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*Descriptive Finding*

**Motherhood of foreign women in Lombardy:  
Testing the effects of migration by citizenship**

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## **Motherhood of foreign women in Lombardy: Testing the effects of migration by citizenship**

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### **Abstract**

#### **BACKGROUND**

The international literature highlights the strong impact of the high risk of childbearing shortly after migration on period fertility, thus establishing a link between reproductive behaviors and migratory transitions.

#### **OBJECTIVE**

The present study aims to analyze how migration affects motherhood and the role played by country of citizenship. Although most of the literature has focused on analyzing post-immigration fertility behaviors, in the present work we follow the women for their entire fertility period.

#### **METHODS**

The data were collected in the 2010 ORIM survey, conducted by the Region of Lombardy and the Ismu Foundation. The survey covered about 8,000 immigrants in Lombardy, of whom 3,848 were women aged 14 years and over from less developed countries or Central/Eastern Europe. Using Event History Analysis, we applied discrete-time logit models to study the transition into motherhood.

#### **RESULTS**

Moroccans are characterized by a strong interrelation effect between fertility and migration. Moroccans and Albanians are the national groups with the highest risk of having a first child during the years shortly after migration. Migration does not seem to

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have any effect on the fertility behavior of Romanians, who have a lower risk of having a child regardless of their migration status.

## CONCLUSIONS

The study confirms the importance of the interrelationship between migratory and reproductive behaviors. It also highlights the different effects by country of citizenship, where different citizenships are often associated with different migration patterns and distinct gender roles.

## 1. Introduction

During the past few decades there has been a significant transformation of the foreign population in Italy, marked by a shift toward permanent settlement. This ongoing transformation has emerged owing to several indicators, often linked to the family sphere: the incidence of family reunifications, the increase in the number of births, the growing importance of foreign minors, and so on. The present paper focuses on the immigrant population's reproductive behavior, which is significant if we consider the Italian model of fertility to which immigrant women are increasingly contributing. It is generally known that Italian fertility is one of the lowest in the world (Delgado Perez and Livi Bacci 1992; Kohler, Billari, and Ortega 2002; Billari 2008) and that much of the slight increase recorded during the past few years is attributed to the presence of foreign women (Sobotka 2008; Ferrara et al. 2009; Istat 2010). Several studies in Italy have focused on foreigners' impact on the period total fertility rate (TFR) (Strozza, Ferrara, and Labadia 2007), and a few studies have analyzed the determinants and influence of migration on the propensity to have children in Italy (Mussino et al. 2012; Ortensi 2015). However, the international literature reveals a strong impact of the high risk of childbearing shortly after migration on period fertility (Alders 2000; Parrado 2011), thus establishing a link between reproductive behaviors and migratory transitions (Andersson 2004; Milewski 2007). Investigation of this interconnection in Italy has encountered difficulties. From a methodological perspective, despite the efforts made in recent years (Mussino et al. 2009; Mussino and Strozza 2012a, 2012b), official sources at the national level have not been able to provide sufficiently detailed data to allow an analysis of the migrant population's fertility; nor do they provide migratory characteristics or information on the couples' formation. Therefore, the present paper focuses on information provided by the Regional Observatory for Integration and Multi-ethnicity (ORIM, *Osservatorio Regionale per l'Integrazione e la Multiethnicità*), derived from a sample survey carried out in Lombardy in 2010 (Blangiardo 2011, 2012), which takes into consideration the migratory and reproductive

biographies of the interviewed women. The data concern a region that can be considered an ‘experimental laboratory’ of migration trends in Italy, as Lombardy hosts about a quarter of the total foreign population living in the country and is one of the European regions with the highest foreign population, characterized by a growing share of stable foreign population and households (Riva and Zanfrini 2013). By employing these data and using a longitudinal approach it is possible to simultaneously follow the transitions to motherhood and to migration among foreign women living in Lombardy. The present study aims to analyze in more detail how time since migration affects motherhood, and the role played by the country or region of citizenship.

Section 2 briefly discusses the recent literature on these issues and analytically defines the research hypotheses. Section 3 presents the data and describes the methods used. Section 4 presents an analysis of the interviewees’ fertility and migratory patterns. The main results are summarized in Section 5.

