkish migrants according to the different destination countries has also been found, suggesting the influence of average fertility levels at destination (Milewski 2011), labour market conditions (Scott and Stanfors 2011), and different patterns of selection in their parents' migration (Adserà et al. 2012).

The influence of parental values and expectations on their descendants' childbearing patterns is likely to be weakened by the influence of school and peers. However, this weakening effect will depend on other factors such as age at migration, language fluency, and residential segregation, as well as the selection processes involved in their parents' migration. The more selected (different from the average citizen in the country of origin) their parents were at the time of migration, the less likely children of immigrants are to reflect the dominant fertility patterns in their (parents') countries of origin. In the case of Spain, the self-selection patterns of Latin American versus Moroccan immigrants, with regard to educational attainment, reasons to migrate, and work aspirations, seem to be quite distinct (González-Ferrer 2011).

Accordingly, we expect a more rapid convergence to host-society fertility levels among the descendants of the former than the descendants of the latter.

Fluency in the language of the destination country has long been recognized as a key factor in immigrants' outcomes and their level of adaptation (Chiswick and Miller 2001). With regard to fertility, a nonofficial mother tongue may impact the ability of the child migrant to access local cultural cues through school and peers when forming her childbearing preferences. In the Spanish case, descendants of Moroccan origin are less likely to be fluent in the language of the host country upon arrival than their Latin American counterparts, who are virtually all native Spanish speakers.

In addition to selection patterns and differential social distances across groups of origin, in a study on immigrants who arrived in Canada before adulthood, Adserà and Ferrer (2013) found that the fertility rate of individuals migrating up to age 6 was either somewhat lower or indistinguishable from that of natives in their host country. This was not the case for those who migrated in their late teens (who maintained differential fertility rates from that of the host country). A similar association between migrants' age at arrival and fertility has been documented in England and France (Adserà et al. 2012). Overall, when researchers allow estimates of fertility to vary by age at immigration, they find patterns broadly consistent with the adaptation hypothesis. With few exceptions, women who migrated at the youngest ages have fertility rates that are most similar to native-born women (Adserà and Ferrer 2014).

Drawing on previous research and different theoretical perspectives relevant to the relationships between migration and fertility, we address three central questions concerning the childbearing behaviour of migrant women and the 1.5 generation in Spain: How do first-, second-, and third-birth transition patterns of migrant women of various origin groups, the 1.5 generation, and Spanish natives differ? Are the observed differences in parity transitions between migrants and Spaniards explained by differences in the socioeconomic profile of the groups? To what extent do socialization in the countries of origin, the types of selection patterns in (parental) migration, and adaptation to the economic, social, and cultural environment at destination explain the degree of convergence of migrants' childbearing patterns with those of Spaniards?

Taking into account the average fertility levels in migrants' countries of origin, the average size of their families of origin, the incidence of marriage migration, and the language and sociocultural distance from the country of destination, we expect migrant women of Moroccan origin to have a substantially higher and earlier fertility than natives. We expect migrant women of Latin American origin to have a higher and earlier fertility than natives if they started their family-building in the country of origin, but not if they migrated childless. By contrast, we expect the childbearing patterns of European immigrants to be similar to those of Spanish natives. With regard to the 1.5

generation, we expect to find signs of adaptation to the host-country fertility patterns, albeit uneven across groups of origin.

Migrants have distinct demographic, socioeconomic, and cultural backgrounds from the Spanish-born population, which can impact childbearing decisions. Accordingly, the composition of migrant groups could be responsible for observed fertility differentials. With regard to the sociodemographic characteristics of migrant women, we expect more-educated and younger migrants to have fertility patterns that are closer to those of natives than to those of less-educated migrants and women from older cohorts. Migrants and their descendants from Europe and most Latin American countries are known to have higher educational levels than their Moroccan counterparts (Aparicio 2007; Aparicio and Portes 2014). For that reason, we expect differentials in birth transitions between natives and Moroccan migrants to be largely attributable to their disparate educational composition.

Family values and family size preferences are, to a large degree, transmitted from the parental generation. Hence, we expect that migrants who have one Spanish-born parent will have fertility patterns that resemble those of their native peers, given the selection already involved in mixed marriages formed by immigrants and native partners.

4. Data, methods, and sample description

4.1 Data and methods

Most of the recent sociodemographic surveys carried out in Spain lack dated information, especially regarding date of marriage or, even more frequently, date of cohabitation, of first job, etc. This limitation seriously restricts opportunities to analyse the process of family formation from a life-course perspective, not only for recently arrived migrants but also for the native-born population. The Fertility, Family and Values Survey (FFVS-2006), conducted by the Centre for Sociological Research, is the latest survey that makes it possible to examine women's childbearing trajectories in Spain. The FFVS-2006 collected complete retrospective partnership and fertility histories. Unfortunately, the FFVS-2006 did not over-sample immigrant populations. For this reason, in order to compare the fertility behaviour of immigrant and nonimmigrant women in Spain, we merged data from the FFVS-2006 and the National Immigrant Survey (ENI-2007), conducted by the National Institute of Statistics. The ENI-2007 collected information about the date of birth of all children born to interviewed migrants, regardless of their place of birth and residence at the time of the survey, which has allowed us to reconstruct reproductive histories of immigrant

women. We obtained a total sample size of 11,677 women aged 15 and older, of which 5,393 are natives and 6,284 immigrants.

Instead of looking at fertility rates, as some previous studies have done, in this article we analyse the transition to first, second, and third births. This approach makes it possible to better understand differences not only in the total number of children but also in the fertility timing patterns of women of different origin (Kulu et al. 2017). This is particularly relevant when we are analysing the fertility behaviour of young cohorts that still have not completed their reproductive cycles.

Moreover, for the first time we analyse the fertility patterns of descendants of immigrants in Spain compared to their native counterparts. The ENI-2007 allows us to examine transitions to the first, second, and third birth of the 1.5 generation of European, Maghrebian, and Latin American origin, and compare them with their mothers' generation, apart from their Spanish native counterparts. Respondents are categorized as the 1.5 generation if they migrated before age 16. As evident in Table 1, the sample sizes for the 1.5-generation groups are relatively small. Therefore, all the results concerning this group must be taken with caution, not only because of limited sample sizes but also because our data will over-represent 1.5-generation women who had their children at younger ages, which implies that the results obtained for them might change as the rest of the 1.5-generation women become of childbearing age.

