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Post-Migration Fertility in Southern Europe: Romanian and Moroccan women in Italy and Spain

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Abstract

This paper seeks to analyse migrant women's reproductive behaviour in two countries with the lowest fertility rates, namely, Italy and Spain. We assess differences in migrant fertility patterns according to country of origin by comparing the post-migration motherhood of Moroccan and Romanian women.

We have used data from the "2007 National Immigrant Survey" (INE) and the "2011-2012 Survey on Social Integration and Condition among Foreign Citizens" (ISTAT) to adopt an event-history approach to the factors that affect the birth of the first child after migration. Specifically, we focus on marital status upon arrival and on the number of previous children, controlling in turn for the women's socioeconomic circumstances.

The results show, firstly, that Moroccan women have a higher fertility rate than Romanians in both countries. Secondly, the risk of the first birth shortly after migration is higher among childless and married women, and this probability remain high even for women from Morocco with children. Thirdly a cross-country comparison reveals that the results related to childbearing patterns are similar.

Keywords: *Post-migration fertility; Moroccan and Romanian women; marital and motherhood status; Italy and Spain; event-history analysis*

Introduction

Immigration in Southern Europe has become increasingly significant in terms of demographic dynamics, as it plays a fundamental role in shaping not only the composition of populations but also their reproductive behaviour.

In recent decades, all the countries in this area have been affected by a decline in fertility that has been further exacerbated by the late home-leaving of young people, implying other long-term consequences, such as the delay in forming a partnership and parenthood (Billari and Liefbroer, 2010; Schwanitz and Mulder, 2015; Carella and Heins, 2021). In particular, Italy and Spain, which are included in the *latest-late* transition pattern to adulthood (Billari, 2004), record the highest mean age for women having their first child (31.3 and 31.1 years, respectively, in 2019) and the *lowest-low* levels of total fertility rates in Europe (Kohler *et al.*, 2002) with 1.27 and 1.23 children per woman, respectively, in 2019 (Eurostat 2020).

The childbearing of migrant women in these countries is now recognized as a crucial factor in their demographics. Indeed, a large body of literature dating back to the beginning of this century has broadly pointed to the major impact that migrant fertility has on the process of renewal and/or ageing of populations (Billari, 2008; Sobotka, 2008), focusing especially on its

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positive effect on the size and population age-structure (Goldstein *et al.*, 2009). Several studies have shown that the higher fertility of migrant women contributes often to a significant increase in the number of births in destination countries (Roig Vila and Castro-Martín, 2007; Giannantoni and Strozza, 2015). Together with the growing number of cohorts of female migrants in the childbearing age, this can in turn prompt a substantial recovery in the total fertility rate (Del Rey and Cebrián, 2010).

Concurrently, the mainstream research on this topic has also highlighted the significant heterogeneity of fertility due to migrants' origins (Verropoulou *et al.* 2007) or their socio-demographic circumstances (Andersson, 2004; Sobotka, 2008) and to the destination contexts (Kulu and González-Ferrer, 2014). This diversity in childbearing patterns entails the need to compare different sub-groups of migrants across countries to better understand the relationship between migration and fertility.

The main aim here is to analyse the reproductive behaviour of migrant women in two of the lowest-low-fertility countries in Europe - Italy and Spain - by examining the factors that affect motherhood shortly after migration. Specifically, we focus on marital status upon arrival and on the number of previous children, controlling in turn for the women's sociodemographic circumstances.

The differences in migrant fertility patterns by origin have been assessed by comparing the post-migration motherhood of Moroccan and Romanian women in Italy and Spain, with both countries being included in the *Mediterranean immigration model*, whereby they share the same migration history and receive similar types of migrants (Bonifazi, 2008).

Given their specific cultural values and traditions, women from Morocco and Romania are not only different in their fertility levels (an average number of 1.76 and 2.38 children per woman, respectively, in 2019) but are currently the two largest groups of foreign-born migrants from EU and non-EU countries in Italy and Spain.

Our study adopts an event-history analysis to investigate the transition of migrant women to the first child in the destination countries. It uses data from the "2007 National Immigrant Survey" conducted by the Spanish National Institute of Statistics (INE) and from the "2011–2012 Social Condition and Integration of Foreigners Survey" (SCIF) by the Italian National Institute of Statistics (ISTAT). These sources provide diverse information that also allows us to evaluate the influences of certain sociodemographic circumstances in shaping fertility patterns.

To date, most studies explaining the fertility behaviour of migrant populations have emphasised the impact of cultural preferences and norms depending on geographical origins (Andersson, 2004; Mussino and Strozza, 2012; Verropoulou *et al.* 2007) and that of certain variables related to migratory projects (Mussino *et al.*, 2015; Isański *et al.*, 2021). Conversely, less attention has been devoted to marital status and the number of pre-migration births (parity) (Frejka and Sardon, 2001; Baizán *et al.*, 2003), even though both these variables may have a fundamental role in explaining why and how fertility patterns vary within different sub-groups of migrant women by origin.

