

Marriage among the foreign-born population in Spain: transitions and determinants¹

Daniela Vono

(dvono@ced.uab.es, Centro de Estudios Demográficos, Universidad Autónoma de Barcelona)

Alberto del Rey

(adelrey@usal.es, Universidad de Salamanca)

ABSTRACT

The main objective of this study is to analyze the endogamous and exogamous transition to first marriage of immigrants by sex. We focus on two kinds of determinants, the marriage market and individual preferences, in order to analyze the causes of this transition among individuals from Argentina, Colombia, Ecuador, Morocco and Romania, which are the most representative immigrant groups from developing countries in Spain. According to these transitions we can evaluate the integration process of immigrant population in the host society.

We have used data from the 2007 Spanish National Immigration Survey and we have applied a discrete-time logistic model in order to estimate the risk of getting married by year of residence as single. The result shows that the risk of getting married with a native-born person is higher than with a connational and that the time of residence increases the risk of both, endogamous and exogamous marriage. We have also found that as individual characteristics such as marriage market structure affect the marriage formation. In particular, education, nationality, social networks, cultural background and ethnicity play a central role in partner selection. Moreover, the results show that marriage market structure, sex composition and concentration of immigrants, are also major factors in these marriage trajectories. The analysis of the marriage patterns under the perspective of integration in the host society shows that this is a matter that depends not only on individual preferences but also on the structure and composition of the group.

KEY WORDS: immigrants, marriage, mate selection, marriage markets, endogamy, intermarriage, integration, Spain.

¹ Paper supported by the projects CSO2008-04778/SOCI and CSO2010-16413 from Spanish Ministry of Science and Innovation and by the Ramon y Cajal Fellowship (RyC-2007-00855).

1- Introduction

The aim of this paper is to analyse the factors that are involved in the formation of marriages among immigrants at their destination, in this case, Spain. We shall analyse the transition to immigrant marriage according to sex, either with another immigrant of the same nationality or a native-born person, while considering the existing limitations in the marriage market and the presence of certain characteristics or individual preferences.

The analysis of marriage amongst immigrants is a well-studied phenomenon in countries that have a long history of migrations. Nevertheless, it continues to be a relevant phenomenon as the migratory destinations continuously change, such as the groups involved, or the conditions wherever they take place. Spain provides an interesting context for the study of this process for several reasons. First, because it is a country that has undergone a rapid transformation in a short time. Spain, a country with a history of emigration, has become a country of immigration in the last two decades of the 20th century. This transition has occurred at a pace and magnitude that far exceeds previous experiences in developed countries. Secondly, because of the lack of studies on this matter from a longitudinal perspective, particularly due to the lack of specific data. Thirdly, because of the variety in the composition of immigrant groups. The majority immigrant groups in Spain give a vast geographic diversity, mainly Latin-Americans, Eastern Europeans or North Africans, which in turn involves a different ethnic and religious composition and in general, a different cultural background. This situation creates the possibility of different scenarios in the formation of marriages, particularly with native-born partners.

Furthermore, immigrant marriages is a phenomenon that draws much attention given that it is frequently analysed as an indicator of the level of **integration** of immigrant groups and minorities in the host country. These studies are part of a long history of studies on unions between different races or ethnics in countries that have a long history of immigration, the US in particular. (Drachler, 1920; Gordon, 1964; Kalmijn, 1998; Rosenfeld, 2002; Meng and Gregory, 2005; Nielsen et al., 2007) and more recently in Europe (Coleman, 1994; Tribalat, Simon and Riandey, 1996; Lievens, 1999; Safi, 2008; Dribe and Lundh, 2008; Lucassen and Laarman, 2009). A marriage between an immigrant or a member of a minority group and a native-born person or people from a majority group can be analysed both as a factor that favours integration in the host society and as a result of an integration process of that society.

Kalmijn (1994) loosely suggests two basic hypotheses for the selection of a spouse by minority groups. According to the *matching hypothesis* people prefer to marry someone of

similar cultural status (homogamy). The *competition hypothesis* is based on the notion that the choice of a spouse is governed by benefits and this explains why people prefer to marry someone of high socio-economic status (hypergamy). The last hypothesis allows the justification of unions outside their group.

In the case of the immigrant population, basic marriage trajectories in the destination society are that they marry someone from their own country or a person from the destination country. This difference introduces the question of legal status in the selection and gives rise to new hypotheses in partner selection, apart from socio-economic and cultural characteristics of each immigrant. Marrying someone from their own country, endogenous marriage, would support the idea that people have a tendency to marry within their social group or to marry a person who is close to them in status (homogamy union). Marrying a native-born partner, intermarriage or exogamous marriage, from a strategic viewpoint means a rise in their legal status in their host society (hypergamy union). This legal distinction creates the question about the prevalence of strategic behaviour in the structure of immigrant marriages or the prevalence of cultural similarities amongst the different immigrant groups in the host society. These are aspects that also bring us closer to the integration process.

In this study, we first consider that the time of residence as a single person in the host society plays a central role in the probability of marrying a connational or a native-born partner. This justifies the use of survival models to analyse the transition from being single to their first marriage. Furthermore, we also take into account socio-economic conditions and the structure of the immigrant marriage market at the time of their arrival in Spain as determinants in marriage trajectories.

On the one hand, we have considered the main socio-economic characteristics that affect the marriage, paying particular attention to the moment of arrival: age, time of arrival, possession of the nationality, existence of contacts with friends and families in the place of arrival, level of education and place of birth. Although we do not have direct registers on some particular points in the structure of marriages such as religion or race/ethnicity, the country of origin acts as a variable proxy for these aspects. We have considered native-born single people from 3 countries from Latin America (Argentina, Colombia, Ecuador) as the main origin of immigrations and the two most numerous nationalities, Morocco and Romania.

On the other hand, we have considered the characteristics of the marriage market for each immigrant group at the time of their arrival in Spain: we analyse the composition on the basis of the relation between men and women of the same nationality in the province of

arrival and the geographic distribution in relation to the percentage of the population of the same nationality in the province of arrival.

Finally, we want to point out that this paper contains several limitations. First, we analyse the trajectories from the viewpoint of the immigrants, but we do not have the viewpoint of the native-born. That is, we analyse the union with native-born people according to certain hypotheses on immigrants, but we have not considered the perspective or the strategic behaviour that the native-born might have to marry or not an immigrant. Secondly, we do not consider marriages between immigrants from different countries, given that this is a very rare occurrence. Thirdly, we have focused on marriages and we have not taken into account cohabitations or other types of unions. From a general viewpoint of marriage, even though we have left out an important section of unions, more so in Spain where they have increased in number considerably since the second demographic transition (Miret-Gamundi, 1997; Baizán et al,2003; Miret-Gamundi and Cabré, 2005; Castro-Martín et al., 2008; Domínguez-Folgueras and Castro-Martin, 2008) they are less relevant from the viewpoint of strategic behaviour of immigrants as they do not carry any legal added value. Moreover, several studies have considered cohabitation to be a separate stage that occurs prior to marriages (Brines and Joyner, 1999; Castro Martín, 2003) or to be a less stable relationship that has a higher probability of dissolution (Bumpass and Sweet, 1989; Schoen, 1992; Domingo, 1997; Brown and Booth, 1996; Skinner et.al., 2002; Baizán, Aassve et.al., 2003).

Following is the theoretic reference framework on minority and immigrant group marriages along with the hypothesis of this paper. The data, variables and model are then provided. This is followed by the analysis of the results and finally, the conclusions and discussion are presented.

2 – Theoretical framework and hypothesis

The reference framework to analyse the structure of marriages of immigrants or minorities in the destination societies on the one hand tend to highlight both particular individual characteristics that affect preferences and strategies in the selection of a partner and the existing limitations in the marriage market. Thus, marriage patterns result from both preferences and opportunities. On the other hand, the formation of unions with native or majority groups is used as an integration indicator of minority groups in the host society. By considering this analytical framework and characteristics of Spanish immigration, we have established the hypothesis of our study.

2.1 Marriage framework: preferences, strategies and marriage pool

Traditional studies suggest that marriage is a result of two factors (Becker, 1973; Shoen and Kluegel, 1988): the composition or availability of potential marriage partners with desired characteristics; and the propensity to marry, also understood as the mutual attraction for marriage between males and females. This propensity to marry includes individual preferences as well as the influence of prevailing social norms and social structures.

According to Becker (1983), as marriage is generally a voluntary decision each person tries to find the best mate, despite the restrictions created by the conditions of the marriage market. This is considered the key explanation for an adult's choice to marry or not, the kind of the union chosen, the age at marriage and the characteristics of mates with regard to education, wealth, religion, race, and other characteristics (Spanier, 1983; Goldman et al., 1984; South and Lloyd, 1992; Kalmijn, 1994; Angrist, 2002; Baizán et al., 2003; González-Ferrer, 2006; Cortina et al., 2008; Dribe and Lundh, 2008), Lucasen and Laarman, 2009).

Firstly, empirical studies have suggested that the number of partners available to men and women has profound effects on marriage, and specifically on partner selection (Goldman et al., 1984; South and Lloyd, 1992; Cabré, 1993; Lievens, 1998; Esteve et al., 2009). This supply plays an important role in determining the age at marriage as well as the proportion of individuals that remain definitively single. Other studies have pointed out that union formation among minority, ethnic or immigrant groups is also strongly influenced by the size, composition and geographical distribution of the group (Blau et al., 1982; Schoen and Kluegel, 1988; Angrist, 2002; Harris and Ono, 2005), that is, its “marriage pool”. Generally, members of a small group will have lower chances of marrying endogamously than members of a larger group. However, in addition to group size, other factors also matter, including the

degree of openness of the group in question, and the extent of multiple group affiliations among individuals (Blau, Beeker and Fitzpatrick 1984; Kalmijn, 1994). The chance to encounter a member of one's own group also depends on the way a group is dispersed geographically (Schoen and Kluegel, 1988; Harris and Ono, 2005) and the residential segregation (Massey and Denton, 1987 and 1988). Moreover, "local marriage markets", school, neighbourhood and work place, are often socially segregated, and that is why they are important for explaining marriage patterns (Davis, 1984). Another aspect that must be taken into account is the level of heterogeneity or homogeneity of the group (Blau, 1977; Blau et al, 1982): endogamy is negatively related to the degree of heterogeneity of a population. This shows that in a heterogeneous population, endogamy is lower than in a homogeneous population. Heterogeneity increases the chances of fortuitous encounters between persons from different groups, and many such encounters make the development of congenial and even intimate relations between members of different groups more likely.

