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FEMALE MIGRATION AND NATIVE MARITAL STABILITY: INSIGHTS FROM ITALY

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Female Migration and Native Marital Stability: Insights from Italy

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Abstract

In this paper, we argue that the size and the composition of the female migrant population in a given area can affect the marital stability of natives. We take Italy as a case-study and we offer discrete-time event history models predicting marital disruption on data from the nationally–representative 2009 *Family and Social Subjects* survey. We found that the increasing presence of first mover migrant women (coming from Latin America and Eastern Europe) is associated with higher separation risks among natives, especially for couples with lower human capital. Our findings add to our understanding of family formation and dissolution dynamics in recent immigration countries.

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1. Motivation[1]

Over the last decades, research has mainly focused on the labor market implications of migration. Most attention has been given to migrants displacing natives in terms of wage or employment, or both. Several scholars have shown that, whereas a certain replacement effect in the labor market is found for lower levels of skills and education (Venturini & Villosio, 2006, Dalla Zuanna & Weber, 2011; Ottaviano & Peri, 2012; Dustmann *et al.*, 2013), migrants do not necessarily negatively affect native workers' wages and their probability of transition from unemployment to employment (Gavosto *et al.*, 1999; Venturini & Villosio, 2006; Ottaviano & Peri, 2012). In addition, recent studies focusing on female migrants working as housekeepers or as care workers has demonstrated that female migrants are complementary to native highly-skilled females in the labor market. In other terms, migrant women allow native women to work for more hours (e.g. Barone & Mocetti, 2010, Cortes & Tessada, 2011, Ferre, Gonzales, Ortega, 2011) and to reduce their traditional early retirement practices to take care of elderly parents (Romiti & Rossi, 2011). These considerations involve countries where the family is largely responsible for family services and where men still invest little time in housework and care activities Previous studies suggested that the growing presence of migrant women positively affects the life of many families, enabling native women to stay in the labor market while providing domestic assistance for elderly or sick relatives. Nevertheless, the question of whether and how natives' family dynamics are affected by the increasing presence of female migrants, has scarcely been explored

We wish to study this question here by focusing on the effect of (female) migrants on the native marriage market. Research has noted that the divorce rate tends to be higher when there is a surplus of marriageable women (Grossbard-Shechtman, 1993). Migration often brings just such a surplus women, and these women may be a factor in the breakdown of

native marriages. In addition, if the supply of women increases, men who earlier were not able to find a marriage partner may now find one. Sarret and Vitali (2015), after all, have shown that the increasing presence of foreign women means an increase in mixed marriages, helping to balance the contemporary loss of marriages among natives. Overall, we hypothesize that the increasing presence of female migrants facilitates the disruption of established couples and favors the formation of new couples. This (new) framework of divorce and remarriage may be especially valid for men with lower education, who may prefer a female partner used to traditional (and subordinate) gender roles.

In this paper, we outline this approach by addressing the former part of the argument, namely whether the size and the composition of the female migrant population in a certain area affects the dissolution of native marriages. We take Italy as a case-study because it exemplifies a male-breadwinner society, and because it is a relatively new immigration country.

2. The Rationale of the study

2.1 A model for the interplay between marriage market and migration

We can usefully compare the marriage market to a labor market. Let us imagine that there is a bundle of goods and services provided in a marriage, e.g., shirt ironing, food preparation, company, protection, sexual intercourse, and so on. Within this market there are two types of agents: the first who *demands* marriage services; and the second who *provides* marriage services. In our model, the first are men and women are the second. There are limitations to this old-fashioned model. There may be cases where women demand and men provide; there are same sex couples; and many other dimensions, but this stylized model should help in depicting marriage dynamics[1].

Formally, to get marriage services, the demander, has to provide remuneration R. The higher the remuneration needed, the lower the demand. The demand function is thus down

sloping:

$$Q_{ms}D = Q_0 - aR \qquad\qquad \text{with} \quad a, Q_0, R > 0 \qquad\qquad [1]$$

where $Q_{ms}D$ are the amount of marriage services demanded, which depend on Q_0, the level of marriage services demanded when the remuneration R is set tat 0, and a, a propensity to consume marriage services that multiplies the remuneration R.

The supply of marriage services, provided by women in the case at hand, increases with the remuneration granted by marriage. The decision to abandon single life and enter into marriage implies new duties – such as ironing, cooking and having sex – that may be differently valued by different women, i.e. they have different reservation costs[2]. Hence, some women will be ready to enter into the marriage market with the return of a lower remuneration than others. Indicating with b the propensity to offer marriage services, and with Q_1 the level of marriage services offered when the remuneration is set to 0, the total quantity of marriages supplied $Q_{ms}S$ is equal to:

$$Q_{ms}S = Q_1 + bR \qquad\qquad \text{with} \quad b, R, Q_1 > 0 \qquad\qquad [2]$$

The higher the remuneration, the larger the supply.