Our study aims to contribute to the existing literature on this subject in a threefold way. Firstly, we complement previous research on post-migration motherhood in Italy and Spain by differentiating between migrant women with and without children and between single women



and those with partners by duration of stay. Secondly, we add to the current knowledge on this topic by exploring differences and convergences in fertility patterns across and within the sub-groups of Romanian and Moroccan women in Italy and Spain. Thirdly we enhance the general discussion on the role played by specific sociodemographic factors in the diversity in fertility behaviour among these groups of migrants.

Theoretical framework and hypotheses

Theories and evidence for understanding migrant women's fertility

Migrant women's fertility has been extensively investigated in recent years, becoming a crucial issue for demographic studies, especially in countries with very low fertility levels, where it is widely acknowledged to be essential to demographic dynamics.

Several theories have thus far been proposed to explain migrant reproductive behaviour, focusing mostly on timing effects and factors related to the origin and the destination context that can affect migrants' childbearing patterns in diverse ways.

Among the main theoretical approaches, a first one, involving a process of *assimilation-adaptation*, is based on the hypothesis that migrant fertility tends to gradually converge towards the patterns of the host country (Kahn-1988, 1994; Kulu, 2005; Parrado and Morgan, 2008), mainly in step with a longer stay (Andersson, 2004). Conversely, the *socialisation* approach is based on the assumption that migrants bring values and norms in family behaviour from their home countries that are maintained in their host societies (Alders, 2000; Sobotka, 2008). This means that various cultural preferences related to fertility exist in different parts of the world, hence each one of these can be assumed as the best option for women.

By complementing this approach, some authors argue that migrants' fertility patterns can be explained by a *selection* process among migrants whereby they may belong to selected groups with peculiar sociodemographic or subjective characteristics that affect and delineate different fertility behaviors (Goldstein, 1973; Abbasi-Shavazi and McDonald, 2000; Feliciano, 2005; Bledsoe *et al.*, 2007).

In short, *socialisation* and *selection* theories rely on the hypothesis that the values and preferences acquired during childhood play a major role in determining migrant fertility patterns regardless of the destination context.

Finally, the *disruption* approach assumes that difficulties and changes occurring during and after migration combine to determine fertility preferences. Indeed, migration is a distressful event that not only upsets individuals' equilibrium, but may also affect family dynamics, often involving the separation of partners or spouses. A process of "interruption-rupture" in migrant fertility behaviour can therefore be caused by migration experience, which may induce migrant women to modify or postpone childbearing (Carter, 2000; Kulu, 2005; Lindstrom and Giorguli, 2007; Milewski, 2007).

Alongside these macro approaches, the literature on migrant fertility has emphasised the role played by certain micro-level factors in shaping migrant fertility patterns, highlighting the dominant impact of the duration of stay and geographical and cultural origins (Bongaarts, 2003; Andersson, 2004; Roig-Vila and Castro-Martín, 2007; Adserà and Ferrer, 2014). Additionally, research conducted on migrant women from different countries has also found that individual characteristics, such as level of education (Home, 1986; Blossfeld and

Jaeninchen, 1992; Bongaarts, 2003), age at migration (Ford, 1990; Carter, 2000; Toulemon and Mazuy, 2004) or the number of births before migration or marital status may also affect migrant fertility behaviour (Rindfuss *et al.*, 1988; Kiernan, 1999; Frejka and Sardon, 2001; Baizán *et al.*, 2003).

Concerning the two latter variables, several studies have documented that the decision to have a child post-migration is stronger within marriage than in another type of partnership (Baizán *et al.*, 2003; Milewski, 2007), as it is often conceived as part of a family migration project involving a long-term stay in the host country. Conversely, motherhood status can shape childbearing patterns in different ways: the risk of having a child can be high both for childless women, especially shortly after migration (Andersson, 2004; Kulu, 2005; Nedoluzhko and Andersson, 2007) and for those women that have already had children before migration, and who intend to consolidate their role as mothers within traditional family contexts (Milewski, 2007).

Migrants' motherhood patterns in Italy and Spain: a review of previous research

Migrant fertility in Italy and Spain has attracted widespread attention in academic and political circles for its major impact on the birth rate. In 2019, one in four births in both countries involved foreign-born mothers, with 23% of total births in Italy and 28% in Spain (Eurostat, 2020).