Secondly, preferences are a central factor on the marriage. They are mainly derived from the cultural background (Gordon, 1964; Kalmijn, 1998), such as ethnicity or religion, socio-economic status and education.

Physical features, such as a particular skin color or racial type in the host society may affect the selection of a partner and become a handicap in the assimilation and integration process (Portes, 1995; Stevens et al, 1990) highlighted the physical attractiveness as a factor to explain preferences to marrying someone of the same ethnic or racial group. Moreover, Schoen and Kluegel (1988) found racial differences in marriage propensities between black and white populations.

Because economic resources play a central role in the production of marital goods, these characteristics are immediately relevant to the choice of a spouse as well. People maximize their income by looking for spouses with the most attractive economic resources (Becker, 1981; Mare, 1991). Similar arguments can be made about occupational status (Edwards, 1968; Kalmijn, 1994).

Religion is another major factor in homogamy marriage trends. In particular, religious intermarriage may interfere with the transmission of religious beliefs and values from one generation to the next, and has often been viewed with concern by religious authorities (Schoen and Thomas, 1990). Religion also involves a particular conception of power relationships in marriage (Kalmijn, 1998), which is a major aspect in the selection of a partner. Today in Western societies, high rates of religious intermarriage suggest that religion is not a central concern (Schoen and Thomas, 1990).

Education has become an increasingly important proxy for both cultural taste and socio-economic success. Trends in socio-economic homogamy/heterogamy are most frequently studied by analyzing class background and education (Kalmijn, 1991). Education is a main factor that breaks with ascriptions and enables intragroup partner formations (Kalmijn, 1994).

Educational effects have been interpreted in terms of both opportunity and preference (Kalmijn, 1998). People marry within rather than outside socio-economic groups, although some groups are more closed than others (Mare, 1991). Many studies have found that more highly-educated members of ethnic or racial minority groups marry exogamously more often than their lesser-educated peers (Goldman et.al., 1984; Schoen and Wooldredge, 1989; Kalmijn, 1993). In the case of Spain, Cortina et.al. (2008) have shown that higher educational levels also contribute to a higher probability of entering an exogenous union. In this point, some studies pointed out that more educated immigrants are more likely to move out of ethnic enclaves and to possess better language skills (Dribe and Lundh, 2008). However, Mare (1991) found that some groups at the top and bottom of the educational hierarchy are more closed than groups in the middle.

Sex differences have also been studied in the analysis of socio-economic homogamy. A common finding is that highly educated men and women in professional and technical occupations marry down more often than up (Mare 1991; Kalmijn 1994).

Thirdly, Kalmijn (1991) added a new factor to the preferences and marriage market structure, "the third parties". This author pointed out that patterns of marriage selection depend not only on the preferences of the marriage candidates themselves, but are also affected by "third parties", that is, individuals who are not directly involved in the marriage but who interfere in the search process because they are connected to one of the two candidates. For example, in a rural preindustrial society, it is often assumed that partner selection is made strategically in order to maintain or improve income, wealth, social, or occupational status. These kinds of marriage strategies can be expected to differ between people of different socio-economic status.

2.2 Marriage and integration

The assimilation perspective assumes that there is a natural process by which diverse ethnic groups come to share a common culture and to gain equal access to the opportunity structure of society (Gordon, 1964). This process consists of gradually deserting old cultural and behavioral patterns in favor of new ones. Under this perspective, marriage between

persons of migrant background and the native-born is often considered as a powerful indicator of the social and cultural integration of immigrants into the host society.

Traditional receiving countries have also developed an extensive body of literature about intermarriage as an indicator of integration of foreign-born populations in destination societies. Drachler (1920) was the first to examine the marriage patterns of European immigrants in America as an indicator of migrant incorporation. Gordon (1964), in the classic study “Assimilation in American Life” found that intermarriage between natives and immigrants could be considered both a powerful motivator for assimilation as well as a sign that the final stages of assimilation had taken place. In contrast, endogamy was widely believed to reflect and perpetuate group divisions, social distance, and unequal power distributions in racially and ethnically diverse societies. Gordon stated that the time spent in the receiving country was a key issue to access the integration level. The longer immigrants have lived in the host country prior to marriage, the more likely they are to enter a union with a native partner. However, the duration of this process depends on the cultural, religious and socio-economic status in relation to that of the majority population.

According to Kalmijn (1998), because marriage is an intimate and often long-term relationship, intermarriage or a heterogamy union not only reveals the existence of interaction across group boundaries, it also shows that members of different groups accept each other as social equals. Intermarriage can thus be regarded as an intimate link between social groups; conversely, endogamy or homogamy can be regarded as a form of group closure. However, the distribution of endogamous marriages and intermarriages might be due either to the conscious behaviour of the minority group or as a result of the majority group behaviour or of both. Thus, if members of two groups do not marry one another, it does not necessarily mean that both groups are closed. Moreover, opportunity to marry within the group depends on many factors, such as residential segregation, the composition of local marriage markets, group size and other factors we pointed out above.

In order to relativize Gordon’s theory, some authors have made contributions that can be grouped in the social stratification approach. For instance, Sandberg (1973) adds to the analysis the importance of considering successive generations and the different stages of migration. Blau et.al (1982) emphasize the need to take into account the size of the minority groups and the availability of prospective partners, the so-called “marriage pool”, on the one hand, and the degree of racial and socio-economic heterogeneity influencing the likelihood to intermarriage on the other. Massey (1985) focused on the importance of considering residential segregation in marriage formation. A more recent perspective is the “segmented

assimilation” theory (Portes and Zhou, 1993). According to this theory, intermarriage varies between different origins and the assimilation does not necessarily occur just in marriages between immigrants and the dominant native social group, i.e., the white American population in the American example. Instead, it can also occur between different minorities.

2.3 Characteristics of immigrants in Spain

Nowadays, the immigrant population presents a high diversity according to origin, composition, period of arrival and characteristics of immigrants. This study focuses on immigrants from Colombia, Ecuador, Morocco, Romania and Argentina. These are the five developing countries most represented in contemporary Spanish immigration. The Latin-Americans represent 39% of the immigration population at the time of the survey in 2007, and Moroccans and Romanians were the two main nationalities having 12% and 9.5% respectively of the 4.5 million immigrants. The 5 groups considered comprised 60% of the total immigration population resident in Spain. Each one of these countries has its own specific socioeconomic characteristics and different marriage market structures, such as size, composition and geographical distribution. These aspects are core in the analysis of the formation of marriages.

First, the country of origin makes a general reference to the cultural background and particularly for this study, to principal aspects of partner selection such as race/ethnicity and religion. Although we do not have these variables directly for each immigrant, the 5 groups that have been selected provide important differences and their origin indirectly helps us to refer to these aspects.

The Moroccans have the greatest cultural differences with regards to the host society. They have a religion and beliefs that are clearly different from the majority of the Spanish society, which might, in principle, cause difficulties for union formations with natives. For instance, in Moroccan tradition, marriage is a family matter rather than a union between two independent individuals (Lievens, 1999). Thus, parents living abroad have a high preference for a partner from the same country of origin. This has been demonstrated in Belgium despite the higher prevalence of men, which otherwise might stimulate intermarriages with natives. Instead, endogamous marriage is promoted in Moroccan families through the importation of wives (Lievens, 1999).

Romanians are Europeans, white, Christians and have a Latin-based language (Viruela-Martínez, 2006), so from a perspective of the marriage market, they hold a greater

affinity. Romanian society highly values traditional marriages, despite the fact that cohabitation has increased in recent years² (Muresan, 2007; Hoëm et.al., 2009).

Latin-Americans have the greatest cultural and historical affinity, having the same language and religion as the host society. Nevertheless, there are some important differences to be made among them. A large number of Ecuadorians come from the mountains and rural areas (Jokisch and Pribilsky, 2002; Gómez-Cirinao and Tornos-Cubillo, 2007; Gray, 2009) and have indigenous Andean features, which marks them as a different ethnic group from the marriage market perspective. Contrarily, Colombians and Argentineans mainly come from urban areas (Khoudour, 2007; Novick and Murias, 2005) and with regards Argentineans, a large percentage have Spanish ancestors (Novick and Murias, 2005), making marriage formations with natives more viable in principle.

However, in the case of some Latin-American countries the proportion of couples cohabitating surpasses that of legal marriages. However, although informal unions are widespread and socially recognized, they have less social status than formal marriages and are more prevalent amongst the disadvantaged social strata (Rosero-Bixby, 1992 and 1996; Castro, 2002; Rodríguez-Vignoli, 2004). The prevalence of cohabitation could lead to lower levels of marriages among this population in Spain, both endogenously and exogenously.

Secondly, a reference should be made to the structure of the marriage market for each of the 5 groups considered. The size and structure of the marriage market for each foreign group in Spain may affect the selection of the partner and could be related to the probabilities of getting married with Spaniards.

