The Effects of Migration on the Transition to First Marriage among Latinos in the context of USA and Mexico*

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Abstract

The purpose of this paper is to explore the effect of migration on the transition to first marriage among Latinos living in USA and Mexico. International migration is expected to delay marriage, but it is not at city level. By using Southwest Migration Study (SWMS) including life history calendar, collected in 2009 in USA and Mexico, migration is divided into three levels: country, state, and city level. Discrete-time event history model is used to estimate the effect of migration at each level. Since cohabitation has been common in Latin countries, cohabitation is considered as competing risk. There are two main results based on the preliminary results. First, international migration accelerates the rate of marriage or cohabitation significantly. Second, employment status decelerates the rate of marriage, but has no effect on the transition to first cohabitation. Further analysis would be done by exploring migration experience at various levels.

Introduction

As migration becomes one of the main interests in American society, the transition to marriage in a variety of circumstances regarding migration has received much attention in the recent research literature. However, there are a few reasons why it is quite difficult to figure out the sheer effect of migration on the transition to marriage. First of all, it is difficult because migration experience could shake the marriage market of a person during the prime time of his or her marriage, or it could change any thoughts or norms a person has toward marriage. Furthermore, migration adds another layer of complexity to the life course (Raley et al. 2004). Each migrant was more likely to be at different life stage in his or her life cycle from others when they migrated. This fact might confuse researchers trying to isolate the effect of migration on marriage timing (Carlson 1985). To consider stages in a life course and isolate the effect of migration, it is necessary to arrange the timing of marriage, migration, and other important life events.

It is also difficult because we need to consider Latino's unique union patterns as well to understand the effect. With the fact that cohabitation is very common in most Latin American societies through history, cohabitation could be seen as surrogate marriage, and marriage could be seen as advantageous among Latinos (Martin 2002). So those people who migrated from Latin countries might just stay in cohabitation instead of marriage, and that might not deviate from the pattern in the origin countries. In this case, focusing on the effect of migration on the transition to only marriage might be resulted in the wrong or biased interpretations of the union pattern among Latinos living in the U.S. Thus, it is necessary to consider the transition to first marriage with cohabitation as a competing risk.

Another difficulty is that although we usually can get the information about whether people migrated or not and sometimes the timing of migration, it is hard to get the information about the level and the frequency of migration. In other words, with normal datasets, it is difficult or impossible to get the additional information about if a respondent migrated at international, state, or city level and how many times. This type of information is crucial to understand and diversify migration effect because the degree of the impact of each level of migration experience would be very different from each other. For example, one movement at state level might affect the transition to marriage much stronger by making the marriage market unstable than the three movements at city level within the same state. Thus, with this type of data, in addition to the possibility of exploring migration effect at various levels, the effect of within-country migration can be scrutinized together with the effect of international migration.

The selection effect of migration would also put some difficulties on the study of the sheer effect of migration on the transition to union formation. Probably, Latinos who have certain characteristics, which might be related to the better chance of being employed, are more likely to migrate. And if these certain characteristics are highly correlated with the chance of the transition to marriage or cohabitation, it is difficult to be confident that the results, only by looking at Latinos living in the U.S., are not biased. Thus, the same analysis in the context of the origin country is needed to compare the pattern with the one in the U.S. Then, it is more likely to be able to isolate the sheer effect of migration at various levels on the transition to both types of union formations.

Relatively little is known about the effect of migration experience on the timing of union formation empirically (Jampaklay 2006; Lloyd 2006). And it is due to the above

reasons mainly. To overcome these difficulties, the dataset, which are collected in the origin country and the U.S. together, with the life course perspective, is highly necessary. In addition, statistical techniques which can take care of timing issues are strongly required. The public datasets usually do not contain the information tracking the life history of each respondent, and it is very unlikely that a dataset was collected in both countries. Thus, it is difficult to test theories or assumptions even if there are theories in our hands with normal datasets.