In both countries, a stream of research focusing on the transition to the first birth post-migration for some sub-groups of women has shown that the country of origin plays a key role in determining the heterogeneity of fertility patterns. Some studies have found that cultural preferences assessed as proxy of the origins can have an immediate impact (Mussino and Strozza, 2012; Castro-Martín and Rosero-Bixby, 2011; Roig-Vila and Castro-Martín, 2007) or have an indirect effect mediated by the duration of stay or by the reason for migration (Mussino *et al.*, 2015).

Other more detailed analyses have reported that diversity in fertility behaviour may depend on women's different migratory paths. In particular, family migration and reunification are two choices related to the migratory project that can lead to earlier and greater fertility after settling in the host country when the proxy variable is the reason for the migration (Giannantoni and Gabrielli, 2015; Ortensi, 2015; Gabrielli *et al.*, 2019). Generally speaking, both Italy and Spain have recorded a higher fertility among women emigrating for family reasons than for those moving for work-related reasons (Castro-Martín and Rosero-Bixby, 2011; Mussino and Strozza, 2012).

Besides these factors, recent studies have examined the relationship between migrant women's reproductive behaviour and their previous marital and motherhood status, finding that marriage increases the likelihood of having a child after migration (Del Rey *et al.* 2015; Mussino and Strozza, 2012; Mussino and Van Raalte, 2008). Concerning women without children, their risk of having a child is greater among older ones, whereas the opposite is true among those with children (Del Rey *et al.*, 2015).

Concerning Moroccans and Romanians, the two largest groups of migrant women in Italy and Spain, and as suggested by the literature and the empirical evidence for both countries, their fertility diverges considerably, following patterns shaped by different norms or migration



projects. Moroccan women generally conform to the North African patriarchal model based on strong values and traditions; consequently, they usually record a higher average number of children than host country nationals (HCNs). In contrast, Romanians follow a fertility model that is influenced more by their life project and migration strategy. In general, their overall fertility rate is closer to that of HCNs (Impicciatore *et al.*, 2020; Mussino *et al.*, 2015; Del Rey *et al.*, 2015).

Research Hypotheses

In line with the existing literature, we formulate our general hypotheses by comparing migrant women in Italy and Spain.

(H1) *Disruption*. Assuming that migration causes an upheaval in everyday life, impacting also on women's childbearing, we expect migrants' fertility upon arrival to rapidly increase in the initial years of residence, in line with the process of its recovery frequently observed shortly after migration.

(H2) *Socialisation or Adaptation*. According to the assumption that the heterogeneity in migrant fertility behaviour persists across countries driven by the *socialisation* perspective, we expect to find differences in both Italy and Spain in the transition to motherhood post-migration depending on the origins. Specifically, our hypothesis is that Moroccan mothers will record a higher risk of a first birth after migration than their Romanian counterparts because they come from a society in which women are embedded in a traditional family model that is more oriented toward valuing their responsibility as mothers and their tasks in the care of other familiar members than their labour aspirations. Concurrently, the *adaptation* approach entails assuming a convergence of behaviors due to the prevalence of living conditions in the destination country. By focusing on the first years of residence, and according to this hypothesis, we expect different reproductive patterns among migrant groups, albeit similar findings in Italy and Spain due to the similar destination contexts.

(H3) *Characteristics of migrant women: Maternal Status*. The heterogeneity in fertility behaviour among migrants could diminish or disappear when controlling for the various groups' sociodemographic characteristics (Milewski, 2007). We therefore expect to find fertility differentials between migrant women with and without children before migration.

(H4) *Characteristics of migrant women: Marital Status*. Assuming that migrants more often have a child in a formal union and that living or migrating as a couple is less stressful, we expect to find a higher first-birth risk among married women.

Data and Methods

Data

Our analyses are based on data from the 2007 *National Immigrant Survey* (NIS 2007) conducted by the Spanish National Statistical Office (INE), and from the *Social Condition and Integration of Foreigners Survey* (SCIF) carried out in 2011-2012 by the Italian National Statistical Office (ISTAT).

These surveys are the first and only sources that provide a detailed portrait of the behaviours and sociodemographic circumstances of immigrants in Italy and Spain (foreign born person includes Italians and Spanish born abroad), as well as retrospective information on life-course

trajectories, including data on partnership status and fertility. Moreover, the data provided by these sources are highly comparable due to similar sampling procedures and information collected (both samples use retrospective information and provide similar sociodemographic characteristics for the analysis of immigrant fertility).

The SCIF survey covered 9,553 households with at least one foreign-born member, with a total of 25,326 individual interviews. The units of analysis were private households randomly selected from the Population Register.

NIS 2007 contains 15,465 records of individuals aged 16 and over born abroad, living in private households, who at the time of the survey had resided in Spain for at least one year or who planned to do so.

As for sample selection, we adopted similar exclusion criteria in both surveys. We selected women aged 15–49 at the time of the interview. We focused on women that migrated between 1990 and 2007, although we excluded the period 2008–2011 in the Italian case due to the interference between economic crisis and fertility. After deleting records missing information on the variables of interest, our analytical sample amounted to 7,189 migrant women in Italy and 6,185 in Spain.