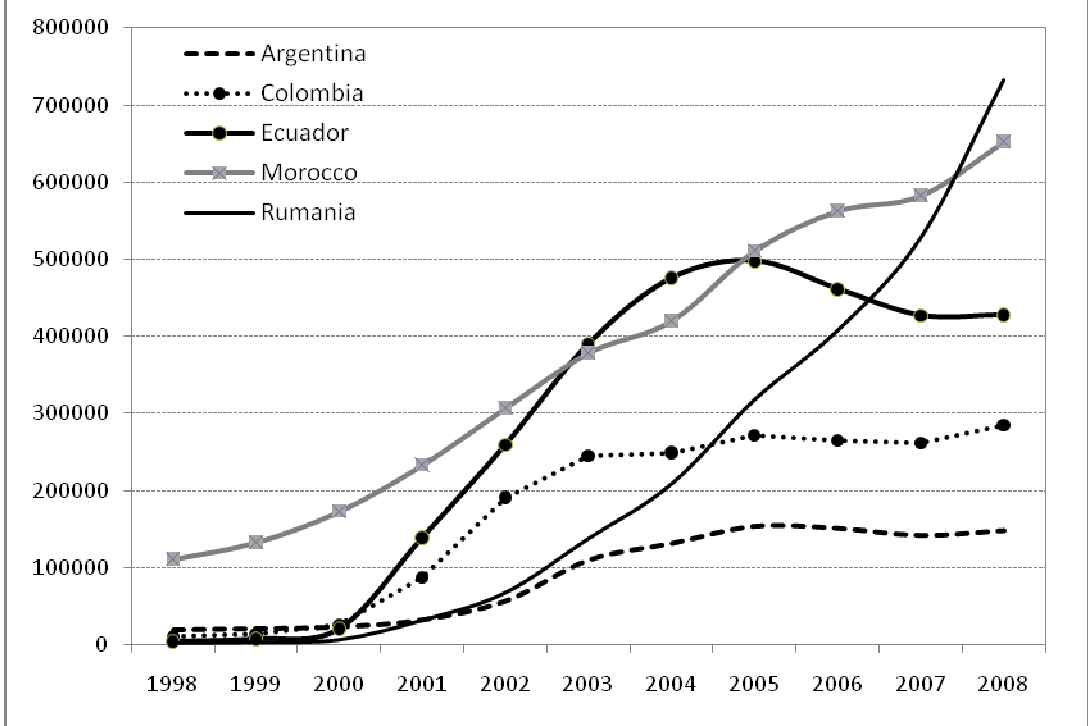
As can be seen in the Figure 1, the number of people from the selected countries was very small in 1998, with the exception of the Moroccan population. Since this year, the stocks have shown a continuous growth, starting with the Ecuadorians and Colombians. From 2002 on, the increase of Romanians in the country can be observed. They are currently the largest immigrant group. Argentineans were the second most represented nationality in 1998 and increased very gradually over the following years.

The average age of single immigrants on arrival in Spain was 23.3 years old, women being slightly older (23.6) than the men (23). There are important differences for the countries of origin: 48% of Moroccans that were single on arrival were under 15 years old, while this percentage is less than 7% amongst the Romanians, 12% for Colombians, 14% for Ecuadorians and 19% for Argentineans. Single immigrants that arrived after reaching 30

² 74% of all the individuals who live in cohabitation get married before 5 years of living together (Rotariu, 2006).

represent 37% in the case of the Colombians, 24% for Ecuadorians and under 15% for Argentineans, (13.7%), Romanians (11%) and Moroccans (14.5%). These are aspects to take into account for union formation.

Figure 1: Stocks of foreign immigrants by nationality, 1998-2008.



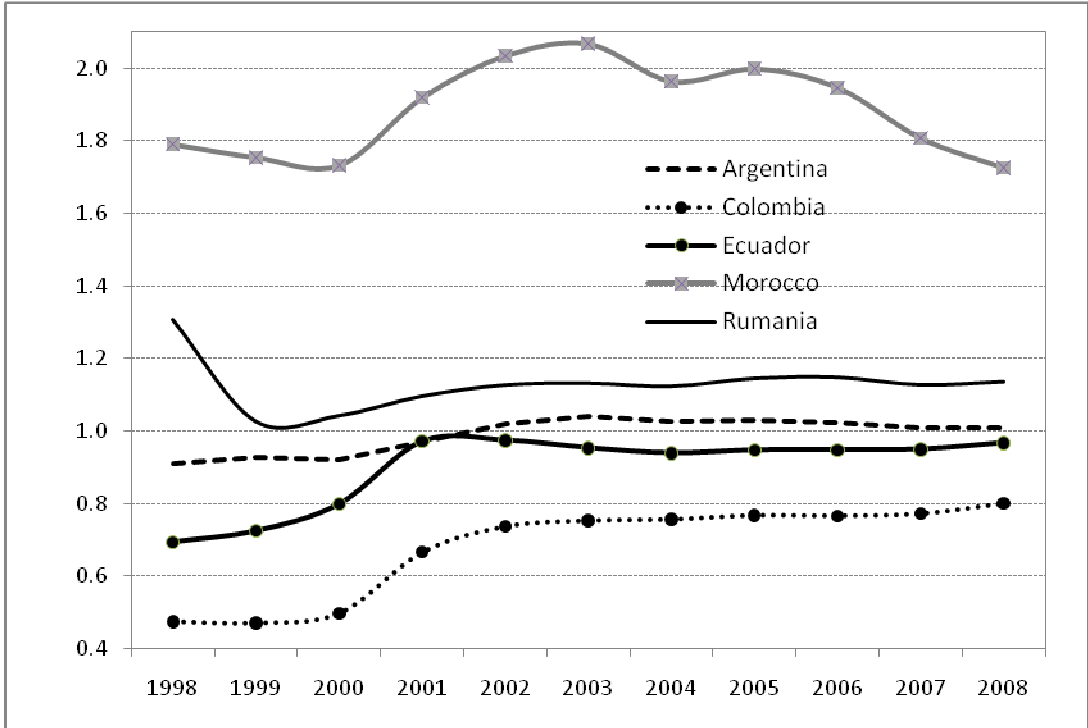
Source: Municipal register (Padron Municipal de Habitantes), INE, Spain.

The sex ratio for each nationality also presents an important difference among the 5 groups (Figure 2). Moroccan immigrants present a strong prevalence of men throughout the period of study. Men are also the majority in the case of the Romanians, although the values are smaller. For the three Latin-American nationalities, until the beginning of this century women were more represented than men, especially in the cases of Ecuadorians and Colombians. With the increase of flows of immigration, around the year 2000, the proportion of men has increased gradually. In 2008 the number of men was higher than the number of women in the Ecuadorians and Argentinean population (Figure 2).

The different compositions according to sex could play a significant role in the type of marriage for each origin. For instance, Moroccan women, theoretically, have a higher probability of finding a Moroccan man in Spain than an Argentinean woman would have of finding an Argentinean man due to the available stocks of men for each case, excluding the option of finding a partner in the home country. Consequently, Argentinean women are more

likely to marry a Spaniard. In the case of men, Moroccans would be more exposed to the risk of marrying a Spaniard due to the relative scarcity of women in their group.

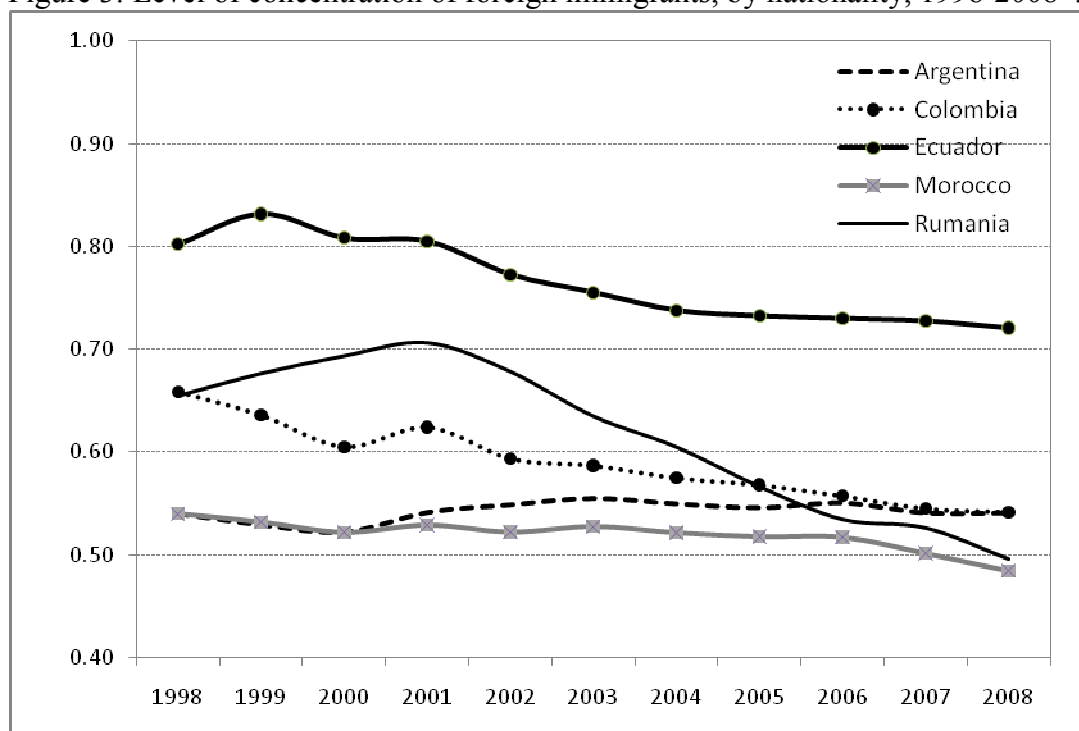
Figure 2: Sex ratio of foreign immigrants, by nationality, 1998-2008.



Source: Municipal register (Padron Municipal de Habitantes), INE, Spain.

The geographical distribution of immigrants or the level of concentration also presents important differences among the selected groups (we have taken the percentage of foreigners living in the provinces of Madrid, Barcelona and Valencia, Figure 3). The geographical distributions of the different immigrant groups could affect the possibility of establishing contacts among candidates of their own nationality.

Figure 3: Level of concentration of foreign immigrants, by nationality, 1998-2008*.



Source: Municipal register (Padron Municipal de Habitantes), INE, Spain.

*Percentage of foreign immigrants leaving in Madrid, Barcelona and Valencia

The relative size of the immigrant groups, the sex ratio and the geographical distribution, are known to be key components of the marriage pool. However they were not directly included in the model because there is no population register that takes into account the exposure to marriage for each immigrant over time. Instead, we have incorporated at the moment of arrival to Spain the sex ratio composition and the percentage of population of the same country living in the province of residence. Moreover, the period of arrival makes reference to the evolution of the size of foreign-born population.

2.4 Hypothesis:

The focus of this paper is the study of temporal variables in the structure of different types of marriage, which justifies the application of the temporal models.

In the first place, we consider that as time passes while immigrants are still single, their risk of marrying increases given that the majority of immigrants are of reproductive age. However, the risk of marrying a connational or a native can change as more time passes. According to the *matching hypothesis*, there is a preference to marry someone with a similar cultural background, so we would expect that at the beginning of their residence, immigrants would prefer to marry someone from their own country. The longer they stay in the country,

the greater their identification/adjustment to the norms and culture of the host society (Gordon, 1964), and therefore we would expect an increase in the risk of marriage with a native. Nevertheless, there is the possibility of a strategic behaviour, according to the *competition hypothesis*, where the search for “benefits” could result in a marriage with a native at the initial stage of their stay, and the relation between the period of single status and the formation of endogamous marriages and intermarriages would disappear.

