DEMOGRAPHIC RESEARCH
A peer-reviewed, open-access journal of population sciences

## DEMOGRAPHIC RESEARCH

## VOLUME 39, ARTICLE 1, PAGES 1-32 <br> PUBLISHED 4 JULY 2018

http://www.demographic-research.org/Volumes/Vol39/1/
DOI: 10.4054/DemRes.2018.39.1
Research Article

Mixed marriages between immigrants and natives in Spain: The gendered effect of marriage market constraints

## Amparo González-Ferrer <br> Ognjen Obućina <br> Clara Cortina <br> Teresa Castro-Martín

This publication is part of the Special Collection "A New Look Into the Dynamics of Mixed Couples in Europe," organized by Guest Editors Amparo GonzálezFerrer, Laura Bernardi \& Alícia Adserà.
© 2018 González-Ferrer, Obućina, Cortina \& Castro-Martín.
This open-access work is published under the terms of the Creative Commons Attribution 3.0 Germany (CC BY 3.0 DE), which permits use, reproduction, and distribution in any medium, provided the original author(s) and source are given credit.
See https://creativecommons.org/licenses/by/3.0/de/legalcode.

## Contents

1 Introduction ..... 2
2 Previous research on intermarriage in Spain ..... 3
3 Theoretical expectations in the context of the changing local ..... 7 marriage market in Spain
4 Data and methodology ..... 12
4.1 Data and methodology for the analysis of immigrants' marital ..... 12choices
4.2 Data and methodology for the analysis of natives' marital choices ..... 14
5 Results ..... 17
5.1 Immigrants' marital choices ..... 17
5.2 Natives' marital choices ..... 20
6 Summary and conclusions ..... 23
7 Acknowledgements ..... 26
References ..... 27

# Mixed marriages between immigrants and natives in Spain: The gendered effect of marriage market constraints 

Amparo González-Ferrer ${ }^{1}$<br>Ognjen Obućina ${ }^{2}$<br>Clara Cortina ${ }^{3}$<br>Teresa Castro-Martín ${ }^{4}$


#### Abstract

\section*{BACKGROUND}

Spain has become an important immigrant destination relatively recently. Marriages between natives and immigrants are among the most important agents of social and cultural change in contemporary Spanish society.

\section*{OBJECTIVE}

This study's aim is to analyse the propensity to enter mixed-nativity marriages among both natives and immigrants in Spain, focusing on the roles played by both individual and marriage market characteristics.

\section*{METHODS}

The study combines data from the National Immigrant Survey (2007) and the Marriages Register (2008). Multivariate analysis is based on multinomial logistic regression, with an event history approach for immigrants and cross-sectional approach for natives.

\section*{RESULTS}

Immigrant groups, and particularly immigrant men, differ considerably in their propensity to intermarry. Education is positively associated with exogamy among immigrant men but is not an important predictor of intermarriage among immigrant women. By contrast, the marriage market structure is more important for immigrant women than men. The analysis for natives shows only limited support for the exchange hypothesis. Educational exchange can be observed in the mixed marriages of native women with some immigrant groups but is observed much less often for native men.


[^0]Age difference within the couple is more frequently consistent with some sort of exchange between immigrant and native partners.
CONCLUSIONS
Our results suggest that there is not one marriage market but several for different groups and that the patterns of native/immigrant marriage in Spain are strongly gendered.

CONTRIBUTION
This is the first study on intermarriage in Spain to look at both natives and immigrants.

## 1. Introduction

Although a number of important studies have looked at mixed marriages between communities who have lived in the same country for centuries (Hendrickx, Lammers, and Ultee 1991; O'Leary and Finnäs 2002; Kalmijn and van Tubergen 2006), it can be argued that native/immigrant marriages currently dominate European research on intermarriage. Spain is no exception to this pattern; the research on intermarriage in Spain has focused almost exclusively on marriages with respect to nativity. A sizeable body of research on how preferences, marriage markets, and third parties shape partner choices among immigrants in Western countries echoes widely accepted views on intermarriage as an indicator and agent of social integration of minorities (Coleman 1994; Kalmijn 1998). However, there is also reason to believe that the link between intermarriage and social integration is more complex than is commonly assumed. For instance, recent empirical evidence (see an overview in Kulu and González-Ferrer 2014) shows that native/immigrant marriages are more likely to break up than endogamous marriages. Also, Song (2009) argues that intermarriage per se does not imply social acceptance since the experiences of intermarriage may vary across gender, class, and region. In addition, some studies have attributed some of the integrative effects in the labour market to selection effects rather than a proper intermarriage premium (Kantarevic 2004), although more recent analyses in other national contexts have challenged these conclusions (Meng and Gregory 2005; Meng and Meurs 2009). Moreover, the intermarriage premium has not been found for natives, which definitely poses interesting questions as to why natives engage in mixed marriages, a topic that has received far less attention than the marital choices of immigrants (Glowsky 2007; Huijnk, Verkuyten, and Coenders 2010; Kalmijn 1998; Kalmijn and van Tubergen 2010).

This paper contributes to previous research on the dynamics of intermarriage in Spain by analysing simultaneously the determinants of marital choices made by both immigrants and natives. For immigrants, we adopt an event history approach that
represents a step forward in comparison to most previous studies, which are mostly based on the distribution of existing unions. Apart from the sociodemographic and ethnic explanations usually explored in other studies, we investigate the role of marriage market constraints separately by gender. In order to shed light on the differential incidence and composition by origin of recent mixed marriages in Spain, we develop the available findings on immigrants with a complementary cross-sectional analysis of the mixed-marriage choices made by native Spaniards, incorporating the role played by structural conditions in local marriage markets strongly segmented by educational level. Unfortunately, data limitations prevent us from running a risk model in our analysis of natives as well, so we observe marital choices and examine their characteristics across groups and provide a descriptive account of marital choices of natives.

## 2. Previous research on intermarriage in Spain

As a former emigration country that turned into an attractive destination country within a relatively short timespan, Spain is considered a textbook example of migration transition (Castles, de Haas, and Miller 2014). However, the peculiarity of the Spanish case in the migration context of contemporary Europe lies not only in the very rapid increase of its immigrant population. First, Spain has an unusually high share of immigrants who share their mother tongue with the destination country. Second, Spain is one of the principal destinations for lifestyle migration within Europe, and a fair share of its immigrants originate from even wealthier countries. This heterogeneity in immigrant population has affected the patterns of intermarriage in Spain, which have increased significantly since 2000, as can be seen in Figure 1.

It is noteworthy that our knowledge of intermarriage patterns in Spain has mostly been acquired in an indirect way; previous research on partner choices among immigrants to Spain has paid more attention to determinants of endogamous choices. Cortina, Esteve, and Domingo (2008) use data from the 2001 Spanish census to study marriage formation among the foreign-born in Spain. This paper can be considered as early evidence of intermarriage patterns in Spain as at that time immigration flows were still recent and the economic crisis had not yet fuelled return flows. The authors focus on four groups - immigrants born in the United Kingdom, Morocco, Colombia, and Ecuador - and analyse which characteristics are associated with being in an endogamous marriage. Their results show that Ecuadorians had the greatest propensity for endogamy while the British-born had the lowest. Immigrants who were younger at arrival and immigrants with a longer duration of stay were less likely to enter endogamous marriages. Similar results have been found in other European studies, and
the most likely mechanism behind these findings is a lower degree of socialization in the country of origin for immigrants who arrive at a young age, as well as greater opportunities of interaction with natives the longer the stay at destination (Kalmijn and Van Tubergen 2006; Adserà and Ferrer 2014). Cortina and colleagues also find that less-educated immigrants, especially men, were more likely to be in endogamous unions. This finding is the mirror image of the very frequent result in European studies on intermarriage that a higher education level implies a greater likelihood of immigrants marrying a native (Lievens 1998; González-Ferrer 2006; Kalmijn and Van Tubergen 2006; Dribe and Lundh 2008; Hamel, Pailhé, and Santelli 2013). The main limitation of this study is that due to data constraints the authors are not able to distinguish between unions formed before and after migration. In the light of the previously discussed views on the link between intermarriage and integration, social researchers have been largely interested in post-migration marital behaviour. This is why the launch of the Spanish National Immigrant Survey (hereafter NIS) in 2007, which provides additional insight into mixed-nativity unions in Spain, was very important for subsequent research.

Figure 1: Proportion of mixed marriages by origin, Spain 1989-2016


Source: Marriage records, 1989-2016.
Note: Only opposite-sex marriages are included.

