International Migration and Educational Assortative Mating in Mexico and the United States

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Abstract

Using data from the 2000 U.S. and Mexican Censuses, this paper examines the relationship between migration and marriage patterns by describing how the distributions of marital statuses and assortative mating patterns vary by individual and community experiences of migration. In Mexico, migrants and those living in areas with high levels of migration are less likely to marry a spouse with the same level of education. Return migrants from the U.S. to Mexico may use their improved economic position to marry up. In the U.S., Mexican migrants are also less likely to enter into homogamous unions; however, the odds of homogamy do not vary by couple level of migration. Migrants may expand their pool of potential spouses to include non-migrants and non-migrants tend to be better educated than Mexican migrants. With individual migration experiences, the odds of marrying outside of one's education group increase the most among the least educated. With community level of migration in Mexico, the odds of marrying outside of the group increases the most among the best educated. These findings suggest that preferences for homogamy are disrupted by migration.

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INTRODUCTION

Mexican migration is characterized by the high rates of circular migration of men between Mexican sending communities to the U.S. and relatively low rates of migration by women (Durand et al. 2001; Frank and Wildsmith 2005; Hondagneu-Sotelo 1994; Kanaiaupuni 2000). Despite increases in women's migration since the 1970's, in the 1990's, 80% of Mexican migrants to the U.S. were men (Durand et al. 2001; Marcelli and Cornelius 2000). In particular, young, single men living in areas with limited economic opportunities have high migration rates[1] (Riosmena 2005). Migration disrupts existing marriage patterns by engendering structural and normative changes at the individual and community levels. For individual migrants, migration experiences may alter their attractiveness in the marriage market by changing their relative socioeconomic position of return migrants. At the community level, the volume and pattern of Mexican migration not only alters the sheer number of potential spouses in sending and receiving communities, but also changes the composition of the marriage market in sending and receiving communities. Combined, these changes not only alter the likelihood that individuals will marry, but they also alter the characteristic of the spouses that they marry.

This paper reports an analysis of these phenomena by describing marriage and assortative mating patterns in Mexico, including those who have had recent circular migration experience, and among Mexican immigrants in the U.S. A full demographic model of these processes must take account of how young men and women in Mexican communities are at risk to both union

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[1] Our results indicate that about 56% of Mexican male migrants in the U.S. between the ages of 18 and 40 were single in 2000 (see below).

formation and migration, of patterns of interregional and international migration and return

migration, of marriage patterns in receiving communities (that may include U.S. born partners of

both Mexican and non-Mexican descent), of differentials in these processes among persons of

varying socioeconomic levels, and of assortative mating patterns in sending and receiving

communities. Although it is relatively straightforward to enumerate the stocks and flows of

individuals and couples whose behavior makes up these processes, data limitations make the

study of these individuals difficult. Ideal data would include complete marriage and migration

histories of large samples of Mexicans in a number of sending and receiving communities. In

this paper, we take an indirect approach to these processes by comparing distributions of marital

statuses and assortative mating patterns among spouses with different types of migration

experiences living in communities within Mexico and the U.S. that vary in their migration

patterns. More specifically, we investigate: (1) whether marriage rates among Mexicans vary by

individual migration experiences and levels of in and out migration in the community; (2)

whether the educational resemblance of spouses varies by individual migration experience and

levels of in and out migration in a community; and (3) to the extent that they have occurred, we

examine how they vary across the education distribution.

We focus on patterns of educational assortative mating because educational attainment is

a key socioeconomic consequence of family background as well as a key determinant of labor

market success and socio-economic attainment (Mare 1991). We focus on assortative mating

patterns as well as marriage rates because the clustering of couples on educational traits may be a

source of inequality among families and children (Schwartz and Mare 2005). Indeed, the recent

increase in the resemblance of husbands and wives in the United States is concentrated at the

bottom of the education distribution and may be partly attributed to the unique marriage patterns of poorly educated immigrants (Schwartz and Mare 2005).

This project extends previous research in several ways. Although union formation patterns of sending and receiving communities are interdependent due to the sex-selective nature of migration, the majority of studies on the effect of migration on union formation focus on either sending or the receiving communities (Esteve and McCAA 2006).[2] In contrast, we examine the relationship between Mexican migration and the educational resemblance of Mexican spouses in both Mexico and among Mexican immigrants to the U.S. Furthermore, most studies on the relationship between migration and union formation examine how individual migration experiences influence whether they form a union and seldom examine how community level rates of migration affect union formation (Parrado 2004; Riosmena, 2005). We examine how migration experiences at the community level affect both union formation and patterns of assortative mating. Moreover, most studies on educational assortative mating limit the scope of their analyses to marriage patterns of majority populations such as non-Hispanic Whites or the total U.S. population (Lewis and Oppenheimer 2000; Qian and Preston 1993; Schwartz and Mare 2005). This study focuses on educational assortative mating patterns of Mexican immigrants, the largest contemporary immigrant group in the U.S.

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[2] Esteve and McCAA (2006) also examine the educational assortative mating patterns for Mexicans in the U.S. and Mexico. Our studies differ in several respects. Whereas a focus of our study is the relationship between community level migration and educational assortative mating, they focus on the educational assortative mating among persons with Mexican ethnicity in the U.S. Whereas they examine the assortative mating patterns of individuals of Mexican origin, we compare assortative mating pattern of recent immigrants from Mexico, pre-1995 migrants, and others. Furthermore, they restrict their analyses to couples with at least one spouse between the ages of 30 and 39, whereas we include a broader age range. Our analyses include a more extensive comparison of the educational assortative mating patterns in Mexico and the U.S.

BACKGROUND

Migration Experiences and Marital Outcomes

Over the short term, international migration may be a disruptive event that removes migrants from the marriage market in their home communities (Parrado 2004). Their absence combined with the economic uncertainties accompanying the early stages of migration may lower the likelihood that migrants marry (Parrado 2004). Over the long run, however, migration experiences may improve migrants' relative economic standings in the community and their chances for marriage in either the U.S. or in Mexico. The higher wages in the U.S. may provide migrants with the opportunity to amass financial wealth (Massey and Espinosa 1997). However, upon their return, not only does their improved economic circumstance increase their chances for marriage (Parrado 2004), but it may also provide them access to potential partners who may overlook their lower levels of education in light of their financial wealth. Furthermore, some migrants may marry while in the U.S. In light of the educational differentials between the U.S. and the Mexico, some of these migrants' spouses have higher levels of education than the potential spouses that are available to the migrant in Mexico.

In addition, migration may also disrupt existing patterns of assortative mating by changing norms on the attractiveness of a potential spouse. When exposed to the norms on union formation in the U.S., migrants may seek spouses with different characteristics than those sought by non-migrants. In the U.S., male migrants are exposed to an environment where wives contribute more to the financial well-being of their families than in married couple households in Mexico. Having been exposed to such an environment, migrants may place a greater premium on characteristics that signal their future wives' economic prospects such as education or current employment. Male migrants' preference for wives with good economic potential may increase

the likelihood that men marry women who are better educated or, at least, lower the incidence of

marrying women who are lesser educated than they are.

Migration and Marriage Markets

At the community level, the volume and pattern of Mexican migration may have a variety

of complex effects on union formation in sending and receiving communities. Previous studies

have documented and speculated about the relationship between the composition of local

marriage markets and marriage. Of particular relevance to our analyses are the potential effects

of sex ratios and group sizes on marriage patterns.

Gender imbalances in the local marriage market may influence rates of union formation

and patterns of marital sorting (Lewis and Oppenheimer 2000). According to this explanation,

union formation is contingent upon one's own characteristics, the availability of potential

spouses, and the characteristics of competitors (Lewis and Oppenheimer 2000; Lichter et al.