Table 1: Person-years. Number of women and number of events by migrant status and parity

| | First child | | | Second child | | | Third child | | |
|--|--------------|--------|--------|--------------|-------|--------|--------------|-------|--------|
| | Person-years | N | Events | Person-years | N | Events | Person-years | N | Events |
| Total | 141,278 | 11,677 | 7,375 | 52,024 | 7,375 | 4,579 | 44,370 | 4,579 | 1,437 |
| Native | 64,283 | 5,393 | 3,167 | 22,158 | 3,167 | 2,136 | 24,395 | 2,153 | 563 |
| Immigrants: 1G | 69,643 | 5,635 | 3,991 | 28,442 | 3,991 | 2,324 | 18,885 | 2,307 | 841 |
| Immigrants: 1.5G | 7,352 | 649 | 217 | 1,424 | 217 | 119 | 1,090 | 119 | 33 |
| | First child | | | Second child | | | Third child | | |
| | Person-years | N | Events | Person-years | N | Events | Person-years | N | Events |
| 1G with at least 1 child before migration | 22,241 | 2,636 | 2,636 | 21,177 | 2,636 | 1,770 | 15,195 | 1,756 | 714 |
| 1G with no child before migration | 47,402 | 2,999 | 1,355 | 7,265 | 1,355 | 554 | 3,690 | 551 | 127 |
| 1.5G with no child before migration | 7,352 | 649 | 217 | 1,424 | 217 | 119 | 1,090 | 119 | 33 |

Source: Fertility, Family and Values Survey (FFVS-2006). National Immigrant Survey (ENI-2007).

In a first descriptive step we use Kaplan–Meier survival curves to depict the successive birth transitions of various origin groups of migrants and their descendants compared to native women. In the multivariate analyses we run discrete-time event history models with a logit link function. For the transition to first birth the process time is the woman’s age, for the transition to second birth the process time is duration (in years) since first birth, and for the transition to third birth the process time is duration since second birth. The data is organized in person-year format, with each person potentially contributing one entry per year. Cases are censored in the year a woman gives birth or at time of interview when a respondent has not yet had a first, second, or third birth.

Apart from geographical region of origin and migrant generation (first or 1.5 generation), we control for a number of factors that have been shown to be relevant to the incidence and timing of birth transitions. We define four cohorts: born in 1950–1959, 1960–1969, 1970–1979, and 1980–1989. Assuming that the women’s education was completed in early adulthood, we create three categories for education: primary or less, some or completed secondary education, and some or completed tertiary education. In order to take into account the intergenerational transmission of family size norms, we control for the number of siblings in the family of origin. We also take into account whether one parent was born in Spain, in order to control for the potential effect of being the child of a mixed couple, which might distort the socialization effects often associated with the woman’s country of birth. In the analysis of the transition to second birth we control for age at first birth. Likewise, we control for age at second birth in the analysis of the transition to third birth. In models not shown here but available upon request, we also include information on whether the woman had ever worked before having the first child; the results remained largely unchanged.⁹

A large majority of prior studies that evaluate the processes of convergence or adaptation of migrants’ fertility to the dominant childbearing patterns in the host society focus on post-migration fertility. However, a large proportion of immigrant women have children before moving to Spain,¹⁰ since early childbearing is commonplace in non-European societies of origin, and immigration flows to Spain are relatively recent, so the first generation comprises a large part of the total adult female immigrant

⁹ Only the FFVS includes exact information on the year when a woman worked for the first time in her life. By contrast, ENI-2007 only provides information on whether women were working in the country of origin right before migrating to Spain and, if not, on whether they had ever worked before that, but not on the exact date of the first job. As a result the variable ‘ever worked before first birth’ included too many missing values for those in the immigrant sample that had their first child before migrating, and we decided to exclude it from the final models.

¹⁰ Approximately 47% of immigrant women born in 1950 or later and who migrated at age 16 or older had at least one child by the time of migration to Spain, according to ENI-2007 (authors’ calculations).

population in the country. Therefore, a fertility analysis restricted only to births after arrival in the destination country would offer only a partial and biased picture of the reproductive behaviour of the immigrant population (Devolder and Bueno 2011) and of their potential contribution to population growth in the destination country. In this study we construct separate models for all immigrants, considering all birth transitions regardless of whether they took place during the pre-migration or post-migration period, and also for those immigrants who were childless at the time of migration. In the first model we intend to evaluate (dis)similarities in the entire reproductive biographies of immigrant and native women. In the second model we intend to assess the influence of the Spanish socioeconomic context on the timing and incidence of migrants' birth transitions and to indirectly test the selective nature of international female migration to Spain. Besides reflecting distinct self-selection mechanisms, women with children and without children at the time of migration are likely to differ by age at migration, union status, motive for migration, and readiness to work, and therefore we expect them to follow different parity transition patterns.

4.2 Sample description

Women with migrant backgrounds have different educational levels, partnership histories, labour force trajectories, and other conditions that may explain why their fertility patterns differ from those of native women (González-Ferrer, Hannemann, and Castro-Martin 2016). The different cohort composition of the 1.5 generation may also be responsible for their distinct fertility patterns. Table 2a describes the sociodemographic profile of the migrant groups under study and of native women. We observe that on average, first-generation immigrant women belong to younger birth cohorts than natives, with the exception of other European women, who have a very similar age profile to those born in Spain. Despite their younger profile, immigrant women are not always more educated than natives. North African immigrant women are substantially less educated than native women: 60% of them have only a primary education or less, compared to 13% of natives and 20% of immigrants from other origins. Differences across immigrant groups are also substantial in terms of the reasons for migration reported by the surveyed women. On average, 40% of immigrant women reported economic reasons as their main motive for moving to Spain, 27% reported family reasons, 10% reported a mixture of both, and the rest reported other reasons, primarily to pursue studies. Half of Latin-American women reported economic reasons, whereas family reasons were dominant among Moroccans (54%). Finally, as expected, the average number of siblings among immigrant women largely reflects differences in (past) fertility patterns across world regions: Immigrant women from the Maghreb area

had more than 5 siblings on average, followed by Latin-Americans with almost 4, and native, European, and other immigrant women with between 2 and 2.5.