Sánchez-Domínguez, De Valk, and Reher (2011) use the NIS to explore endogamous marriages among immigrants from Morocco, Romania, Ecuador, Colombia, and Argentina. They show that men are less likely to marry around the time of migration. This result is a strong indicator that the pattern of marriage migration is largely traditional, i.e., a male immigrant imports a female partner from his country of origin. Marriage migration is an especially common practice among Moroccans recently arrived in Spain (Capote 2011) (as well as in other European countries: see Lievens 1999). The interplay of cultural and gender norms implies that the nature of intermarriage is also gendered (Dribe and Lundh 2011; Lanzieri 2012). SánchezDomínguez and colleagues show that in Spain, as in other European destinations, endogamy is more common among immigrant men. The only exception to this pattern is immigrants from Argentina: in this group the share of endogamously married immigrants is somewhat lower among men. Once the observable characteristics are taken into account, the highest propensity for endogamy is found among Moroccan men and women and Romanian and Ecuadorian men.

Their results regarding the effect of education and age at migration on partner choice show a somewhat more complex picture than in Cortina, Esteve, and Domingo (2008). In particular, whereas it is clear that more-educated immigrant men are less likely to be married endogamously, this association is not statistically significant for immigrant women. Gender differences also emerge when looking at the effect of age at migration. Immigrant men arriving young to Spain are less likely to marry endogamously, while the opposite is the case for women. Finally, the period of migration also matters: pre-2000 immigrants had a lower propensity to be married endogamously. The authors ascribe this effect to smaller ethnic marriage markets in the early stages of immigration to Spain. This interpretation is consistent with evidence from other countries showing a positive association between group size and endogamy (Blau, Blum, and Schwartz 1982; Van Tubergen and Maas 2007; Chiswick and Houseworth 2011). More intense individual selection in the initial phases of migration flows has also been argued to be one factor underlying higher intermarriage rates when the flows initiate, compared to the more mature phases of the immigration process when selection decreases and co-ethnic group size increases (Klein 2001). In fact, immigrants who arrived in Spain before the late 1990s, especially from Latin America, are known to have a substantially different profile from the most recent immigrants in terms of reasons for migration (more political than economic), education, and national origin. In any case, in their analyses Sánchez-Domínguez, De Valk, and Reher (2011) never empirically test these hypotheses concerning the role of the marriage market structure (group size).

Esteve and Bueno (2012) also use the NIS to explore the marital choices of Moroccan immigrants who migrated to Spain unmarried after 1980. In contrast to Latin

Americans, the profile of Moroccan immigrants to Spain has remained relatively unchanged (Cebolla and Requena 2009). Moroccan men who marry endogamously typically do so three years after migration, while those marrying a non-Moroccan woman typically do so eight years after the move to Spain. For Moroccan women, no clear link is identified between endogamy and duration of stay, whereas, somewhat surprisingly, an exogamous marriage is more likely to take place soon after migration than some years later. This result may suggest that Spanish-born men also participate in transnational marriage markets. Building on classical intermarriage literature on the influence on partner choices of third parties and marriage markets (Kalmijn 1998; Jacobson and Heaton 2008; Tolsma, Lubbers, and Coenders 2008), Esteve and Bueno (2012) find that chances of endogamous choice rise if the migration decision was influenced by a relative or acquaintance, which in their interpretation indicates that immigrants’ social networks promote endogamous marriages. Del Rey Poveda and Vono de Vilhena (2014) also address the issue of the influence of individual networks on partner choice. Using the same dataset, they focus on immigrants from Romania, Morocco, Argentina, Colombia, and Ecuador who have not been married prior to their arrival in Spain. Their study shows that for immigrant men and women the presence of family members or co-ethnic friends at the moment of arrival increases the likelihood of an endogamous partner choice. On a similar note, a higher degree of affiliation to Spain (operationalized by the possession of Spanish nationality) increases the chances of marrying a Spanish native.

Most studies on mixed-nativity marriages in Europe analyse the characteristics of the foreign-born who enter exogamous or endogamous marriages. However, it takes two to marry, and it can be argued that our understanding of intermarriage is not complete without insight into natives' propensity to intermarry. In fact, in both international and Spanish literature our understanding of natives' inter-marriage decisions is much more limited than our understanding of immigrants' intermarriage decisions. To our knowledge, only two studies have addressed this issue, and only partially. Serret and Vitali (2014) compare the intermarriage patterns of natives in Spain and Italy with data from the Marriages Register. According to their results, in both countries native men who marry an immigrant from Eastern Europe, Africa, Asia, or Latin America tend to be lower-educated than those who marry a native spouse. By contrast, for both men and women higher education is mostly positively associated with the likelihood of marrying a partner from Western Europe or North America. Medrano et al. (2014) find something similar when examining marriages between Spaniards and other Europeans, making a rough distinction between the natives of EU-15 countries and other EU countries (here labelled "new Europeans"): while a higher education level implies a higher likelihood of marriage with an EU-15 spouse, it is lower-educated Spaniards who have a tendency to marry immigrants from new EU member countries.

In addition, they found that Spanish women marry a partner from the EU-15 more often than Spanish men, while the opposite is the case when it comes to marrying a European from outside the EU-15.

## 3. Theoretical expectations in the context of the changing local marriage market in Spain

Although the results of the studies reviewed above are very interesting, they do not provide a convincing story of why in Spain men and women intermarry at different rates and with different immigrant groups. According to the status homogamy theory (Becker 1973, 1974), married spouses have similar characteristics in terms of educational level and/or socioeconomic status, even in mixed marriages. This body of research basically concludes that people find mates who are similar to themselves in status, class, education, and religion (Kalmijn 1993, 1998) as well as race (Lieberson and Waters 1988). In sum, married partners tend to be alike in every dimension except gender. For immigrants the assimilation hypothesis proposes the same, but only in the highly-educated segment of the population, because higher education is believed to weaken attachments with the group of origin and consequently to blur the cultural barriers against marriage out of their own group (Hwang, Saenz, and Aguirre 1995 cited in Kalmijn 1998: 401).

By contrast, Merton (1941) explains the formation of mixed couples by the exchange theory, which requires marriage partners to be different in at least one key dimension other than gender. Without difference the 'exchange' cannot take place: in exchange for the cost of crossing racial, ethnic, and/or cultural lines that intermarriage entails for the partner from the socially privileged native group, the immigrant partner must have some valuable trait to offer. This cost may be high or low, depending on the perceived social distance and previously established prejudices between majority and minority groups. ${ }^{5}$ In principle, the larger the (perceived) social distance between the natives and the ethnic group to which the immigrant partner belongs, the more necessary some sort of exchange is to compensate for the native partner's loss of status entailed by intermarriage. In immigrant endogamous couples, with a possible exception of those formed through marriage migration, status homogamy is expected to dominate since there is no clear trait to be exchanged. ${ }^{6}$ In the case of mixed marriages the status exchange theory predicts that the immigrant partner will have higher educational and/or

[^1]social status than their native partner, which they will exchange for a more stable legal status, upward socioeconomic mobility, and access to a safer and richer social network.

However, as Maffioli, Paterno, and Gabrielli (2013) point out, even if an immigrant's educational level is higher than that of their native partner, this does not necessarily imply the possibility of status exchange because of the limited transferability of qualifications across borders and their different rewards in destination labour markets. As the assimilation hypothesis argues, education is an important factor in exogamy because it increases social contacts and relaxes traditional links. However, to compensate members of the majority group for the perceived loss of status associated with intermarriage, other traits like physical appearance and younger age might be more important than educational level. A large age difference is, after all, an old and wellrecognized system for balancing social differences in mate selection: as men age they are known to choose women who are increasingly younger (Alarie and Carmichael 2015; England and McClintock 2009).

Beyond the partly contradictory predictions derived from the status homogamy and status exchange theories with regard to immigrant/native mixed marriages, it is important to remember that individual preferences regarding marital choices can be seriously constrained by the structural conditions of marriage markets, as the "opportunity theory" formulated by Blau $(1977,1994)$ emphasizes. Two of the most important constraints on marital choices are sex imbalances within the marriage market where individuals search for a partner, and size of the individuals' own group within the local marriage market. The larger the size of the own group, the greater (statistical) chance there is of endogamous contacts, and the greater the source of social control; accordingly, a negative relationship is expected between size of own group and the propensity to mix-marry. On the other hand, sex imbalances within the own group are likely to increase intermarriage rates (at least) for the majority sex, since the fewer marriageable women (men) within the same group, the more likely men (women) will be to marry a woman (man) from outside. The effect of these two variables (group size and sex ratio) are expected to be stronger in shaping women's choices to the extent that they tend to be subject to stronger social control in most cultures.

Bearing all this in mind, it is clear that a proper understanding of the gender and ethnic differences in intermarriage patterns in Spain requires framing any empirical analysis within the context of changing marriage markets. First of all, massive immigration flows to Spain started at a time when the local marriage market was already segmented by gender and educational level and was developing some clear unbalances. In 2007, the year before annual immigrant entries peaked, young, loweducated, single men faced a clear shortage of 'similar' women (Figure 2: see sex ratios above 1 for dark-grey bars - primary education and less - in age groups younger than 35), while highly educated women faced a clear shortage of similarly educated Spanish-
born available partners, especially in the youngest groups (Figure 2: see sex ratios below 1 for light-grey bars - tertiary education ).