Explanatory variables

The analysis has two groups of variables that refer, respectively, to the mother's characteristics at the time of migration, and the migration process.

Firstly, maternal and marital status: the former comprises two categories: with and without children, while the latter differentiates between married and single or other.

We also control for demographic and socioeconomic variables such as country of origin and educational level. Due to the major origin-based differences in the probability of having a first child after migration, and in line with our main aim, we separate the two most numerous migrant groups of women in Italy and Spain, namely, Romanians and Moroccans, and we group all the other nationalities into their respective continents. Educational level is used as an indicator of socio-economic background, reporting the highest qualification the women have attained. It has three categories: Less than primary, primary, and secondary or more.

Migration variables are measured by age at arrival (in the following categories: aged younger than 16; 16–19; 20–29, and 30 and over) and the reason for migrating (family or work). Unfortunately, it is not possible to fully compare this covariate in Italy and Spain because its construction is addressed in different ways within the two national datasets. The question on the reason for migration comprises diverse categories in both surveys: work, family, study, asylum and other, which are not mutually exclusive. We constructed our covariate in the same manner, differentiating solely between work and family reasons.

Methods

Analyses have been performed to identify the timing of transition to the first child after migration in relation to pre-migration characteristics, such as marital status and number of existing children.

To describe the process of transition to motherhood, we used years since migration as the timeline, which starts from the moment women settle in the destination country, and ends



whenever they have a child. If no child has been born after five years of residence, the observation is censored.

Years since migration is a time-varying variable that refers to the year-distance living as a migrant, and allows identifying the start of the process of motherhood after migration. Our analysis focuses on births during the first five years after migration, when it has been shown that the likelihood of having a child is higher (Andersson 2004; Kulu 2006).

In a preliminary descriptive step, we apply a non-parametric-analysis using Kaplan–Meier survival curves⁴ to estimate the proportion of migrant women that experience the transition to a first birth after migration. We conduct this analysis separately for Italy and Spain, firstly on all migrant women by motherhood and marital status, and secondly by origin. This method does not make any assumptions about process distribution, hence it is particularly appropriate for an initial exploratory data analysis according to Blossfeld and Rohwer (2002).

In a second phase, we perform a multivariate analysis adopting Event History Analysis, specifically discrete-time logit models. This model does not assume a defined pattern that a priori forces the relationship between the independent and explanatory variables.

The discrete-time logistic regression model is defined as follows:

$$h(t|x) = 1 - \exp \{-\exp(\beta_0 t + x'\beta)\}, \text{ with } x'\beta = (x_1 \beta_1 + x_2 \beta_2 + \dots + x_n \beta_n)$$

where $h(t|x)$ is the conditional probability or risk of a first birth as a function of time (t) and a series of explanatory variables (x), with β being its parameters. This provides coefficients that indicate the effect of the women's time of residence (t) on the probability of having a child, as well as the impact of the different explanatory variables considered.

Results

Descriptive results

Table 1 shows the sample distribution of migrants in Italy and Spain according to their origins. Romanian and Moroccan migrant women have different sociodemographic circumstances and come from very different childrearing backgrounds, with both these aspects being highly relevant in the study of fertility (table 1).

Among the migrant women settling in Italy since 1990, 38.6% have had at least one child while living in the country, with this percentage falling to 29.5% in Spain's case. This differentiation in terms of origin reveals that migrant women from Morocco record a higher percentage of births in both Italy and Spain (61.9% and 55.2%, respectively). By contrast, Romanian women record a lower percentage of post-migration births following their arrival in both countries (25% in Italy and 20% in Spain). This situation could in part be related to the different time of residence between these migrants. The migrants in Italy have generally been living longer there than their counterparts in Spain. Romanian and Moroccan women are the ones that have been living the shortest time in Spain. The age of the migrants upon

⁴The Kaplan–Meier estimator defines a discontinuous function in intervals: within each interval, the survival function is constant. It is based on the measure of a risk estimate at each point in time where at least one event occurs, without a priori setting the time intervals. Indeed, it is based on the principle that time intervals derive directly from the phenomenon, rather than being imposed from outside (Blossfeld and Rohwer 2002).

arrival is fairly similar in both countries, with Romanian migrant women between slightly older than the corresponding Moroccan women.

The educational level of migrant women in Spain is higher than their peers in Italy, but there are major differences depending on their origin. Moroccan migrant women are the ones with lower levels of education in both Italy and Spain, while by contrast, Romanian migrant women have a higher level. Two out of three Romanian migrant women have secondary studies or more, while the same figure for Moroccan migrant women is fewer than 1 out of 3, and over 40% of them do not have primary education.