1995). Mexican migration to the U.S. disproportionately reduces the number of men from local

marriage markets in Mexico. Not only does Mexican migration reduce the number of men, it

also disproportionately removes "marriageable men" since migration may be selective of certain

traits, such as resourcefulness, motivation to succeed, desire to be independent, and good health,

that are also desirable traits in a potential spouse (Hondagneu-Sotelo 1994). The gender

imbalances in the numbers and characteristics of men resulting due to migration diminish

marriage opportunities for single, non-migrant women. Choi (2006) and Riosmena (2005) show

that women living in Mexican communities with high levels of migration are more likely than

those in communities with low levels of migration to delay forming a union. Conversely, in

receiving communities in the U.S., immigration may create a surplus of single men. This may

diminish marriage opportunities for men in competition with Mexican migrants and possibly

enhance the opportunities for the relatively small number of women who migrate or regard male

migrants as potential spouses. In addition to its impact on marriage rates, the volume and pattern

of migration may also influence patterns of assortative mating by generating imbalances of men

and women at various levels of educational attainment or other key markers of spouse

desirability. Unmarried women may expand their pool of potential partners due to the shortages

of marriageable men resulting from migration. Therefore, women living in Mexican

communities with high levels of migration may be more likely than women living in areas with

low levels of migration to marry men who have lower levels of education than they do. This

pattern is likely to be particularly salient among single men and women in the highest education

categories. Their pool of potential spouses is extremely small due to the low levels of education

in Mexico. The removal of marriageable mates from their extremely small pool of potential

spouse pressures them to expand their pool of potential mates. Empirical results on the effects of

gender imbalances on assortative mating in U.S. marriage markets are mixed. Some studies have

found that once individual characteristics are controlled the composition of local marriage

markets do not have an effect on educational assortative mating (Lichter et al. 1995, Qian and

Preston 1993). Other studies, however, suggest that shortages of potential spouses with some

preferred characteristics force women to lower the minimum qualities expected in a partner and

marry down (Lewis and Oppenheimer 2000).

Group size may also affect patterns of assortative mating (Lewis and Oppenheimer

2000). According to this perspective, members of minority groups may face difficulty in

marrying within their own group if the group of potential spouses is relatively small (Lewis and

Oppenheimer 2000). This forces some members of this minority group to seek spouses outside

of their group. In the context of Mexican migration, the pool of potential spouses among male

migrants is small due to the gendered nature of Mexican migration. In many cases, this may result in delayed marriages for male migrants who postpone marriage until they return to Mexico; however, other migrants may expand their pool of potential spouses to include women in the U.S. who are not Mexican migrants. Because Mexican migrants tend to have lower levels of education compared to non-migrants in the U.S, this increases the likelihood that these men marry women with higher levels of education. This perspective may also help us foresee the marital sorting behavior of to the small group Mexican migrations with above average levels of education living in the U.S. If their desire for endogamy within their ethnic group is high, these individuals may be more likely to marry spouse with lower levels of education because they are part of a smaller educational group. This is consistent with empirical evidence that suggests that heterogamy is more common in smaller educational groups (Blau et al. 1982).

DATA AND METHODS

Data Sources

To examine the relationship between migration, marriage, and educational assortative mating, we use the 5% Integrated Public Use Microdata Series (IPUMS) sample of the 2000 U.S. Census, the 10.6% IPUMS sample of the 2000 Mexican Census, and the International Migration Supplement of the 2000 Mexican Census downloaded from the Mexican Census Bureau (INEGI).

For individuals and couples, each sample contains information on their age, educational attainment, migration experience, and marital status. The samples for Mexico also contain information on the current state, current municipality of residence, municipality of residence in 1995, and state of residence in 1995. The samples for the U.S. contain information on current state of residence, current metropolitan area of residence, state of residence in 1995, metropolitan

area of residence in 1995, and country of birth. The *International Migration Supplement* asks

respondents to provide proxy reports about the last international trip that a household member

took between January 1, 1995 and the date of interview. Household member is defined as an

individual who lived in the respondent's household in 1995, before they migrated to their country

of destination. The proxy reports contain information about the migrant's age at the time of

migration, sex, date of departure, country of destination, country of residence on the date of the

interview, and date of return to Mexico[3].

Because the 2000 Mexican and U.S. Censuses[4] do not collect information about the

socio-demographic characteristics of spouses or partners who are absent, our couple-level

measures are restricted to couples where both partners are present. We restrict our analyses of

married couples in the U.S.; for Mexico, we also include couples who are explicitly identified as

being in consensual unions.   Such unions often serve as surrogate legal marriages for individuals

with lower socioeconomic status in Mexico and other Latin American countries (Castro Martin

2002). Our couple sample consists of unions in which the wife is aged 18 to 40 regardless of the

age of the husband at the time of the interview. The resulting sample includes 1,018,428 couples

in Mexico and 1,053,802 couples in the U.S.

Measurements

Couple's Migration Experiences: We capture the couple's migration experience using

information about respondent's country of residence in 1995 and country of birth. For Mexico

we classify each individual as either a recent migrant (i.e. individuals that lived in the U.S. in

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[3] 97.3% of all migrants in the *International Migration Supplement* had migrated to U.S.
[4] Recent migrants are 0.7% of the U.S. population.

1995 and returned to Mexico prior to 2000) or a non-migrant.[5] Classifying each spouse as one of these two categories yields four types of couples: (1) no migrants, (2) wife only, (3) husband only, and (4) both migrants. For the U.S., we classify each respondent into one of 3 categories- recent migrants, pre-1995 migrants, and non-migrants. Recent migrant*s* were living in Mexico in 1995, but were present in the U.S. in 2000. Pre-1995 migrants were born in Mexico and living in the U.S. in 1995 and 2000. Non-migrants[6] were not born in Mexico and did not live in Mexico in 1995. Classifying each spouse as one of these three categories yields six types of couples: (1) no migrants, (2) wife non-migrant and husband recent migrant, (3) wife non-migrant and husband pre-1995 migrant, (4) wife recent and husband non-migrant, (5) both spouses are recent migrants, (6) wife recent and husband pre-1995 migrants, (7) wife pre-1995 and husband non-migrant, (8) wife pre-1995 and husband recent migrant, and (9) both spouses are pre-1995 migrants.

Couple's education: We classify each spouse into one of five categories for highest year of schooling completed (<9, 9-11, 12, 13-15, ≥16).

Levels of migration in communities: We classify communities into four categories by their gender-specific level of in or out migration. For Mexico, we use information on the country of destination, date of return to Mexico, and sex of the migrant in the International Migration Supplement to calculate the rates of out-migration. As the political, administrative, and economic unit similar in meaning to counties in the U.S. (Parrado and Zenteno 2002; Villarreal 2003), municipality approximates migration sending communities and local marriage markets in Mexico. Because the pattern and process of Mexican migration varies by sex, we calculate out-

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[5] Data limitations in the 2000 Mexican Census prevent us from differentiating between people that had never migrated and those that had migrated to the U. S. and returned to Mexico prior to 1995.

[6] The measure also includes individuals who are not self-identified Mexicans. We include these individuals in light of the high intermarriage rates of Hispanics who are largely composed of Mexican Americans

migration rates for men and women. The rate of out-migration for men (women) in a municipality is the percentage of the municipality's male (female) residents in 1995 who migrated to the U.S. between 1995 and 2000 and reside in the U.S. on the date of the interview. Municipalities were classified as areas with high (low) levels of male migration when the gender-specific out-migration rate is above (below) the 90th percentile of the rates for the country as a whole. For men the 90th percentile is 8.98%; for women it is 2.34%. Using these definitions, we classify each municipality into one of four types (low male/low female, high male/low female, low male/high female, high male/high female)[7].

For the U.S., we calculate in-migration ratios using information on country of birth, country of residence in 1995, state and metropolitan area of residence in 1995, state and metropolitan areas of residence in 2000, and the sex of the respondent. We use metropolitan area and a state-specific non-metropolitan area as our geographic unit for the calculation of in-migration ratios. The in-migration ratio for men in a metropolitan or state-specific non-metropolitan area is the number of men who lived in Mexico in 1995 and were residing in the area in 2000 divided by the number of men who lived in the area in 1995. The in-migration ratios for women in a metropolitan or state-specific non-metropolitan area is the number of women who lived in Mexico in 1995 and were residing in the area in 2000 over the number of women who lived in the area in 1995. We then classified the entire U.S. population into 2 groups using the rates of migration for men and women. Metropolitan and state-specific non-metropolitan areas are classified as areas with high (low) male migration when the in-migration ratio is above (below) the 90th percentile for the country as a whole. For men the 90th percentile

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[7] We also conducted analyses classifying the communities into areas with high level of male/female migration depending on whether the gender specific migration rates were above or below the 50th percentile and 75th percentile. Although the magnitude of the effect is accentuated when we classify the communities into areas with high levels of migration using higher sex-specific migration rates, our general results do not change.

is 4.99%; for women it is or higher (lower). Municipalities were classified as areas with high

(low) female migration when the rate of out-migration for women was 4.09%. Using these

definitions we classify each state-metropolitan area into one of three types (low male/low female,

high male/low female, high male/high female). When communities are classified depending on

whether the sex-specific in-migration ratio is above or below the 90th percentile, no areas have

low levels of male migration and high levels of female migration. This is consistent with the

patterns of Mexican migration observed in previous studies where migrants are predominantly

male and women usually migrate to reunite their male families (Cerrutti and Massey 2001).