The match between supply and demand determines the equilibrium amount of marriages Q_e and the equilibrium market remuneration R_e. Formally:

$$R_e = (Q_0 - Q_1) / (a + b) \qquad\qquad\qquad\qquad\qquad\qquad [3]$$

The demander is not discriminating among suppliers, thus he is unable to provide different returns for different suppliers, and the market defines both the equilibrium return E_o, which implies the remuneration R_e and the level of equilibrium marriages Q_e (Figure 1).

It is straightforward to extend this stylized representation of the marriage market in order to include the dynamics linked to marital dissolution, which eventually leaves space for a new union. Within this system, we expect that the changing levels of equilibrium remuneration facilitate the disruption of established couples. We hypothesize that for an

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established match (a marriage), as the aspirations of women increase, leading to an increase in their reservation remuneration, the gain that the man receives from that union decreases. In this changing scenario of costs and opportunities, the demander of marriage services – i.e. the man – sees the *stimuli* to continue the match reduced.

*Figure 1. Stylized representation of the marriage market*
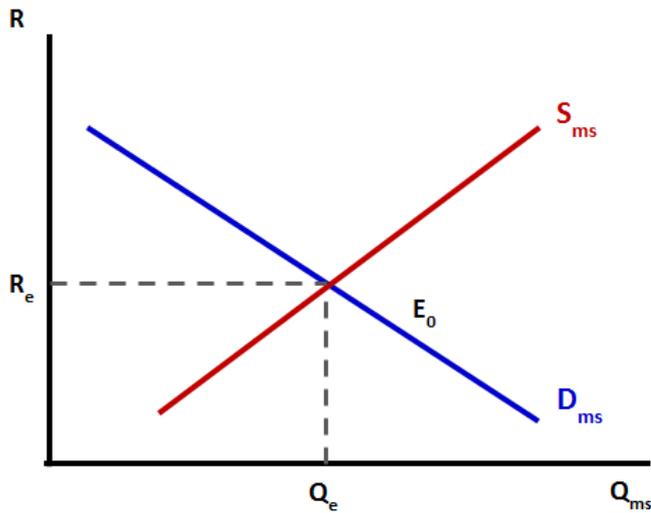
What happens if the suppliers of marriage services increase, for instance following the increase of female migration? An increase in suppliers of marriage services determines a shift to the right of the supply function S_{ms} (S'_{ms}), and thus a new equilibrium point E'_0 as well as a new remuneration equilibrium R'_e (Figure 2). This corresponds to an increase in the total amount of marriage services to Q'_e. The new equilibrium remuneration R'_e, which is lower than that of the previous situation, will not be sufficient for some native women with high reservation remunerations. Hence, some of them may decide to abandon the match, or the male partner may decide not to provide such high remuneration, choosing a more affordable option. This changed scenario implies that the total number of native marriages will decline from Q_e to Q_n: This shift represents marriage disruption. Conversely, the difference between Q'_e and Q_e represents new (mixed) matches.

Note that in this representation (Figure 2) foreign women hold the same reservation remuneration distribution as native women, thus the new supply function of marriage services

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S'$_{ms}$ has the same slope as the previous one. Nevertheless, the reservation remuneration of foreign women might be better set at a lower level than that of the native women, because they are more in need of remuneration. In this case, the new supply function will be steeper, the reduction of the equilibrium remuneration larger, and the displacement of native women in the marriage market even greater.

Figure 2. Stylized representation of the marriage market following an increase in female migration
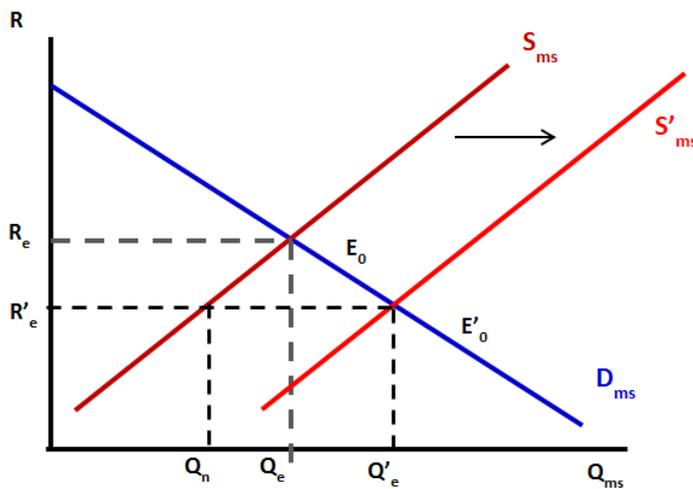
2.2 The role of education