The reasons for emigrating to both Italy and Spain are quite similar, although there are significant differences depending on origin. Moroccan women migrate to both Italy and Spain largely for family reasons, while work is the prevailing reason for Romanian women. Nevertheless, a large number of migrants combine both these reasons.

Around half of the migrant women in Italy and Spain arrived when they were single, and the other half had a partner or had had one beforehand. Nonetheless, when differentiating between them in terms of origin, the number of Moroccan women arriving in Italy when still single are in a minority, whereas single Romanian women account for more than half. A slight majority of Romanian and Moroccan women arrive in Spain with a partner. Finally, as regards their motherhood status upon arrival, the majority in both countries consists of those without children, especially among Moroccan migrant women.

In sum, although there are certain similarities in the characteristics of migrant women arriving in Spain and Italy from a childbearing perspective, there are also significant differences, thereby making it crucial to control for these variables to explain their post-migration fertility behaviour.

Table 1. Descriptive data on migrant women in Italy and Spain arriving since 1990 by origin.

	Italy				Spain			
	Other	Morocco	Romania	Total	Other	Morocco	Romania	Total
N	4763	525	1901	7189	4913	554	718	6185
Event (1)	41.4%	61.9%	25.2%	38.6%	27.9%	55.2%	20.1%	29.5%
Time								
1	3.2%	4.6%	2.1%	3.0%	217	4.1%	4.5%	3.6%
2	7.6%	15.0%	4.3%	7.3%	523	9.8%	15.3%	11.3%
3	10.2%	19.2%	7.7%	10.2%	733	11.7%	23.8%	15.9%
4	9.2%	11.6%	9.6%	9.5%	683	12.8%	14.6%	22.1%
5	7.8%	8.2%	12.9%	9.2%	662	11.9%	8.8%	16.4%
6	7.3%	6.7%	13.6%	8.9%	641	11.2%	6.5%	14.2%
7	7.4%	5.1%	11.8%	8.4%	605	12.1%	6.9%	9.6%
8	7.2%	4.0%	8.9%	7.5%	536	8.5%	4.7%	4.0%
9	5.5%	2.9%	7.8%	5.9%	424	5.0%	4.5%	1.1%
10 & more	34.5%	22.7%	21.3%	30.1%	12.9%	10.3%	1.7%	11.3%
Age at arrival								
15 & less	1.9%	3.8%	0.6%	1.7%	4.9%	7.1%	3.5%	4.9%
16-19	8.2%	8.4%	10.0%	8.7%	6.8%	14.5%	11.5%	8.0%
20-29	42.7%	48.6%	40.2%	42.5%	40.8%	44.2%	47.5%	41.9%
30 & more	47.2%	39.2%	49.2%	47.2%	47.5%	34.2%	37.6%	45.2%
Education								
Less than primary	11.6%	41.3%	5.7%	12.2%	6.1%	41.2%	5.0%	9.1%
Primary	26.2%	29.1%	22.6%	25.5%	15.4%	23.5%	15.7%	16.2%
Secondary & more	62.2%	29.5%	71.7%	62.3%	78.5%	35.4%	79.2%	74.7%
Migration for labour reason								
Yes	44.7%	28.8%	61.8%	48.0%	42.3%	24.0%	51.5%	41.7%
Migration for Family reason								
Yes	39.4%	64.6%	26.6%	37.9%	30.8%	67.5%	35.8%	34.7%
Marital status at arrival								
Single vs other	50.1%	29.6%	56.5%	50.3%	50.3%	48.4%	43.7%	49.3%
Motherhood status at arrival								
Childless	57.1%	61.3%	53.4%	56.5%	49.6%	69.1%	51.0%	51.5%
1 child	17.8%	16.2%	24.1%	19.3%	23.0%	8.8%	30.6%	22.6%
2 or more children	25.1%	22.5%	22.5%	24.2%	27.4%	22.0%	18.4%	25.9%

Source: Data from SCIF (ISTAT) for Italy and from NIS 2007 for Spain (INE).



The survival curves for the birth of the first child for all migrant women in Italy and Spain are very similar (figures 1 and 2). The differences appear when distinguishing between marital status and motherhood situation upon arrival. Those women that arrive with children have a more delayed timeline, and a higher percentage remain without children after ten years of residency. According to marital status upon arrival, there are certain differences in Italy, with an earlier timeline for those that have or have had a partner, although the intensity after ten years is very similar between single women and those with partners. In the case of migrant women in Spain, the timeline and intensity are very similar for women both with and without partners.