Statistical Methods

Our analysis has two parts. In the first part, we describe the relationship between

Mexican migration and union formation. We first estimate gender-specific distributions of

education and marital status by individual migration experiences and level of migration in

sending and receiving communities. These analyses provide a general sense of the impact that

individual migration experiences and the volume and patterns of migration may have on

individual marriage opportunities and the structure of the local marriage market in these

communities. We then establish whether marriage patterns vary for male and female migrants

and determine whether marriage patterns for men and women vary by the level of male and

female migration in the communities. We also examine whether there are variations in the

marriage patterns of Mexicans in sending and receiving communities.

In the second part of our analyses, we describe the relationship between migration and

educational assortative mating. We employ simple descriptive statistics as well as using log

linear models for contingency tables (e.g. Agresti 2002; Mare 1991; Schwartz and Mare 2005).

Log linear models are well-suited for our analyses because they show the association between

couples' educational characteristics controlling for the marginal distributions of husbands' and

wives' schooling (Mare 1991; Schwartz and Mare 2005).   In the analysis of assortative mating,

we cross-classify husbands' highest educational attainment, wife's highest educational

attainment, by couple's migration experience, and level of migration at the community for each

country. For unions in Mexico, there are 16 unique combinations of couple's migration

experience and levels of migration in the community, yielding a 400 cell table (5 x 5 x 4 x 4).

For marriages in the U.S., there are 27 combinations of couple's migration experience and levels

of migration in the community, yielding a 675 cell table (5 x 5 x 9 x 3). We restrict our analyses

to couples for whom the wife is between the ages of 18 and 40 regardless of the husband's age.

Our goal is to represent changes in the association between husband's and wife's

education in a parsimonious yet accurate manner. To do so, we use *homogamy* and *crossing*

models. *Homogamy models* represent the association between husband's and wife's education in

terms of a single parameter that represents the odds that husbands and wives share the same

rather than different levels of education. *Crossing models* represent the association between

husband's and wife's education as a series of barriers to marriage between education groups or in

terms of the relative permeability between adjacent education levels (Mare 1991; Schwartz and

Mare 2005).

We start with a baseline model in which the association between husband's and wife's

education does not vary by couple's migration status or the level of migration in the

communities. We also saturate our model with interaction between husband and wife's education

and focus on a more parsimonious representation of change in the association. Thus our baseline

model is:

$$\log(m_{ijlc}/t_{ijlc}) = \lambda + \lambda_i^H + \lambda_j^W + \lambda_l^L + \lambda_c^C + \lambda_{ij}^{HW} + \lambda_{il}^{HL} + \lambda_{jl}^{WL} + \lambda_{ic}^{HC} + \lambda_{jc}^{WC} + \lambda_{lc}^{LC} + \lambda_{ilc}^{HLC} + \lambda_{jlc}^{WLC}$$

Where, for Mexico, H is husband's education ($i=1,..., 5$), W is wife's education ($j=1,..., 5$), L

is the level of migration in the community ($l=1, ..., 4$), and C is couple migration status ($c=1,...,$

4) for Mexico. For the U.S., all variables are defined similarly except the level of migration in

the community L ($l=1,..., 3$) and couple's migration experience C $(c=1, ..., 9)$ for the U.S. Thus,

m_{ijkl} is the expected number of marriages between husbands in education category i and wives in

education category j with couple's migration experience c living in communities with level of

migration l. This model captures variations in the distribution of each spouse's education by

couple's migration experience or level of migration in the community and contains all lower

order terms for the marginal distributions of the variables.

A homogamy model is:

$$\log(m_{ijcl}/t_{ijcl}) = \text{Baseline model} + \gamma_{ol}^{OL} + \gamma_{oc}^{OC}$$

where O =1 if the wife's education category equals the husband's education category and 0

otherwise; γ_{ol}^{OL} estimates the changes in homogamy relative to the levels of migration in the

community; and γ_{oc}^{OC} estimates the changes in homogamy relative to the couple migration status.

A crossing model is:

$$\log(m_{ijcl}/t_{ijcl}) = \text{Baseline model} + \gamma_{ijc}^{HWL} + \gamma_{ijc}^{HWC}$$

where

$$\gamma_{ijl}^{HWL} = \begin{cases} \sum_{q=j}^{i-1} \gamma_{ql} & \text{for } i > j \\ \sum_{q=i}^{j-1} \gamma_{ql} & \text{for } i < j \\ 0 & \text{for } i = j \end{cases}$$

Here γ_{ql} represents the difficulty of crossing educational barrier q for individuals living in a

community with level of migration *l*. γ_{ijc}^{HWC} is defined analogously. The crossing parameters are

the log odds of marriage for couples in *adjacent* educational categories relative to the log odds of

homogamy. The greater the educational distance between them, the more barriers the

prospective spouses must cross. Interaction terms between level of migration in the community,

couple migration status, and the crossing parameters show the effects of migration at the couple

and community levels on the likelihood that spouses cross the educational barrier.

The 2000 Mexican and U.S. Censuses contain weights to ensure that the samples are

representative of the population. We use the wife's person weight as the couple's weight. We

incorporate these weights in our models using an offset t_{ijlc} which is equal to the inverse of the

total weighted frequency of the cell divided by the unweighted cell count (Agresti 2002:391).

RESULTS

Patterns of Marital Status

We first examine whether marriage rates among Mexicans and Mexican immigrants in

the U.S. vary by individual migration experiences and level of migration in the community.

Table 1 displays the gender-specific marital status distributions by individual migration

experiences for Mexico and the U.S. We restrict our description to individuals who were

between the ages of 18 and 40. In Mexico, recent migrants (i.e. those who were living in the

U.S. in 1995 and returned to Mexico prior to 2000) are more likely than non-migrants to be

married or in a consensual union. Whereas 60% of men and 65% of women are married or in a

consensual union, 66% of male and 74% of female migrants are married or in a consensual

union. This may be because the resources accumulated during migration increases the

attractiveness of return migrants in the marriage markets and enhance their ability to form a

union (Parrado 2004). Although both male and female migrants are more likely to be in a union

compared to other men and women in Mexico, the difference in the percent in a union between

migrants and non-migrants is somewhat greater for women than men. Because women are

substantially less likely than men to move, female migrants may be a more select group than

male migrants and may possess additional characteristics that may render them more attractive in

the marriage market.

Migrants are more likely than non-migrants and women are more likely than men to have

an absent spouse. While 3% of men and 6% of women had an absent partner, 4% of male and

16% of female migrants had an absent partner. This finding is consistent with the patterns of

migration observed in past studies where Mexican migration is largely driven by the circular

migration of men and the permanence of women and children in sending communities

(Kanaiaupuni 2000).

In the U.S. the marital status distributions of male and female migrants differ

substantially by individual migration experiences. Whereas recent male migrants are

substantially less likely than other men to be married, recent female migrants are more likely

than women in their age group, but less likely than pre-1995 female migrants to be married. This

may reflect the different migration process for both men and women. Mexican families are

typically less likely to finance single women's migration costs than single men's migration costs

(Hondagneu-Sotelo 1994). Mexican women are more likely to migrate once they are married

and often do so to join their migrant spouses in the U.S. (Cerrutti and Massey 2001). Women

who migrate from Mexico are much more likely to be following their spouses to the U.S.