An important role is played by the education level of the individuals involved. The level of remuneration reservation may change according to individual aspirations, values, gender attitudes, and cultural system. These are all aspects that can be captured and synthesized through the individual level of education. The level of education can, in fact, be viewed not only as a valid surrogate for hard-to-measure concepts like opportunity costs, but also as a valid marker of individual autonomy, intellectual abilities, and independence from social norms (Castro Martín & Juárez, 1995; Hoem *et al.*, 2001). For women, traditional and family-oriented values may push the remuneration reservation downwards, facilitating the match with men with male-oriented values; on the contrary, requests for independence and autonomy (often fueled by higher levels of education) push the female minimum target of remuneration upwards, reducing matching possibilities.

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Let us extend the previous representation of the marriage market by adding educational differentials. Broadly speaking, there is assortative mating among agents with a similar level of education – better educated with better educated and less educated with less educated: this is induced by the different types of marriage services in demand and on offer. Migrant women, even if they hold high human capital, are generally unable to get a return on it because, for instance, of insufficient knowledge of the language, or because of difficulties in accessing a qualified job. Thus, migrant women are likely to compete in the marriage market with less educated native women: who, in general, match less educated men. In our model, we, therefore, expect the situation described in Figure 2 to be verified especially among agents with low levels of education. We anticipate that the increasing presence of foreign women would be particularly disruptive for marriages formed by spouses with lower educational attainments[3].

3. The Feminization of Migration in Italy

Internationally, there is great interest in the Italian context. This interest stems, first, from the dramatic family changes that Italy has witnessed over the last two decades. Among other family changes, the total divorce rate increased from around 115 (divorces per 1,000 marriages) in 2000 to 182 in 2011 (Istat, 2012). Second, Italy is a country with a long history of emigration, but a relatively short history of immigration.

In the 1970s, Italy was chosen, above all, as a destination by migrant men coming from Northern Africa and Albania; women were a small part of the total stock of migrants and about 80% of them entered Italy to accompany or join family members as caregivers (Del Boca & Venturini, 2014). In more recent years, women represent the vast majority of migrants coming from Eastern European countries, South America and the Philippines, whereas men are overrepresented among migrants coming from, for example, Northern Africa, Pakistan and Bangladesh (Table 1; see also Reynaud & Conti, 2011). In addition, the

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presence of female first movers for work characterizes these decades: their presence reached 40% of total entrances around 2010 and they represent the principal wage earners for themselves and their families (Forbes Martin, 2004).

Table 1. Feminization of migration in Italy: Foreign population residing in Italy by gender and area of nationality, 2002 and 2009.

	Men		Women		Total	
Area of nationality	2002	2009	2002	2009	2002	2009
EU-27	114,244	545,284	172,656	717,325	286,900	1,262,609
Other European countries	192,294	447,970	173,344	541,056	365,638	989,026
Africa	283,989	554,659	180,594	377,134	464,583	931,793
Asia	149,286	383,954	136,646	321,062	285,932	705,016
North America	6,973	8,191	8,572	10,035	15,545	18,226
Center-South America	40,339	121,819	87,707	203,098	128,046	324,917
Others	1,149	1,530	1,580	1,942	2,729	3,472
Total	788,274	2,063,407	761,099	2,171,652	1,549,373	4,235,059

Source: Istat (2012)

Most migration studies have been gender-blind, focusing on men as the main actors of migration and paying little attention to women. Even when women's migration was recognized as an empirical phenomenon, little attention was paid to women moving to a new country for work (Cooke, 2008; Kofman, 2011). The case of women's migration toward Italy offers a crucial example of the double meaning of the "feminization of migration". Feminization refers to the increase in the *quantity* of women who migrate; it points, too, to the *transformation* of women in transnational mobility from movers for family reunification to first movers looking for a job (Di Bartolomeo & Marchetti 2013).

The increase in the number of women first movers toward Italy is essentially attributable to the expansion of the demand for family services, in particular for the care of elderly and sick relatives. Insufficient support from the national welfare system obliges the family to undertake these services. This goes, hand in hand, with the family culture of the country, which relies on female labor for the production of labor-intensive family services. Altogether, this state of affairs has been sustained with the hiring of additional female labor. Such

demands becomes even more pressing in the context of a rapidly ageing society and the increasing need for a second income in the household to face day-to-day family expenditures. Looking at the labor market role of foreign women in Italy, Barone and Mocetti (2010) showed that migrant women are complementary to highly-skilled native women, and even increase their labor supply, thanks to this external family services production. Romiti and Rossi (2011) argued, indeed, that foreign women workers reduce the probability that native women will quit the labor market (retiring early) in order to take care of elderly parents and relatives. Importantly, the hiring of "family helpers" is not limited to high-income families; the need for a second income has pushed medium and low-income families to look for external help in housework and care, while the female spouse is now active on the labor market.