In relation to time, we would also expect the existence of an effect according to the age of the immigrant on arrival. The age on arrival in the country establishes a different risk of getting married. Individuals who arrive younger have more time to change the marital status in comparison to individuals who arrive at older ages. Nonetheless, in a country with a short history of immigration such as Spain, the arrival of minors is very recent and most of them are censored observations in the survey, meaning that they are still single. Moreover, several studies highlight the importance of age on arrival as a factor that conditions the integration of the immigrant population and effects the selection of a partner (González, 2003; Åslund et al, 2009). From this perspective, we expect that the youngest immigrants to arrive will have better prospects to integrate and also have a greater risk of marrying natives.

The third temporal variable makes a reference to the arrival period. Each period refers to certain conditions, particularly with regards to the marriage market size. We expect that immigrants who arrived before 1996 would have a higher risk of engaging in intermarriage in comparison with immigrants who have arrived after that year. Similarly, we would expect a higher risk of endogamous marriage for those who arrived after 1996 due to the increase in the stock of immigrants. Nonetheless, changes in sex ratio and geographical distribution of each immigrant group could involve different risks in endogamous and exogamous marriage by sex.

A second general hypothesis is that we consider that the existing conditions of the marriage market will affect the formation of marriages from different immigrant groups. The greater or lesser presence of a population from their country in their place of residence and their distribution by sex will condition the formation of endogamous or exogamous marriages: a greater dispersion will favour intermarriage. With regards to the composition of sexes, we would expect that an important imbalance in sexes in the province of residence will lead to the search of native partners by the majority sex.

Lastly, we have made a hypothesis on certain individual characteristics that equally effect the selection of a partner from the same country or in the place of destination. We have focused on 4 variables:

Educational level: The education attainment has been considered by different scholars as a key variable to explain differences in marriage formation (Goldman et.al., 1984; Schoen and Kluegel, 1988; Mare, 1991; Kalmijn, 1994). People that have a higher educational level are less dependent on the norms and limitations set by their group of origin and their decisions depend more on their own achievements. Accordingly, our hypothesis is that the higher the educational level of the immigrant, the higher the probability of marriage to a Spanish partner.

Contacts or social networks. Social networks are an important source of support for immigrants and minority group members, but they are also an important source of social control (Zhou, 1997). These social networks can affect adaptation and discourage marriage with native-born partners. Moreover, networks of friends and families play a central role in partner selection (Murstein, 1976: Kalmijn, 1998). We therefore consider that single immigrants who have friends and family already settled in the place of destination are at a greater risk of marrying connationals. The lack of social networks or contacts in the place of arrival, in our scenario family or friends, would lead to the construction of new social contacts with different groups and would increase intermarriage. In this sense, we assume that the pre-existence of social networks increases the probability of endogamous marriages and decreases the probability of intermarriages.

Nationality or citizenships: Those immigrants that hold Spanish nationality possess added value when settling in Spain, given that they have immediate access to the formal job market. Those who have Spanish nationality prior to entering Spain is possibly due to their having ancestors present in the country of origin or even, quite possibly, have family members that were born in Spain. This leads us to suggest that their risk of marrying natives will be higher with regards to those that do not hold Spanish nationality. Nevertheless, those who obtain nationality in Spain before marrying show greater integration in the host society. For these cases, we would also expect an increase in the risk of marrying a native.

We hypothesize that the tenancy of Spanish citizenship contributes to a higher probability of getting married to natives and a lower probability of getting married to conationals for both men and women.

Country of origin. Although we do not have information on the race/ethnicity or religion for each individual, the 5 immigrant groups selected show important differences in these areas. Race/ethnicity and religion play a central role in the choice of a spouse, given that people have a tendency to marry within their social group, and it is major cause of endogamy and homogamy (Kalmijn, 1998).

Given the different immigrants considered and the cultural diversity, we believe that the Latin-Americans have a higher probability of marrying a Spaniard due to their similar culture, language and religion. In contrast, Moroccans are the group with the greatest cultural differences and therefore we expect Moroccans will have a lower risk of marrying natives. Differences can also be found amongst the different groups of Latin-Americans, as a result of their different ethnicities, particularly in the case of the Ecuadorians, where a high percentage of the population have indigenous features. We expect a lower probability of marrying natives for these cases than other Latin-Americans.

3- Data, method and variables

The database used to analyze the transition to the first marriage among the foreign born population in Spain is the National Immigrant Survey (ENI) from 2007 of the Spanish National Institute of Statistics (INE). It is the first longitudinal database that provides retrospective information on social and demographic characteristics of immigrants in Spain (Reher and Requena, 2009). The ENI is based on a sample of 15465 individuals, and enables the study of transition to the first marriage, considering the year of arrival in Spain and the year of marriage. However, the ENI has important shortcomings that complicate the evaluation of marriage transitions. First, the survey does not provide information regarding the temporal reference of the beginning of cohabitation which makes it impossible to compare marriage and cohabitation paths amongst immigrants. Second, the ENI does not contain the data necessary to simultaneously analyze marriage transition and mobility paths in Spain. Therefore, we were not able to directly study the effect of local or regional marriage market for each immigrant group and we have only focused on the moment of arriving to Spain. Third, the ENI survey does not provide information on the Spanish population which makes it impossible to compare it with the trajectories of native population.

Our sample size has 3555 immigrants, 1812 males and 1743 females, older than 16 years old that arrived in Spain as singles and that have been living in the country for at least one year. By country of birth, we have 650 Romanians, 1017 Moroccans, 433 Argentineans, 697 Colombians and 758 Ecuadorians. The sample was divided into persons-years of residence in Spain, year by year until they reached 10 years of residence and then two five-year intervals, and as a result the database contains 19,925 observations.

We consider two different events: endogamous marriage, that is, the marriage between a male and a female born in the same country, and intermarriage, defined as any marriage between foreign-born immigrants and a person born in Spain. We did not include marriages

between immigrants from different countries due to both the relative scarcity of cases in the survey (4%) and the different implications of this type of marriage³. The population was selected by using the criteria of not having a partner before migration, and eliminating all cases where the date of marriage was prior to the date of arrival in Spain. We eliminated all cases where the year of arrival was the same as that of marriage for both partners in an effort to avoid cases of marriage migration. We have also eliminated marriages registered during their stay in Spain with a partner living abroad in order to avoid marriages of immigrants in their country of origin, a frequent situation among the Moroccan population (18% of total marriages). The duration of the transition to marriage was calculated taking into account the date of arrival and the date of marriage, information available in years, therefore requiring a discrete time model instead of a continuous time model.

We observe that 35% of the observations registered an event in the period analysed, where endogamous marriage was slightly higher (18.8%) than intermarriage (16.8%). Nevertheless, according to each nationality, it was found that Argentines and Colombians have the highest count of intermarriages, while endogamous marriages were highest in the other nationalities (Table 1). According to sex, endogamous marriages were predominant amongst male immigrants and intermarriage amongst female immigrants.

Table 1. Single immigrants by country and type of event registered in Spain

	Events = 0	Event = 1	<i>Kind of events:</i>	
	(Single)	(Married)	<i>Endogamous</i>	<i>Intermarriage</i>
Rumania	75.8%	24.2%	70.1%	29.9%
Morocco	43.5%	56.5%	60.2%	39.8%
Argentina	62.6%	37.4%	23.5%	76.5%
Colombia	67.9%	32.1%	35.7%	64.3%
Ecuador	80.6%	19.4%	64.6%	35.4%
Total	64.4%	35.6%	52.9%	47.1%

Source: 2007 ENI Survey.

The average age at marriage in the 5 groups selected ranges from 26 in the case of the Romanians to 32 in the case of the Colombians, where the age at union is slightly higher among men than it is among women (Table 2). By type of union, although the total average age at intermarriage is higher than the average age at endogamous marriage, this is completely the opposite for Romanians, Moroccans and Argentines. These ages are slightly below the

³ Marriages between immigrants of the selected groups and other different immigrants is lower than 1% among Romanians, lower than 2% among Moroccans and around 3% among Latin-Americans (2007 ENI Survey).

average age at union of the native population in Spain (32.3 years old for men and 30.1 for women, according to the ENI), although for all cases these ages are above the average age at first union in their countries of origin (UN, 2010).

Table 2. Mean age at marriage by sex and type of union of selected immigrants in Spain

	Men	Women	Endogamous	Intermarriage	Total
Rumania	27.5	25.5	26.5	25.9	26.4
Morocco	30.5	26.9	29.3	28.4	29.4
Argentina	33.0	29.9	32.5	30.9	31.3
Colombia	33.2	32.2	31.5	32.8	32.4
Ecuador	29.8	29.4	28.8	30.6	29.5
Total	30.7	28.9	29.1	30.0	29.8

Source: 2007 ENI Survey.

In order to achieve the objectives of this study, two sets of discrete-time logistic regression models were computed: one to analyze the probability of entering a marriage with a Spanish partner and another to analyze the probability of marrying a partner from the same country of origin. Both models were run separately for men and women to better analyze the differences by sex. Since our main objective is to evaluate the significant covariates in each marriage path more than evaluate the magnitude of the coefficients among models, we have applied logistic regression models instead of competing risk models⁴. This model is defined as:

[1]

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

Where $h(t|x)$ is the conditional probability or the risk that a marriage occurs as a function of time (t), and a set of explanatory variables (x), being β its parameters. The size of the sample which we used is insufficient to separately calculate a model for each of these 5 selected groups of immigrants.

The covariates used in the analysis of marriage transition are (table 3):

⁴ The results obtained of these logistic regression models are very similar to the results obtained by a competing risk model.