Figure 2: Sex ratio of Spanish-born available spouses by age and educational level, Spain 2007


Source: Labour Force Survey 2007.
Note: Sex ratios are computed as the number of males available (single, divorced, or widowed) over the number of females available in each age and education group. Individuals in non-marital cohabitation are considered to be available here, which might affect the results.

In absolute size, according to Labour Force Survey data for 2007, the shortage of similar partners was much larger for low-educated, native men (an excess of 684,767 available men in age groups 16-34) than for highly-educated women (an excess of 365,501 available women in age groups 16-34), ${ }^{7}$ which gives a higher chance of mixed couples consisting of native men and immigrant women than the other way around. However, this expectation of more likely matches between native men and immigrant women also depends on at least two other factors: (1) the gender, marital status, and educational-level composition of the immigrant inflows that arrived during those years,

[^2]and (2) native men and women's differential propensity to cross ethnic homogamy lines.

Regarding the composition of the immigrant inflow, first, by 2007 approximately $64 \%$ of total immigrants aged between 16 and 55 from any country of origin were potentially 'available' for marriage - meaning unmarried (see Figure 3). However, the extent of this availability varied across genders and origins: the proportion of potentially available partners was much lower among Moroccan women ( $43 \%$ ) and much higher among Colombian women and EU25 men (77\%). In other words, the opportunity for native men and women to find a partner among the recently arrived immigrants varied substantially across origin groups, even without taking into account their level of education.

Figure 3: Percentage of available partners within the same origin group among immigrants in 2007, by gender and origin


Source: NIS 2007.
Note: The figures in the graph are based on immigrants aged 16 and over, living in Spain in 2007, who arrived after 1996.

Second, we know that in Spain there has been an increasing trend towards educational homogamy among the most educated; this pattern has been especially strong among highly educated women. There is also some indication that the traditional prevalence of female hypergamy among heterogamous unions has started to decrease among the youngest cohorts (Esteve and Cortina 2009). Accordingly, and assuming that immigrants are, on average, less educated than natives of similar age, we should expect a stronger reluctance among native highly educated women to intermarry with
immigrants than among low-educated men, reinforcing the expected effect of the differential size of the gender and educational unbalances in the native marriage market and in the composition of the recent immigration inflows.

According to all the facts described so far, increasing immigrant inflows would raise intermarriage rates for Spanish-born women if a large number of the newly arrived immigrants were single and relatively highly educated men, since this is the type of men in shortage in the Spanish marriage market. Conversely, Spanish-born men would be more likely to engage in mixed couples with immigrants if immigration inflows were abundant in non-married women of relatively young ages (younger than the Spanish unmarried men), who did not mind marrying native low-educated men, regardless of their own educational level, because in exchange they get other types of advantage, such as a more secure legal status and access to native social networks, which may result in a safer socioeconomic position. Note that this reasoning is not necessarily dependent on differential preferences concerning more or less traditional gender orientations when choosing a partner (Safranoff 2015). Single immigrant women, regardless of their own educational level and their preferences regarding gender roles within the couple, have lower bargaining power than Spanish-born women due to their more vulnerable legal position and generally weaker socioeconomic situation. At the same time, low-educated Spanish-born men may find them more attractive as potential partners when the local marriage market is suffering from a clear shortage of native marriageable women with low education. In other words, given the structure of the native marriage market in Spain, a potential educational exchange is more likely in marriages between native Spanish women and immigrant men than in marriages between native Spanish men and immigrant women. In addition, the importance of the potential educational exchange will vary across different combinations of native and immigrant groups depending on the perceived social distance between the natives and each immigrant group, and also across gender. However, it might also be the case that the value of education as a sign of status will decrease as social distance increases due to the lack of skill transferability: as a result, no clear association between perceived social distance and strength of the educational exchange hypothesis would be observed.

In the next sections we further explore the characteristics of the endogamous and mixed couples formed in Spain between 1996 and 2008. Unfortunately, we cannot actually model marriage as a bilateral decision, but we can assess whether patterns of status exchange, status homogamy, and assimilation can be traced back in each type of couple (immigrant with native-born Spanish; immigrant with immigrant), distinguishing by gender, education, and national origin of each partner.

## 4. Data and methodology

### 4.1 Data and methodology for the analysis of immigrants' marital choices

The individual-level data for the empirical analysis of immigrants' marital choices is drawn from the 2007 National Immigrant Survey (NIS), released by the Spanish National Institute of Statistics. This partly retrospective survey covers a wide range of questions on the sociodemographic characteristics and migration experience of the foreign-born in Spain. A total of 15,500 individuals born outside Spain were surveyed. In our analysis we only include immigrants who moved at marriageable age (16 and older) to Spain from 1995, and who were younger than 55 years at the time of the survey. Immigrants who married Spanish-born partners before coming to Spain are excluded from our sample, since the theoretical reasoning developed to explain intermarriage decisions in immigration countries does not apply to them and their marital decisions were made in a different marriage market. Only individuals who had spent at least one year in Spain before marrying endogamously or exogamously are thus included. This decision guarantees comparability with the analysis of natives' marital choices, based on data from the Spanish Marriage Register, which does not include marriages celebrated abroad (see more below). The main characteristics of the immigrants from the NIS 2007 included in our analytical sample are summarized in Table 1.

The dependent variable is transition to first marriage in Spain in year $t .{ }^{8}$ The origin of the partner is also taken into account so that each immigrant who migrates to Spain unmarried is at risk of two competing events: (1) marriage with a spouse born in the same country of origin (endogamous marriage), or (2) marriage with a Spanish-born spouse (exogamous marriage). We do not analyse the marriages of immigrants who enter mixed marriages by marrying immigrants from other countries due to the very small number of these events recorded in the survey. Unfortunately, entry into cohabitation could not be analysed since the NIS did not collect information on the year cohabitation started.

[^3]Table 1: Descriptives of the sample for analysis of immigrants' marital choices, by gender

|  | Men | Women |
| :--- | :---: | :---: |
| Age at migration 16-20 | $22.2 \%$ | $19.6 \%$ |
| $21-25$ | $32.3 \%$ | $29.2 \%$ |
| $26-30$ | $25.0 \%$ | $21.6 \%$ |
| $31-35$ | $11.6 \%$ | $13.1 \%$ |
| 36 or more | $8.9 \%$ | $16.4 \%$ |
| Years since migration (mean) | 5.1 | 5.4 |
| Education level primary or less | $24.7 \%$ | $19.2 \%$ |
| Secondary | $56.9 \%$ | $56.6 \%$ |
| More than secondary | $18.4 \%$ | $24.2 \%$ |
| Migration motivation economic | $57.2 \%$ | $50.5 \%$ |
| Student | $7.1 \%$ | $8.1 \%$ |
| Other | $35.7 \%$ | $41.4 \%$ |
| Had a child before migration | $11.1 \%$ | $32.3 \%$ |
| Has ever worked before migration | $76.3 \%$ | $76.2 \%$ |
| Spanish citizen | $3.7 \%$ | $6.9 \%$ |
| Homeowner | $16.8 \%$ | $19.9 \%$ |
| Log of group size (mean) | 12.0 | 12.1 |
| Sex ratio within immigrant group (mean) | 0.9 | 1.0 |
| Immigrant group EU25 | $13.4 \%$ | $11.3 \%$ |
| Morocco | $15.9 \%$ | $5.9 \%$ |
| Romania | $12.2 \%$ | $11.9 \%$ |
| Ecuador | $9.8 \%$ | $12.4 \%$ |
| Colombia | $6.6 \%$ | $15.6 \%$ |
| Other Europe | $6.0 \%$ | $6.0 \%$ |
| Other Latin America | $21.8 \%$ | $32.3 \%$ |
| Other countries | $14.3 \%$ | $4.7 \%$ |
| N | 1,675 | 1,649 |

Source: NIS 2007.

Multivariate analysis is based on a discrete-time multinomial logit competing risk model. Time is measured as years since migration and its squared term. Age at arrival is controlled for by a categorical variable with the following categories: 16-20, 21-25, $26-30,31-35$, and 36-55 years of age at arrival in Spain. Education level refers to the level attained by the time of the survey and is categorized as: primary school or less, lower or upper secondary, and more than secondary. ${ }^{9}$ Migration motivation is divided into three categories: economic migrant, student, and other. Two indicator variables, having child before migration and having work experience before migration, are introduced to control for the heterogeneity of the immigrant population with respect to

[^4]their pre-migration experiences. ${ }^{10}$ The model also controls for Spanish citizenship and homeownership in Spain.