Altogether, female migrants contribute to a social model of the family as the main producer of care services. In the following we might reasonably ask: does the increase of available women also affect the marriage market? In particular, we wish here to test whether the widespread presence of migrant women correlates with a higher probability of marriage disruption in Italy.

4. Analytical Strategy

4.1 Data and Sample Selected

We use data coming from the Italian "Family and Social Subjects" survey (FSS), carried out by the Italian National Statistical Office (Istat) in 2009 on a nationally representative sample of around 20,000 households, with around 50,000 individuals. The data were collected based on a two-stage sampling design. The municipalities are the primary units and the households are the secondary units. The municipalities were sampled with probabilities proportional to their population size and without replacement; whereas the households were drawn with equal probabilities and without replacement. Respondents were interviewed face-

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to-face. The overall response rate of the survey was over 80%.

The 2009 FSS provides detailed retrospective partnership histories. We selected men or women born after 1945, who had their first marriage after 1980. Hence, we considered the retrospective partnership history for one member of each sampled household. The overall analytical sample includes 12,668 individuals. We focus on the dissolution of the first marriage, considering *de facto* separation as a marker of marital breakdown. *De facto* separation represents a marriage dissolution not yet accompanied by a legal provision. This means, in practice, separation because of marital discord. We concentrate on *de facto* separation because this act corresponds to the same life-step for all three categories of separated people: i.e. *de facto* separated; legally separated; and divorced.

Data for foreign residents comes, instead, from the registry of the resident population, in which, from 2002, information on the foreign residents by gender, region of residence, and country of origin can be detected. Using this data, we build a set of female migration indicators computed as the share of foreign women over the total resident population, by year, region and single country of origin or area of origin.

4.2   Statistical Model

We estimate a set of discrete-time event history models to study the hazard of a *de facto* separation. We follow marriage until *de facto* separation occurs or, alternatively, we censor the observation in cases of widowhood or by date of the interview. Since data about foreign residents are available only for more recent years, the analysis is left-censored, i.e. limited to separations from 2003 to 2009. 11.5% of the individuals sampled experienced a *de facto* separation in the relevant period.

Let us consider individual i with $i = 1, ..., I$ living in region j with $j = 1, ..., J$. For each individual a set of H individual variables X_{ij} is collected, as well as a set of M contextual variables $Z_j(t)$ for each area. X and Z may be either constant or time-varying. The logit

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transformation of the hazard of event (i.e. *de facto* separation) in time period t for individual i living in region j, $h_{ij}(t)$, is given by

$$\text{logit}[h_{ij}(t)] = \alpha(t) + \beta_h X_{hij}(t) + \beta_m Z_{mj}(t)$$

where $\alpha(t)$ represents some function of the time, called the logit of the baseline hazard function, and β_h and β_m are the slope parameters for the individual and contextual covariates. This model uses logistic regression to estimate the log-odds of a separation occurring in each person-year interval as a function of the individual's marriage duration, and time-constant and time-varying individual and aggregate-level characteristics.

This procedure implies that we have repeated measures for each individual, thus implying that observations on the same subject are not independent. Moreover, our data are hierarchically structured, with individuals living in different regions, with different marital disruption patterns and different migration levels. To account for dependence among observations and among regions, we adjusted the estimates utilizing robust standard errors (Cleves et al. 2008).

4.3   Individual-level covariates

In our models we accounted for the duration of the marriage – that represents our baseline duration – including two terms: a variable continuous in years and a quadratic term. Then, we considered a range of additional covariates. As basic demographic controls, we included gender (coded 0 for men and 1 for women) and birth cohort (grouped into: 1 = *1945-54*; 2 = *1955-64*; 3 = *1965-74*;4 = *≥1975*). Previous analyses for Italy have also shown that the presence of children reduces any separation risk, because they tend to be considered as couple-specific capital (De Rose, 1992; Vignoli & Ferro, 2009). We thus included a time-varying variable indicating whether the respondent has children (1 = *yes*).

Educational qualification has been proved to be powerful source of variation in disruption risks in Italian marriages (De Rose, 1992; Vignoli & Ferro, 2009). We thus created the

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following educational attainment groups: primary (1); secondary and upper-secondary (2); and post-secondary and tertiary (3). In addition, as proxy for the family background, we considered parental education (1 = *if at least one parent holds a university degree*). The parents' educational level may be understood as an indicator of the socio-economic level of the childhood place of residence (Billari & Ongaro, 1999). In addition, higher education among parents may also reflect exposure to more liberal attitudes, and acceptance of divorce among their offspring (Vignoli & Ferro, 2009).