## **2. Theoretical background and hypotheses**

During recent decades the reproductive behavior of immigrants has received much more attention from European researchers than previously. This interest, which is due to the demographic impact of immigrants’ presence, has led to different hypotheses concerning immigrants’ reproductive behaviors. Among these hypotheses the most discussed are adaptation, disruption, selection and socialization.<sup>6</sup> However, in recent years a different approach has been developed that looks more closely at the interrelationship between events. The life course hypothesis assumes that there is interdependence between migration, union formation, and fertility (Mulder and Wagner 1993; Courgeau 1989). For example, Andersson (2004) showed that migration and fertility are interrelated: during the first years after migration to Sweden, immigrant women had a higher risk of giving birth to their first child. Similar results were shown for Italy when, following the 2003 female immigrant cohort from Romania, Morocco, and Albania, Mussino and Strozza (2012a) found a clear pattern in the timing of motherhood for the different types of migration, as well as strong differences by citizenship. Among the immigrants’ characteristics influencing fertility, emphasis has been on their country of origin, which is often considered a proxy for their cultural heritage (Gabrielli, Paterno, and Strozza 2007; Milewski 2007; Schoorl 1990). Thus persons from different geographical origins may show differences in reproductive behavior in the same country of destination (Bijwaard 2010). This is particularly true

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<sup>6</sup> For a complete overview, see Milewski 2010 and Mussino 2010.

for the Italian context, where previous studies have mainly described the wide variety of origins (Paterno, Strozza, and Terzera 2006; Mussino and Strozza 2012a).

However, the above studies and most of the literature on this topic have focused on post-immigration fertility, while the present work allows us to follow the women for the entire fertility and migratory transition.

The main goal of the present paper is to study the propensity to become a mother among women who have migrated to Lombardy. Although most of the literature has focused on analyzing post-immigration fertility behaviors, in the present work we follow the women for their entire fertility period. The high period fertility of migrants in the host country has primarily been associated with rapid post-migration childbearing, as well as the coincidence of life course stage and age at migration (Mussino and Strozza 2012a; Parrado 2011; Toulemon 2004). In the present work we point to the importance of citizenship in this equation. Our main hypothesis is that fertility is strongly affected by migration (the interrelation between the two processes); however, our aim is to verify whether this interrelation is equally strong among different citizenship groups.

### 3. Data and methods

The data were collected in the 2010 ORIM survey carried out by the Region of Lombardy and the Ismu Foundation.<sup>7</sup> The survey covered about 8,000 immigrants in Lombardy (both legal and illegal), of which 3,848 were women aged 14 years and over who came from less developed countries or Central/Eastern Europe (Blangiardo 2011). Data were weighted using a ‘center sampling technique’ based on a double set of weights, the purpose being to make the results representative of the local migrant presence at the regional level (Baio, Blangiardo, and Blangiardo 2011). The data on fertility, family,<sup>8</sup> and migratory history were collected retrospectively;<sup>9</sup> additionally, we collected data on social-demographic, economic, work, and housing characteristics at the time of interview. Therefore an additional value of the present work is our use of this dataset. As far as we know, no other dataset has been collected that includes the entire fertility biography of immigrant women in Italy, as the only information available is on co-resident children or children born in Italy.

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<sup>7</sup> See: <http://www.orimregionelombardia.it>.

<sup>8</sup> Unfortunately, the information on union formation is available only as regards the partner interviewed.

<sup>9</sup> Having a child and migrating are considered major events in life and the information is collected yearly: thus we do not expect any memory problems to have affected the data. Given the retrospective nature of the data, we should take into account the possibility of bias due to re-emigration (Ortensi 2015). However, Barbiano di Belgiojoso and Ortensi (2013) recently showed the low risk of re-emigration intentions of female migrant workers living in Italy.

Longitudinal data and a life course approach were used to test the interdependency of the timing between childbearing and migration events (Courgeau 1989; Courgeau and Lelievre 2006; Kulu and Milewski 2007; Milewski 2010). The aim of this approach was not only to provide better descriptions and explanations of the process determining the life course, but also to consider different trajectories jointly (Mayer and Tuma 1990). We had annual data on migration and fertility: thus, using an Event History Analysis, we applied discrete-time logit models to study the transition to motherhood. Its main time-fixed and time-varying determinants were identified using a stepwise procedure. Using the well-known episode-splitting procedure, pseudo observations were created at each age-time period from age 14 years up to motherhood or censoring. Such a procedure expands the dataset from the number of cases considered to the number of pseudo observations.<sup>10</sup> This means that we treat every discrete time unit for each individual as a separate observation (Allison 1982).

Considering the predictors of motherhood, in order to test the hypotheses described above the study focuses on the combination of two variables: time since migration to Italy and the area (or country) of the interviewees' citizenship. The first is a time-varying variable that considers the year-distance before and after the migration event. We suppose that migration influences the timing of childbearing and vice-versa. Therefore, we expect to observe an increased risk of entering into motherhood mainly around the migration event, in particular during the first two years after immigration. However, the persisting differences in the risks of having a child have to be observed in relation to the different areas (or countries) of citizenship. More precisely, we consider separately the three most numerous immigrant nationalities (Romanian, Albanian, and Moroccan), and we aggregate all other nationalities into the following macro-regions of citizenship: Central/Eastern Europe (without Romania and Albania), Africa (without Morocco), Asia, and Latin America.