The data on group size and sex composition of immigrant groups by country of birth stem from the Municipality Register, which is administered by the Spanish National Institute of Statistics and includes most immigrants living in Spain regardless of their legal status. ${ }^{11}$ Group size is a time-varying variable and denotes the number of all individuals, regardless of age, gender, and marital status, ${ }^{12}$ born in the same country and living in Spain in the year of observation, which ranges between 1996 and 2007. The log transformation is used to reduce skewedness. Sex ratio measures the number of co-ethnics of the opposite sex divided by the number of co-ethnics of the same sex who live in Spain in the year of observation. Note that both variables are measured at the national level.

Finally, the heterogeneity of the immigrant population with respect to social distance from native Spaniards is controlled for by a categorical variable that distinguishes between immigrants from: the EU25, Morocco, Romania, Ecuador, Colombia, other European countries, and other Latin American countries. All remaining foreign-born population is grouped into a residual heterogeneous category. The limited size of the sample did not allow running separate models for each origin group. Duration of stay in Spain, Spanish citizenship, group size, and sex ratio are timevarying variables and refer to year $t$. Homeownership is also a time-varying variable and refers to year $t-1$. All other variables are time invariant.

### 4.2 Data and methodology for the analysis of natives' marital choices

The empirical analysis of natives' marital choices is based on individual-level data from the Spanish Marriage Register from the National Institute of Statistics for the year 2008. The cross-sectional nature of the Marriage Register precludes analysing natives' choices from a dynamic perspective like that used for immigrants. However, it allows very detailed categories of intermarriage by origin of the immigrant spouse. The year 2008 was chosen because it was closest to when the NIS was carried out (2007) and also in order to maximize the number of relevant explanatory variables available. In previous years the Marriage Register data lacked information on the educational level and occupation of each partner, which has been included since 2008. Unfortunately, the

[^5]information on education and occupation was not very well recorded initially and was missing for between $17 \%$ and $35 \%$ of the cases, depending on the group and the variable. However, the omission seems to be related to how diligent the Register Office in each province was in collecting this information, rather than individuals' willingness to report it. Robustness checks including and excluding these cases were run with a simpler specification of the models and the results remained substantially unchanged. In the final analyses in this paper, all cases with missing information have been excluded.

It is important to emphasize that the use of the Marriage Register data implies a restriction to only marriages celebrated in Spain. This could lead to a certain underestimation of mixed marriages because an unknown part of them might have been celebrated abroad, even after migration of the immigrant partner. Also, this data excludes unmarried cohabiting couples, which are relatively common among some of the most important migrant groups in Spain, such as Latin Americans (Cortina, Bueno, and Castro-Martín 2010). Finally, only heterosexual marriages are analysed (same-sex marriages have been registered in Spain since 2005). In spite of these limitations, marriage records offer relatively detailed sociodemographic information for the two spouses, especially since 2008. Table 2 summarizes the characteristics of the marriage sample utilized for the analysis of natives' marital choices.

We conduct multinomial regression models to estimate the likelihood of natives (men and women separately) having married a foreign-born spouse from a particular country/region of birth (Morocco, Romania, Ecuador, Colombia, EU25, Rest of Europe, and Other) instead of another native. Focusing on the country of birth instead of the country of citizenship reduces the potential bias introduced by the increasing rate of naturalizations that have occurred in Spain over the last fifteen years. This decision seems adequate due to the very small size of the second generation of adult age in Spain in 2008.

In the multivariate models we first control for the main individual characteristics of the native spouse, including age (using a linear and quadratic term) and marriage order, defined according to the prior marital status of the native spouse (first order when he/she was single before marrying, and second order when he/she was widowed or divorced). Secondly, in order to explore indications of potential (status) exchange in this type of mixed marriage, we introduce two sets of variables that measure the level of homogamy/heterogamy in terms of age and education within the married couple. We take as reference categories couples in which spousal age difference is less than two years, and couples in which both spouses have less than secondary education.

Table 2: Descriptives of the sample for analysis of natives' marital choices, by gender

|  | Native men | Native women |
| :--- | :---: | :---: |
| Origin of the spouses |  |  |
| Both Spanish born | $88.8 \%$ | $92.3 \%$ |
| Spanish/Ecuadorian | $0.5 \%$ | $0.2 \%$ |
| Spanish/Colombian | $1.0 \%$ | $0.3 \%$ |
| Spanish/Other Latin American | $5.5 \%$ | $2.5 \%$ |
| Spanish/EU25 | $1.3 \%$ | $2.0 \%$ |
| Spanish/Moroccan | $0.6 \%$ | $1.0 \%$ |
| Spanish/Romanian | $0.6 \%$ | $0.1 \%$ |
| Spanish/rest of Europe | $1.1 \%$ | $0.4 \%$ |
| Spanish/other foreign born | $0.6 \%$ | $1.1 \%$ |
| Marriage order |  |  |
| $\quad$ Second marriage | $18.6 \%$ | $16.4 \%$ |
| First marriage | $81.4 \%$ | $83.6 \%$ |
| Occupation |  |  |
| Inactive | $1.8 \%$ | $9.0 \%$ |
| Unemployed | $1.6 \%$ | $5.4 \%$ |
| Low-skilled manual workers | $10.9 \%$ | $8.5 \%$ |
| Skilled workers | $56.6 \%$ | $46.4 \%$ |
| Highly skilled workers | $29.1 \%$ | $30.6 \%$ |
| Age heterogamy |  |  |
| Man older | $53.5 \%$ | $51.6 \%$ |
| Woman older | $14.5 \%$ | $15.3 \%$ |
| Age homogamy 0 1 years diff. | $32.1 \%$ | $33.1 \%$ |
| Education heterogamy |  |  |
| Less than secondary - partner higher | $17.1 \%$ | $8.5 \%$ |
| Both secondary | $17.4 \%$ | $17.5 \%$ |
| Secondary, partner higher | $11.5 \%$ | $5.4 \%$ |
| Secondary, partner lower | $7.2 \%$ | $11.4 \%$ |
| Both tertiary | $18.6 \%$ | $19.4 \%$ |
| Tertiary, partner lower | $7.1 \%$ | $17.2 \%$ |
| Both less than secondary | $21.1 \%$ | $20.6 \%$ |
|  | 100,488 | 97,052 |

Source: Spanish Marriage Register 2008.
Note: We have excluded observations with missing information on occupation and/or education of the spouses. Missing values represent $37 \%$ of the cases for education and $18 \%$ for occupation ( $14 \%$ for both variables).

## 5. Results

### 5.1 Immigrants' marital choices

Since we are dealing with competing risks, the patterns of post-migration marriage formation can be analysed using the cumulative incidence approach described in Coviello and Boggess (2004). Figure 4 shows that endogamy is a prevailing choice for immigrant men. Around $30 \%$ of immigrant men marry a co-ethnic within the first ten years after migration to Spain. The cumulative probability of entering an endogamous marriage is roughly the same for men and women in the first three years following migration, but from that point on women opt for a co-ethnic partner less frequently than men. In accordance with most of the previous literature (e.g., Lanzieri 2012), but also in line with the large shortage of potential native female partners for low-educated men, immigrant women intermarry with natives more often than immigrant men. In fact, they are more likely to marry a native than a co-ethnic partner. These patterns are already visible in the first year after arrival. The share of immigrant women who marry a native partner - roughly $40 \%$ within the first ten years in Spain - is almost twice that of immigrant men.

Figure 4: Cumulative probability of the formation of endogamous marriage and intermarriage for immigrant men and women


Source: NIS, own calculations.

Table 3 displays the results of the discrete-time multivariate analysis for immigrants' marital choices in Spain. We start by discussing the findings where gender differences are not very pronounced. The results show that the association between duration of stay in Spain and marriage formation has an inverted U-shape. The risk of marriage increases with duration in the initial period following arrival and then starts to decrease. As for migration motivation, economic migrants - both male and female - are less likely to marry a native partner than migrants with a different motivation. Having a child before migration increases the probability of entering both endogamous and exogamous marriages, although not all coefficients are statistically significant. We are not able to control for marriage order, but this result may suggest that people who have already experienced a union dissolution are more likely to marry following migration. Having at least some pre-migration work experience implies a higher likelihood of marrying a native Spaniard, and this is the case for both men and women. Importantly, there is no statistically significant association between the possession of Spanish citizenship and marriage formation. On the other hand, homeowners, who are likely to be individuals with greater economic resources, are more likely to marry, and this association is especially strong when it comes to the probability of marrying a native. Differences across immigrant groups are substantial, even after controlling for observable characteristics. Immigrant men and women from the EU25 countries are the least likely to enter an endogamous marriage, whereas Moroccans, Romanians, and immigrants from European countries outside the EU25, regardless of gender, show a particularly high propensity for endogamy.