4.4   Aggregate-level covariates

Female migration indicators represented our main explanatory aggregate-level variables in the assessment of the hazard of *de facto* separation. Our aggregate-level indicators were temporally lagged by one year: this means that they were measured one year prior to the event of interest (i.e. *de facto* separation), thereby allowing a proper temporal ordering of events.

In a preliminary analysis, we tested a large set of indicators distinct by single country of origin and/or area of origin: e.g. Europe, Asia, North America, Latin America, and Africa. In several cases, they proved not to be significant, thus, beside the presence of the total stock of resident female foreign population, we limit the presentation to those reporting a significant association with the outcome variable: the female resident foreign population coming from certain Latin American countries (namely, Peru, Cuba, Colombia, Argentina, and Venezuela), and from some Eastern European countries (Poland, Russia, and Belarus).

Finally, in order to account for differences across regions and across time, we included, in the equation, other variables for the regional labor market context. There was, first, the long-term unemployment rate, to give a sense of the structural characteristics of the labor market in each region. It is often used interchangeably with a simple regional fixed effect. Second, we considered the employment rate, and aimed to identify the time trend for each region.

Given its cyclical nature, this indicator is often used to proxy annual time dummies. Third, we included the gross domestic product (expressed in millions of Euros purchasing power standard) to capture contingent regional variations, which have not yet been transformed into occupations.

5. Results

5.1 Effects of aggregate-level migration indicators

The effects of aggregate-level indicators for foreign female population with the risk of *de facto* separation are presented in the form of Average Marginal Effects (AMEs hereafter) and displayed in Table 2. AME expresses the effect on separation risk as a categorical covariate x_1 changes from one category to another or as a continuous covariate increase of one unit, averaged across the values of the other covariates introduced in the model (i.e. population-averaged). Hence, the AME of the aggregate level of female migration represents the percentage points change in the predicted probabilities of separation, averaged across the values of other covariates, as this indicator increases by one unit.

Model 1 shows that an increase in the percentage of female foreign resident population over the Italian one is not significantly associated with a significant increase in *de facto* separation risk: AME expressed in percentage points equal to 0.0057, Model 1. In order to test whether the make-up of women's migration matters in the dissolution of Italian marriages, we focus on areas of origin. Among all areas of origin under consideration, only female migrants coming from some countries of Eastern Europe and Latin America had a significant effect on native marriages. In particular, an increase of one point in the percentage of foreign female resident population from selected countries of Latin America (namely, Peru, Cuba, Colombia, Argentine, and Venezuela; see Model 2) was associated with an increase of 0.33 percentage points in the risk of *de facto* separation. When considering the percentage of foreign female residents coming from the selected countries of Eastern Europe

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(i.e., Poland, Russia, and Belarus; see Model 3), this risk increases by 0.18 percentage points. In other words, an association between the risk of marital dissolution and the increasing presence of foreign women is detectable. Interestingly, these ethnicities have more women who migrate as first movers, rather than for family reunification (Di Bartolomeo &Marchetti 2013). It is worth noting that, though statistically significant, this marginal effect is relatively low in magnitude.

Table 2. Discrete-time event-history models predicting de facto *separation in Italy. Average Marginal Effects (AMEs), expressed in percentage points (p.p.), for the individual covariates and the aggregate-level indicators of migration stemming from registry of foreign resident population*

	Model 1		Model 2		Model 3	
	AME (p.p.)	p-value	AME (p.p.)	p-value	AME (p.p.)	p-value
Baseline duration						
Years of marriage (linear term)	0.005	0.075	0.005	0.060	0.005	0.063
Years of marriage (quadratic term)	-0.003	0.028	-0.000	0.024	-0.000	0.020
Women (ref: Men)	-0.013	0.256	-0.013	0.232	-0.012	0.250
Cohort (ref: 1945-54)						
1955-64	0.044	0.006	0.041	0.005	0.038	0.000
1965-74	0.067	0.001	0.064	0.000	0.058	0.000
>=1975	0.136	0.002	0.133	0.001	0.117	0.000
Education (ref: High)						
Medium	-0.006	0.715	-0.006	0.694	-0.004	0.780
Low	0.021	0.282	0.020	0.287	0.021	0.230
Having children (ref: No)	-0.246	0.000	-0.232	0.000	-0.218	0.000
Parental education (ref: Medium-high)						
Low	0.002	0.954	0.004	0.906	0.004	0.900
Contextual covariates						
Employment rate	0.000	0.902	-0.001	0.493	0.000	0.670
Long term unemployment rate	-0.002	0.524	-0.003	0.390	-0.001	0.670
Gross Domestic Product	0.000	0.249	0.000	0.039	0.000	0.530
Female resident foreigners						
Total stock	0.006	0.476				
From some countries of Latin America			0.329	0.024		
From some countries of Eastern Europe					0.176	0.020