Table 2a: Sample's descriptives by group of origin. Vertical percentages

| | Native | 1G-EU+ US+Can | 1.5G-EU+ US+Can | 1G- Maghreb | 1.5G- Maghreb | 1G- LA | 1.5G- LA | 1G- other | 1.5G- other | Total |
|---------------------------------------|--------|------------------|--------------------|----------------|------------------|-----------|-------------|--------------|----------------|--------|
| Birth cohort | | | | | | | | | | |
| 1950–1959 | 22.4 | 21.4 | 8.4 | 12.3 | 34.5 | 14.1 | 14.1 | 19.9 | 23.0 | 19.3 |
| 1960–1969 | 32.5 | 30.5 | 36.3 | 34.6 | 18.7 | 34.5 | 17.0 | 27.3 | 23.3 | 32.2 |
| 1970–79 | 30.6 | 35.2 | 38.0 | 39.0 | 16.1 | 39.3 | 27.5 | 42.5 | 18.4 | 34.4 |
| 1980+ | 14.5 | 12.9 | 17.3 | 14.2 | 30.7 | 12.1 | 41.4 | 10.4 | 35.4 | 14.2 |
| Education | | | | | | | | | | |
| Primary or less | 13.3 | 18.0 | 24.1 | 60.1 | 67.1 | 19.5 | 22.5 | 19.9 | 17.9 | 19.0 |
| (Some) secondary | 65.4 | 58.2 | 55.4 | 32.5 | 31.8 | 57.2 | 59.9 | 43.4 | 73.2 | 59.1 |
| (Some) tertiary | 21.3 | 23.9 | 20.5 | 7.4 | 1.1 | 23.3 | 17.6 | 36.7 | 8.9 | 22.0 |
| Mixed parents | | 3.3 | 27.3 | 1.0 | 6.8 | 2.4 | 21.6 | 1.4 | 19.6 | 2.4 |
| Number of siblings | 2.5 | 2.1 | 2.0 | 5.2 | 4.7 | 3.9 | 2.1 | 2.4 | 2.1 | 2.9 |
| Native partner | | 24.8 | 29.9 | 10.8 | 22.7 | 25.8 | 24.7 | 28.9 | 28.6 | 24.6 |
| Ever worked before first birth | | | | | | | | | | |
| No | 33.1 | 38.2 | 19.4 | 48.6 | 33.0 | 51.2 | 36.6 | 43.4 | 41.1 | 39.2 |
| Yes | 62.1 | 52.4 | 49.6 | 31.8 | 33.0 | 39.9 | 39.2 | 41.7 | 32.1 | 51.8 |
| Unknown | 4.8 | 9.4 | 30.9 | 19.6 | 34.1 | 9.0 | 24.2 | 14.9 | 26.8 | 9.1 |
| Reason for migration | | | | | | | | | | |
| Economic | | 39.7 | 5.8 | 26.1 | 8.0 | 50.4 | 4.4 | 38.0 | 7.1 | 39.4 |
| Family | | 20.9 | 64.4 | 53.4 | 64.8 | 16.0 | 71.8 | 25.5 | 55.4 | 26.9 |
| Both | | 11.3 | 2.2 | 8.6 | 4.6 | 10.4 | 4.9 | 8.7 | 1.8 | 9.6 |
| Other | | 28.2 | 27.7 | 11.9 | 22.7 | 23.2 | 18.9 | 27.8 | 35.7 | 24.1 |
| Age at migration | | 28.9 | 7.1 | 26.8 | 9.0 | 29.6 | 10.3 | 29.0 | 10.1 | 26.9 |
| N (women) | 5,393 | 1,677 | 278 | 582 | 88 | 2,733 | 227 | 643 | 56 | 11,677 |

Source: Fertility, Family and Values Survey (FFVS-2006). National Immigrant Survey (ENI-2007).

Table 2b: Sample's descriptives by group of origin and country where first birth took place. Vertical percentages

| | Immigrant women with first child before migration | | | | | Immigrant women childless at migration | | | | |
|--|---|------------|-------|----------|-------|--|------------|-------|----------|-------|
| | 1G-EU+US+ | 1G-Maghreb | 1G-LA | 1G-other | Total | 1G-EU+US+ | 1G-Maghreb | 1G-LA | 1G-other | Total |
| Birth cohort | | | | | | | | | | |
| 1950–1959 | 23.5 | 18.4 | 17.5 | 23.6 | 19.8 | 14.8 | 7.1 | 5.7 | 10.1 | 9.5 |
| 1960–1969 | 33.6 | 39.7 | 33.8 | 34.1 | 34.2 | 21.5 | 23.0 | 21.1 | 18.1 | 21.1 |
| 1970–79 | 37.0 | 31.6 | 40.5 | 36.2 | 38.5 | 35.9 | 40.7 | 43.3 | 49.6 | 41.2 |
| 1980+ | 5.9 | 10.3 | 8.2 | 6.1 | 7.5 | 27.8 | 29.2 | 29.9 | 22.2 | 28.2 |
| Education | | | | | | | | | | |
| Primary or less | 24.3 | 85.2 | 25.2 | 21.2 | 28.6 | 11.8 | 49.1 | 11.3 | 19.6 | 17.7 |
| (Some) secondary | 62.4 | 10.6 | 58.0 | 48.2 | 54.8 | 58.0 | 42.5 | 58.7 | 42.0 | 54.3 |
| (Some) tertiary | 13.3 | 4.2 | 16.7 | 30.5 | 16.6 | 30.2 | 8.4 | 29.9 | 38.5 | 28.0 |
| Mixed parents | 0.8 | 0.7 | 1.0 | 0.4 | 0.9 | 4.8 | 0.8 | 3.0 | 1.3 | 3.1 |
| Number of siblings | 2.4 | 5.8 | 4.3 | 2.4 | 2.7 | 2.0 | 5.1 | 3.4 | 2.5 | 0.0 |
| Native partner | 11.0 | 1.4 | 19.7 | 21.2 | 16.6 | 30.9 | 12.9 | 31.9 | 36.5 | 29.5 |
| Ever worked before first birth* | | | | | | | | | | |
| No | 2.2 | 55.3 | 1.5 | 7.9 | 6.0 | 3.7 | 37.2 | 4.0 | 8.7 | 9.1 |
| Yes | | | | | | 87.1 | 44.3 | 88.5 | 76.6 | 80.5 |
| Unknown | 97.8 | 44.7 | 98.5 | 92.0 | 94.0 | 9.2 | 18.5 | 7.6 | 14.7 | 10.4 |
| Reasons for migration | | | | | | | | | | |
| Economic | 44.5 | 23.0 | 58.2 | 41.6 | 50.6 | 36.5 | 27.5 | 40.9 | 34.9 | 36.9 |
| Family | 22.2 | 58.6 | 12.3 | 26.0 | 19.4 | 20.0 | 51.2 | 20.6 | 25.1 | 25.1 |
| Both | 17.1 | 11.5 | 11.8 | 11.5 | 13.1 | 7.4 | 7.4 | 8.7 | 6.3 | 7.8 |
| Other | 16.2 | 6.9 | 17.7 | 21.0 | 17.0 | 36.0 | 14.0 | 29.8 | 33.7 | 30.2 |
| Age at migration | 32.0 | 31.0 | 30.0 | 31.0 | 31.0 | 24.2 | 24.3 | 24.9 | 24.1 | |
| Age first child | 22.3 | 22.0 | 22.0 | 22.3 | 22.1 | 27.4 | 26.5 | 27.6 | 26.6 | |
| N (women) | 667 | 174 | 1,499 | 296 | 2,636 | 1,010 | 408 | 1,234 | 347 | 2,999 |

Note: * See footnote 5

Source: Fertility, Family and Values Survey (FFVS-2006). National Immigrant Survey (ENI-2007).