All the findings discussed so far are characterized by relatively small gender differences. However, some other results show more pronounced gender patterns. For instance, age at migration matters more for immigrant men than women. Among men, the risk of endogamous marriage increases with age at migration and is highest for men who migrated between ages 30 and 35, largely in line with the results previously obtained by Sánchez-Domínguez, De Valk, and Reher (2011). By contrast, the risk of intermarriage is highest for those men who arrived in Spain between ages 21 and 30. Among women the association between age at migration and the risk of marriage is generally weak, regardless of the type of marriage. These results clarify the findings of previous studies that were not able to distinguish between marriages celebrated before and after migration (Cortina, Esteve, and Domingo 2008) or did not explicitly consider intermarriage (Sánchez-Domínguez, De Valk, and Reher 2011). Interestingly, gendered patterns also arise when looking at the impact of education. More-educated immigrant men are more likely to enter marriage and this association is particularly strong as far as the risk of intermarriage is concerned - immigrant men with post-secondary education are three times more likely to marry a native than men with primary school or less. This result is clearly in line with the expectations derived from both the assimilation
approach and the characteristics of the native marriage market in Spain, as described in previous sections. By contrast, the association between education and marriage of either type is almost non-existent among immigrant women, which reinforces our expectation that education is not necessarily the trait most sought after by natives willing to cross ethnic lines to find a partner, especially if they are low-educated men, who suffer from the largest shortage of potential partners in the local marriage market.

Table 3: Discrete-time multinomial logit model, first post-migration marriage among immigrants in Spain (base outcome: staying unmarried), odds ratio

|  | Men endogamy | intermarriage | Women endogamy | intermarriage |
| :---: | :---: | :---: | :---: | :---: |
| Age at migration (ref: 16-20) |  |  |  |  |
| 21-25 | $2.97 * * *$ | 1.93** | 1.37 | 1.17 |
| 26-30 | 3.14*** | 2.06** | 1.17 | 1.08 |
| 31-35 | $3.33 * * *$ | 1.66 | 0.70 | 0.90 |
| 36 or more | 1.76 | 0.67 | 0.32 | 0.73 |
| Years since migration | $1.74 * * *$ | $1.47{ }^{* * *}$ | 1.26* | $1.27^{* * *}$ |
| Years since migration squared | 0.94*** | $0.95 * *$ | $0.96{ }^{* * *}$ | 0.96 *** |
| Education level (ref: primary or less) |  |  |  |  |
| Secondary | $1.53 * * *$ | 1.74** | 0.94 | 1.11 |
| More than secondary | 1.16 | $2.99 * * *$ | 0.94 | 1.12 |
| Migration motivation (ref.: economic) |  |  |  |  |
| Student | 0.45* | 1.55 | 0.69 | $1.83 * * *$ |
| Other | 0.79 | $2.06 * * *$ | 1.51*** | $1.71{ }^{* * *}$ |
| Had a child before migration | 1.75*** | 1.40 | 1.25 | 1.67 *** |
| Has ever worked before migration | 1.12 | 2.23*** | 1.19 | 1.49** |
| Spanish citizen | 0.52 | 0.82 | 0.70 | 0.58 |
| Homeowner | 1.65* | $3.52{ }^{* * *}$ | 1.87** | $3.54 * * *$ |
| Group size (log) | 0.94 | 0.94 | $1.42{ }^{* * *}$ | 0.90** |
| Sex ratio within immigrant group | 1.53 | 0.99 | 1.77*** | 0.77 |
| Immigrant group (ref.: EU25) |  |  |  |  |
| Morocco | 3.97*** | 0.60 | $3.13 * * *$ | 1.33 |
| Romania | 4.39*** | 0.55 | $3.50 * * *$ | 1.63* |
| Ecuador | 2.31** | $0.11^{* * *}$ | 1.51 | 1.01 |
| Colombia | 1.90* | 0.84 | 1.61 | 1.65** |
| Other Europe | 2.62*** | 0.29** | $4.02^{* * *}$ | 1.77** |
| Other Latin America | 1.47 | 0.94 | 1.83* | 1.37* |
| Other countries | 1.63 | 0.71 | 4.03 *** | 0.51* |
| N | 1,675 | 1,649 |  |  |
| Person-years | 6,869 | 6,538 |  |  |

[^6]Gender differences can also be identified when looking at the impact of structural factors on partner choice. Among men, somewhat surprisingly, there is no association between the size of own group and the likelihood of entering an endogamous or exogamous marriage. A favourable sex ratio (men outnumber women within the own immigrant group) increases the risk of endogamous marriage, but this coefficient is not statistically significant either. By contrast, for women, belonging to a larger group implies an increased risk of endogamy as well as a lower risk of exogamy, and a higher ratio of men to women within the own immigrant group increases the likelihood of endogamous marriage. The analysis shows an analogous result for men, but this association is not statistically significant, which can be read as an indication of stronger social control over women's marital decisions

Whereas distinguishing between men and women is not particularly important when it comes to the propensity for endogamy across immigrant groups, this is not the case when comparing the propensity to intermarry. Men from the EU25 countries have the highest likelihood of marrying a native spouse, and the difference is particularly pronounced when compared to men from Ecuador or Eastern Europe. This result is again in accordance with our expectations derived from the type of shortage in the local marriage market for native (highly educated) women. By contrast, when looking at immigrant women and after controlling for observables, several groups show a higher likelihood of intermarriage with native men than the EU25 migrants; this is especially the case for women from Colombia, Romania, and other non-EU Europeans.

### 5.2 Natives' marital choices

Tables 4 and 5 display the results of the multivariate analysis for mixed couples that focuses on the natives' characteristics, for men and women respectively. Each column shows the coefficients estimated for each exogamous outcome compared to native endogamous marriages (reference category). In the case of native men, and in line with the previous literature (Dean and Gurak 1978; Muttarak and Heath 2010), results in Table 4 clearly indicate that native men who are in a second or higher order marriage are more frequently in a mixed marriage than native men who never married previously. With regard to their occupational status, highly-skilled employed native men are systematically the least likely to be intermarried for all the mixed marriage combinations by origin of the immigrant spouse. Moreover, unemployed and lowskilled and manual native men are more likely to be in mixed marriages with Romanian, Moroccan, Ecuadorian, and other Latin American women than in marriages with another native, compared to highly skilled men. In sum, intermarriage for native
men seems more likely among men with more unstable positions in the labour market, and hence with a weak position in the native marriage market.

Table 4: Multinomial regression model, marital choices among male nativeborn Spaniards in 2008 (base outcome: marrying a native woman), odds ratio

|  | Spanish/ Ecuadoria | Spanish/ Colombian | Spanish/ other LA | Spanish/ EU25 | Spanish/ Moroccan | Spanish/ Romanian | Spanish/ other Eur. | Spanish/ other imm. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Socioeconomic characteristics of the male native spouse |  |  |  |  |  |  |  |  |
| Age | 1.11*** | $1.12^{* * *}$ | 1.10*** | $1.17^{* * *}$ | 1.10*** | 1.10*** | $1.12^{* * *}$ | 1.06** |
| Age squared | 0.99* | 0.99*** | 0.99*** | 0.99*** | 0.99*** | 0.99*** | 0.99*** | 0.99 |
| Marriage order (ref. 1st marriage) |  |  |  |  |  |  |  |  |
| Second marriage | 2.15*** | $2.97 * * *$ | 2.03*** | 1.17* | 2.69*** | 3.8 *** | $3.79 * * *$ | 1.21 |
| Labour market position (ref.: highly skilled) |  |  |  |  |  |  |  |  |
| Inactive | 1.35 | 1.55** | 1.39*** | 1.02 | 1.46 | 1.32 | 1.23 | 0.92 |
| Unemployed | 2.11** | 1.27 | 1.55*** | 1.43** | 2.2** | 1.06 | 1.80 | 1.32 |
| Low-skilled and manual | 1.82*** | 1.14 | 1.22*** | 1.03 | 1.92*** | 1.49** | 1.07 | 1.48 |
| Skilled worker | 1.35** | 0.94 | 1.00 | 0.95 | 1.2 | 1.22 | 1.13 | 0.81* |
| Status exchange |  |  |  |  |  |  |  |  |
| Age heterogamy (ref.: 0-1 years diff.) |  |  |  |  |  |  |  |  |
| Husband older | 1.70*** | 1.678*** | 1.97*** | 1.01 | 2.57*** | 3.70*** | 2.03*** | 1.72*** |
| Wife older | 1.60** | $2.44 * * *$ | 2.09*** | 1.73*** | 1.75*** | 0.82 | 1.48*** | 1.89*** |
| Education (ref.: Both spouses less than secondary) |  |  |  |  |  |  |  |  |
| Less than secondary, wife higher | 0.79 | 0.92 | 0.85*** | 1.02 | 0.35*** | $0.47^{* * *}$ | 1.90*** | 0.71** |
| Secondary, wife higher | $0.27 * * *$ | $0.47^{* * *}$ | 0.54*** | 1.08 | $0.14 * * *$ | 0.23 *** | 1.40** | 1.01 |
| Both secondary | 0.60*** | 0.74** | 0.61*** | 1.14 | 0.20*** | 0.29*** | 0.98 | 0.8 |
| Secondary, wife lower | 1.11 | 1.12 | 0.94 | 1.02 | 0.97 | 0.65** | 0.93 | 0.91 |
| Both tertiary | 0.20*** | 0.40*** | 0.37*** | 1.24** | 0.12*** | 0.14*** | 1.05 | 1.29 |
| Tertiary, wife lower | 0.70* | 0.60*** | 0.69*** | 1.37** | 0.37*** | $0.48^{* * *}$ | 0.92 | 0.93 |
| N | 513 | 993 | 5,495 | 1,354 | 611 | 610 | 1,096 | 570 |

Source: Marriage Register 2008. Note: ${ }^{*} \mathrm{p}<0.10$; ** $\mathrm{p}<0.05$; *** $\mathrm{p}<0.01$.