In this paper, a new innovative dataset, the Southwest Migration Study (SWMS) collected in 2009, is used. The data was collected in the context of Maricopa County, AZ, USA and of Culiacán, Mexico. This project used a life history calendar which contains the histories of union formation, migration, and employment status at each year since a respondent was born. Most importantly, because the migration history has residential movement information at the country, state, city, and street levels, migration effect could be expanded to the effect of residential mobility at each level. This feature is one of the main advantages of using this dataset. Another benefit of SWMS is that the effect of two important health conditions, diabetes and asthma, can be controlled. This might be able to take care of the selection effect of health on the transition to union formation considering that healthy people might be more likely to be married than unhealthy people.

This paper contributes to the literature on the transition to first marriage in the contexts of Mexico and the U.S. by presenting how migration experience at various levels affect the transitions with cohabitation as competing risk controlling for other factors together.

Theoretical Considerations

International migration might be a disruptive event for marriage by separating immigrants from future marriage partners in the origin countries (Carlson 1985). Furthermore, economic uncertainty caused by migration could make immigrants delay their marriages (Parrado 2004). These views show that the available number of partners and human capital could be two key factors deciding the transition to first marriage. Marriage market theory fits this consideration. According to Oppenheimer (1988), the marriage market resembles the job-search market in terms of cost and gain from the search. Briefly, marriage market theory emphasizes the available number of opposite sex and human capital characteristics of opposite sex in the marriage market (Lloyd 2006). Thus, uncertainty, available partners, and timing of choosing a partner are three main essentials of the theory. These considerations lead to the first hypothesis that migration at an international level would delay marriage.

If immigrants delay marriage due to instability caused by migration, residential instability could also be associated with a lower rate of marriage. Previous studies predict that individuals who are mobile are more likely to experience poorer outcomes and worse neighborhoods (Kirby and Kaneda 2006). If so, frequent mobility represents the inability to maintain a stable residence. This inability could be highly associated with economic uncertainty because they should change their occupations as they move to the new place. Thus, the second hypothesis is that frequent migration at state level would also delay marriage. However, residential movement at city level might not need the change in their occupations though it depends on the distance between those two

cities. Hence, the third hypothesis is that migration at city level would not change the rate of marriage.

Some studies indicate that the timing of migration could be an important factor deciding the transition to marriage. Carlson (1985) finds the negative effect of international migration on the timing of marriage by using the 1971 Melbourne Family Formation Survey with analysis of covariance method. Regardless of gender, single immigrants who migrated after the age of 15 delay their marriages. On the contrary, Sassler (1997) argues no negative effect of migration on marriage. By analyzing the 1910 Census Public Use Sample with accelerated failure time model, Sassler finds that female immigrants who married in their origin country marry at a later age than those who migrated before working-age. These considerations lead to the fourth hypothesis that early international migration would delay the transition to marriage.

Employment status and educational attainment could be seen as important human capitals by removing economic uncertainty (Yabiku and Schlabach 2009; Lloyd 2006; Yabiku 2005; Raley et al. 2004; Carlson 1985). Because employment can guarantee earning power and economic stability, employment is expected to be associated with accelerated marriage rates. However, there could be a gender difference in the effect of employment. Women's economic independence theory fits this perspective. If a woman is financially independent, she is more likely to delay marriage because economic independence might make women be against the traditional gender role and be autonomous. Then, for both men and women, the gains from marriage derived from the traditional gender roles decrease enormously (Becker et al. 1977). Thus, employment would be associated with higher rate of marriage for men, but the employment of

women would delay marriage. Therefore, employment and gender are needed to be controlled to examine the effect of migration.

Marriage could be selective especially in terms of health. Men with good health are more likely to marry (Murray 2000; Cheung and Sloggett 1998). For women, however, this could be the adverse selection into marriage. Less healthy women are more likely to marry than healthy women (Cheung and Sloggett 1998). With regard to the general condition immigrants confront after migration, healthy people might be more likely to move and work compared to unhealthy people. In other words, being healthy is more likely to reduce uncertainty caused by migration. This reduced uncertainty would be associated with high rate of marriage. Health condition will be controlled due to these considerations.