5.2 Effects of other covariates

All the coefficients of the other control variables included in the model (see again Table 2) show the expected sign (De Rose 1992; Vignoli & Ferro 2009), which provides an indirect

general validation of the statistical model itself. By looking together at the two variables describing the baseline duration, as marriage duration increases, the risk of separation is reduced to a certain point, when it slows down again. The risk of marital dissolution is slightly higher for younger cohorts. Having one or more children, as expected, significantly reduces the likelihood of *de facto* separation. Educational level is not significant. This is in line with recent papers showing a weakening of the negative educational gradient in marriage dissolution (Matysiak, Styrc, & Vignoli 2013), and this also applies to contemporary Italy (Salvini & Vignoli 2011). Also, family background, measured through the parental educational level, does not appear to be statistically significant.

The three contextual variables included in the model do not result statistically significant. It is worth noting that they did not display any effect even when they were included separately in the estimate. Nevertheless, they have been retained in the model in order to account for Italian regional heterogeneity.

5.3   Educational differentials

In order to get deeper insights into the effects of the aggregate-level of migration on Italian separation risk, we re-ran previous models stratifying by level of education. For the sake of simplicity, we put higher education (tertiary) against medium and low education (secondary and lower). Table 3 reports the results.

Table 3. Discrete-time event-history models predicting de facto *separation in Italy. Average Marginal Effects (AMEs), expressed in percentage points (p.p.), for the aggregate-level indicators of female migration for the highly-educated people and low-medium educated.*

		High education		Low-medium education	
Model	Indicator of female resident foreigners	AME (p.p.)	p-value	AME (p.p.)	p-value
1a.	Total stock	0.010	0.515	0.0045	0.660
2a.	From some countries of Latin America	0.383	0.266	0.3220	0.061
3a.	From some countries of Eastern Europe	0.250	0.177	0.1617	0.072

Note: All models are controlled for variables listed in Table 2.

The models estimated for sub-groups of Italians with a high level of education do not

show immigrants having a significant effect on marital dissolution. None of the indicators about female migration considered display statistical precision. On the contrary, for less educated people the risk of *de facto* separation increases as the presence of foreign women coming from Latin America and Eastern Europe becomes more relevant. Again, the magnitude of this association is rather moderate (0.32 and of 0.16 percentage points, respectively for the two geographical areas, both significant at the 10% level). This result is interesting, considering that educational level did not represent a significant discriminant on the risk of marital dissolution for Italians on average (see Table 2).

5.4   Robustness checks

Our findings may not be valid without a series of sensitivity checks. First, instead of data from the registry of foreign resident population, we estimated similar models relying on a different source for migration data, namely the registry of residency permits. The pattern of results remained virtually unchanged: the results are not shown, but they are available upon request from the authors. Nonetheless, the residency permits dataset presents some caveats: it includes information by gender starting only from 2006, and people coming from some Eastern European countries are excluded from the determination of residency permits in most recent years, because of their entry to the European Union. Hence, we decided to present only results from the registry of the resident foreign population.

Second, we claim that there is no endogeneity at play between migration and marriage dissolution dynamics. In fact, it is worth stressing that, of course, immigrants comes to Italy for work, without any intention of altering the Italian marriage market. Nonetheless, we conducted a robustness check to scrutinize the potential endogeneity between rising female migration and union dissolution. If the relationship were spurious – that is, if we observed a positive link between the presence of female migrants and union dissolution because the two

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phenomena are increasing in parallel – one should naturally detect the same pattern among male migrants. In this robustness check, male migration indicators thus represent our main explanatory aggregate-level variables in the assessment of the hazard of *de facto* separation: and, we also tested a large set of indicators by single country of origin and/or area of origin. Interestingly, we found that none of the models including the male component of foreign presence illustrates significant effects on marital dissolution risk of natives (Table 1A). This result confirms that the association between women's migration and the marital disruption of natives is not spurious.

Third, we considered a large series of aggregate-level covariates describing different sources of variations between regions. We tested several combinations between activity, employment and unemployment rates, distinguishing between male and female indicators, long-term unemployment rates, diffusion of higher levels of education, different measurement scales of gross domestic product, as well as regional fixed effects. Any specific combination between them did not substantially change the results (Table 1B). The three selected variables were chosen in light of their relevance in describing the economic characteristics of the Italian regions.