Table 3: Descriptive statistics of data

	Men	Women		Men	Women
Sample size	1812	1743	Period of arrival:		
			Before 1995	35.0%	31.3%
Events:			1995-1999	18.6%	21.1%
Endogamous	22.8%	14.6%	2000-2002	34.9%	36.8%
Intermarriage	12.9%	20.8%	2003-2007	11.5%	10.8%
Years between arrival and event (or censored):			Country of birth:		
1	17.4%	18.0%	Argentina	13.5%	14.3%
2	16.0%	16.2%	Colombia	12.6%	26.9%
3	14.5%	14.2%	Ecuador	19.2%	21.7%
4	12.7%	12.1%	Morocco	43.6%	25.1%
5	10.4%	10.3%	Rumania	11.1%	12.1%
6	8.5%	8.2%			
7	6.2%	5.8%	Spanish nationality:		
8	4.3%	4.4%	No	85.9%	84.4%
9	3.2%	3.4%	Yes: Before arriving	10.4%	10.1%
10	2.8%	3.0%	Yes: After arriving	3.7%	5.5%
11-15	2.5%	2.6%			
16-20	1.6%	1.8%	Education:		
			Less primary	13.6%	10.9%
Age at arrival:			Primary	38.9%	33.3%
15 or before	24.9%	28.4%	Secondary and more	47.5%	55.8%
16-20	19.9%	16.3%			
21-25	25.7%	21.8%	Social Networks:		
26-30	17.1%	13.8%	No	39.8%	36.3%
After 30	12.3%	19.7%	Yes	60.2%	63.7%
Provincial Sex Ratio (SR):			Provincial Concentration:		
SR < 0.90	33.0%	53.7%	Low (< 5%)	33.7%	36.6%
SR = 0.90 - 1.10	27.2%	26.2%	Medium (5 - 15 %)	31.5%	29.6%
SR > 1.10	39.8%	20.2%	High (>15%)	34.8%	33.8%

Years between arrival and marriage is our time variable. We have considered annual intervals for the first 10 years of residence in Spain and then two 5-year intervals after 10 years due to the scarce number of observations and events given that the majority of immigration in Spain has been recent.

The age at arrival in the country. We assume different risks of getting married according to the age at arrival in years: 15 or before, 16-20, 21-25, 26-30 and after 30.

The period of arrival reflects the different stages of the Spanish immigration process and the different characteristics of the “marriage pool”, particularly the size of the immigrant

population, an aspect we have not included in other variables. We have defined four periods according to the intensity of the migration: before 1995, 1995-1999, 2000-2002 and 2003-2007.

The country of birth. The main purpose of including the country of birth in the model is to analyze the significance of the origin of immigrants in their probabilities of getting married. Cultural elements may influence the decision of getting married as well as individual preferences derived from the social and religious values of a marriage in each birth country, i.e., unmeasured cultural factors.

The possession of *Spanish nationality or citizenship* before marriage, and before or after arriving in Spain has been included as a key covariate. This variable could be considered as an indicator of integration if it was acquired after migration or a characteristic that facilitates integration if it was acquired before migration, which is the case of many Latin-Americans.

The attainment of education has been considered by different scholars as a key variable to explain differences in marriage formation. According to the composition of the sample, we have considered three educational levels, below primary, primary and secondary and higher.

Social networks or contacts. In accordance with the hypothesis, the majority of partners are selected from contacts through family and friends. In our model we consider *having or not having contacts* at the moment of arrival in Spain as one of the main determinants of intermarriage or endogamous unions.

Finally, we have included two variables related to the “local” marriage market for each immigrant group in the first place of residence in Spain, *provincial sex ratio* and *concentration or geographical distribution*. These variables have been created based on the annual data of the Municipal Register or *Padrón municipal de Habitantes* (INE) from 1996 to 2007 and the 1991 Spanish census (INE). Regarding the sex ratio, we have defined provinces with a high majority of women (<0.90), a high majority of men (>1.10) and provinces in equilibrium (0.90-1.10). The concentration or provincial distribution of each immigrant group has also three categories, low (<5%), medium (10-15%) and high concentration (>15%).

4 – Results:

We have estimated the baseline and the conditional probability of getting married by interval of time, sex and type of marriage of immigrant population (figure 4). There are three major aspects to highlight:

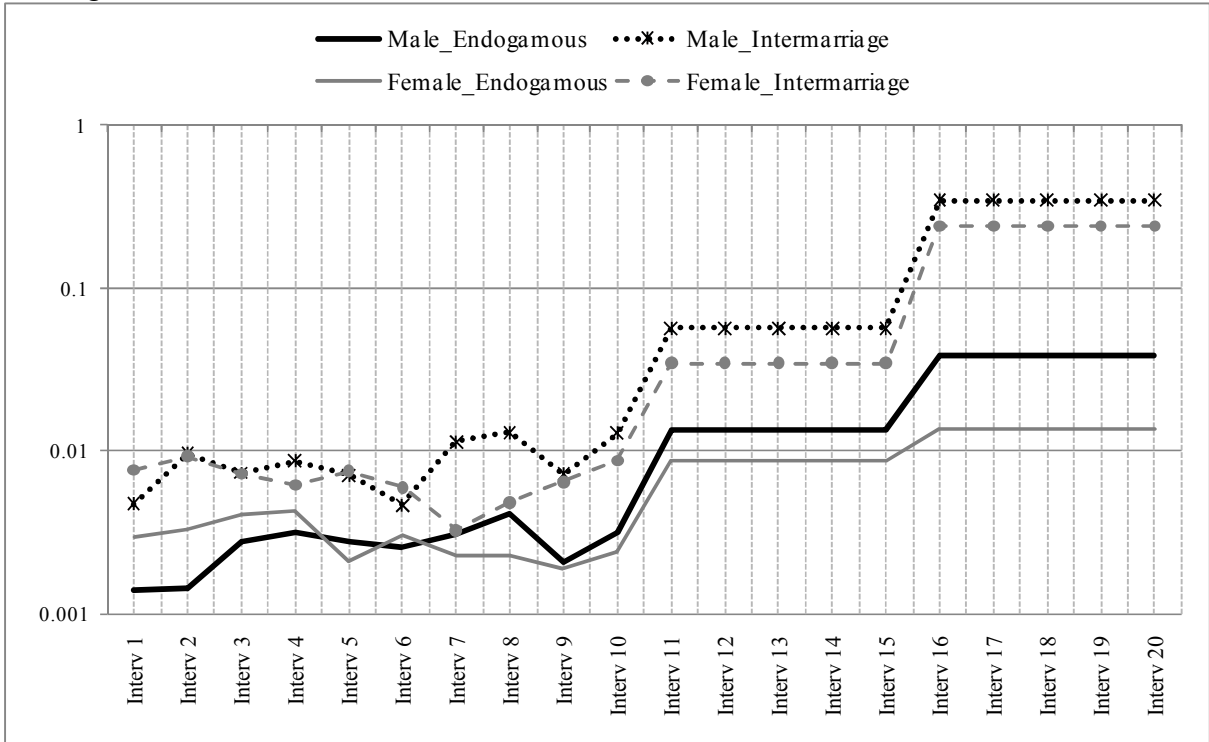
First, we find that the risk of marrying a native, both for male and female immigrants, is greater than the risk of marrying a person from their own country for the entire period under

study. In accordance with the reference framework used and our hypothesis, we expected that at least at the beginning of residency in Spain that the risk of marriage between immigrants from the same country would be greater than the risk of marrying natives, given the shared cultural background amongst connationals and the greater differences with natives.

Second, the risk of marriage increases as residency time in Spain increases while single for both types of marriages for men and women. The highest increase occurs after 10 years of residence and particularly in the case of mixed marriages between immigrants and natives. This confirms our initial hypothesis regarding the importance of residency time as a factor that favours a marriage with natives. That is, as the time of residency prolongs, there is a greater identification of migrants with the host society and this favours the formation of mixed marriages and the integration process at the same time.

Third, the risk of marrying among men is greater than among women, as endogamously as exogamously. However, the patterns between men and women are quite similar.

Figure 4: Probability of getting married by year of residence in Spain, sex and type of marriage.



Source: Author calculations based on ENI (2007) data.

Moreover, we have the covariates that affect the risk of marriage by type of union, for men (Table 4) and women (Table 5).

Age of arrival is a highly significant variable for the 4 trajectories analysed, where the risk of marrying increases considerably for those who are single and over 16 upon arrival. The risks vary depending on sex and whether it is an endogamous or exogamous marriage. According to our hypothesis, those migrants that are youngest at arrival have more time to marry and can thereby prolong their single status in the host society. Furthermore, due to their age and vital trajectory, they are better suited to integrate themselves in the host society (González, 2003; Åslund et al, 2009). Therefore, we would expect that for the youngest on arrival will have a greater risk of intermarriage while those who are older will be at a greater risk of endogamous marriages.

With regards to immigrant men, the risk of marrying a woman from his own country it sharply increases according to his age at arrival in Spain. That is, in this case the result would be the one expected. Where, for example, a man who was over 30 on arrival is 12 times more likely to marry a connational than a person who was under 16 on arrival. Nevertheless, in marriages with a native-born women, there is no trend in risk with regards to age upon arrival, where migrants who were between 20 and 30 upon arrival were at the greatest risk.

For women, there is no clear risk pattern for marriages with natives or connationals according to age upon arrival in Spain. The greatest risks of marrying either a connational or a native are between 21-30 years old.

Table 4: Men: likelihood of entering marriage by type of marriage.