Differentiating between country of origin, Moroccan migrant women record an earlier timeline and a lower percentage without children compared to their Romanian counterparts in both Spain and Italy. Moroccan migrant women without children but with a partner in Italy have an earlier timeline, and a greater percentage of them have at least one child after ten years of residency. Spain's case is very similar regarding the timeline for the birth of a first child among Moroccan women arriving with or without children or with or without a partner. In the case of Romanian migrant women in both Italy and Spain, they have very different timelines depending on whether they arrive with or without children, yet by contrast, there are almost no differences depending on marital status upon arrival.

Figure 1. Survival curves at the first birth after migration by origin and marital status and motherhood status at arrival in **Italy**

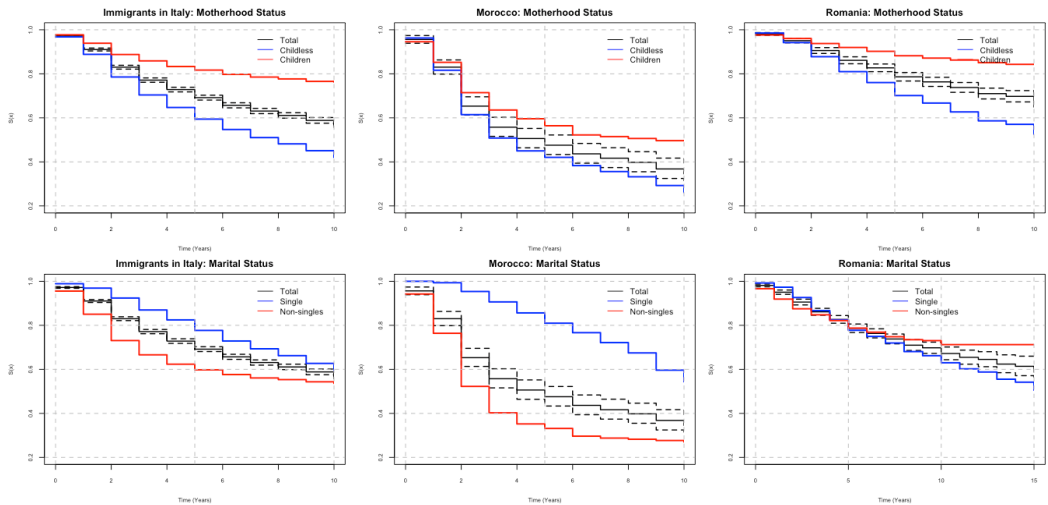
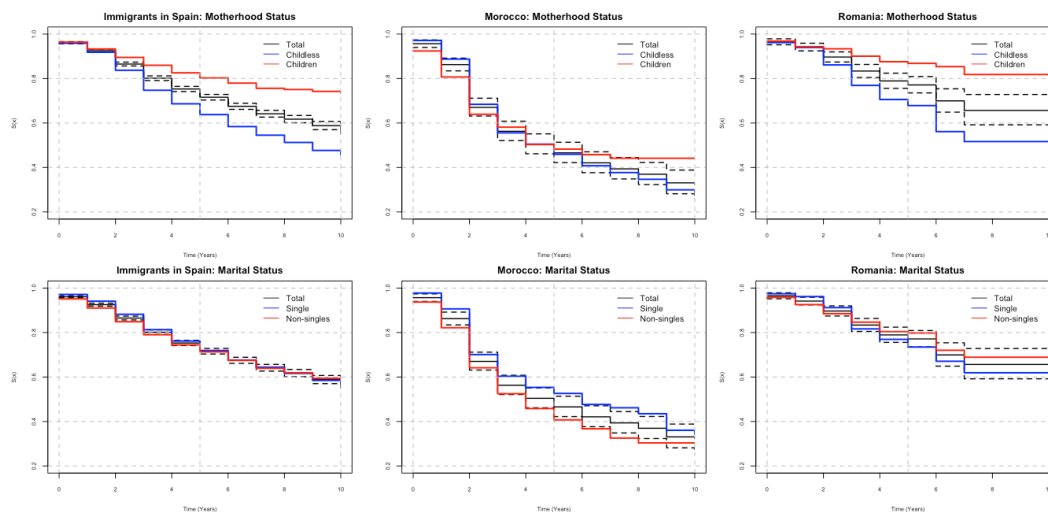


Figure 2. Survival curves at the first birth after migration by origin and marital status and motherhood status at arrival in **Spain***Multivariate analysis: the determinants of the first birth*

The first model's results reveal a high significance of the variable considered and very similar effects in both Italy and Spain (table 2). The probability of having a child increases significantly as of the first year of residence in Italy and the second year in Spain, with the greatest probabilities of having a first child being between the fourth and fifth years, which confirms the hiatus that migration causes on fertility (H1). Age upon arrival is another variable that is likewise highly significant, with a higher probability among the 20-29 age group.

The educational level of migrant women has an impact on the likelihood of having the first child in Italy or Spain. There are no significant differences between women with or without primary schooling, whereas those migrant women with secondary or higher studies are less likely to have a child.