Among married immigrants, recent migrants are more likely than pre-1995 migrants and

other married couples to live apart from their spouses: a pattern that occurs much more

frequently for men. Whereas 19% of recent male migrants lived apart from their spouses, 7% of

recent female migrants did so.

Table 2 presents the gender-specific marital distributions by level of male and female

migration within the community. In Mexico, the overall percentage of individuals who are

currently in a union varies little by the level of migration in sending communities. The

distribution of types of union, however, varies by the level of migration within a community.

More specifically, compared to individuals living in other areas, those living in communities

with high levels of female migration (i.e. "LL" and "HH") are more likely to be married and less

likely to be in a consensual union. For instance, among men in unions, 87% [8] of men in "LH"

and 84% [9] of men in "HH" communities were formally married; whereas, approximately 75%[10]

of men in "LL" and "HL" communities were formally married. A similar pattern was also

observed for women. This may result from the economic structure of communities with high

levels of female migration. Communities with high levels of migration are also areas with high

levels of female labor force participation (Hondagneu-Sotelo 1994). Thus, women living in

communities with high levels of female migration may have more financial resources than

women living in communities with low levels of female migration. Because the dissolution of a

union affects women more adversely, women may be more likely to invest their financial

resource to formalize their unions.   In the U.S., there are virtually no differences in the marital

distributions among the communities classified by level of male and female migration in the U.S.

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[8] $[(54+2)/(54+2+7+1)*100] = 87\%$
[9] $[(49+2)/(49+2+9+1)*100] = 84\%$
[10] $[(44+2)/(44+2+13+1)*100] = 75\%$; $[(45+2) / (45+2+13+1)*100] = 77\%$

This evidently reflects that in-migrants constitute a very small proportion of the population, even in communities that have exceptionally high in-migration rates.

Patterns of Marital Sorting: Homogamy

We examine whether migration disrupts existing preference for and opportunities to marry partners with varying educational characteristics by examining whether the educational resemblance of spouses differs by individual migration experiences and the levels of migration in the community. A simple measure of the variation in the educational resemblance of spouses is measuring the percentage of couples who share the same educational category.

Table 3 presents the percentage of homogamous unions by the level of migration in the community. In Mexico, the percentage of homogamous unions is higher among couples living in communities with high levels of female or male out-migration than in communities with low levels of male and female out-migration. While only 55% of couples in "LL" communities are in homogamous unions, nearly 70% of couples in "LH" and "HH" communities. The high percentages of observed homogamous unions are due to the high percentage (over 50%) of unions between men and women who have less than 9 years of education in these communities (see Table A1).

In contrast, in the U.S., rates of homogamy in communities vary hardly at all by their level of in-migration. The percentage of homogamous unions ranges from 55% in "HL" communities to 53% in "LL" communities. This pattern is most likely the result of the relatively low percentage of Mexican migrants in U.S. communities.

Table 4 depicts variations in the percentage of homogamous unions by couple migration status.[11] In Mexico, couples in which both spouses are non-migrants are more likely to be in a

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[11] Couples are weighted using the wife's personal weight.

homogamous union (56%), than couples in which one or both spouses has recent migration experiences (ranging from 43% to 53%). The slightly lower level of homogamy in unions in which one or both partners have recently migrated suggests that migration disrupts typical marriage preferences and opportunities. In log-linear analyses reported below we investigate whether this pattern persists when the marginal distributions of educational attainment are taken into account.

In the U.S., couples with similar migration experiences are also more likely than couples with differing migration experiences to be in educationally homogamous unions. Homogamy is greatest (over 50%) among couples in which both spouses are recent migrants, in which both are non-migrants, in which both are pre-1995 migrants, and in which the husband is a pre-1995 migrant and the wife is a recent migrant. In contrast, couples in which the wife is a non-migrant but the husband is a migrant were least likely to be homogamous. For example, 35% of couples in which the wife is a non-migrant but the husband is a recent migrant and 38% of couples in which the wife is a non-migrant but the husband is a pre-1995 migrant are educationally homogamous. Among couples with differing migration experiences, the migrant partner typically has lower levels of education than the non-migrant partner.

Patterns of marital sorting: Hypergamy

Table 3 shows that the rates of hypergamy vary modestly across communities with varying migration level in Mexico, but not at all in the U.S. In Mexico, men living in communities with higher levels of male or female out-migration are slightly less likely to marry down compared to men living in areas with lower levels of male and female out-migration. Whereas 59% of couples living in communities with low male and female out-migration rates are in hypergamous unions, only 54% of couples living in communities with high male and female

out-migration rates are in hypergamous unions, given heterogamy. This is consistent with our observation that individuals with migration experience are more likely to form unions where husband's education is lower than wife's education.

For heterogamous couples, the degree of hypergamy (i.e. husband has higher educational attainment than his wife) varies by couple migration status. In Mexico, among heterogamous unions, hypergamous unions outnumber hypogamous unions (i.e. wife has higher educational attainment than the husband) by a ratio of approximately 3:2, reflecting a general tendency in Mexico for women to "marry up" and for men to average more schooling (see Table A1 and Esteve 2005). An exception to this pattern is for couples in which only the husband is a return migrant. For these couples, only 45% of heterogamous unions are hypergamous. This suggests that male migrants may use their newly acquired economic resources to "marry up" and that the marriage market may reward migration experience differentially by gender.

Among heterogamous unions in the U.S., hypogamy outnumbers hypergamy by a ratio of approximately 5:4, reflecting a general tendency for women to "marry down" and for women to average more schooling (see Table A1). Overall, the percentage of heterogamous unions that are hypergamous is 46%. Table 4 shows that the tendency for women to "marry down" is highest among couples where the husband is a migrant and the wife is a non-migrant. While 46% couples where both the husband and wife are non-migrants are in hypergamous unions, less than 30% of couples where the husband is a migrant and the wife is a non-migrant are in hypergamous unions, given heterogamy. In contrast, the tendency for women to "marry up" is highest among couples where the husband is a non-migrant and the wife is a migrant. Given heterogamy, approximately 60% of these couples were in hypergamous unions. Among couples where spouses had similar migration experiences, those couples where both spouses were recent

migrants were the group most likely to be in a hypergamous union, given heterogamy. This

pattern suggests that recent migrants retain the preferences for hypergamy that prevail in Mexico.

These variations in homogamy, hypergamy, and hypogamy across couples and

communities with varying migration experiences suggest that circular migration disrupts

standard patterns of marriage between education groups. Migration may alter individual

preferences for mates, change the balance of men and women at different education levels, or

alter the social and economic value of educational attainment for migrants and non-migrants.

Log linear models: Goodness of Fit

Table 5 provides the model specification and the fit statistics of our log-linear models.

We present both log-likelihood ratios and Bayesian information criterion (BIC) statistics for

model fit, but rely mainly on the BIC for model selection. More negative BIC statistics indicate

a more preferred model. Homogamy and crossings models are summarized in Panels A and B

respectively.[12] Because the patterns of fit for the homogamy and crossings models yield the

same qualitative results, we confine our discussion of fit to the homogamy models alone.

The baseline model (Model 1), which assumes that the educational resemblance between

spouses does not vary by the couple migration status or the level of migration in the community,

fits the data poorly relative to models that allows for variation in educational assortative mating

by migration experiences. In Models 2, 3, 4, and 5, we examine whether the likelihood of

forming an educationally homogamous union varies by couple-specific and community-specific

migration experiences. Our models include various combinations of associations among

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[12] In analyses unreported here, we examined alternative models of the association between couple migration status
and educational assortative mating. We found that the odds of educational homogramy and of marrying across
education barriers vary across the migration status of each spouse (three-way interactions) but, net of these
variations, not with the combined migration statuses of spouses (four-way interaction). Additionally, the
associations between spouse migration status and educational assortative mating do not vary by the gender of the
migrant spouse. In all models reported here, therefore, we constrain the two three-way interactions between
migration status, education of male partner, and education of female partner to be the same.

homogamy, couple's migration experience, and the level of migration in communities. Model 2

includes interaction between homogamy and levels of migration in a community. This model

improves the fit of the model relative to the baseline and indicates that the likelihood of forming

homogamous unions varies by the level of migration in the communities for Mexico and the U.S.