To hedge against compositional effects, in the present study we control all analyses for the respondent's own age and birth cohort.

#### **4. Motherhood: Different fertility patterns by citizenship and years since migration to Italy**

The distribution of motherhood varies as a function of women's citizenship (Mussino et al. 2009, 2012), but we are interested in analyzing differences in the timing of the transition to the first child by mothers' citizenship.

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<sup>10</sup> For descriptive statistics, please contact the authors directly.

To conduct a multivariate analysis, we ran a set of regression models using a stepwise procedure. The hypotheses underlying the models are that different citizenship groups have different risks of bearing a first child and that the experience of migration can shape fertility behaviors in different ways. In the present study the year since migration to Italy is particularly important because women were also observed before migration, thus enabling us to verify some of the hypotheses such as the interrelation between events or the disruption produced before and after migration by the migratory event. We ran a first and a second model (not shown), controlling separately for the impact of citizenship and year since migration to Italy, at the same age (baseline). The first model confirms that when analyzing all of the fertility periods of immigrant women and not only the time spent in the host country, the differences between the different national groups are reduced. Nonetheless, the second model confirms the importance of time since migration for the risk of having a first child. As a third step, we include the combination between the two variables. The final model (Figure 1 and Table 1) additionally verifies women's birth cohort, considering the significant decreasing trend of first-order intensity of fertility going from older to more recent birth cohorts.

Figure 1 shows different patterns by year since migration as a function of citizenship. The effect of migration on motherhood is particularly evident for the Moroccans and the Albanians (the interrelation hypothesis), highlighting a peak in motherhood between 0 and 2 years after arriving in Italy. Fertility and migration also seem to be connected for women from Asia and Africa, who are likely to experience motherhood in the years following their arrival in the host country. However, the risk remains high for a longer period. As regards the latter group, the risk is also associated with stabilization in Italy, considering that the highest peak is between 2 and 4 years after arrival. By contrast, Romanians, other Eastern Europeans (excluding Albanians), and Latin Americans show different patterns.

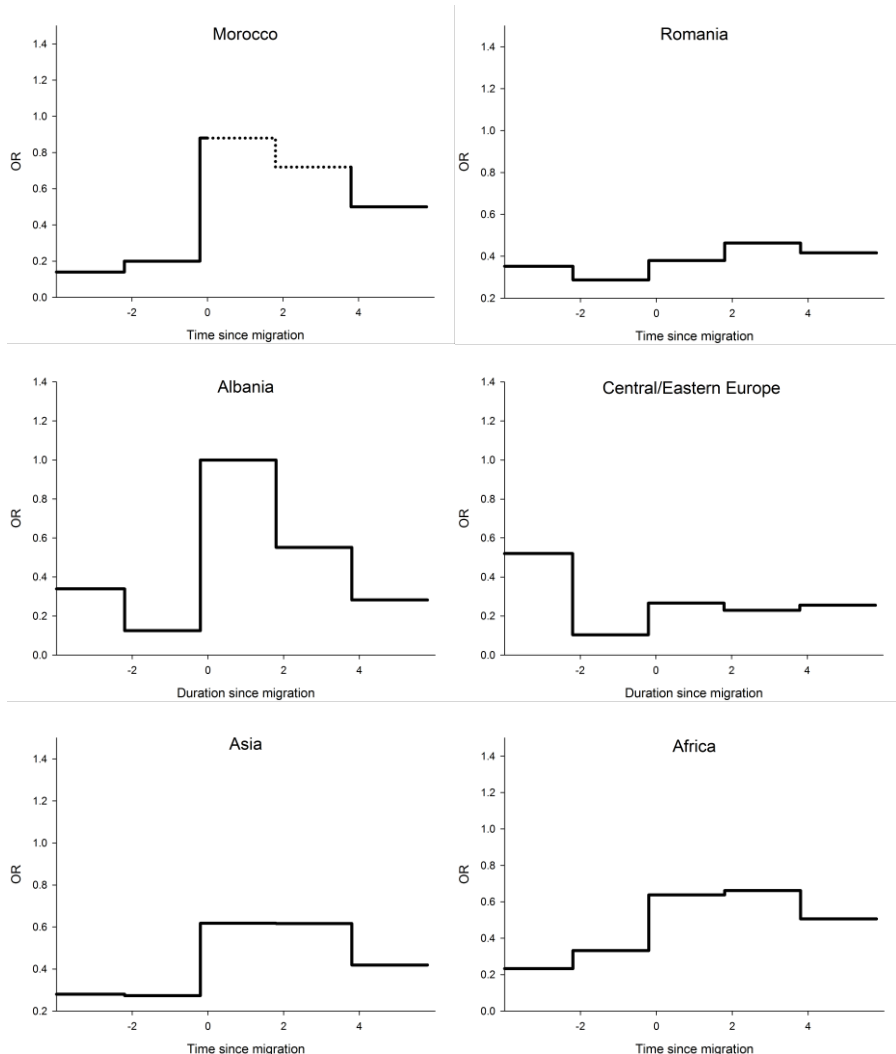
For Romanians, the odd ratios (ORs) of having a first child do not seem to be affected by the time since migration, and the risk is persistently lower compared to the newly arrived Albanians, although there is a small peak once they are stabilized in Italy. On the other hand, for other Eastern Europeans there are two peaks, the first 2 years before migration and the second immediately after, showing a pattern that is defined as disruptive<sup>11</sup> in the literature.