There are also remarkable differences between women who started their reproductive history in their country of origin and those who migrated childless to Spain, as Table 2b shows. Moroccan women who had at least one child before migrating to Spain were much less educated (85% only had primary education or less), whereas only 50% of their 'childless at migration' counterparts had similar education

profiles. The same pattern appears at a lower level among Latin-American women (25% versus 12% with only primary) and European women (24% versus 12% with only primary). Economic and academic reasons for migration were also more common among migrant women who were childless at migration, and therefore these migrant women were also much more likely to have worked before having their first child. In any case, it is important to note that many of the aforementioned differences may simply be reflecting the younger profile of immigrants who migrated to Spain before having any children (24-years-old versus 31); the younger profile also helps to explain the much higher percentage of mixed partnerships among the childless migrants. For instance, 13% of Moroccan women who migrated childless have a Spanish partner, while this is only the case for 1% of Moroccan women who migrated after becoming mothers.

Among the 1.5 generation there are considerably fewer differences across origins in migration motivation and incidence of mixed partnership. In fact, the proportion of mixed marriages among the 1.5 generation is as high as 23% among women from the Maghreb, and 25% among those of Latin-American origin. Nonetheless, descendants of North African immigrants still come from substantially larger families and have much lower levels of education attainment than both natives and their immigrant counterparts.

5. Results

5.1 Descriptive results

As a first step, we compare first, second, and third birth transitions based on Kaplan–Meier survival curves. Figure 1a describes the pattern of transition to first birth for four large immigrant-origin groups – Latin America, Maghreb, Europe/United States/Canada, and other – and Spanish native women (thicker blue line). All immigrant women are considered, regardless of whether their transition to motherhood took place before or after migration to Spain. We can observe that all immigrants have had an earlier transition to first birth than Spaniards, the only exception being women from Europe, Canada, or the United States after age 30. However, it should be noted that their median age at first birth, reflected in Figure 1a, is well above the prevailing childbearing age in their societies of origin, providing strong evidence for the selection hypothesis. For instance, the median age at first birth for Latin American women residing in Spain in 2007 was 26.8, whereas it ranges from 21 to 22 in the primary

countries of origin (Ecuador, Colombia, Bolivia, and Peru).¹¹ Likewise, the median age at first birth for Moroccan women residing in Spain was 26.7 in 2007,¹² whereas it was 23.9 in their country of origin.¹³ Nonetheless, differences between first-generation migrant women and native women in the transition to motherhood mainly concern timing rather than level.

Figure 1b restricts the analysis to first generation immigrant women who arrived childless in Spain. We can observe that first-generation migrant women who did not start the process of family formation in their country of origin have a later transition to first birth than Spanish women. This is the case for all origin groups, including women from the Maghreb, and remains consistent with the much more selective profile of Moroccan immigrant women who arrive in Spain childless, as was previously described (they are considerably more highly educated and more frequently motivated to migrate due to economic reasons than those who had already began the process of family formation at arrival). Both their selected educational profile and their work aspirations are potential explanations for their late pattern of transition to motherhood. Accordingly, multivariate models will be estimated for all immigrant women and for immigrant women who migrated to Spain before starting their reproductive life.

When we look at the progression to second birth (Figure 2a), women of immigrant origin seem slightly less likely to experience this transition over their lifetimes than native Spaniards, with the exception of women from the Maghreb, who display both higher and earlier rates of transition to second birth than Spanish women. When we restrict the comparison to first generation immigrant women that arrived childless (Figure 2b) the general picture remains unchanged, but Latin American women who came to Spain before entering into motherhood become clearly the least likely to transition to a second birth.

Finally, Figure 3 depicts the transition to third birth. We can observe that all immigrants except those of European background are considerably more likely to have a third child than Spaniards. This is particularly so in the case of first-generation Moroccan women – nearly 70% of those with two children make the transition to a third child in the ten years after the second child – and, to a lesser extent, of first-generation Latin American women. In this case the limited sample size does not allow distinguishing women who came childless to Spain.

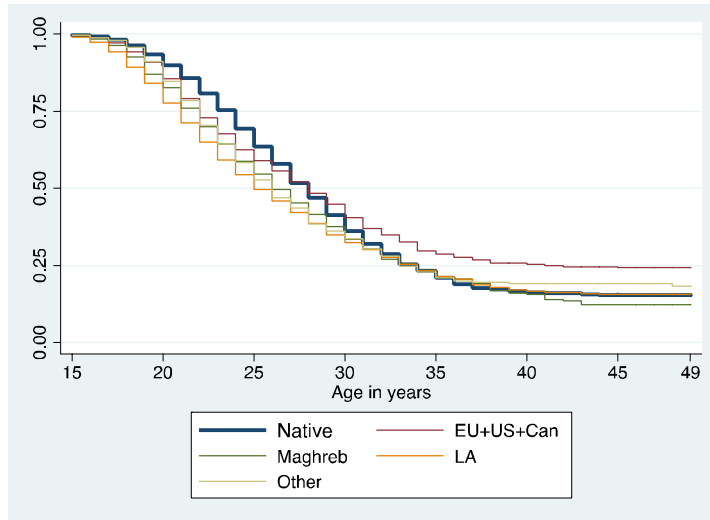
¹¹ According to recent Demographic and Health Surveys (DHS) and Reproductive Health Surveys (RHS), women's median age at first birth was 21.2 in Ecuador (RHS 2004), 21.6 in Colombia (DHS 2010), 21.1 in Bolivia (DHS 2008), and 21.9 in Peru (DHS 2007).

¹² Authors' calculations based on birth register data.

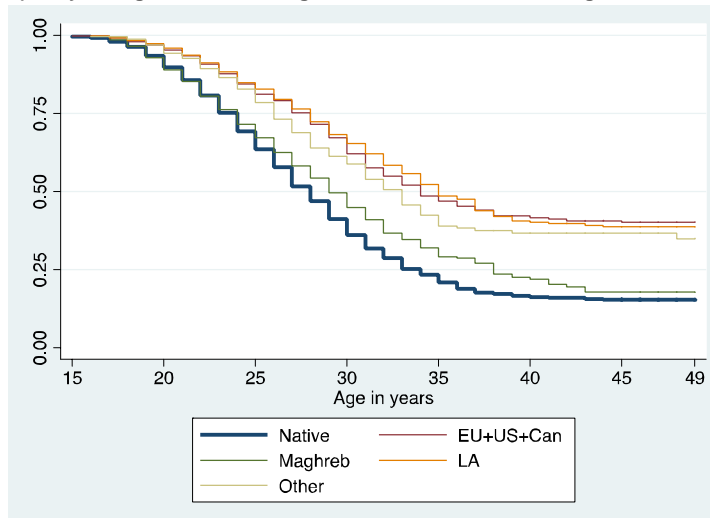
¹³ Estimate based on the Morocco Demographic and Health Survey 2003–2004.