Model 3 includes allows homogamy to vary with couple migration status. This interaction

improves the fit of the model relative to the baseline model for both Mexico and the U.S.,

indicating that the odds of homogamy vary significantly by whether none, one, or both partners

are migrants. For the U.S., the odds of homogamy may also vary by the type of migrant (i.e.,

non-migrant, recent migrant, pre-1995 migrant). Model 4 includes the interactions between (1)

homogamy and level of migration in the community and (2) homogamy and couple migration

status. For Mexico, this model is an improvement over Model 2, which only takes account of

variation in homogamy across communities and over Model 3, which only takes account of

variation in homogamy across couples with varying migration statuses. For the U.S., in contrast,

Model 4 is a substantial improvement over Model 2; however, it is not an improvement over

Model 3. Finally, in Model 5, we examine the joint association of homogamy, couple migration

status, and community migration level. For neither Mexico nor the U.S. do we find evidence for

these higher way interactions.   As noted above and illustrated in Panel B, for crossings models,

we find the same qualitative patterns of association, in which, by the BIC, model 4 best describes

educational assortative mating for Mexico and model 3 best describes it for the U.S.

For both educational homogamy and crossing education barriers, the migration statuses

of men and women are associated with educational assortative mating in both Mexico and the

U.S. Only in Mexico, however, does educational assortative mating vary across communities

with different levels of international migration.

Migration and Educational Homogamy

To examine variation in educational homogamy across couples and communities of different types, while taking account of variations in the distribution of educational attainment across couples and communities, we examine the odds of educational homogamy and crossing educational barriers that our preferred log linear models predict. Figure 1A shows the variation in the odds[13] that husbands and wives are educationally homogamous by couple migration status in Mexico. Net of variation in the marginal distributions of men's and women's educational attainments and migration statuses, the odds of educational homogamy are lower for couples in which one or both partners have international migration experience than for couples in which neither has migrated. The relative odds of homogamy for couples in which both spouses are migrants is approximately 24 % [100*(1 − 2.52/3.30)] lower than for couples in which neither partner is a migrant.

Figure 1B displays the variation in the odds that husbands and wives have the same levels of education by the couple's migration status in the U.S. The odds of homogamy are also lower among couples in which at least on spouse is a migrant compared to couples in which neither spouse migrated. This is consistent with our descriptive results and suggests that individual migration experiences alter marriage patterns by changing the relative attractiveness of persons with varying educational attainments or the availability of persons with varying education levels.

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[13] Our models do not produce coefficients for the odds ratios of homogamy for the reference categories (couples in which both spouses are non-migrants or communities with low levels of male and female migration depending on the model) due to interaction terms between husband and wife's education, which control for the husband's and wife's characteristics that do not vary by couple's migration experiences or levels of migration. We estimate the odds ratios of homogamy for the above mentioned reference categories using modified versions of Model 3 for our analyses of the U.S. and Model 4 for our analyses of Mexico where we leave out the interaction terms for husband's and wife's education. The variation by levels of migration or couple's of migration experiences are later added to our estimate obtained from our interaction between the homogamy parameter and the variable of interest.

Comparing the two migrant groups, the odds of educational homogamy are lower for couples in which at least one spouse is a pre-1995 migrant than couples in which at least one spouse is a recent migrant. The odds of homogamy for couples in which both spouses are pre-1995 migrants are approximately 21% [100*(1-2.11/2.67)] lower than the odds of homogamy for couples in which both spouses are recent migrants. This is probably because of the greater educational heterogeneity among pre-1995 migrants than recent migrants. Although the majority of recent migrants are likely to have completed their schooling in Mexico, the educational experience of pre-1995 migrants is mixed. Some pre-1995 migrants may have migrated as children or adolescents and completed their schooling in the U.S. In contrast, other pre-1995 migrants may have migrated to the U.S. after completing their education in Mexico.

Figure 2 displays the variation in the educational resemblance between spouses by the level of migration in Mexican communities. The odds of homogamy decrease as the volume of migration in a community increases. The odds of homogamy are lowest in "HH" communities and highest in "LL" communities. Migration may alter the gender composition of the marriage market and create imbalances of men and women at various levels of educational attainment or other key markers of spouse desirability. As a result, single men and women may expand their pool of potential partners and may be less likely to enter into homogamous unions. It is also possible that the odds of homogamy are lower in these communities because education may serve less of a proxy for future economic security and instead, migration experiences and/or the resources accumulated during migration may fulfill this role.

Migration and Crossing Education Barriers

To see how the impact of individual and community level migration varies across different points in the educational distribution, we turn to the examination of crossing

parameters. Figure 3 presents the odds of crossing the different educational barriers by couple

migration status in Mexico. Individuals with less than 9 years of education face the most rigidity

in crossing the education barrier. In contrast, those with 13 or more years of education cross the

education barrier with the greatest ease. For instance, the odds of intermarriage between those

with 13 to 15 years of education and those with 16 or more years of education is approximately

35% [100*(0.55-0.41)/0.41] higher than the odds of intermarriage between those with less than 9

years of education and those with 9 to 11 years. For the most part, the rigidity of the education

barrier decreases with individual migration experiences. The magnitude of the increase in the

odds of crossing is the largest among those with the lowest level of education (<9). For example,

while the presence of a migrant spouse increases the odds of intermarriage between those with

less than 9 years of education and those with 9-11 years of education by 19% [100*(.49-

.41)/.41], the presence of a migrant spouse increases the odds of intermarriage between those

with 9-11 years of education and those with 12 years of education by 9%[14] [(.50-.45)/0.45*100].

An exception to this pattern can be seen among those in the highest education category.

Although not statistically significant, the odds of intermarriage between those with 13-15 and

16+ years of education decrease in the presence of a migrant spouse. This is partially because

migrants who have 16+ years of education are extremely unlikely to marry individuals with

lower levels of education (See Table A1). The combination of the high level of education and

migration experience is like to make them attractive in the marriage market. Thus, they have

enough potential spouses in the highest education category (16+ years of education) to choose

from in the local marriage market.

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[14] Due to rounding, the calculations in the right do not yield 9%.

Figure 4 presents the variation is the odds of crossing an education barrier by couple migration status in the U.S. Overall, individuals with the lowest level of education (<9) and individuals with the highest level of education (16+ years) face the most rigidity in crossing their educational barrier in the U.S. For instance, the odds of intermarriage among those who completed *fewer than 9 years* of education and *9 to 11* years of education is 25% [100*(0.48-0.36)/0.48] lower than the odds of intermarriage among those who completed *12* and *13 to 15* years of education.

For the most part, the rigidity of the education barrier decreases with individual migration experiences. This finding reinforces the view that migration also disrupts existing marriage patterns. The magnitude of the disruption is the largest among those with the lowest level of education (<9). For example, the odds of crossing the lowest education barrier (<9/9-11) is 27% higher among couples in which at least one of the spouses are a recent migrant compared to couples in which neither spouse is a migrant. In contrast, the odds of crossing the second higher education barrier (12-13-15) is only 5% higher among couples in which at least one spouse is a recent migrant compared to couples in which neither spouse is a migrant. The higher odds of crossing an educational barrier among couples in which at least one spouse is a recent migrant may be due the clustering of Mexican migrants at the lowest education category. Recent migrants, who have 9-11 years of education, may be forced to expand their pool of potential spouses to include those with less than 9 years of education if they desire to marry another Mexican migrant. For couples in which one spouse is a recent migrant and the other is a non-migrant ("NR"), the higher odds of crossing is probably due to differences in the level of education between Mexico and the U.S. Recent migrants with fewer than 9 years of education are less of an adversely selected group compared to non-migrant men with fewer than 9 years of

education because individuals average fewer years of schooling in Mexico than in the U.S[15].

Therefore, recent migrants with less than 9 years of education may possess desirable qualities, such as resourcefulness, that may allow non-migrant women with 9 to 11 years of education to overlook their slightly lower levels of education. At higher categories of education, the odds of crossing improve very little when at least one spouse is a recent migrant. Individuals with higher levels of education may better appreciate the importance of credentials in obtaining jobs that provide financial security. The potential spouses, who are better educated, may not appreciate the attributes that made migrants attractive in the eyes of the lesser educated potential spouses because these attributes do not help migrants obtain jobs that they desire in a potential mate.