There could be a difference in the rate of marriage by generations based on the degree of assimilation of immigrants toward American society. Assimilation theory is the perspective that the behavior of immigrants gets similar to that of people of the host country as they spend more time in the host country (Gordon 1964). “Familism” of Mexicans seems to decline with time in the U.S. though it does not go away completely (Massey 1981). Sassler (1997) found that the experience of upward social mobility among the second generation delays marriage. The study of Landale and Stewart (1993) shows substantially a similar result. By analyzing the same dataset, they found that the second generation of immigrants delays their marriages compared to the first generation, in both rural and urban areas, regardless of gender. Therefore, whether a respondent was born in the U.S. or not will be controlled in the context of the U.S.

To summarize, migration adds another layer in the life course of people. Residential mobility at international, state, or city levels, timing of migration, employment status, health, and immigration status would be helpful to isolate the sheer effect of migration on the transition to marriage.

Data and Method

South West Migration Study (SWMS) data was collected in 2009. The aims of the SWMS are to examine the interrelationships between migration, health, and the environment. The SWMS is a joint effort between investigators at Arizona State University and Universidad Autónoma de Sinaloa (UAS), in Culiacán, Mexico. This first set of SWMS data is a small-scale pilot project designed to bi-nationally test data collection procedures in a two-country setting, Mexico and USA. The data consists of a questionnaire, a life history calendar, and blood sample. This paper is mainly using the life history calendar information from both datasets collected in Mexico and USA, so the measures are retrospective.

Discrete-time event history model will be used to handle the timing effect of migration at various levels on the transition to first marriage. The model is also able to control time-dependent variables such as number of trips before marriage, number of children before marriage, employment status, and health status. The event is whether or not a respondent has experienced the first marriage. The competing risk is cohabitation. The duration of the event is from the year a respondent was born to the year of the first marriage, if the respondent has not cohabited before the marriage. In the analysis,

individuals become at risk of marriage at the age of ten, and they are removed from the risk after they marry or cohabit. Because the data are on marriage year and time-varying predictors to the nearest year, the time unit of analysis is the person-year. To take full advantage of the life history calendar information, the respondents who were born before 1956, which is the starting year in the calendar, are excluded from the datasets. The case would be right censored if the respondent has not experienced the first marriage or cohabitation up to 2009.

Additional thirty-one cases in the datasets of Mexico and USA which might be thought as having lack of information about marriage or migration history are excluded from the dataset, so there are no left-censored cases.

Because the dependent outcome is the transition to first marriage with cohabitation as competing risk, not all respondents experienced the event. In these circumstances, event-history models are the appropriate form of analysis.

First marriage

The dependent variable is the rate of transition to first marriage with cohabitation as competing risk. In a discrete-time hazard model, the event-transition indicator is coded 0 until the year of marriage, when it is coded 1. After the year of marriage or cohabitation, the respondent no longer contributes person-years to the data set. Unmarried individuals who do not have cohabitation experience contribute person-years until they are censored.

Residential mobility

Residential Mobility is measured at three levels: country, state, and city levels. There are three time-varying variables for this: number of international trips, number of

interstate trips in the U.S. and/or in Mexico, and number of intercity trips within the same state in the U.S. and/or in Mexico since birth year. These variables are lagged by 1 year so that past experiences can be used to predict the transition to marriage.

Employment status

Employment status is a time-varying variable of whether or not the respondent was employed in any type of occupation during the previous year. It is coded 1 or 0 and varies with the individual's employment status. Housewife or student is not considered as employment.

Health

There are two main medical conditions for health: diabetes and asthma. This is time-varying variable. It is coded 0 for every year until the respondent was diagnosed with diabetes or asthma by a doctor, after which it is coded 1. This variable is lagged by 1 year.