The reasons for emigrating considered here have different effects on the probability of having a first child. Emigrating for work reasons reduces the probability of having a child during the first five years of residence in Italy, yet has no significant impact in Spain. By contrast, in both these countries emigrating for family reasons most significantly increases the probability of having a child in this period subsequent to arrival.

As we posited in our hypotheses, marital and motherhood status have a significant effect on the probability of having a first child during the initial five years of residence. Arriving when already having had children reduces the likelihood of having them after migrating, with this effect being greater according to the number of children had pre-migration. As regards marital status, arriving with a partner or having had one previously increases the probability of having a child in the first five years post-migration compared to those women that are single when they arrive.

Differentiating between the migrant women according to their country of birth and controlling for all the other explanatory variables reveal that Moroccan women are more likely to have a child compared to all the other migrants, whereas by contrast, Romanian women



are less likely to have a child either in Italy or in Spain, confirming our hypothesis (H2). The cultural factor and the family and childrearing model in the country of origin have a highly significant and similar impact on childbearing after migrating to Italy or Spain.

Table 2. Probability of having a first birth after migration (Discrete-time logistic regression model)

	Italy					Spain				
	B	S. E.	Pr(> z)	Exp(B)	B	S. E.	Pr(> z)	Exp(B)		
Constant	-5.50	0.34	0.00	***	0.00	-5.39	0.30	0.00	***	0.00
Time (r.c. 1)	0.00	0.00	0.00			0.00	0.00	0.00		0.00
2	0.98	0.09	0.00	***	2.66	-0.02	0.10	0.81		0.98
3	1.54	0.09	0.00	***	4.66	0.62	0.09	0.00	***	1.86
4	1.45	0.09	0.00	***	4.25	0.84	0.09	0.00	***	2.31
5	1.31	0.10	0.00	***	3.71	0.66	0.10	0.00	***	1.94
Age at arrival (r.c. 15 & less)										
16-19	1.69	0.33	0.00	***	5.41	2.31	0.28	0.00	***	10.11
20-29	1.78	0.33	0.00	***	5.96	2.58	0.28	0.00	***	13.14
30 & more	0.66	0.33	0.05	*	1.94	1.58	0.28	0.00	***	4.85
Education (r.c. less than primary)										
Primary	0.01	0.09	0.87		1.01	0.08	0.11	0.50		1.08
Secondary & more	-0.31	0.08	0.00	***	0.73	-0.34	0.10	0.00	***	0.71
Labour reason (r.c. no): Yes	-0.27	0.06	0.00	***	0.76	0.02	0.08	0.83		1.02
Family reason (r.c.no): Yes	0.64	0.06	0.00	***	1.90	0.45	0.08	0.00	***	1.57
Origin (r.c. Other)										
Romania	-0.42	0.07	0.00	***	0.66	-0.29	0.10	0.00	**	0.75
Morocco	0.31	0.08	0.00	***	1.36	0.65	0.09	0.00	***	1.92
Motherhood status (r.c. childless):										
1 Child	-0.29	0.07	0.00	***	0.75	-0.30	0.08	0.00	***	0.74
2 or more Children	-1.46	0.10	0.00	***	0.23	-0.93	0.10	0.00	***	0.39
Marital status (r.c. single): non-single	1.14	0.06	0.00	***	3.13	0.51	0.06	0.00	***	1.66

Source: SCIF (ISTAT) data for Italy and NIS 2007 data for Spain (INE).

Finally, there are no major differences between Italy and Spain in terms of the effects of the explanatory variables. The sole difference lies in labour-induced emigration, which reduces the probability of having a child in Italy, but not so in Spain. It is worth mentioning on this point that in both cases these reasons tend to conflate with others, so these results need to be taken with some degree of caution.

With a view to delving further into the childbearing behaviour of Moroccan and Romanian migrant women, models have been established with interaction between the country of origin and our variables of interest: marital and motherhood status upon arrival (figure 3). The results reveal major differences between Moroccan and Romanian migrant women in Italy and Spain.