The odds of crossing are particularly high among couples in which at least one spouse is a pre-1995 migrant. Regardless of the level of education, couples in which both spouses were pre-1995 migrants exhibited the highest odds of crossing the education barrier.

Figure 5 presents the odds of crossing by the level of migration in communities in Mexico. For the most part, the odds of crossing are higher in communities with high levels of male or female out-migration. More specifically, in almost all education barriers, communities with low levels of male and female migration ("LL") have the lowest and communities with high levels of male and female migration ("HH") have the highest odds of intermarriage between adjacent categories. The variation in the odds of crossing by level of migration in the community is smallest in the lowest level of education (<9 years of education) and largest in highest level of education (16+ years of education). Because the number of potential spouses with 16+ years of education is so small, even the smallest removal of potential spouses from the local marriage

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[15] Our results show that approximately 40% of individuals living in Mexico and recent migrants from Mexico to the U.S. ages 18 to 40 completed fewer than 9 years of education; whereas, less than 3% of non-migrant men living in the U.S. completed fewer than 9 years of educations.

market resulting from migration may generate substantial pressure among those with 16+ years

of education to cross the education barrier and marry those with 13-15 years of education.

SUMMARY AND CONCLUSION

The analyses reported in this paper examine the relationship between migration and

marriage patterns by comparing distributions of marriage and assortative mating patterns that

vary by individual migration statuses as well as by the levels of migration in sending and

receiving communities within Mexico and the U.S. We find that individual migration

experiences affect whether and when individuals enter into unions as well as the types of

partners whom they join. Not only are migrants more likely to be in a union, but also they are

more likely than non-migrants to form unions with partners who have different levels of

educational attainment from their own. In most instances, migrants are more likely to marry up

educationally than comparable non-migrants. In sending communities in Mexico, return migrants

typically enjoy an improved economic standing relative to local non-migrants and this may

improve their prospects in the marriage market. Their improved prospects in the marriage market

increase the likelihood that migrants with lower levels of education marry up. Conversely, it

reduces the likelihood that migrants with the highest level of education marry individuals outside

their group. In the U.S., migrants from Mexico are exposed to a large pool of potential partners

who have more education than they do because of the dramatic differences in average

educational attainment between the two countries. This is especially true among those with the

lowest level of education.

In addition, the volume and pattern of Mexican migration may affect not only the level

and timing of union formation, but also the kinds of unions that are formed in sending

communities. Individuals living in areas with high levels of migration are more likely to marry

outside of their educational group compared to individuals to individuals living in areas with low levels of migration. The odds of marrying outside of the group are especially high among individuals with the highest level of education. Because the number of potential spouses with 16+ years of education is so small, even the smallest removal of potential spouses from the local marriage market resulting from migration may generate substantial pressure among those with the highest level of education to expand their pool of potential spouses.

In the United States we did not find any relationship between community levels of migration from Mexico and marriage patterns. This may be mainly because the relative size of the Mexican migrant population is not large enough to affect local marriage markets.

A comprehensive understanding of the relationship between Mexican migration to the United States and union formation patterns requires that some aspects of marriage markets be considered in a bi-national context. The large volume of recent Mexican migration alters the ethnic and socioeconomic makeup of populations in communities on both sides of the border. That Mexican immigration is disproportionately by young men in their typical ages of marriage alters the sex ratios in sending communities with high migration rates and, perhaps more importantly, alters the balance of unmarried men and women with varying levels of educational attainment in these communities. More generally, migration may alter both the preferences of single individuals for the type of partner whom they would like to marry, as well as the opportunities for marrying partners with different kinds of characteristics. Our general finding is that both for couples and for communities as a whole, migration weakens the generally strong tendency for individuals to form unions with persons of similar educational status. So far as we can tell, the children and grandchildren of immigrants tend to marry more homogamously than immigrants themselves. But eras of high migration between the two countries may have many

unions with atypical combinations of partners who differ in their educational status. At the

aggregate level, this may portend somewhat higher levels of socioeconomic mixing and

intergenerational mobility than marriage patterns of non-migrants imply.

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Tables
Table 1. Percentage distribution of marital status by individual migration experiences

		All		Recent migrants		Pre-1995 migrants	
		Male	Female	Male	Female	Male	Female
MEXICO	Married, present	44%	46%	47%	44%	-	-
	Married, absent	2	4	3	12	-	-
	S/W/D	2	6	4	7	-	-
	Consensual, present	13	13	15	14	-	-
	Consensual, absent	1	2	1	4	-	-
	Never married	38	30	30	18	-	-
	Total	100%	100%	100%	100%	-	-
	N	(1,573,339)	(1,742,896)	(14,551)	(6,908)		
U.S.	Married, present	43%	49%	22%	54%	52%	64%
	Married, absent	3	2	19	7	8	4
	S/W/D	8	12	3	6	5	9
	Never married	46	37	56	33	35	23
	Total	100%	100%	100%	100%	100%	100%
	N	(2,043,050)	(2,131,067)	(35,235)	(21,961)	(109,571)	(86,196)

Note:
1. Sample is restricted to individuals between the ages of 18 and 40
2. Weighted percentages; unweighted base N
3. S/W/D refers to individuals who are separated, widowed, or divorced

Table 2. Percentage distribution of marital status by individual migration experiences

	Male					Female				
Marital status	LL	LH	HL	HH	Total	LL	LH	HL	HH	Total
MEXICO										
Never married	38%	35%	38%	38%	38%	30%	32%	28%	33%	30%
Married, pres.	44	54	45	49	44	46	47	46	44	46
Married, abs.	2	2	2	2	2	3	9	6	9	4
S/W/D	2	1	2	1	2	6	4	5	4	6
Consensual, pres.	13	7	13	9	13	13	6	12	8	13
Consensual, abs.	1	1	1	1	1	2	2	2	2	2
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
N	(1,396,125)	(51,362)	(54,791)	(71,061)	(1,573,339)	(1,521,289)	(66,683)	(61,851)	(93,073)	(1,742,896)
U.S.										
Married, pres.	43%	-	42%	41%	43%	49%	-	50%	48%	49%
Married, abs.	2	-	4	4	3	2	-	2	3	2
S/W/D	8	-	8	7	8	12	-	11	11	12
Consensual, pres.	46	-	46	47	46	37	-	37	38	37
Consensual, abs.	100%	-	100%	100%	100%	100%	-	100%	100%	100%
Total	(1,775,123)	-	(30,448)	(237,479)	(2,043,050)	(1,864,749)	-	(29,905)	(236,413)	(2,131,067)

Note:
1. The categories for community level migration are defined in the following manner:
   LL: Low male/female *LH:* Low male & high female *HL:* High male & low female *HH:* High male/female
2. Sample is restricted to individuals between the ages of 18 and 40
3. Weighted percentages; unweighted base N

Table 3. Distribution of patterns of marital sorting by level of migration in the community

	LL	LH	HL	HH	Total	N
Mexico						
Homogamy	55	68	62	67	56	(1,018,428)
Given Heterogamy						
Hypergamy	59	56	56	54	59	(410,397)
U.S.						
Homogamy	53	-	55	52	53	(1,053,802)
Given Heterogamy						
Hypergamy	45	-	49	51	46	(500,594)

Note:
1. The categories for community level migration are defined in the following manner:
   LL: Low male/female   *LH:* Low male & high female   *HL:* High male & low female   *HH:* High male/female
2. Weighted percentages; unweighted base N
3. The sample is restricted to couples in which wives are 18 to 40

Table 4. Distribution of patterns of marital sorting by couple migration status

	NHNW	RHRW	PHPW	NHRW	RHNW	NHPW	PHNW	RHPW	PHRW	Total	N
Mexico											
Homogamy	56	50	-	43	53	-	-	-	-	56	(1,018,428)
Given Heterogamy											
Hypergamy	59	50		51	45					59	(410,397)
U.S.											
Homogamy	53	55	50	40	35	41	38	46	51	53	(1,053,802)
Given Heterogamy											
Hypergamy	45	53	48	60	28	63	29	48	49	47	(500,594)