Endogamous			Intermarriage		
	Exp(B)	Pr(> z)		Exp(B)	Pr(> z)
(Intercept)	0.001	0.000 (***)	(Intercept)	0.005	0.000 (***)
YEAR OF ARRIVAL:			YEAR OF ARRIVAL:		
Before 16	1		Before 16	1	
16-20	3.828	0.000 (***)	16-20	3.929	0.000 (***)
21-25	8.386	0.000 (***)	21-25	8.285	0.000 (***)
26-30	10.171	0.000 (***)	26-30	6.523	0.000 (***)
After 30	12.060	0.000 (***)	After 30	4.768	0.000 (***)
PERIOD OF ARRIVAL:			PERIOD OF ARRIVAL:		
Before 1995	1		Before 1995	1	
1995-1999	1.447	0.038 (*)	1995-1999	1.065	0.841
2000-2002	1.435	0.054 (.)	2000-2002	0.989	0.970
2003-2007	0.660	0.139	2003-2007	0.468	0.155
COUNTRY OF BIRTH:			COUNTRY OF BIRTH:		
Argentina	1		Argentina	1	
Colombia	1.640	0.164	Colombia	0.573	0.071 (.)
Ecuador	1.702	0.108	Ecuador	0.131	0.000 (***)
Morocco	8.117	0.000 (***)	Morocco	0.911	0.686
Rumania	4.921	0.000 (***)	Rumania	0.987	0.972
EDUCATION LEVEL:			EDUCATION LEVEL:		
Less primary	1		Less primary	1	
Primary	0.881	0.398	Primary	0.947	0.837
Secondary and +	0.740	0.038 (*)	Secondary and +	1.684	0.036 (*)
SPANISH CITIZENSHIP:			SPANISH CITIZENSHIP:		
No	1		No	1	
Yes: Before Arriving	0.068	0.000 (***)	Yes: Before Arriving	6.255	0.000 (***)
Yes: After Arriving	1.044	0.905	Yes: After Arriving	3.398	0.000 (***)
SOCIAL NETWORK:			SOCIAL NETWORK:		
Without contacts	1		Without contacts	1	
With contacts	1.468	0.004 (**)	With contacts	0.702	0.100 (.)
PROVINCIAL SEX RATIO:			PROVINCIAL SEX RATIO:		
High (>Male)	1		High (>Male)	1	
Even	0.776	0.203	Even	1.585	0.033 (*)
Low (>Female)	0.680	0.030 (*)	Low (>Female)	3.366	0.000 (***)
PROVINCIAL CONCENTRATION:			PROVINCIAL CONCENTRATION:		
Low	1		Low	1	
Medium	1.291	0.057 (.)	Medium	0.863	0.450
High	1.358	0.017 (*)	High	0.663	0.041 (*)

Source: Author calculations based on ENI (2007) data. Discrete-time logistic regression models.

Signif. Codes: [*** 0.001], [**0.01], [*0.05], [.0.1]

Table 5: Women: likelihood of entering marriage by type of marriage.

Endogamous				Intermarriage			
	Exp(B)	Pr(> z)			Exp(B)	Pr(> z)	
(Intercept)	0.003	0.000	(***)	(Intercept)	0.008	0.000	(***)
YEAR OF ARRIVAL:				YEAR OF ARRIVAL:			
Before 16	1			Before 16	1		
16-20	3.897	0.000	(***)	16-20	2.68	0.00	(***)
21-25	4.957	0.000	(***)	21-25	3.31	0.00	(***)
26-30	4.204	0.000	(***)	26-30	3.93	0.00	(***)
After 30	2.461	0.003	(**)	After 30	3.10	0.00	(***)
PERIOD OF ARRIVAL:				PERIOD OF ARRIVAL:			
Before 1995	1			Before 1995	1		
1995-1999	1.279	0.384		1995-1999	2.186	0.002	(**)
2000-2002	2.379	0.003	(**)	2000-2002	2.688	0.000	(***)
2003-2007	1.335	0.397		2003-2007	2.211	0.016	(*)
COUNTRY OF BIRTH:				COUNTRY OF BIRTH:			
Argentina	1			Argentina	1		
Colombia	0.601	0.106		Colombia	1.039	0.856	
Ecuador	0.597	0.135		Ecuador	0.617	0.047	(*)
Morocco	2.492	0.003	(**)	Morocco	1.067	0.770	
Rumania	1.326	0.330		Rumania	0.995	0.985	
EDUCATION LEVEL:				EDUCATION LEVEL:			
Less primary	1			Less primary	1		
Primary	0.735	0.144		Primary	1.358	0.212	
Secondary and +	0.605	0.022	(*)	Secondary and +	1.340	0.028	(*)
SPANISH CITIZENSHIP:				SPANISH CITIZENSHIP:			
No	1			No	1		
Yes: Before Arriving	0.259	0.030	(*)	Yes: Before Arriving	4.022	0.000	(***)
Yes: After Arriving	1.059	0.400		Yes: After Arriving	5.310	0.000	(***)
SOCIAL NETWORK:				SOCIAL NETWORK:			
Without contacts	1			Without contacts	1		
With contacts	1.761	0.007	(**)	With contacts	0.688	0.025	(*)
PROVINCIAL SEX:				PROVINCIAL SEX:			
High (>Male)	1			High (>Male)	1		
Even	0.855	0.492		Even	0.844	0.324	
Low (>Female)	1.472	0.049	(*)	Low (>Female)	0.680	0.071	(.)
PROVINCIAL CONCENTRATION:				PROVINCIAL CONCENTRATION:			
Low	1			Low	1		
Medium	0.942	0.715		Medium	0.871	0.324	
High	1.218	0.088	(.)	High	0.690	0.012	(*)

Source: Author calculations based on ENI (2007) data. Discrete-time logistic regression models.

Signif. Codes: [***0.001], [**0.01], [*0.05], [.0.1]

The *arrival period* as we have mentioned enables us to refer to a particular situation of the host country and to some degree, refer to the evolution of the size of migrants, an aspect that has not been taken into consideration in the other variables. This variable has a low level of significance, except where there are marriages between immigrants and native women. We do not observe any clear trend in any of the 4 trajectories in consideration. That is, it does not have a migrant profile according to his/her moment of arrival and related to the risk of marrying a connational or a native.

The *country of birth* of immigrants is not a highly significant variable as a whole, although in all trajectories there are certain categories that are statistically significant. Having

the Argentinians as a reference category, we find that only Moroccan and Romanian men, that is, the two countries that are most culturally different to the host society, have a significantly greater risk statistically of marrying a woman from the same country. However, in the case of unions with natives, there is only a significant statistical risk in the case of Ecuadorians, less than 38%. Therefore, in the case of men, the effects associated to the country of birth show on the one hand the fact that people who have greater cultural differences tend to marry women from their own country and on the other, the ethnic aspect implies a lower risk of marrying natives women.

With regards to women, only Moroccans showed a much greater risk of marrying a man from their own country. With regards to the risk of marrying a Spaniard, the category corresponding to Ecuador once again gives a significant lower risk. As a result, in the case of women, the effects associated to the country of birth mean that only the country with the greatest cultural differences, Morocco, marry more men from their own country, while the ethnic differences of Ecuadorians implies a lower risk of marrying a Spaniard.

The results in relation to our hypothesis on cultural, religious and ethnic aspects that can be attributed to the country of origin facilitate the extraction of two clear associations. First, we have observed that Moroccan men and women have a greater risk of marrying a person from their own country over that of the rest of the selected groups, 8 times more in the case of men and twice over in the case of women with regards to the category of reference. That is, it supports the initial hypothesis given its greater cultural singularity, although the latter is not observed as being supported in the existence of a differential risk and predictably lower in the case of marriage with a native. In the case of the Ecuadorians, about whom we have already pointed out their features in relation to an important indigenous component, both men and women show a lower risk of marrying Spaniards, which supports the initial hypothesis, although this is not supported either by a higher risk of endogamous marriage.

In the 4 trajectories there is a significant effect of *education* in the formation of immigrant marriages. With regards to the reference category, lower than primary education, we have not observed significant differences regarding primary education and the risk of endogamous or exogamous marriages for either men or women. The statistically significant differences upon marrying appear when comparing the reference category with the highest level of education, secondary education or higher. We found that both men and women who had the highest level of education had a lower risk of marrying a partner from their own country, 26% lower in men and 40% lower in women. However, this group with their higher

level of education have a higher risk of marrying a native-born partner, 68% greater in men and 34% greater in women.

That is, the effect of the level of education in marriage trajectories is the expected in accordance with the theoretical reference framework and prior studies in Spain (Cortina et al., 2008) and in accordance with the initial hypothesis proposed on the importance of education to break away from the group they belong to (Kalmijn, 1994).

Having or not Spanish citizenship is a highly significant variable in the formation of both types of marriage, particularly if they have Spanish nationality before arriving in Spain. In this last case, they have a lower risk of marrying a person from their birth country and a much greater risk of marrying a native partner compared to those who do not hold Spanish nationality, for both men and women. In the case where nationality is acquired in Spain prior to marriage, this does not cause any effect in endogamous marriages but it sharply increases the risk of marrying native women.

The effects of nationality in the formation of the union are in agreement with the initial hypothesis, but with important differences depending on the moment of naturalization. Holding the nationality of the destination country before travelling means there are direct ancestors present in the emigration country and quite possibly, the presence of family members. This means that the settling process will be more direct in the host society, relationships will be established more easily with natives and therefore they will have a greater risk of marrying Spaniards. When nationality has been obtained in the destination country, this is mainly due to a prolonged stay, in the case of Latin-Americans, this is after 5 years of residence and 10 for the rest, which serves as an integration indicator by itself and equally favours marriage with natives as there is a greater assimilation by the migrants of their host society in accordance with the theoretical framework (Gordon, 1964).

The presence of *contacts* on arrival, whether they be family members or friends that emigrated prior to their arrival, statistically affects the formation of marriage in the way suggested in our hypotheses. Contacts or a social network increases the risk of marrying an immigrant for both men and women and reduces the risk of marrying a native. That is, these contacts favour relationships with people from their own country, which means that the risk of finding a partner within these relationships increases and therefore decreases the risk of finding a native partner. In contrast, immigrants that do not have these contacts upon arrival seem to be more exposed to finding any type of relationship, which increases their probability of establishing contacts with natives (Zhou, 1997). This means that they are at a greater risk of marrying Spaniards, particularly in the case of female migrants.

Marriage market variables that refer to the province of residence upon arrival in Spain show a clear tendency and are an important factor in immigrant marriage trajectories. The composition by sex and the geographic distribution of immigrants are statistically significant in the structure of marriages.

The *sex ration*, relative to the relation between men and women of the same nationality, has given the expected effect although significant differences are only found between extreme categories, the majority presence of men or the scarcity of women compared to the scarcity of men or the majority presence of women. For men, a high sex ratio in the province of residence, that is, a greater presence of men than women of the same nationality reduces the risk of marriages with women of their own nationality and increases the risk with native women. In the case of women, a greater presence of men of the same nationality in the province of residence has the opposite effect, increases the risk of marrying a man from their own country and reduces the risk of marrying a Spaniard. That is, the availability of partners conditions the formation of marriages between immigrants from the same country.

The *level of concentration* of the immigrant population is also significant following the suggested hypothesis. The high concentration of an immigrant population from the same country favours endogamous marriages with regards to provinces with a low concentration, both for men and women. In contrast, provinces with a high concentration of immigrants of the same nationality show a lower risk of forming unions with natives. That is, availability and not connationals to form couples conditions the type of marriage of the immigrant population.