Figure 1: Kaplan–Meier estimates: survival function of transition to first birth

a) All women



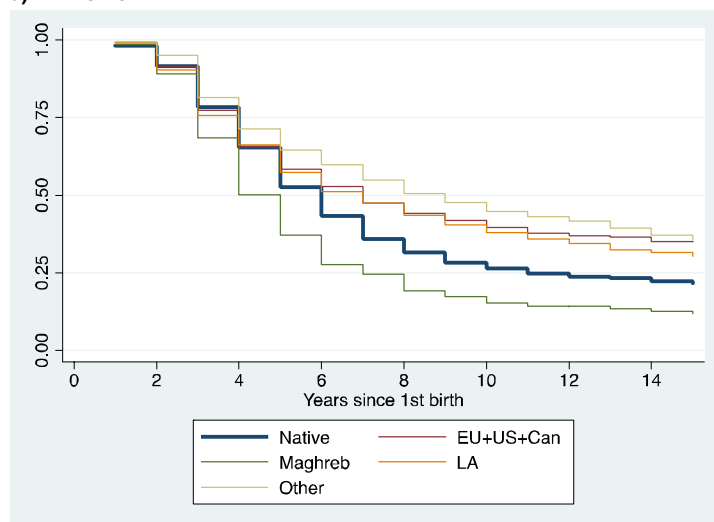
b) Only first generation immigrant women childless at migration



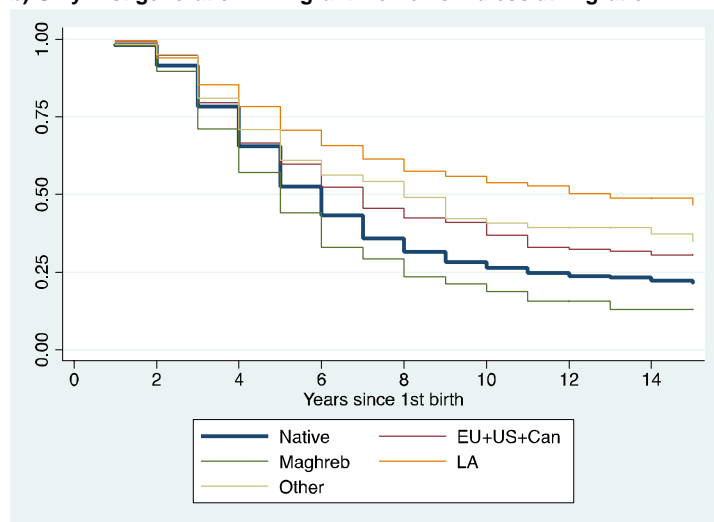
Source: Fertility, Family and Values Survey (FFVS-2006). National Immigrant Survey (ENI-2007).

Figure 2: Kaplan–Meier estimates: survival function of transition to second birth

a) All women

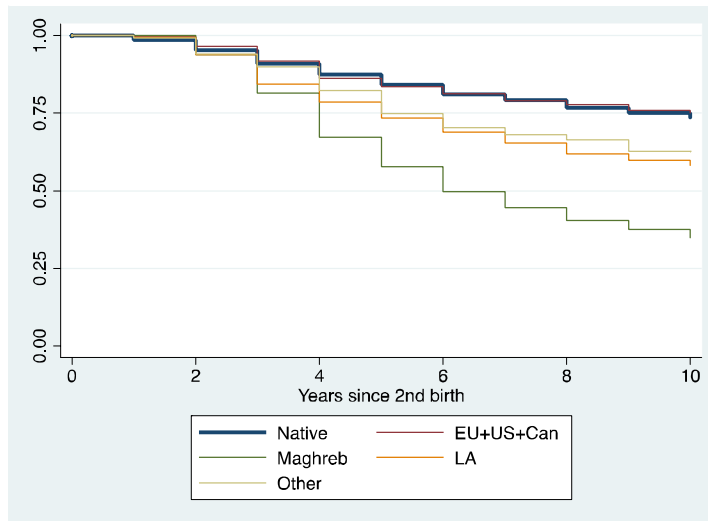


b) Only first generation immigrant women childless at migration



Source: Fertility, Family and Values Survey (FFVS-2006). National Immigrant Survey (ENI-2007).

Figure 3: Kaplan–Meier estimates: survival function of transition to third birth, all women



Source: Fertility, Family and Values Survey (FFVS-2006). National Immigrant Survey (ENI-2007).

5.2 Multivariate results

5.2.1 Transition to first birth

In order to control for cross-group differences in sociodemographic profile, and also to explore differences between the first and 1.5 generations, in this section we present the results of the discrete-time logit models for parity-specific transitions. First, we examine the propensity of childless women to enter motherhood, in order to detect differences in patterns between different immigrant groups, between the first and 1.5 generations, and between the migrants groups and Spanish-born women. In Table 3 two step-wise models are estimated to examine the transition to first birth. Model 1 compares native and immigrant women from the first and 1.5 generations of the four large origin groups, controlling for birth cohort and age, and Model 2 also includes educational level, size of family of origin, and Spanish ancestry (whether the mother or

the father of the woman is Spanish-born) as covariates.¹⁴ The first panel presents the models pertaining to all immigrant women, regardless of whether they had their first child before or after migration, and the second panel presents the models restricted to immigrant women who arrived childless in Spain.