Note:
1. The categories for couple migration status are defined in the following manner:
   NHNW: Both non-migrant   *NHRW*: Non-migrant husband, recent migrant wife
   NHPW: Non-migrant husband, pre-1995 wife   *RHNH:* Recent migrant husband, non-migrant wife
   R*HRW*: Both recent migrant   *RHPH:* Recent migrant husband, pre-1995 wife
   P*HNW*: Pre-1995 husband, non-migrant wife   *PHRH:* Pre-1995 husband, recent migrant wife
   PHPW: Both pre-1995 migrant
2. Weighted percentages; unweighted base N
3. The sample is restricted to couples in which wives are 18 to 40

Table 5. Log-Linear Models of Association between Partners' Educational Attainments

			Mexico			U.S.	
Model		df	Log-likelihood	BIC	df	Log-likelihood	BIC
PANEL A: Homogamy							
1	HW +HCL^{H}L^W+WCL^{H}L^W	246	-1533	-2197	432	-4688	-75
2	Model 1+ OL	243	-1501	-2220	430	-4661	-103
3	Model 1+ OC	245	-1494	-2262	430	-4211	-1001
4	Model 2+ OC	242	-1468	-2272	428	-4210	-976
5	Model 4+ OCL	239	-1465	-2236	424	-4196	-949
PANEL B: Crossing							
1	HW +HLC^{H}C^W+WLC^{H}C^W	246	-1533	-2197	432	-4688	-75
2	Model 1+ XL	234	-1359	-2380	430	-4444	-452
3	Model 1+ XC	242	-1455	-2297	424	-3005	-3331
4	Model 2+ XC	230	-1288	-2467	416	-2968	-3295
5	Model 4+ XCL	218	-1465	-2338	400	-2861	-3287

Note:
1. The following variables were defined in the following manner:
    df: Degrees of Freedom
    H: Male partner's educational attainment
    W: Female partner's educational attainment
    L : Community level migration rate
    C : Couple migration status
    C^H: Husband's migration status
    C^W: Wife's migration status
    O : Homogamy
    X: Crossing
    OC = O*(C^H+C^W)
    XC = X*(C^H+C^W)
2. Preferred models are highlighted in grey. They are Model 3 for the U.S. and Model 4 for Mexico

Table A1. Percentage distribution of husband's and wife's educational attainment by level of migration in the community and country

| | Mexico | | | | | | U.S. | | | | | |
| | Wife's education | | | | | | Wife's education | | | | | |
	0- 8	9- 11	12	13- 15	16+	Total	0-8	9 -11	12	13- 15	16+	Total
Low-Low												
0-8	33	9	2	0	0	44	2	1	1	0	0	4
9 -11	11	13	4	1	1	29	1	2	3	1	0	7
12	2	4	4	1	1	12	1	2	16	10	3	32
13- 15	1	1	1	1	1	5	0	1	7	15	6	30
16+	1	2	3	1	5	11	0	0	2	7	18	28
Total	47	29	13	4	7	100	3	6	30	33	28	100
N						(898,557)						(924,763)
Low-High												
0- 8	58	9	1	0	0	69	-	-	-	-	-	-
9 - 11	10	7	2	0	0	19	-	-	-	-	-	-
12	2	2	1	0	0	5	-	-	-	-	-	-
13- 15	1	1	0	0	0	2	-	-	-	-	-	-
16+	1	1	1	0	1	5	-	-	-	-	-	-
Total	71	19	6	2	3	100	-	-	-	-	-	-
N						(35,469)						
High-Low												
0-8	50	10	2	0	0	62	4	1	1	1	0	7
9- 11	10	9	2	0	1	21	1	2	2	1	0	6
12	2	3	2	0	0	8	1	2	11	7	2	23
13-15	1	1	0	1	0	3	0	1	6	13	7	28
16+	1	2	1	1	2	7	0	0	3	8	25	35
Total	63	23	8	2	4	100	6	6	24	30	34	100
N						(36,367)						(15,136)
High-High												
0-8	58	10	2	0	0	70	8	2	2	1	0	14
9 -11	9	6	2	0	0	18	2	3	3	1	0	10
12	2	2	1	0	0	5	2	3	12	6	2	24
13- 15	1	1	0	0	0	2	1	1	6	13	5	27
16+	1	1	1	1	1	5	0	0	2	7	16	25
Total	70	19	6	2	2	100	13	10	25	28	23	100
N						(48,035)						(113,903)
Total												
0-8	34	9	2	0	0	45	2	1	1	0	0	5
9- 11	11	12	4	1	1	28	1	2	3	1	0	7
12	2	4	4	1	1	11	1	2	16	9	3	31
13- 15	1	1	1	1	1	4	0	1	7	15	6	29
16+	1	2	3	1	4	11	0	0	2	7	18	28
Total	48	28	13	4	7	100	4	6	29	33	28	100
N						(1,018,428)						(1,053,802)

Figure 1A. Odds of homogamy by Couple Migration Status (Wives Aged 18 to 40), Mexico
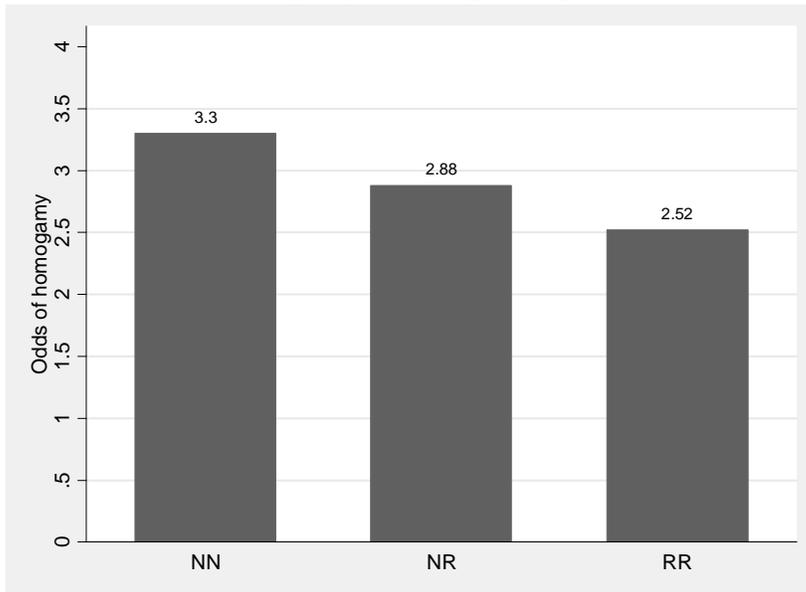
Note:
1. The odds were computed based on the preferred model (Model 4) for Mexico.
2. The following definitions can be applied to the categories of couple migration status:
   NN: Both non-migrants, *NR*: Non-migrant and recent migrant, *RR:* Both recent migrants
3. The coefficients for homogamy and the interaction between homogamy and couple migration status are statistically significant.

Figure 1B. Odds of homogamy by Couple Migration Status, U.S.

Note: All coefficients are statistically significant.
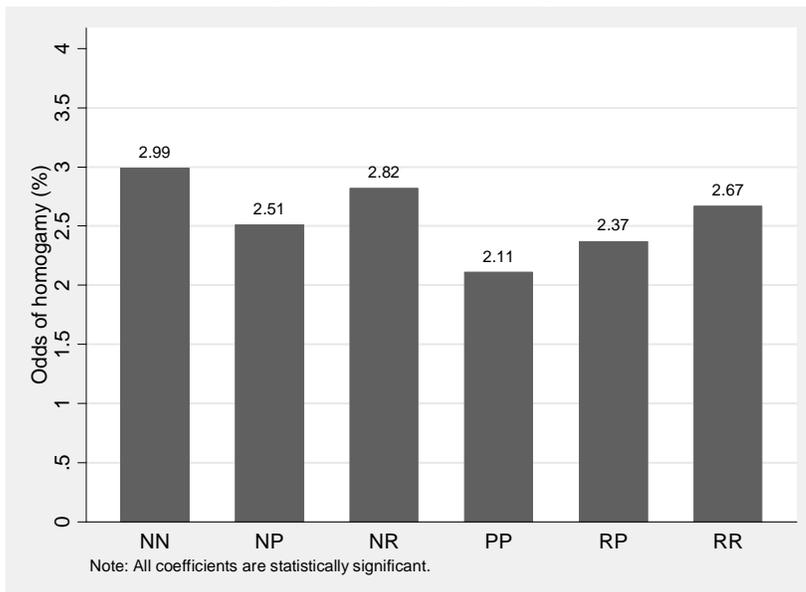
Note:
1. The odds were computed based on the preferred model (Model 3) for the U.S.
2. The following definitions can be applied to the categories of couple migration status:
   NN: Both non-migrants   *NP:* Non-migrant & pre-1995 migrant   *NR:* Non-migrant & recent migrant
   PP: Both pre-95 migrants *RP:* Recent & pre-95 migrant   *RR:* Both recent migrants
3. The coefficients for homogamy and the interaction between homogamy and couple migration status are statistically significant.