The aspects relative to the marriage market mean that the formation of couples depends on the preferences and characteristics of immigrants and existing possibilities. From a perspective of the integration process this means that it is not just a market process due to characteristics or preferences of immigrants and natives, but also of structural aspects such as the distribution of immigrants in the country.

5 – Conclusion and discussion

The analysis of first marriages of the immigrant population in Spain belongs to 5 main collectives by country of origin, Argentina, Colombia, Ecuador, Romania and Morocco, confirms some of the hypotheses suggested and question others. The selection of a partner is shown as an aspect related both to individual characteristics of immigrants and their preferences such as the process of settling in the host society, and where very few differences between men and women are given.

The first aspect to highlight is the time of residency in Spain. The risk of marrying a Spaniard, both for male and female migrants is greater than the risk of marrying a person from their own country. This result questions the general hypothesis that people prefer to marry someone from a similar cultural background, the matching hypothesis, and could be interpreted that strategic behaviour exists among migrants. Nevertheless, the sharp increase in the risk of marrying a Spaniard as time of residency in Spain increases (the risk of marrying a connational also increases but to a lower extent), and particularly after 10 years of residency, would indicate the importance of integration into the Spanish culture and reality as step prior to marrying a Spaniard. The existence of this link between time spent in the destination and the formation of mixed marriages supports the idea that time is one of the factors that most promotes integration through the assimilation of culture (Gordon, 1964).

From these results it can be concluded that foreign-born immigrants from these selected countries are more likely to marry natives after moving to Spain than with their conationals. But it should be interpreted cautiously: it is not possible to have data relating to the date of the initiation of cohabitation due to survey limitations. The lower probability of endogamous marriages, in particular at the beginning of arrival, could hide a larger proportion of cohabitation in this type of union, especially in the case of Latin-American immigrants (Rosero-Bixby, 1996; Castro, 2002).

Secondly, certain characteristics of immigrants must be highlighted which statistically affect partner selection, either a native or an immigrant:

Although *the age on arrival* is very significant, it does not show a trend in the type of marriage when it is considered a priori as one of the most important factors for the integration of the immigrant population. Arriving at an early age means their better adjustment to the host society, beginning with their access to the education system and job market (González, 2003; Åslund et al, 2009), which should favour marriage with natives. This absence of a link reminds us that a large part of this migration is very recent and that many migrants have only been in Spain for a short while, which means that the youngest of the group have not been exposed to possible marriages for long. Data from the ENI survey, show that 80% of immigrants under 30 were single at the time of the survey, while 50% of those over 30 had already married⁵.

⁵ We should also point out that the average age on arrival of single immigrants is 23.3 years old and that the average age at the time of the survey these same immigrants were 34.8 years old, and practically the same for both men and women.

This lack of exposure to the marriage market of numerous immigrants who arrived after 2000 might also be due to the lack of relationship between the time of arrival and type of marriage.

Education, as has been mentioned in several studies (Goldman et.al., 1984; Schoen and Wooldredge, 1989; Kalmijn, 1994; Cortina et al, 2008), allows the immigrant to break with the group and favours the formation of mixed marriages. In the case studied here, we observe that immigrant groups that have the highest level of education have the lower risks of marrying other immigrants and higher risks of marrying natives with regards to those of a lower educational level. Somehow, those who are more educated have better possibilities of integrating into their host society, particularly from a job market perspective, and which is also evident in the formation of marriages with natives. Having Spanish *nationality* is another individual characteristic that has a clear effect in the formation of marriages. Immigrants who have Spanish nationality before they migrate arrive in better conditions to position themselves in society and particularly to find a better job than those who do not have Spanish nationality⁶. Nationality in this case is a facilitator for integration and has a greater risk of marriage formation with natives and a lower risk of marriage with an immigrant. Immigrants who obtain Spanish nationality after migrating, but before marrying, also show a greater risk of marrying a native, although in contrast to the first group, they do not show a lower risk of marrying an immigrant. In these cases, nationality is a result of a prolonged stay in the country, that is, it is part of the integration and immersion process in the host culture.

The presence of *contacts* in the destination favours endogamous unions and inhibits exogamous unions. According to the integration perspective, social networks can make the arrival moment in the destination society easy but it could also make the adaptation/assimilation process to the host society more difficult since the networks of social relations can involve shared obligations and social control (Zhou, 1997). This fact explains the higher risk of endogamous marriage and the lower risk of intermarriage among immigrants with social networks.

Another aspect to point out is the formation of unions in the *country of origin*, given that this highlights the importance of cultural and ethnic aspects (Stevens et al., 1990; Portes, 1995; Kalmijn, 1998). People who come from Morocco (the most culturally different country and particularly with regards to religious issues, but also with regards to the relation between genders and family), have a greater risk of marrying amongst themselves (an aspect shared by

⁶ Although from a strategic viewpoint there is no incentive to marry a Spaniard to improve their legal situation in Spain.

Romanian men, but not Romanian women). However, people from Ecuador have greater racial or ethnic differences and is the only group to show a significantly lower risk of marrying a native. In this case, their physical features easily make them less attractive marriage candidates for native-born men and women (Kalmijn, 1998). In this sense, their physical appearance could affect the marriage formation and also the integration process in the host society (Portes, 1995; Zhou, 1997).

Thirdly, the importance of the trends of settlements and distribution of immigrants and the local marriage market should be pointed out in the selection of the partner type. The concentration and ratio of sexes significantly affect marrying an immigrant or a native.

We find that the availability of connational men or women at the precise moment of arrival in Spain affects the formation of marriages. This aspects questions intermarriage as an indicator of integration, at least from a perspective of the predisposition of immigrant groups, given that this is the often the result of the availability of partners from the same country. The lack of partners might “artificially” increase the formation of mixed couples and levels of integration although in fact the act of marrying a connational is an integration accelerator (Gordon 1964).

This aspect highlights the importance of the installation process in the territory of migrant groups and the rules of regulating immigration in each country, from assimilation, differential, exclusion and multiculturalism models (Castles, 2002), as factors that affect group interaction and the integration of minority groups. Certain factors that favour mobility, networks and migratory chains, as well as the installation in migrant territories and the formation of migrant communities (Portes et al, 1999; Castles, 2002) might hinder the integration of this population.

Nevertheless, as has been highlighted in previous studies, a low degree of endogamy does not necessarily imply integration and on the contrary (Gurak and FitzPatrick 1982). Lastly, we should point out that we do not know the intention of the structure with regards to natives: the greater or lower risk of marrying a native might be a result of migrant group behaviour (the case of less tendency of Ecuadorians to marry Spaniards) or of native group behaviour (where Spaniards show less tendency). Future studies should take this perspective into account.

References

- Angrist, Josh. (2002). "How Do Sex Ratios Affect Marriage and Labor Markets? Evidence From America's Second Generation", *Quarterly Journal of Economics*, 117(3): 997-1038.
- Åslund, O. Böhlmark, A. and Nordström Skans, O. (2009). "Age at Migration and Social Integration". *IZA DP No. 4263*, June 2009.
- Baizán, P., Aassve, A. and Billari, F. (2003), "Cohabitation, Marriage, and First Birth: The Interrelationship of Family Formation Events in Spain", *European Journal of Population*, 19: 147-169.
- Blau, P.M. (1977). *Inequality and Heterogeneity*. New York: Free Press.
- Blau, P.M., Becker, C, and Fitzpatrick, K.M.. (1984). "Intersecting Social Affiliations and Intermarriage." *Social Forces* 62 (3): 585-606.
- Blau, P., Blum, T. and Schwartz, J. (1982). "Heterogeneity and Intermarriage", *American Sociological Review*, 47 (1): 45-62.
- Becker, G.S. (1973). "A Theory of Marriage: Part I", *Journal of Political Economy*, 81 (4): 813-46.
- Brines, J. and Joyner, K. (1999) "The Ties That Bind: Principles of Cohesion in Cohabitation and Marriage", *American Sociological Review*, 64: 333-355.
- Brown, S.L. and Booth, A. (1996). "Cohabitation versus Marriage: A Comparison of Relationship Quality", *Journal of Marriage and the Family*, 58 (3): 668-678.
- Bumpass, L.L. and Sweet, A. (1989). "National Estimates of Cohabitation", *Demography*, 26 (4): 615-625.
- Cabré, A. (1993). "Volverán Tórtolos y Cigüeñas". In Garrido, L. and Gil Calvo, E. (eds), *Estrategias familiares*. Madrid: Alianza Universidad: 113-131.
- Cabré, A., Cortina, C. and Esteve, A. (2009), "¿Con quién se unen los latinoamericanos en España? Respuestas a partir de tres fuentes demográficas". *Notas de Población*, 86: 19-38.
- Castles, S. (2002). "Migration and Community Formation under Conditions of Globalization". *International Migration Review*, 36 (4): 1143-1168.
- Castro-Martín, T., Domínguez-Folgueras, M. and Martín-García, T. (2008). "Not truly partnerless: Non-residential partnerships and retreat from marriage in Spain". *Demographic Research*, 18(16): 443-468
- Castro, T. (1999). "Pautas recientes en la formación de pareja: ampliando el concepto de nupcialidad a las uniones consensuales", *Revista Internacional de Sociología*, 23, 61-94.
- Castro Martín, T. (2002). "Consensual Unions in Latin America: Persistence of a Dual Nuptiality System". *Journal of Comparative Family Studies*, 33 (1): 35-55.
- Castro Martín, Teresa (2003). "Matrimonios de hecho, de derecho y en eterno aplazamiento: la nupcialidad española al inicio del siglo XXI". *Sistema* 175-176: 89-112.
- Coleman, D. (1994): "Trends in fertility and intermarriage among immigrant populations in Western Europe as measures of integration", *Journal of Biosocial Science*, 26: 107-136.
- 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.