6. Concluding remarks

This paper focuses on the interplay between migration and the marital dissolution of Italians. We asked whether aggregate migration shocks alter the marriage market. Our findings suggest that they do. We show, indeed, that the higher the foreign female presence, the higher the dissolution risk of established marriages. The composition of women's migration is especially relevant. Our outcomes suggest that the increasing presence of women first movers (especially those coming from Latin America and Eastern Europe) is associated with increasing separation risks. Although the magnitude of disruption risk is relatively low, the evidence suggests that the growing presence of female migrants may disrupt native

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marriages.

Our study may thus stimulate new perspectives. The presence of "family helpers" – very often women first movers – has traditionally been considered as an element contributing to preserve the Italian welfare system, where its first and most important pillar is the family itself. In this context, while foreign women tend to be complementary to Italian women in the labor market (Barone & Mocetti, 2010; Romiti & Rossi, 2011), helping to fulfill household and care work, they also seem to affect the stability of native marriages. The association between the presence of migrant women and marital dissolution was found to be relevant especially for less- and medium-educated individuals. Thus, migrant women may be in competition in the marriage market with Italian women, perhaps particularly less educated Italian women.

To conclude, this analysis offers new insights into family changes in recent immigration countries. Empirical studies concentrating on individual-level factors affecting marital dissolution risks – such as marriage duration, presence of children, or women's education – have a long tradition (e.g., Amato & Rogers 1997; Härkönen & Dronkers 2006; Lyngstad & Jalovaara 2010; Matysiak, Styrc, & Vignoli 2013). But the study of contextual-level determinants for divorce is much less well established. In this paper, we propose a potentially new, and never investigated, contextual correlate of marital disruption. We suggest the relevance of migrants as a potential driver of new family life courses, at least for Italy; with effects depending on country of origin. Our results need to be read as pointers for further research, whether they can be extrapolated remain to be seen.

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[1] For a more detailed analysis of the marriage market from an economic point of view, see Grossbard-Shechtman (2003). In Chapter 1 the author employs a similar model, but she did not analyze migration. The imbalances in the marriage market were also considered by Guttemberg and Secord (1983), but again they did not consider any macro level shock.

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[2] We define the reservation cost as the cost that a partner has to put up with to enter into a marriage. The remuneration has to be higher than the cost. This definition is inspired by the reservation wage, or the money that a worker has to receive to accept to enter into the labor market.

[3] Notably, there are remarkable levels of educational assortative mating between spouses in Italy – in 2008 almost 70% of Italian spouses had the same level of education (Vignoli *et al*., 2011) – justifying a segmentation of the Italian marriage market by levels of education.

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Appendix

Table 1A. Marginal Effects (AMEs), expressed in percentage points (p.p.), for the individual covariates and the aggregate-level indicators of male migration stemming from registry of foreign resident population

	Model 1		Model 2		Model 3	
	AME (p.p.)	p-value	AME (p.p.)	p-value	AME (p.p.)	p-value
Baseline duration						
Years of marriage (linear term)	0,006	0,131	0,006	0,068	0,005	0,073
Years of marriage (quadratic term)	0,000	0,051	0,000	0,026	0,000	0,025
Women (ref: Men)	-0,019	0,249	-0,014	0,242	-0,013	0,250
Cohort (ref: 1945-54)						
1955-64	0,063	0,017	0,043	0,005	0,043	0,006
1965-74	0,096	0,005	0,066	0,001	0,065	0,001
>=1975	0,194	0,004	0,137	0,001	0,132	0,001
Education (ref: High)						
Medium	-0,009	0,706	-0,006	0,707	-0,005	0,752
Low	0,028	0,306	0,021	0,282	0,022	0,258
Having child(ren) (ref: No)	-0,331	0,001	-0,242	0,000	-0,240	0,000
Parental education (ref: Medium-high)						
Low	0,002	0,972	0,003	0,922	0,003	0,924
Contextual covariates						
Employment rate	0,003	0,392	0,000	0,748	0,001	0,685
Long term unemployment rate	-0,001	0,766	-0,003	0,399	-0,002	0,606
Gross Domestic Product	0,000	0,475	0,000	0,070	0,000	0,433
Male resident foreigners						
Total stock	-0,009	0,563				
From some countries of Latin America			0,395	0,075		
From some countries of Eastern Europe					0,297	0,103

Table 2A. Marginal Effects (AMEs), expressed in percentage points (p.p.), for the individual covariates, the aggregate-level indicators of female migration stemming from registry of foreign resident population, and different contextual-level economic indicators