Figure 2. Odds of Homogamy by Community Level of Migration (Wives Aged 18 to 40), Mexico

1. The odds were computed based on the preferred model (Model 4) for Mexico
2. The following definitions can be applied to the categories of community level migration:
   LL: "low male/ low female"   *LH:* "low male/high female"
   HL: "high male/low female"   *HH: "high male/high female"*
3. The coefficients for homogamy and the interactions b/w homogamy and community level migration are statistically significant with the exception of the interaction for comunities with low levels of male and high levels of female migration.

Figure 3. Odds of Crossing an Educational Barrier relative to the Odds of homogamy by Couple Migration Status (Wives Aged 18 to 40), Mexico

1. The odds were computed based on the preferred model (Model 4) for Mexico
2. The following definitions can be applied to the categories of couple migration status:
   NN: Both non-migrants   *NP:* Non-migrant & pre-1995 migrant *NR:* Non-migrant & recent migrant
   PP: Both pre-95 migrants *RP:* Recent & pre-95 migrant   *RR:* Both recent migrants
3. The main effects for the crossing parameters are statistically significant. The odds of crossing the first education barrier (<9/9-11) and the second education barrier (9-11/12) is statistically different by couple migration status.

Figure 4. Odds of Crossing an Educational Barrier Relative to the Odds of Homogamy by Couple Migration Status (Wives Aged 18-40), U.S.
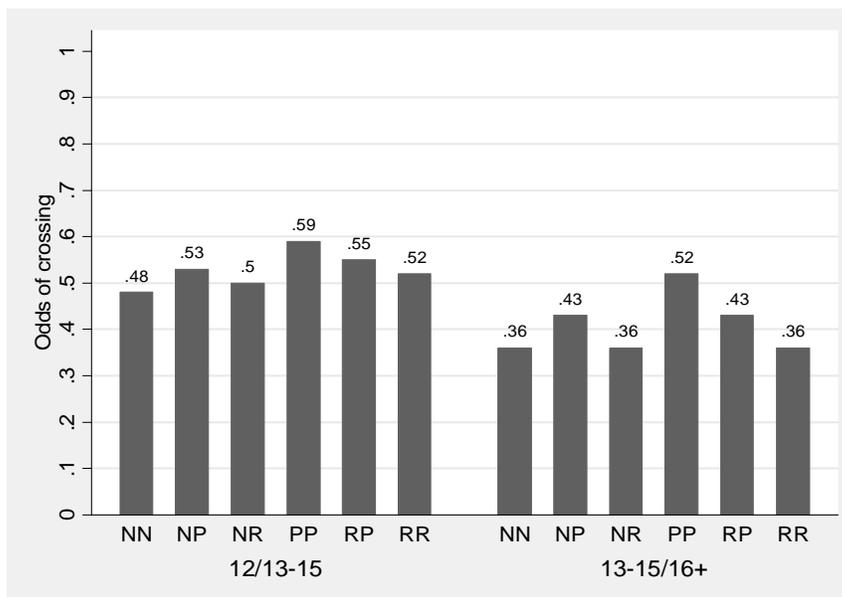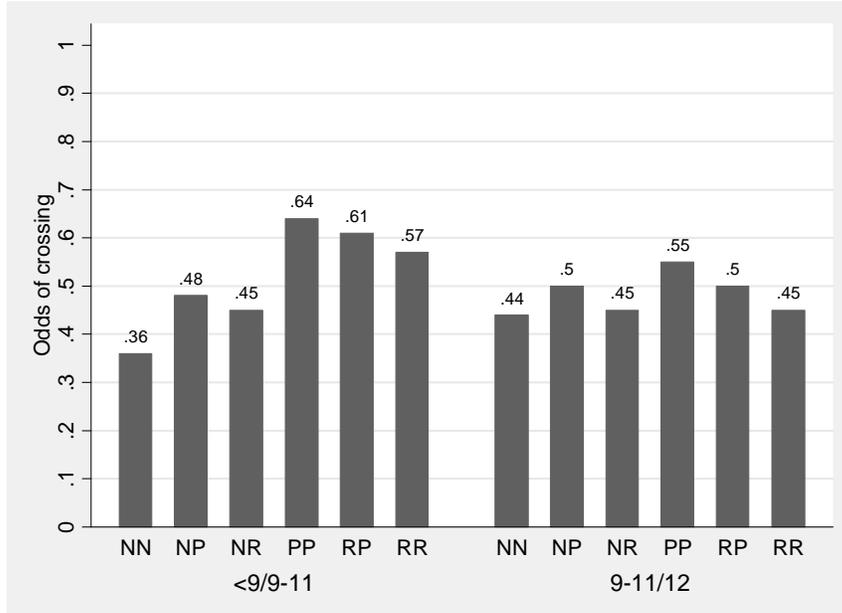
1. The odds were computed based on the preferred model (Model 3) for the U.S.
2. Refer to Figure 1B for the definitions applied to the categories of couple migration status.
3. The main effects for the crossing parameters and the majority of the interactions for the crossing parameters and couple migration status are statistically significant. The odds of crossing the second education barrier (9-11/12) and the fourth education barrier (13-15/16+) does not vary in a statistically significant manner when at least one of the spouses is a recent migrant.

Figure 5. Odds of Crossing an Educational Barrier relative to the Odds of homogamy by level of migration (Wives 18 to 40), Mexico
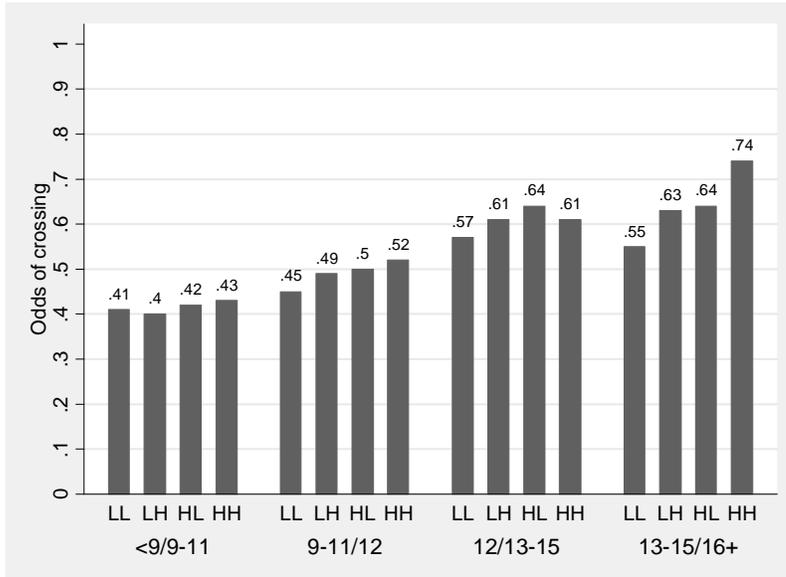
1. The odds were computed based on the preferred model (Model 4) for Mexico.
2. Refer to Figure 2 for the definitions applied to the categories of couple migration status.
3. The main effects for the crossing parameters and the majority of the interactions for the crossing parameters and couple migration status are statistically significant. The interaction between the first education barrier (<9/9-11) and area with low level of male and high level of female migration ("LH") is not statistically significant. The interactions between the third education barrier (12/13-15) and communities with low level of male and high level of female migration ("LH") and communities with high levels of male and female migration ("HH") are not statistically significant.