Table 3: Transition to first birth. Logit discrete-time models

| | Native and all immigrant women | | Natives and immigrant women who had no child at arrival in Spain | |
|------------------------------|--------------------------------|-----------|--|-----------|
| | Model 1 | Model 2 | Model 1 | Model 2 |
| Ref. Natives | | | | |
| 1G-EU+US+Can | 0.020 | 0.048 | -0.761*** | -0.725*** |
| 1.5G-EU+US+Can | -0.619*** | -0.522*** | -0.654*** | -0.632*** |
| 1G-Maghreb | 0.232*** | -0.153*** | -0.132** | -0.500*** |
| 1.5G-Maghreb | -0.119 | -0.581*** | -0.168 | -0.609*** |
| 1G-LA | 0.284*** | 0.256*** | -0.767*** | -0.792*** |
| 1.5G-LA | -0.402*** | -0.188 | -0.418*** | -0.284** |
| 1G-other | 0.182*** | 0.228*** | -0.570*** | -0.528*** |
| 1.5G-other | -0.357 | -0.332 | -0.402* | -0.456* |
| Ref. 1950–59 | | | | |
| 1960–69 | -0.256*** | -0.154*** | -0.322*** | -0.205*** |
| 1970–79 | -0.419*** | -0.268*** | -0.580*** | -0.404*** |
| 1980–89 | -0.581*** | -0.471*** | -0.513*** | -0.361*** |
| Ref. Age<20 | | | | |
| 20–24 | 1.262*** | 1.313*** | 1.509*** | 1.549*** |
| 25–29 | 1.507*** | 1.622*** | 2.070*** | 2.157*** |
| 30–34 | 1.565*** | 1.711*** | 2.236*** | 2.351*** |
| 35–39 | 0.956*** | 1.090*** | 1.667*** | 1.777*** |
| 40+ | -0.856*** | -0.767*** | -0.282 | -0.201 |
| Ref. Primary or less | | | | |
| (Some) secondary | | -0.380*** | | -0.306*** |
| (Some) tertiary | | -1.051*** | | -0.964*** |
| Size family of origin | | | | |
| | | 0.034*** | | 0.042*** |
| Mixed parents | | | | |
| | | -0.341*** | | -0.095 |
| Constant | -3.651*** | -3.425*** | -3.975*** | -3.835*** |
| Person-years | 141,278 | 141,278 | 119,037 | 119,037 |

Note: * p < 0.10. ** p < 0.05. *** p < 0.01

Source: Fertility, Family and Values Survey (FFVS-2006). National Immigrant Survey (ENI-2007).

¹⁴ Unfortunately, ENI-2007 did not collect complete partnership histories or the date of entry into cohabitation. Since cohabitation levels are very high among Latin American women (Castro-Martín 2002), we could not use the available information on the date of first marriage to create a time-varying covariate of partnership status, as would have been desirable in the model of transition to motherhood. Nor did the survey collect complete work histories, hindering the inclusion of labour force status as a time-varying covariate in the models, as mentioned above.

As expected, Model 1 in the left panel closely replicates the results of the former non-parametric analysis (Figure 1a). All first-generation migrant women, except those coming from developed societies (Europe, United States, Canada), display higher rates of transition to first birth than Spanish-born women. Differences in first birth risks between first-generation migrants and natives should be interpreted as timing rather than level differentials, since previous survival analysis showed that childlessness is relatively uncommon among all of the groups, migrant or otherwise. When it comes to the 1.5 generation the patterns observed are mixed: Daughters of Latin American women who arrived in Spain before age 16 have lower rates of transition to motherhood than native women, whereas the 1.5 generation of Moroccan and other origins have rates similar to that of native Spanish women. Once we control for sociodemographic characteristics, differentials tend to narrow, and the coefficients for the first and 1.5 generations of Moroccan origin turn negative and statistically significant, suggesting that the low educational level and large size of the family of origin that characterize these groups are partly responsible for the observed patterns.

When we limit the analysis to migrant women who were childless when they arrived in Spain (right panel), we observe in Model 1 that all immigrant groups have lower transition rates to first birth than native women, except for the daughters of Moroccan women, for whom differentials with natives are not statistically significant. Nonetheless, once socioeconomic covariates are introduced in the models, the negative coefficient for the 1.5 generation of Moroccan origin becomes statistically significant. The coefficients for the rest of the migrant groups remain relatively unaffected by the controls, possibly because their composition in terms of educational attainment and number of siblings is less disparate than that of Moroccan immigrants when compared to the native population.

In brief, the results suggest that there is a pattern of convergence towards native women's fertility patterns across immigrant generations, but they also reveal a pattern that we had not anticipated: Women who migrated childless have lower odds of transition to motherhood than their Spanish counterparts once we control for educational level and family-of-origin size.

5.2.2 Transition to second birth

In a lowest-low fertility context such as Spain, the analysis of the transition to second birth may provide relevant insights into disparities in childbearing dynamics among social groups. When we examine all immigrant women, regardless of whether they had their first child before or after migration, the results presented in the left panel of Table 4 show that the first generation and the 1.5 generation from the Maghreb are more

likely to have a second child than native women. Their higher rate of transition to second child remains statistically significant when the sociodemographic covariates are incorporated in the model. By contrast, the rest of the migrant groups display a lower rate of transition to second child. The coefficients are statistically significant for each migrant group, with the exception of the 1.5 generation of Latin America origin. The inclusion of sociodemographic covariates in the model does not substantially alter the results.

Table 4: Transition to second birth. Logit discrete-time models

| | Native and all immigrant women | | Natives and immigrant women who had no child at arrival in Spain | |
|-----------------------------------|--------------------------------|-----------|--|--------------------|
| | Model 1 | Model 2 | Model 1 | Model 2 |
| Ref. Natives | | | | |
| 1G-EU+US+Can | -0.313*** | -0.303*** | -0.0814 | -0.113 |
| 1.5G-EU+US+Can | -0.376** | -0.439*** | -0.385*** | -0.438*** |
| 1G-Maghreb | 0.546*** | 0.395*** | 0.495*** | 0.446*** |
| 1.5G-Maghreb | 0.691*** | 0.534** | 0.732*** | 0.696*** |
| 1G-LA | -0.179*** | -0.242*** | -0.553*** | -0.611*** |
| 1.5G-LA | 0.109 | 0.0716 | 0.104 | 0.0443 |
| 1G-other | -0.430*** | -0.429*** | -0.138 | -0.209 |
| 1.5G-other | -0.952** | -0.983** | -0.985** | -1.015** |
| Ref. 1-2 year | | | | |
| 3-4 years | 1.389*** | 1.394*** | 1.455*** | 1.461*** |
| 5+ years | 0.662*** | 0.671*** | 0.929*** | 0.945*** |
| Ref. 1950-59 | | | | |
| 1960-69 | 0.014 | 0.033 | 0.060 | 0.055 |
| 1970-79 | -0.066 | -0.025 | 0.092 | 0.106 [†] |
| 1980-89 | -0.605*** | -0.555*** | -0.436** | -0.404** |
| Ref. Age first child 20-24 | | | | |
| 15-19 | 0.116*** | 0.105** | -0.042 | -0.028 |
| 25-29 | -0.218*** | -0.205*** | -0.213*** | -0.236*** |
| 30+ | -0.544*** | -0.531*** | -0.481*** | -0.548*** |
| Ref. Primary or less | | | | |
| (Some) secondary | | -0.131*** | | -0.027 |
| (Some) tertiary | | -0.042 | | 0.321*** |
| Size family of origin | | 0.034*** | | 0.026*** |
| Mixed parents | | 0.119 | | 0.107 |
| Constant | -2.824*** | -2.863*** | -3.018*** | -3.118*** |
| Person-years | 52,024 | 52,024 | 30,847 | 30,847 |

Note: * p < 0.10. ** p < 0.05. *** p < 0.01

Source: Fertility, Family and Values Survey (FFVS-2006). National Immigrant Survey (ENI-2007).