Control variables

Control variables are immigration status, gender, educational attainment, birth cohorts, and number of children. Immigration status (in the U.S. context), gender, educational attainment, and birth cohorts are time-static variables. Immigration status is coded 1 if the respondent was born in the U.S. If the respondent was born outside of the U.S., it is coded 0. This variable is applicable only in the context of the U.S. Male is coded 1 if the respondent is a man, and it is coded 0 if the respondent is a woman. Education attainment is current level of education in 2009. It is measured by 6 groups in the questionnaire. These groups are re-categorized into 3 groups: less than elementary school, high school, and college or university. Although school enrollment delays

marriage, high educational attainment is also one of key factors delaying it (Yabiku and Schlabach 2009; Yabiku 2005). Birth cohorts are categorized into three groups: born in 1960s including 1956-59 period, born in 1970s, born in after 1980. Birth cohorts are to consider the change in social norms toward gender roles over time.

Number of children is time-varying variables. Number of children is a time-varying measure of the number of children the respondent had accumulated by the previous year. This measure starts at 0 and increases in increments of 1 for each child.

An additional consideration is the parameterization of time, which is measured with the respondent's age. The hazard has been parameterized with time and squared time. This is decided based on the shape of the hazard plot. Models using this specification did not differ substantively from models using five interval variables.

Results

Before discussion of the multivariate results, a few descriptive statistics will be briefly considered. Table 1 and Table 2 present the means, standard deviations, and value range by the experience of first marriage in the context of the two countries for the variables used in the analysis. The point chosen to evaluate the means of time-varying variables is the last observed year, which is either the previous year of marriage or of censoring. There are some notable differences in the means by the event within each country and between countries. First of all, in the U.S., the respondents who have never married move more frequently at international, state, and city levels than those people who have ever married. This pattern is similar in Mexico but only at state and city levels.

Table 1, Table 2, Table 3, and Table 4 about here

Among people living in Mexico, there is an extremely small number of people who moved at international level, and there is no respondent who moved at state or city level in the U.S. Second, there are more employed respondents among the never-married than among the ever-married in the U.S. In Mexico, the proportions are similar. Third, in the U.S., there are more respondents who were diagnosed with diabetes or asthma among the never- married than among the ever-married. In Mexico, the proportions are similar. Fourth, the never-married respondents have more children than the ever-married regardless of the country. Fifth, the never-married respondents seem to be more educated than the ever- married respondents in both countries.

Table 3 and Table 4 present the means, standard deviations, and value range by the experience of first cohabitation in the context of the two countries for the variables used in the analysis. First of all, there are small differences in the average frequency of migration at all levels between the ever-cohabited and the never-cohabited in the U.S. However, in Mexico, the ever-cohabited people moved more frequently than the never-cohabited at state level. There is no respondent in Mexico who moved at state or city level in the U.S. Second, the average number of children is larger among the never-cohabited in the U.S. On the other hand, this pattern is the opposite in Mexico. Third, while the levels of employment status and health condition are very similar in the U.S., they are different in Mexico. In Mexico, more respondents who were diagnosed with diabetes or asthma are in the ever-cohabited, and more respondents were employed

Figure 1 and Figure 2 about here

among the never-cohabited. Fourth, the never-cohabited respondents seem to be more educated than the ever-cohabited respondents in both countries.

Survival plots are presented in Figure 1 and Figure 2 to see how different the transition to first marriage with cohabitation as competing risk or to first cohabitation with marriage as competing risk between two countries, respectively. The solid line stands for Mexico, and the dotted line stands for USA for both plots. To test the difference between two lines formally, the log-rank test is used. The reason is that the later stage of life has almost the same importance with the beginning or middle stages of life when marriage is considered in both countries. The log-rank test result is significant at $p < .05$ level for both plots. There is a significant difference in the rates of the transition to first marriage with cohabitation as competing risk between USA and Mexico. There is also a significant difference in the rates of the transition to first cohabitation with marriage as competing risk between USA and Mexico. Without controlling for other factors, the rate of marriage is higher in Mexico than in USA, and the rate of cohabitation is higher in the U.S. than in Mexico. However, it should be pointed out that the number of cases for the ever-cohabited respondents in Mexico is relatively small. Therefore, extra care should be put in interpretation of those numbers.