- Cortina, C., Esteve, A. and Jiménez, E. (2008b) “La delicada captación estadística de las uniones de los inmigrantes”. *Índice*, 30: 18-20.
- Cortina, C., Esteve, A. and Domingo, A. (2006), “Crecimiento y singularidades demográficas de los matrimonios de extranjeros en España”, *Revista Migraciones*, 20: 75-105.
- Davis, K. (1984). “Wives and work: consequences of the sex-role revolution”. *Population and Development Review*, 10 (3): 397-417
- Domingo, A. (1997). *La formación de la pareja en tiempo de crisis: Madrid y Barcelona, 1975-1995*. Doctoral Thesis. Universidad Nacional de Educación a Distancia (UNED). Madrid.
- Domínguez-Folgueras, M. and Castro-Martín, T. (2008). “Women’s changing socioeconomic position and union formation in Spain and Portugal”. *Demographic Research*, 19 (41): 1513-1550.
- Drachsler, J. (1920). *Democracy and Assimilation: The Blending of Immigrant Heritages in America*. New York: Macmillan.
- Dribe, M. and Lundh, C. (2008). “Intermarriage and Immigrant Integration in Sweden: An Exploratory Analysis”, *Acta Sociologica*, 51 (4): 329-254.
- Edwards, J. (1968). “Familial Behavior as Social Exchange”. *Journal of Marriage and the Family*, 3: 518-526”
- Esteve, A., Cortina, C and Cabré, A. (2009). “Long Term Trends in Marital Age Homogamy Patterns: Spain, 1922-2006. *Population-E*, 64 (1): 173-202.
- Goldman, N. Westoff, C. F. and Hammerslough, C. (1984). “Demography of the Marriage Market in the United States”. *Population Index*, 50 (1): 5-25.
- Gómez-Cirinao, E.J. and Tornos-Cubillo, A. (2007). *Ecuatorianos en España. Una aproximación sociológica*. Observatorio permanente de la migración, Ministerio de trabajo y Asuntos Sociales, Madrid.
- Gonzalez, A. (2003). “The education and wages of immigrant children: The impact of age of arrival” *Economics of Education Review*, 22, 203–212.
- González-Ferrer, A. (2006). “Who Do Immigrants Marry? Partner Choice Among Immigrants in Germany”. *European Sociological Review*, 22 (2): 171-185.
- Gordon, M. (1964). *Assimilation in American Life: The Role of Race, Religion, and National Origins*, New York: Oxford University Press.
- Gray, C.L. (2009). “Rural out-migration and smallholder agriculture in the southern Ecuadorian Andes”, *Population & Environment*, 30 (4-5): 193-217.
- Gurak DT, Fitzpatrick JP. (1982). “Intermarriage among Hispanic groups in New York City”. *American Journal Sociology*, 87 (4): 921-934.
- Harris, D. R., and H. Ono. (2005). “How many interracial marriages would there be if all groups were of equal size in all places? A New Look at National Estimates of Interracial Marriage.” *Social Science Research* 34: 236–251.
- Hoëm , J.M., Kostova, D. Jasilioniene, A. and Muresan, C. (2009). “Traces of the Second Demographic Transition in four selected countries in Central and Eastern Europe: Union formation as a demographic manifestation”, *European Journal of Population*, 25: 239-255..

- Jokisch, B. and Pribilsky, J. (2002), “The panic to leave: economic crisis and the “new emigration” from Ecuador”, *International Migration*, 40 (4):75-101.
- Kalmijn M. (1991). “Shifting boundaries: trends in religious and educational homogamy”. *American Sociological Review*. 56 (6):786-800.
- Kalmijn M. (1993). “Trends in black/white intermarriage”. *Social Forces*, 72 (1): 119-146
- Kalmijn, M. (1994). “Assortative mating by cultural and economic occupational status”. *American Journal of Sociology* 100(2): 422–452.
- Kalmijn, M. (1998). “Intermarriage and Homogamy: Causes, patterns, trends”. *Annual Review of Sociology* 24 (1): 395–421.
- Khoudour, D. (2007). “¿Porqué emigran los colombianos? Un análisis departamental basado en el Censo del 2005”. *Revista de economía institucional*, 9: 255-271.
- Lesthaeghe, R. (1991). *The Second Demographic Transition in Western Countries: An Interpretation*. Brussels, Princeton University Library.
- 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*, Vol. 33, No. 3 (Autumn): 717-744.
- Lucassen, L and Laarman, C. (2009). “Immigration, intermarriage and the changing face of Europe in the post war period”. *History of the Family* 14: 52–68
- Mare RD. (1991). “Five decades of educational assortative mating”. *American Sociological Review*. 56 (1): 15-32
- Martínez Veiga, U. (1997), *La integración social de los inmigrantes extranjeros en España*. Madrid: Trotta.
- Martín Muñoz, G., García Castaño, F., López Sala, A. and Crespo, R. (2003), *Marroquíes en España. Estudio sobre su integración*. Madrid: Fundación Repsol YPF.
- Massey, D. (1985). “Ethnic Residential Segregation: a Theoretical Synthesis and Empirical Review”, *Sociology and Social Research*, 69: 315-350.
- Massey, D.S. and Denton, N.A. (1987). “The Trends in the Residential Segregation of Blacks, Hispanic, and Asians: 1970-1980”. *American Sociological Review*. Vol. 52, N.6: 802-825.
- Massey, D.S. and Denton, N.A. (1988). “The Dimensions of Residential Segregation”. *Social Forces*, Vol. 67, No. 2 (Dec., 1988), pp. 281-315
- Miret-Gamundi, P. and Cabré Pla, A. (2005), “Pautas recientes en la formación familiar en España: Constitución de la pareja y fecundidad”, *Papeles de Economía Española*, n. 104: 17-36.
- Miret-Gamundi, P. (1997), “Nuptiality patterns in Spain in the eighties”, *Genus*, v.53, n. 3-4: 185-98.
- Muresan, C. (2007). “Family dynamics in pre- and post-transition Romania: a life-table description”. *MPIDR WORKING PAPER WP 2007-018*.
- Murstein, BI. (1976). *Who Will Marry Whom: Theories and Research in Marital Choice*. New York, Springer.
- Novick, S. and Murias, M.G. (2005). “Dos estudios sobre la emigración reciente en la Argentina”. *Documento de trabajo del Instituto de Investigaciones Gino Germani*, 42: 1-86.

- Portes, A., Guarnizo, E., and Landolt, P. (1999). "The Study of Transnationalisms: Pitfalls and Promise of an Emergent Research Field". *Ethnic and Racial Studies*, 22 (2): 217-237.
- Portes, A. and Zhou, M. (1993). "The new second generation: segmented assimilation and its variants", *The Annals of the American Academy of Political and Social Sciences*, 530: 74-96.
- Portes A. (1995). "Economic sociology and the sociology of immigration: a conceptual overview". In *The Economic Sociology of Immigration: Essays on Networks, Ethnicity, and Entrepreneurship*, ed. A Portes, pp. 1- 41. New York: Russell Sage Found.
- Reher, D. and Requena, M. (2009). "The National Immigrant Survey of Spain. A new data source for migration studies in Europe". *Demographic Research*, 20 (12): 253-278.
- Rodríguez-Vignoli, Jorge (2004). "Cohabitación en América Latina: ¿Modernidad, exclusión o diversidad?". *Papeles de Población* 10 (40): 97-145.
- Rosero-Bixby, Luis (1992). "Las tendencias de la nupcialidad y la transición de la fecundidad en América Latina". *Notas de Población* 55:103-130.
- Rosero-Bixby, L. (1996). "Nuptiality Trends and Fertility Transition in Latin America" in Guzman, J.M., Singh, S., Rodriguez, G and Pantelides, E.(Ed.). *The Fertility Transition in Latin America*. Oxford, U.K. Oxford University Press.
- Rotariu, T. (2006). "Romania and the Second Demographic Transition. The Traditional Value System and Low Fertility Rates". *International Journal of Sociology*, 36 (1): 10-27.
- Safi, M. (2008). "Intermarriage and assimilation: disparities in levels of exogamy among immigrants in France". *Population* (English edition), 2 (63): 239-267
- Sandberg, N. (1973). *Ethnic Identity and Assimilation, the Polish Community*. New York: Praeger.
- Schoen, R. (1983). "Measuring the tightness of a marriage squeeze". *Demography*, 20: 61-78.
- Schoen, R. (1992). "First Unions and the Stability of First Marriages", *Journal of Marriage and the Family*, 54 (2): 281-284.
- Schoen, R., and Kluegel, J. R. (1988). "The widening gap in black and white marriage rates: The impact of population composition and differential marriage propensities". *American Sociological Review*, 53: 895-907.
- Schoen, R. and Thomas, B. (1990). "Religion intermarriage in Switzerland, 1969-72 and 1979-82". *European Journal of Population*, 6 (3): 359-376
- Schoen, R, Wooldredge, J. (1989). "Marriage choices in North Carolina and Virginia, 1969-71 and 1979-81". *Journal of Marriage Family*, 51 (2): 465-481
- Skinner, K.B. Bahr, S.J. Crane, D.R. and Call, V.R.A. (2002). "Cohabitation, Marriage, and Remarriage: A Comparison of Relationship Quality Over Time". *Journal of Family Issues*, 23: 74 – 90.
- South, S. J. and Lloyd, K. M. (1992). "Marriage Opportunities and Family Formation: Further Implications of Imbalanced Sex Ratios". *Journal of Marriage and the Family*, 54 (2): 440-451.
- Spanier, G.B. (1983). "Married and Unmarried Cohabitation in the United States". *Journal of Marriage and the Family* 45: 277-88.
- Stevens, G., Owens, D. and Schaefer, E.C. (1990). "Education and Attractiveness in Marriage Choices". *Social Psychology Quarterly*, 53: 6-70.

- Teachman, J.D., Thomas, J., and Paasch, K. (1991). "Legal status and the stability of coresidential unions". *Demography*, 28: 571-586.
- Tribalat, M., Simon, P. and Riandey, B. (1996). *De l'immigration a l'assimilation: Enquête sur les populations d'origine étrangère en France*. Editions La Découverte, INED, Paris.
- United Nations. (2010). *World Marriage Data 2008*. Department of Economic and Social Affairs Population Division (Available at: <http://un.org/esa/population/unpop.htm>).
- Van De Kaa, D. J. (1987). "Europe's Second Demographic Transition." *Population Bulletin*, 42(1): 1-57.
- Viruela-Martínez, R. (2006). "Inmigrantes rumanos en españa: aspectos territoriales y procesos de sustitución laboral" *Scripta Nova*, Vol. X (222) (<http://www.ub.es/geocrit/sn/sn-222.htm>)
- Zhou M (1997) "Growing Up American: The Challenge Confronting Immigrant Children and Children of Immigrants", *Annual Review of Sociology*, 23: 63–95