Major differentials in the transition to second birth by migrant origin also remain virtually unchanged when we limit the analysis to migrant women who were childless when they arrived in Spain (right panel). Moroccan women who started their family formation process in Spain as well as their daughters display higher rates of progression to second birth than Spanish-born women. By contrast, Latin American women who became mothers in Spain display lower transition rates to second birth, and their daughters show transition rates similar to those of native women.

5.2.3 Transition to third birth

Since the so-called two-child norm is pervasive in Spain and the transition to third birth has become increasingly rare, it is of interest to examine whether immigrant women coming from higher fertility societies exhibit a different pattern. According to the results presented in Table 5, when we examine all immigrant women, regardless of whether they had their children in the society of origin or destination (left panel), the transition to third birth is more common among all first-generation immigrant groups than among Spaniards. The only exception is first-generation migrants from Europe and other developed societies, whose rate of transition to third child is below that of Spaniards. It is worth noting that no differentials with respect to native women's pattern of transition to third birth are found for either the 1.5 generation of Latin American origin or those of other origins, which might indicate a relatively rapid convergence for these groups of immigrant descendants. By contrast, the daughters of Maghrebian women continue to display higher rates of transition to third birth than natives. However, it should be noted that although we are using large surveys, we still ran into sample size problems when analysing the transition to third birth, particularly among the 1.5 generation because of their young age profile. Results should therefore be taken with caution.

Once we restrict the analysis to immigrant women who did not bear any children before arriving in Spain, first-generation women from the Maghreb and from the residual category "other" have higher transition rates to third child than native women. However, this is not the case for first-generation migrants from Latin America. With regard to the 1.5 generation, only descendants of Moroccan origin have higher transition rates to third birth than native women; for all other immigrant descendants, the probability of bearing a third child is similar to that of Spaniards.

Table 5: Transition to third birth. Logit discrete-time models

| | Native and all immigrant women | | Natives and immigrant women who had no child at arrival in Spain | |
|------------------------------------|--------------------------------|-----------|--|-----------|
| | Model 1 | Model 2 | Model 1 | Model 2 |
| Ref. Natives | | | | |
| 1G-EU+US+Can | -0.202** | -0.183* | 0.171 | 0.156 |
| 1.5G-EU+US+Can | -0.180 | -0.316 | -0.173 | -0.336 |
| 1G-Maghreb | 1.277*** | 1.003*** | 0.817*** | 0.541*** |
| 1.5G-Maghreb | 1.042*** | 0.774** | 1.017*** | 0.742** |
| 1G-LA | 0.545*** | 0.456*** | 0.166 | 0.096 |
| 1.5G-LA | 0.034 | 0.0507 | 0.023 | 0.029 |
| 1G-other | 0.386*** | 0.401*** | 1.029*** | 0.911*** |
| 1.5G-other | 0.423 | 0.500 | 0.436 | 0.557 |
| Ref. 1–2 years | | | | |
| 3–4 years | 0.999*** | 1.005*** | 0.699*** | 0.704*** |
| 5+ years | -0.005 | 0.011 | -0.229** | -0.211** |
| Ref. 1950–59 | | | | |
| 1960–69 | 0.079 | 0.102 | -0.00473 | 0.0508 |
| 1970–79 | -0.075 | -0.040 | -0.041 | 0.036 |
| 1980–89 | -1.099*** | -1.027*** | -1.305*** | -1.196*** |
| Ref. Age second child 20–24 | | | | |
| 15–19 | 0.420*** | 0.353*** | 0.389** | 0.285 |
| 25–29 | -0.502*** | -0.463*** | -0.540*** | -0.500*** |
| 30+ | -1.311*** | -1.250*** | -1.348*** | -1.318*** |
| Ref. Primary or less | | | | |
| (Some) secondary | | -0.315*** | | -0.351*** |
| (Some) tertiary | | -0.180* | | -0.025 |
| Size family of origin | | 0.048*** | | 0.056*** |
| Mixed parents | | 0.067 | | 0.077 |
| Constant | -3.462*** | -3.458*** | -3.195*** | -3.226*** |
| Person-years | 46,813 | 46,813 | 29,848 | 29,848 |

Note: * p < 0.10. ** p < 0.05. *** p < 0.01

Source: Fertility, Family and Values Survey (FFVS-2006). National Immigrant Survey (ENI-2007).

Most of the covariates included in the parity transition analysis show the expected effects. Younger birth cohorts have lower transition rates to first and subsequent births. Older ages at first (second) birth are associated with a lower probability of having an additional child. Having a larger family of origin is positively associated with earlier or more frequent parity transitions, which supports the relevance of the socialization hypothesis regarding the intergenerational transmission of fertility behaviour. The role

of educational attainment seems to be more important in determining the timing of first birth than that of second and third births.¹⁵ Lastly, having at least one Spanish-born parent only has a slight (negative) effect on the transition to first birth, and not on subsequent transitions.

6. Conclusions and discussion

The childbearing behaviour of immigrants is an important component of population dynamics, particularly in lowest-low and latest-late fertility countries like Spain. Although the contribution of immigrants to the period fertility rate is small, the impact of immigrants' children (both those born in Spain and those who arrived with their parents or later through family reunification) on deterring population decline and slowing down population aging cannot be dismissed. In addition, from a social point of view, the growing share of Spanish children and youth of immigrant descent is an important driver of sociocultural diversity, and examining the reproductive patterns of immigrants and their descendants may provide relevant clues as to the speed of their integration process. Moreover, from a demographic point of view, a better understanding of the childbearing patterns of different migrant groups and their descendants may serve as an important insight for population projections.

Previous studies have mostly focused on migrants' fertility behaviour after arrival in the host society. By contrast, in this study we have examined birth transitions over the entire reproductive life of migrants, regardless of whether they took place before or after migration. The descriptive results show that, overall, first-generation migrant women – with the exception of those born in Europe – have had an earlier transition to motherhood than Spaniards. However, their overall rates of transition to second birth – with the exception of women born in the Maghreb – are lower than those of Spaniards. Immigrant women's rates of transition to third birth, conditional on having had two children, are again higher than those of native women. These parity-specific differentials would have been overlooked in an aggregate fertility analysis.