	Total activity rate		Male activity rate		Female activity rate		Total empl. rate		Male empl. rate		Female empl. rate	
	AME (p.p.)	p-value	AME (p.p.)	p-value	AME (p.p.)	p-value	AME (p.p.)	p-value	AME (p.p.)	p-value	AME (p.p.)	p-value
Baseline duration	0,006	0,229	0,006	0,134	0,006	0,233	0,006	0,193	0,006	0,158	0,006	0,196
Years of marriage (linear term)	0,000	0,082	0,000	0,047	0,000	0,083	0,000	0,068	0,000	0,057	0,000	0,069
Years of marriage (quadratic term)	-0,019	0,243	-0,014	0,249	-0,020	0,242	-0,017	0,244	-0,015	0,246	-0,019	0,244
Women (ref: Men)												
Cohort (ref: 1945-54)	0,062	0,025	0,047	0,011	0,069	0,025	0,057	0,019	0,051	0,015	0,063	0,020
1955-64	0,094	0,008	0,070	0,003	0,103	0,008	0,086	0,006	0,076	0,004	0,094	0,006
1965-74	0,188	0,006	0,139	0,002	0,208	0,005	0,173	0,004	0,153	0,003	0,189	0,004
>=1975												
Education (ref: High)	-0,008	0,722	-0,005	0,747	-0,009	0,715	-0,007	0,718	-0,006	0,732	-0,008	0,710
Medium	0,028	0,308	0,022	0,297	0,031	0,303	0,026	0,304	0,024	0,303	0,029	0,303
Low	-0,324	0,002	-0,254	0,001	-0,351	0,002	-0,302	0,001	-0,274	0,001	-0,324	0,001
Having child(ren) (ref: No)												
Parental education (ref: Medium-high)	0,002	0,971	0,002	0,974	0,003	0,962	0,002	0,974	0,002	0,979	0,002	0,965
Low	0,003	0,102	0,000	0,494	0,003	0,067	0,002	0,110	0,001	0,244	0,002	0,072
Contextual covariate	-0,002	0,233	0,009	0,904	-0,009	0,163	0,000	0,275	0,006	0,600	-0,005	0,192
Total stock of female resident foreigners	0,006	0,229	0,006	0,134	0,006	0,233	0,006	0,193	0,006	0,158	0,006	0,196

Table 2A. following

	total unempl. rate		male unempl. rate		total upper sec. education		long term unempl. rate		gdp (pps per inhabitant)		gdp (pps in million Euros)	
	AME (p.p.)	p-value	AME (p.p.)	p-value	AME (p.p.)	p-value	AME (p.p.)	p-value	AME (p.p.)	p-value	AME (p.p.)	p-value
Baseline duration	0,006	0,117	0,006	0,118	0,004	0,074	0,005	0,115	0,006	0,134	0,006	0,089
Years of marriage (linear term)	0,000	0,041	0,000	0,043	0,000	0,029	0,000	0,040	0,000	0,046	0,000	0,031
Years of marriage (quadratic term)	-0,014	0,248	-0,016	0,246	-0,009	0,235	-0,014	0,250	-0,015	0,248	-0,014	0,254
Women (ref: Men)												
Cohort (ref: 1945-54)	0,047	0,009	0,053	0,011	0,029	0,006	0,043	0,009	0,049	0,011	0,048	0,006
1955-64	0,071	0,002	0,079	0,002	0,043	0,001	0,066	0,001	0,073	0,002	0,071	0,001
1965-74	0,144	0,001	0,158	0,002	0,087	0,001	0,135	0,001	0,147	0,002	0,141	0,001
>=1975												
Education (ref: High)	-0,006	0,729	-0,006	0,728	-0,002	0,737	-0,005	0,730	-0,006	0,744	-0,005	0,740
Medium	0,023	0,293	0,025	0,296	0,017	0,273	0,022	0,291	0,023	0,290	0,023	0,286
Low	-0,259	0,000	-0,281	0,001	-0,169	0,000	-0,241	0,000	-0,264	0,001	-0,258	0,000
Having child(ren) (ref: No)												
Parental education (ref: Medium-high)	0,002	0,971	0,002	0,973	0,003	0,959	0,002	0,974	0,002	0,966	0,002	0,966
Low	-0,001	0,194	-0,002	0,200	0,005	0,172	0,003	0,137	-0,003	0,420	0,000	0,274
Contextual covariate	0,005	0,803	0,004	0,809	0,000	0,984	0,001	0,732	0,003	0,848	0,010	0,064
Total stock of female resident foreigners	0,006	0,117	0,006	0,118	0,004	0,074	0,005	0,115	0,006	0,134	0,006	0,089