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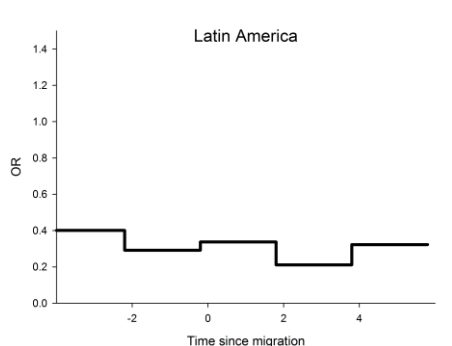
<sup>11</sup> The idea is that migration negatively affects fertility during the periods immediately before, during, and immediately after migration, with a recovery during subsequent years.



**Figure 1: Odds ratios of having a first birth by the combination of a) time since migration to Italy and b) citizenship. Immigrant women age 14 years and over present in Lombardy in 2010.**



**Figure 1: (Continued)**



Source: ISMU, Survey 2010 (author's calculations).

Notes: (a) The continuous line represents the statistically significant odds ratios and the dotted line those not significantly different from the value of the reference category (Albanians during the first two years after migration). (b) For the same age group and birth cohort, see Table 1.

**Table 1: Odds ratios of having a first birth. Immigrant women age 14 years and over present in Lombardy in 2010**

First Child	Model	
	OR	sign
Age: <=19	0.21	0.000
20–24	1	
25–29	1.48	0.000
30–34	1.34	0.000
35+	0.71	0.005
Cohort: <1965	1.37	0.000
1966–1970	1.19	0.013
1971–1975	1.32	0.000
1976–1980	1	
1981–1985	0.92	0.240
Constant	0.20	0.000
Person time	43700	
Pseudo-R2	0.098	

Latin Americans have the highest risk of having a first child before migration and the lowest risk after migration (referring to the Albanians during the first two years after migration), and these risks remain almost stable for all subsequent years observed. Similar results for Moroccans and Romanians were found in Mussino and Strozza (2012a) as regards a cohort of immigrants who arrived in Italy in 2003: however, the present study also indicates what is happening before migration. Considering the control variables (Table 1), the results are in line with the previous literature: the risk of having the first child increases and then decreases by age, with a peak between 25 and 29 years. Older cohorts of women have the highest risk of entering motherhood.

## **5. Conclusions**

The present study confirms the importance of the interrelationship between migratory and reproductive behaviors. It also highlights the different effects as a function of country of citizenship, where different citizenship is often associated with different migration patterns and distinct gender roles. Among North Africans, men are almost always the first to migrate in search of labor, while women usually follow for family reasons. Consequently, there is a strong interrelation between migration, family formation, and fertility. Among Central/Eastern Europeans (excluding Albania), migration is often a form of empowerment and is not connected to fertility, which very often occurs before and is not interrelated with the migratory event. Overall, their fertility remains below the level of other migrant groups, reflecting the lower fertility levels in their home countries.

In the present study we also report on women's fertility behavior before they decide to migrate, and show empirically what previous studies on post-immigration fertility could only hypothesize (see Mussino and Strozza in 2012a).

Parrado (2011) pointed out that careful period fertility measures have to be taken into consideration when looking at the fertility of migrants given the "difficulties in estimating the size of immigrant groups; the tendency for migration to occur at a particular stage in life; and, most importantly, the tendency for women to have a birth soon after migration". However, the present study also shows how differences in fertility between immigrant groups could have potentially different policy implications in terms of countering low fertility and population aging, especially considering the Italian model of fertility, to which immigrant women may be contributing. The main implications of these results are already shown in the Italian TFR (Istat 2014): The increase in Eastern European immigration and the stabilization of old communities such as the Albanians and Moroccans are in fact slowing down and reversing the trends of the past decade.

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