The results of the multivariate analysis suggest that some observed differentials in the process of family building between immigrant and native women can be partly

¹⁵ The effect of educational level on birth transitions is generally negative, but in the transition to second birth, when we confine the analysis to migrant women who were childless at arrival, we found a positive effect of tertiary education (Table 4, right panel). This atypical effect of education is found only among native women and not among immigrant women, as shown in Table A-1 in the appendix when separate models for each group are run. Note that two-thirds of the native women with tertiary education at risk of experiencing the transition to a second birth were born before 1969, since highly educated women from the most recent cohorts often had not yet had their first child by 2006 (date of the FFVS).

accounted for by compositional factors, especially the educational levels of migrant groups. This is particularly the case for the transition to first birth among women of Moroccan origin. These results indicate further potential for fertility convergence, as future migrant cohorts are likely to have, on average, a higher educational attainment than earlier cohorts.

When we confine the analysis to women who were childless at migration we get some unanticipated results. Immigrant women who arrive childless in Spain delay the transition to first birth even later than Spaniards. This is the case for women of Latin American origin but, intriguingly, it also includes women coming from Morocco. Selective processes regarding educational attainment, professional and academic reasons for migration, and mixed partnerships constitute potential explanations. However, with regard to the second and third child, first-generation immigrant women from Morocco still display higher rates of parity progression than Spanish-born women.

Previous literature has found that migration disrupts immigrants' fertility only temporarily; however, in the case of Spain most migrant women who moved before starting family formation do not seem to fully compensate for migration-related disruption of fertility at a later stage. Selection processes involved in the migration decision along with adaptation to a normative context where late childbearing, one-child families, or even childlessness are not strongly stigmatized are possibly part of the explanation. Moreover, the late pattern of transition to first birth of all first-generation migrants and the lower rate of transition to second birth for Latin American immigrants compared to natives is likely to reflect structural constraints for immigrant women entering the formal labour market – many of whom work in the informal domestic care sector – differential opportunity structures for migrant and native women, and strong barriers to work-family conciliation (León 2010; Hobson, Hellgren, and Bede 2015). Prior literature has shown the key importance of labour market uncertainty and employment insecurity for fertility decisions and behaviour (Kreyenfeld, Andersson, and Pailhé 2012); this effect is even greater for migrants, who face much greater obstacles in establishing themselves in the labour market than natives (Lundstrom and Andersson 2012). In fact, the main reasons reported by immigrant women in the FFVS-2006 for not having a(nother) child are labour and economic difficulties, and they do so to a larger extent than native women (Hierro-Hernández and Torre-Fernández 2010). It is likely that the institutional context also represents a factor in fertility decisions. Shortage of affordable preschool services for children aged 0–3, long and rigid work schedules, and scarce welfare benefits that support families shape the difficult context for childbearing in Spain. Spanish women's labour force participation and childrearing is usually reconciled via the unpaid care of grandparents and the low-paid care work of immigrant women (Tobío 2001). In this regard, migrant women are at a disadvantage in terms of extended family networks and resources to pay for childcare.

With regard to the 1.5 generation, the results confirm a process of intergenerational convergence towards natives' fertility patterns. Migrants who arrived in Spain as children or adolescents had less and later parity transitions than their mothers. Furthermore, most groups of immigrant descendants have similar or lower odds of parity progression than Spanish-born women. Only descendants of Moroccan immigrants display higher rates of progression to second and third birth than comparable native women. Thus the socialization hypothesis appears to be relevant only for the 1.5 generation of Moroccan origin. For descendants of Latin American immigrants, the convergence with mainstream fertility patterns expected for the second generation is already observed for the 1.5 generation.

In sum, this study makes several contributions to the literature on migrant fertility in developed societies. First, it illustrates the advantages of performing parity-specific analysis, particularly when examining childbearing patterns of migrant descendants, many of who are still quite young and hence are initiating their reproductive life. Second, it focuses not only on postmigration fertility but also on the entire reproductive histories of migrant women. Third, our findings corroborate the process of convergence of migrant childbearing patterns to those prevailing in the host society, for both women who migrated without children and the 1.5 generation. However, in contrast with other studies on migrant fertility which have observed a process of convergence that unfolds gradually over time and across generations, our findings reveal a remarkably rapid convergence of first-generation migrants and of their descendants – except for those from the Maghreb – to the fertility patterns prevailing in the host society. For Sweden, Andersson, Persson, and Obućina (2017) found that first- and second-birth risks were lower among nearly all country groups of second-generation women than among women with full Swedish backgrounds. In the case of Spain, we find not only that the 1.5 generation of Latin American origin has lower rates of transition to first birth than natives, but also that the first generation of Latin American women who arrived in Spain before the onset of their childbearing have lower progression rates to first and second births than their Spanish counterparts. We interpret these patterns as a reflection of the selected nature of female migrants, potential difficulties in the marriage and partnering market, and the socioeconomic barriers to childrearing in Spain, not merely as the outcome of quick cultural adaptation to the fertility norms prevailing in Spain. Although forecasting the future is beyond the scope of this paper, our findings challenge the widespread belief that immigrants' childbearing alone will allow Spain to leave behind the current lowest-low and latest-late fertility scenario.

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Appendix

**Table A-1: Transition to second birth by immigrant status.
Logit discrete-time models**

| | Native | Immigrant |
|-----------------------------------|-----------------------|-----------------------|
| Ref. 1–2 years | | |
| 3–4 years | 1.408 ^{***} | 1.400 ^{***} |
| 5+ years | 0.939 ^{***} | 0.468 ^{***} |
| Ref. 1950–59 | | |
| 1960–69 | 0.066 | –0.043 |
| 1970–79 | 0.210 ^{***} | –0.226 ^{***} |
| 1980–89 | –0.397 [*] | –0.782 ^{***} |
| Ref. Age first child 20–24 | | |
| 15–19 | –0.0765 | 0.210 ^{***} |
| 25–29 | –0.228 ^{***} | –0.236 ^{***} |
| 30+ | –0.488 ^{***} | –0.633 ^{***} |
| Ref. Primary or less | | |
| (Some) secondary | –0.0867 | –0.136 ^{***} |
| (Some) tertiary | 0.280 ^{***} | –0.238 ^{***} |
| Size family of origin | 0.024 ^{**} | 0.041 ^{***} |
| Ref. 1G-EU+US+Can | | |
| 1.5G-EU+US+Can | | –0.129 |
| 1G-Maghreb | | 0.642 ^{***} |
| 1.5G-Maghreb | | 0.738 ^{***} |
| 1G-LA | | 0.0567 |
| 1.5G-LA | | 0.431 ^{**} |
| 1G-other | | –0.0787 |
| 1.5G-other | | –0.632 |
| Constant | –3.072 ^{***} | –2.944 ^{***} |
| Person-years | 22,158 | 29,866 |

Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