When examining potential indications of some sort of (status) exchange that might compensate for the perceived loss of status for natives entering mixed marriages, the obtained results are not very conclusive, especially when education is the potentially exchanged trait. As can be seen in Table 4, couples formed by a native man with primary or secondary education and an immigrant woman with higher education than his are systematically less likely to happen than mixed marriages in which partners are both low-educated - against the logic of the status exchange hypothesis, which predicts that the native partner compensates for the loss of status derived from marrying an
immigrant with the immigrant's higher educational level. The only exception to this pattern appears in couples comprised of a native man and a woman from a non-EU European country such as Russia or Ukraine. Turning to the role of age, the obtained results suggest a positive association between both types of age heterogamy (man older, woman older) and intermarriage. More importantly for the status exchange hypothesis, our results indicate that for native men to marry a younger woman increases the probability of intermarriage, especially when the origin of the woman is Moroccan and Romanian.

The results in Table 5 suggest more diverse intermarriage dynamics in the case of native women than in the case of their male counterparts. As in the case of native men, native women who have been previously married are clearly more likely to be in a mixed marriage than native women who were never married. However, the role of occupational status is more complex among women than men: it seems irrelevant in explaining intermarriage with Ecuadorian, Colombian, Romanian, and EU25 men; by contrast, the likelihood of being married to a Moroccan man is higher for inactive, unemployed, and low-skilled women. In contrast again to men's results, a more consistent pattern of education exchange can be detected for native women marrying Colombians and other Latin Americans. However, the status exchange hypothesis in education can be fully discarded for mixed marriages joining Spanish native women with Moroccans and Romanians and the results are contradictory for marriages between native women and EU25 and other European men. Interestingly, the role of age heterogamy is much clearer and stronger in native women/immigrant men marriages than in native men/immigrant women marriages: an age differential against the woman (woman older than man) appears systematically associated with a higher probability of intermarriage with any immigrant group compared to endogamous marriages. In other words, Spanish native women are the ones who seem to be exchanging their higher educational, occupational, or social status for the younger age of their immigrant husbands. ${ }^{13}$

[^7]Table 5: Multinomial regression model, marital choices among female nativeborn Spaniards in 2008 (base outcome: marrying a native man), odds ratio

|  | Spanish/ Ecuadoria | Spanish/ Colombian | Spanish/ other LA | $\begin{aligned} & \text { Spanish/ } \\ & \text { EU25 } \end{aligned}$ | Spanish/ Moroccan | Spanish/ Romanian | Spanish/ other Eur. | Spanish/ other imm. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Socioeconomic characteristics of the female native spouse |  |  |  |  |  |  |  |  |
| Age | $0.67^{* * *}$ | 0.76*** | 0.81*** | 1.20*** | $0.72^{* * *}$ | 0.83 | 1.02 | 0.92*** |
| Age squared | $1.00 * * *$ | $1.00 * * *$ | $1.00 * * *$ | 0.99*** | $1.00 * * *$ | 1 | 0.99 | 1.00*** |
| Marriage order (ref. 1st marriage) |  |  |  |  |  |  |  |  |
| Second marriage | $5.47^{* * *}$ | $3.52^{* * *}$ | $3.13 * * *$ | 0.9 | $2.98{ }^{* * *}$ | 2.35** | 1.60** | $1.44 * * *$ |
| Labour market position (ref.: highly skilled) |  |  |  |  |  |  |  |  |
| Inactive | 1.06 | 0.92 | 0.80** | 1.17 | $2.13^{* * *}$ | 0.96 | 1.3 | 1.11 |
| Unemployed | 1.17 | 0.55 | 0.86 | 0.92 | $2.48{ }^{* * *}$ | 1.38 | 0.98 | 1.24 |
| Low-skilled and manual | 0.95 | 1.43 | 1.16* | 1.05 | $2.35{ }^{* * *}$ | 1.28 | 1.78** | 2.03 *** |
| Skilled worker | 0.66 | 1.22 | 0.88** | 0.97 | 1.21 | 0.89 | 1.340* | 0.93 |
| Status exchange |  |  |  |  |  |  |  |  |
| Age heterogamy (ref.: 0-1 years diff.) |  |  |  |  |  |  |  |  |
| Husband older | 0.96 | 1.5 | 1.11* | 1.49*** | 1.12 | 0.49** | 1.07 | 1.43 *** |
| Wife older | 4.08*** | 4.68*** | $3.39 * * *$ | 1.43 *** | 6.01*** | $5.412^{* * *}$ | 2.03 *** | 5.85*** |
| Education (ref.: Both spouses less than secondary) |  |  |  |  |  |  |  |  |
| Less than secondary, husband higher | 1.08 | $2.05 * *$ | 1.98*** | 1.16 | 0.67*** | 1.23 | 1.65 | 0.53*** |
| Secondary, husband higher | 0.54 | 1.19 | 1.42** | $1.48{ }^{* * *}$ | 0.22*** | 0.46 | 1.65** | 0.42 *** |
| Both secondary | 0.39*** | 0.93 | 1.21* | $1.44 * * *$ | 0.25*** | 0.46* | 1.25 | 0.40 *** |
| Secondary, husband lower | 0.62* | 0.66* | 0.95 | 1034 | $0.47^{* * *}$ | 0.6 | 1.12 | 0.59*** |
| Both tertiary | $0.24 * * *$ | 0.94 | 0.98 | $2.38{ }^{* * *}$ | 0.26*** | $0.03 * * *$ | 1.80** | 0.65*** |
| Tertiary, husband lower | 0.42* | 0.47** | 1.13 | 1.46*** | 0.30*** | 0.73 | 1.52* | 0.45*** |
| N | 174 | 293 | 2,410 | 1,978 | 978 | 119 | 376 | 1,101 |

Source: Marriage Register 2008. Note: ${ }^{*} \mathrm{p}<0.10$; ** $\mathrm{p}<0.05$; ${ }^{* * *} \mathrm{p}<0.01$.

## 6. Summary and conclusions

This is the first study of mixed marriages in Spain that analyses intermarriage dynamics both from immigrant and native perspectives, focusing on the moment of peak immigration in 2007-2008. Ideally, we would have followed a fully longitudinal competing risk approach, but data limitations imposed a cross-sectional approach for the analysis of natives' marital patterns. However, the detailed typology of intermarriage by origin of the immigrant partner allowed by the large size of the Marriage Register, and reading the results jointly with the longitudinal analyses of immigrants' choices, permitted us a much more fine-grained understanding of the multiple logics operating simultaneously in the Spanish marriage market.

In this paper the role of the marriage market structure - in the sense of constraints imposed by the availability of potential partners - has been considered a crucial driver
of both immigrants' and natives' intermarriage decisions. By identifying and measuring the main imbalances in both male and female immigrant and native marriage markets, we were able to formulate relatively precise expectations regarding the role that the status homogamy and the status exchange perspectives might be playing in the intermarriage landscape in Spain. The empirical analysis of the partner choices of both male and female immigrants and natives largely supported our expectations.

Using the National Immigrant Survey 2007, we observed significant differences between immigrant groups in the likelihood of marrying within or outside their own groups, even after controlling for multiple sociodemographic and immigration-specific variables, as well as indicators of marriage market constraints. We observed, for instance, that Moroccans, Romanians, and immigrants from European countries outside the EU25 displayed the highest propensity to marry a co-national partner. Furthermore, our results not only confirm a large gender differential in the probability of intermarriage, as shown in previous studies - the share of immigrant women marrying a native is nearly twice that of immigrant men - but they also reveal a strongly gendered pattern of intermarriage dynamics and distinct influencing factors. First of all, educational level appeared irrelevant in explaining the intermarriage propensity of immigrant women, whereas higher education clearly increased the probability of marrying a native woman among immigrant men. Secondly, age at migration was a non-significant predictor of intermarriage for immigrant women, while the likelihood of intermarriage decreased with older age at arrival for immigrant men. And thirdly, indicators of immigrants' marriage market constraints - group size and sex ratio within the immigrant group - were revealed to be important only for immigrant women, while being non-significant for immigrant men.