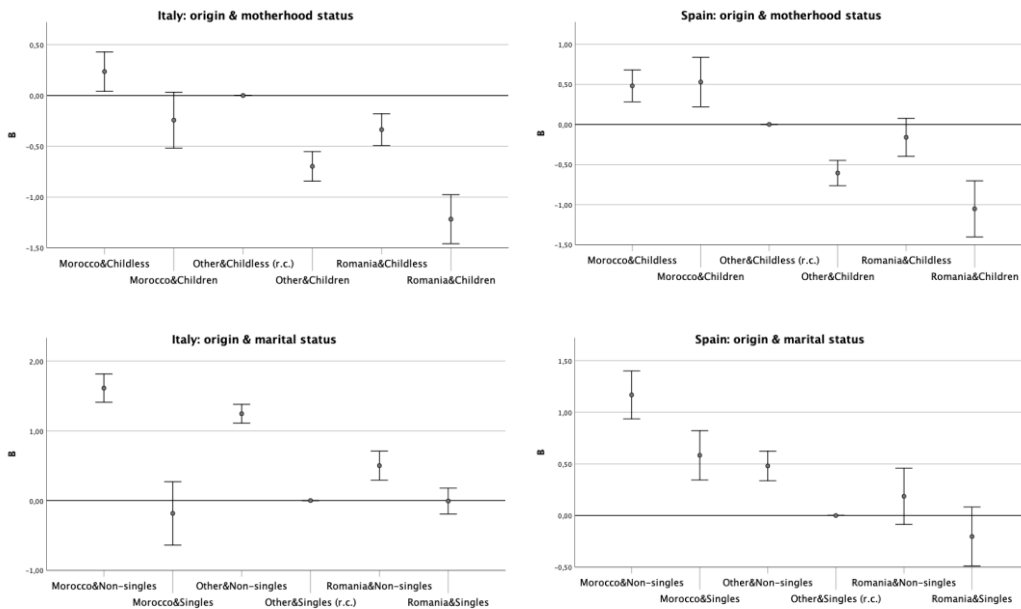
The first interaction between the country of origin and maternal status, where the reference category is *migrant women (other origin) without children*, reveals that in Italy only Moroccan women are more likely to have a child, whereas their Romanian counterparts arriving in the country

with or without children are less likely to have a child post-migration. The results are fairly similar in Spain: on the one hand, Moroccan women with and without children are more likely to have a child post-migration, whereas only Romanian women with children are less likely to do so.

The interaction between country of origin and marital status again reveals different effects between Moroccan and Romanian women in Italy and Spain. All the migrant women that arrived in Italy with a partner are more likely to have a child than those without a partner. Moroccan women in Spain are more likely to have their first child during the initial five years, regardless of whether or not they arrive with a partner, while marital status has no significant impact on Romanian women.

These interactions enable us to affirm that Moroccan women in Spain are clearly more likely to have a child soon after their migration, irrespective of their marital status or of whether or not they have already had a child. By contrast, single Romanian women and those with children are less likely to do so. Marital status upon arrival in Italy has a similar effect on all the migrant women, but not on motherhood status.

Figure 3. The probability of having a first birth post-migration in Italy and Spain: interactions between origin and motherhood and marital status upon arrival*



*Controlled by the rest of explanatory variables.



Discussion and conclusions

The study of the migrant population's first birth during the initial years of residence in Italy and Spain, as countries with very low birth rates, is extremely relevant today because of the importance that migration has on the total number of births in these two Southern European countries.

Firstly, the results are very similar regarding the probability after the migrant women have arrived in Italy or Spain. These two countries have similar social, economic, cultural and institutional characteristics, as well as public policies, which facilitate similar reproductive behaviour of the migrant population after migration.

Secondly, the results highlight the importance of the migrant women's characteristics in terms of childbearing in both countries. In other words, and as we postulated in our first hypothesis, the probability of having a child in the first years of residence is affected by their characteristics upon arrival, such as age, level of education, the reasons for migrating and, in particular, their country of origin and their specific family circumstances in terms of their marital and motherhood status (H2, H3, H4).

The migrants' country of origin involves very different cultural contexts from a demographic perspective, with Morocco being a country with a high birth rate, whereas Romania's fertility is very low. This explains why migrant women from Morocco are more likely to have a child post-migration than those from Romania, both in Italy and Spain. These differences between the two countries enable us to identify the prevalence of migrant women's socialisation context over the reception context in childbearing behaviour (H2).

Migrant women's family circumstances upon arrival are another key factor in their childbearing behaviour during the immediate post-migration period, confirming H3 and H4. The fact that migrant women arrive with or without children and with or without partners has a significant impact on the probability that they will have a child in the initial five years of their stay. Women without children clearly record earlier timeframes for the birth of their first child and a higher rate of fertility than women that have already been mothers (H3). In turn, those women that migrate with a partner have children sooner than single women migrants during their initial years of residence (H4). Nevertheless, the interactions between origin and marital and motherhood status reveal certain differences between Romanian and Moroccan migrant women, as well as between their host countries. Moroccan women in Spain are more fertile than those from other origins regardless of their marital and motherhood status. In Italy, there are greater differences in the probability of having a first child due to marital status than to the fact of whether or not they had a child pre-migration, as except for Moroccan migrant women without children, there are no significant differences among all the others.

In sum, our results show that the impact of migrants on fertility in host countries is mainly affected by the composition of the migrant population, and in particular by their country of origin and their family situation upon arrival.

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