All these results are consistent with the fact that in the Spanish marriage market it is native men who face the largest shortage of potential native partners, especially if they are low educated. In this context, native men are likely to be less demanding in terms of the educational credentials they seek in potential immigrant wives. In fact, the analysis of the marriage patterns of Spanish native men indicates that intermarriage is systematically more likely than endogamous marriage for unemployed and low-skilled native men compared to high-skilled men, regardless of the origin of the immigrant woman. Moreover, the results for mixed marriages between native men and immigrant women also discard the existence of educational exchange as a mechanism to compensate for the loss of status that marrying an immigrant woman might have for Spanish native men. In fact, mixed couples in which both partners are low-educated are more likely than couples formed by a native low-educated man and immigrant woman with higher education. However, nuances are introduced if the exchange involves other appreciated traits, such as the immigrant's (relative) youth. According to our results, native men who marry younger partners are more likely to be in a mixed
marriage than those who marry a partner of similar age. More importantly, our results indicate that older man/younger woman couples are more commonly found among the intermarried. This is especially the case when the origin of the woman is Moroccan or Romanian - the two most stigmatized large immigrant groups in Spain, according to surveys on Spanish attitudes towards immigrants (CIS 2015). This result may suggest that the exchange logic does not make sense for all natives engaged in intermarriage, but only for intermarriage with immigrants from the lowest social status groups. The only exception to this explanation is the evidence suggesting a potential educational exchange at work in mixed marriages with women from the 'rest of Europe', since the social distance between Spaniards and these groups is arguably not very large. In fact, women from the largest nationalities in this group, like Ukrainians and Russians, are often perceived as more educated, prettier, and more stylish than women of other immigrant origins, for whom no evidence of educational exchange is suggested in the results.

When looking at the analyses of immigrant men and native women's marital choices the results are more difficult to reconcile. Immigrant men (but not women) from the EU25 display the highest propensity to intermarry with natives, and immigrant men with higher education are also the most likely to marry a native woman, while immigrant women's education was irrelevant when explaining their chances of marrying a native Spanish man. Both results are consistent with the profile of men that Spanish highly educated women have difficulties finding in the native marriage market. Among native women, the results obtained suggest that their own labour market status is in most cases irrelevant in explaining whether they intermarry or not. At the same time, the characteristics of the immigrant partner seem more decisive in shaping native women's preference for intermarriage than that of native men. Marriages in which the male partner is more educated than the female partner are overrepresented in Spanish-woman/Latin-American-man marriages (with Ecuadorian men being a notable exception). This result is in line with the status exchange hypothesis. In addition, there is a positive association between older woman/younger man marriages and intermarriages, regardless of the origin of the immigrant partner. These two results seems to indicate that native women in Spain are more demanding than men when considering the possibility of intermarriage: for native Spanish women, intermarriage with an immigrant partner is more frequently associated with some sort of exchange that compensates for the loss of status associated with marrying outside their own group than it is for native men.

A more careful look at the different intermarriage combinations according to the origin of the immigrant partner reveals more complex patterns that are congruent with native women's preferences having a more rigid ethnic hierarchy than those of native men, as argued by Potârcă and Mills (2015). First of all, intermarriage with Moroccan
men, the most stigmatized immigrants especially from a female perspective, seems to be reserved for inactive, unemployed, and low-skilled native women. Secondly, for highly educated native women - those facing the largest shortage of native partners in Spain - marrying a less-educated immigrant partner is only more likely than entering an endogamous marriage when these men are of (non-Romanian) European origin.

The examination of intermarriage from both the immigrant perspective and the native perspective, the focus on gendered patterns, and the incorporation of educationand gender-specific shortages in the national marriage market have provided valuable insights to better understand the logics underlying the different rates of intermarriage across the various immigrant groups in Spain. However, the analysis presented here is not without limitations, most of which are related to the type of data available, which prevented a proper analysis of matching strategies. Also, the test of the exchange hypothesis can only be taken as preliminary for several reasons: apart from the fact that exchange is likely to operate differently for different immigrant groups because the native population's perception of their relative social distances differs, it must be emphasized that education is an imperfect proxy for socioeconomic status in migration contexts due to imperfect transferability of skills, and that other traits that remain unobserved, such as physical appearance, might be more relevant when identifying a potential exchange.

## 7. Acknowledgements

The research leading to these results received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement no. 320116 for the research project FamiliesAndSocieties. The authors are grateful to two anonymous referees for valuable comments and suggestions on a previous version of this paper.

## References

Adserà, A. and Ferrer, A. (2014). Immigrants and demography: Marriage, divorce, and fertility. In: Chiswick, B.R. and Miller, P.W. (eds.). Handbook of the economics of international migration. Amsterdam: Elsevier: 315-358.

Alarie, M. and Carmichael, J.T. (2015). The 'cougar' phenomenon: An examination of the factors that influence age-hypogamous sexual relationships among middleaged women. Journal of Marriage and Family 77(5): 1250-1265. doi:10.1111/ jomf. 12213.

Becker, G.S. (1973). A theory of marriage: Part I. The Journal of Political Economy 81(4): 813-846. doi:10.1086/260084.

Becker, G.S. (1974). A theory of marriage: Part II. The Journal of Political Economy 82(2): 11-26. doi:10.1086/260287.

Blau, P.M. (1977). Inequality and heterogeneity. New York: The Free Press.
Blau, P.M. (1994). Structural context of opportunities. Chicago: University of Chicago Press.

Blau, P.M., Blum, T.C., and Schwartz, J.E. (1982). Heterogeneity and intermarriage. American Sociological Review 47(1): 45-62. doi:10.2307/2095041.

Capote, A. (2011). Inmigrantes marroquíes en Andalucía: Itinerarios migratorios en distintos contextos locales de las provincias de Córdoba y Granada. Cuadernos Geográficos 49(2): 33-54.

Castles, S., de Haas, H., and Miller, M.J. (2014). The age of migration: International population movements in the modern world. London: Palgrave Macmillan. doi:10.1007/978-0-230-36639-8.

Cebolla Boado, H. and Requena, M. (2009). Los inmigrantes marroquíes en España. In: Reher, D.S. and Requena, M. (eds.). Las múltiples caras de la inmigración en España. Madrid: Ariel: 251-288.

Center for Sociological Research (CIS) (2015). Actitudes hacia la inmigración. Madrid: Center for Sociological Research (Study 3119). http://www.cis.es/cis/export/ sites/default/-Archivos/Marginales/3100_3119/3119/es3119mar.pdf.

Chiswick, B.R. and Houseworth, C. (2011). Ethnic intermarriage among immigrants: Human capital and assortative mating. Review of Economics of the Household 9(2): 149-180. doi:10.1007/s11150-010-9099-9.

Coleman, D.A. (1994). Trends in fertility and intermarriage among immigrant populations in Western Europe as measures of integration. Journal of Biosocial Science 26(1): 107-136. doi:10.1017/S0021932000021106.

Cortina, C., Esteve, A., and Domingo, A. (2008). Marriage patterns of the foreign-born population in a new country of immigration: The case of Spain. International Migration Review 42(4): 877-902. doi:10.1111/j.1747-7379.2008.00151.x.

Cortina, C., Bueno, X., and Castro-Martín, T. (2010). ¿Modelos familiares de aquí o de allá? Pautas de cohabitación entre las mujeres latinoamericanas en España. América Latina Hoy 55: 61-74.
Coviello, V. and Boggess, M. (2004). Cumulative incidence estimation in the presence of competing risks. Stata Journal 4: 103-112.

Dean, G. and Gurak, D.T. (1978). Marital homogamy the second time around. Journal of Marriage and Family 40(3): 559-570. doi:10.2307/350936.
del Rey Poveda, A. and Vono de Vilhena, D. (2014). Marrying after arriving: The role of individuals' networks for immigrant choice of partner's origin. Advances in Life Course Research 19: 28-39. doi:10.1016/j.alcr.2013.10.003.

Dribe, M. and Lundh, C. (2008). Intermarriage and immigrant integration in Sweden: An exploratory analysis. Acta Sociologica 51(4): 329-354. doi:10.1177/ 0001699308097377.

Dribe, M. and Lundh, C. (2011). Cultural dissimilarity and intermarriage: A longitudinal study of immigrants in Sweden 1990-2005. International Migration Review 45(2): 297-324. doi:10.1111/j.1747-7379.2011.00849.x.

England, P. and McClintock, E.A. (2009). The gendered double standard of aging in US marriage markets. Population and Development Review 35(4): 797-816. doi:10.1111/j.1728-4457.2009.00309.x.

Esteve, A. and Cortina, C. (2009). Changes in educational assortative mating in contemporary Spain. Demographic Research 14(17): 405-428. doi:10.4054/ DemRes.2006.14.17.

Esteve, A. and Bueno, X. (2012). Marrying after migration: Assortative mating among Moroccans in Spain. Genus 68(1): 41-63.

Glowsky, D. (2007). Why do German men marry women from less developed countries? An analysis of transnational partner search based on the German Socio-Economic Panel. Berlin: Deutsches Institut für Wirtschaftsforschung (SOEP Papers on Multidisciplinary Panel Data Research 61).

González-Ferrer, A. (2006). Who do immigrants marry? Partner choice among single immigrants in Germany. European Sociological Review 22(2): 171-185. doi:10.1093/esr/jci050.

Hamel, C., Pailhé, A., and Santelli, E. (2013). Rencontrer son conjoint dans un espace multiculturel et international. Paris: INED (Documents de travail 189).

Hendrickx, J., Lammers, J., and Ultee, W. (1991). Religious assortative marriage in the Netherlands, 1938-1983. Review of Religious Research 33(2): 123-145. doi: $10.2307 / 3511909$.

Huijnk, W.J.J., Verkuyten, M.J.A.M., and Coenders, M.T.A. (2010). Intermarriage attitude among ethnic minority and majority groups in the Netherlands: The role of family relations and immigrant characteristics. Journal of Comparative Family Studies 41(3): 389-414.

Hwang, S-S., Saenz R., and Aguirre, B.E. (1997). Structural and assimilationist explanations of Asian American intermarriage. Journal of Marriage and the Family 59(3): 758-772. doi:10.2307/353959.

Jacobson, C.K. and Heaton, T.B. (2008). Comparative patterns of interracial marriage: Structural opportunities, third-party factors, and temporal change in immigrant societies. Journal of Comparative Family Studies 39(2): 129-148.

Kalmijn, M. (1993). Trends in black/white intermarriage. Social Forces 72(1): 119146. doi:10.1093/sf/72.1.119.

Kalmijn, M. (1998). Intermarriage and homogamy: Causes, patterns, trends. Annual Review of Sociology 24: 395-421. doi:10.1146/annurev.soc.24.1.395.

Kalmijn, M. and Van Tubergen, F. (2006). Ethnic intermarriage in the Netherlands: Confirmations and refutations of accepted insights. European Journal of Population 22(4): 371-397. doi:10.1007/s10680-006-9105-3.

Kalmijn, M. and Van Tubergen, F. (2010). A comparative perspective on intermarriage: Explaining differences among national-origin groups in the United States. Demography 47(2): 459-479. doi:10.1353/dem.0.0103.

Kantarevic, J. (2004). Interethnic marriages and economic assimilation of immigrants. Bonn: Institut zur Zukunft der Arbeit (IZA Discussion Paper No. 1142).

Klein, T. (2001). Intermarriages between Germans and foreigners in Germany. Journal of Comparative Family Studies 32(3): 325-346.

Kulu, H. and González-Ferrer, A. (2014). Family dynamics among immigrants and their descendants in Europe: Current research and opportunities. European Journal of Population 30(4): 411-435. doi:10.1007/s10680-014-9322-0.

Lanzieri, G. (2012). Merging populations: A look at marriages with foreign-born persons in European countries. Luxembourg: Eurostat (Statistics in Focus No. 29/2012).

Lieberson, S. and Waters, M.C. (1988). From many strands: Ethnic and racial groups in contemporary America. New York: Russell Sage Foundation.

Lievens, J. (1998). Interethnic marriage: Bringing in the context through multilevel modelling. European Journal of Population 14(2): 117-155. doi:10.1023/ A:1006075325546.

Lievens, J. (1999). Family-forming migration from Turkey and Morocco to Belgium: The demand for marriage partners from the countries of origin. International Migration Review 33(3): 717-744. doi:10.2307/2547532.

Maffioli, D., Paterno, A., and Gabrielli, G. (2014). International married and unmarried unions in Italy: Criteria of mate selection. International Migration 52(3): 160176. doi:10.1111/imig. 12049.

Medrano, J.D., Cortina, C., Safranoff, A., and Castro-Martín, T. (2014). Euromarriages in Spain: Recent trends and patterns in the context of European integration. Population, Space and Place 20(2): 157-176. doi:10.1002/psp.1774.

Meng, X. and Gregory, R.G. (2005). Intermarriage and the economic assimilation of immigrants. Journal of Labor Economics 23(1): 135-174. doi:10.1086/425436.

Meng, X. and Meurs, D. (2009). Intermarriage, language, and economic assimilation process: A case study of France. International Journal of Manpower 30(1/2): 127-144. doi:10.1108/01437720910948447.

Merton, R.K. (1941). Intermarriage and the social structure: Fact and theory. Psychiatry 4: 371-374. doi:10.1080/00332747.1941.11022354.

Muttarak, R. and Heath, A. (2010). Who intermarries in Britain? Explaining ethnic diversity in intermarriage patterns. The British Journal of Sociology 61(2): 275305. doi:10.1111/j.1468-4446.2010.01313.x.

O'Leary, R. and Finnäs, F. (2002). Education, social integration and minority-majority group intermarriage. Sociology 36(2): 235-254. doi:10.1177/00380385020360 02001.

Potârcă, G. and Mills, M. (2015). Racial preferences in online dating across European countries. European Sociological Review 31(3): 326-341. doi:10.1093/esr/ jcu093.

Rosenfeld, M.J. (2005). A critique of exchange theory in mate selection. American Journal of Sociology 110(5): 1284-1325. doi:10.1086/428441.

Safranoff, A. (2015). Analysing gender power relationships through intermarriage in Spain [PhD thesis]. Barcelona: Universitat Pompeu Fabra.

Sánchez-Domínguez, M., De Valk, H., and Reher, D. (2011). Marriage strategies among immigrants in Spain. Revista Internacional de Sociología 69(M1): 139166. doi:10.3989/ris.2011.iM1.389.

Serret, J. and Vitali, A. (2014). Understanding intermarriage from the native's perspective: Spain and Italy compared. Paper presented at the Annual Meeting of the Population Association of America, Boston, USA, May 1-3, 2014.

Song, M. (2009). Is intermarriage a good indicator of integration? Journal of Ethnic and Migration Studies 35(2): 331-348. doi:10.1080/13691830802586476.

Tolsma, J., Lubbers, M., and Coenders, M. (2008). Ethnic competition and opposition to ethnic intermarriage in the Netherlands: A multi-level approach. European Sociological Review 24(2): 215-230. doi:10.1093/esr/jcm047.

Van Tubergen, F. and Maas, I. (2007). Ethnic intermarriage among immigrants in the Netherlands: An analysis of population data. Social Science Research 36(3): 1065-1086. doi:10.1016/j.ssresearch.2006.09.003.


[^0]:    ${ }^{1}$ Spanish National Research Council, Madrid, Spain. Email: amparo.gonzalez@cchs.csic.es.
    ${ }^{2}$ Institut national d'études démographiques, Paris, France.
    ${ }^{3}$ University Pompeu Fabra, Barcelona, Spain.
    ${ }^{4}$ Spanish National Research Council, Madrid, Spain.

[^1]:    ${ }^{5}$ See Rosenfeld (2005) for a thorough review and critique of the status-exchange theory.
    ${ }^{6}$ In imported/marriage migration couples, the opposite occurs because the potential importer differs in one crucial aspect: the right of residence in the country of immigration. However, the terms of the exchange are likely to vary by gender of the pioneer partner.

[^2]:    ${ }^{7}$ Excess of available native men and women has been calculated by comparing the number of native men and women of each educational level in year 2007.

[^3]:    ${ }^{8}$ The NIS only collected the date of marriage for current marriages. However, we assume that current marriages, if formed after migration, are also the first post-migration marriages. While this introduces some measurement error we do not expect it to affect the main findings of the analysis, as a large majority of immigrants in the sample have lived in Spain for a relatively short time after migration.

[^4]:    ${ }^{9}$ Only $9 \%$ of immigrants in our sample received some education in Spain. Thus, not having a time-varying variable in this case should not be a problem for the estimation of the effects and their interpretation.

[^5]:    10 Note that information on having a child before migration largely controls for previous marriages/cohabitation.
    ${ }^{11}$ The coverage of municipal population registers is assumed to be high, since registration is a prerequisite for access to education and health services as well as for applying for a legal residence permit.
    ${ }^{12}$ The Municipality Register does not include information on marital status, so it was not possible to refine the variable by considering only the 'available' individuals.

[^6]:    Source: NIS 2007, own calculations. Note: ${ }^{*} \mathrm{p}<0.10$; ${ }^{* *} \mathrm{p}<0.05$; *** $\mathrm{p}<0.01$.

[^7]:    ${ }^{13}$ If the variable 'age heterogamy' is coded as 1 only when the age difference is larger than 3 years - instead of 1 as in the reported models - the percentage of marriages where the woman is older than the husband declines from $15 \%$ to $7 \%$, and the positive effect on intermarriage becomes stronger. Results available upon request.