Table 5 is the preliminary results by discrete-time event history model. The first two models (Model 1 and 2) explore the effects of residential mobility, employment status, and health on the transition to first marriage with cohabitation as competing risk in both countries. The next two models (Model 3 and 4) explore the effect of residential mobility,

Table 5 about here

employment status, and health on the transition to first cohabitation with marriage as competing risk in both countries. The number of international trip and US-born variables are omitted in the models for Mexico due to the lack of variation. The coefficients are presented as odds ratios. The odds ratios are interpreted as having an effect on the rate of first each union formation. However, when there are many time periods of risk relative to the number of events, the odds approximate the rates (Yabiku 2005). Thus, the results are discussed in terms of rates.

By comparing Model 1 with Model 3, it might be said that cohabitation is considered as a surrogate marriage among Latinos in the U.S. if the patterns of most factors affecting the transitions to first marriage and first cohabitation are the same or very similar. The results show that this is not the case. The coefficient of 1.312 for number of international trips means that each international trip during the previous year increases the rate of marriage by 31% (1.312 – 1 = 0.312). Each international trip during the previous year increases the rate of cohabitation by 56%. The degrees of effects are different, but at least the directions are the same. However, while employment status decreases the rate of first marriage by 25%, it has no effect on the rate of first cohabitation. In addition, US-born respondents are associated with accelerated cohabitation rate, not with marriage rate.

The situation is the same in Mexico. Employment status during the previous year accelerates the rate of marriage by 64%, but it has no effect on the rate of cohabitation.

Health and number of interstate trips matter when it comes to the rate of cohabitation, but not to the rate of marriage.

Overall, at current stage, the results show the importance of residential mobility and employment status on the transition to first marriage or cohabitation. Although it is hard to say that cohabitation could replace marriage in the U.S. or even in Mexico, at least the results show that residential mobility at various levels is an important factor affecting the rate of marriage or cohabitation. Employment status also affects the transition to first marriage, but not the transition to first cohabitation. One interesting result is that the result of residential mobility at international level is the opposite of the expectation of this paper. International migration accelerates the rate of marriage or cohabitation in the U.S. This result deserves to be explored further.

Future Plan

Since the biggest strength of this paper is that various levels of migration in the U.S. and in Mexico can be scrutinized, the effect of residential mobility at country, state, and city levels on the transition to first marriage and cohabitation will be examined further in detail empirically and theoretically. Then the formal statistical test will be conducted to see if the difference in coefficient between two models is significant. Furthermore, the interactions between migration at each level and time to test the effect of migration timing on the transition to first marriage. In so doing, this paper would contribute significantly to clarifying the sheer effect of migration.

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Table 1 Descriptive Statistics by the Experience of First Marriage in USA

Variable	Total				Ever Married				Never Married			
	Mean	Std.	Min.	Max.	Mean	Std.	Min.	Max.	Mean	Std.	Min.	Max.
Time-varying variables[1]												
No. of international trip	0.52	0.62	0	3	0.43	0.63	0	3	0.67	0.56	0	3
No. of interstate trip in the U.S.	0.10	0.41	0	5	0.06	0.27	0	2	0.17	0.58	0	5
No. of interstate trip in Mexico	0.08	0.30	0	2	0.08	0.26	0	1	0.09	0.34	0	2
No. of intercity trip in the U.S.	0.08	0.32	0	2	0.07	0.29	0	2	0.12	0.37	0	2
No. of intercity trip in Mexico	0.08	0.40	0	5	0.06	0.27	0	2	0.12	0.57	0	5
Employment status	0.43	0.50	0	1	0.33	0.47	0	1	0.60	0.49	0	1
Health(diabetes or asthma)	0.11	0.31	0	1	0.08	0.27	0	1	0.16	0.37	0	1
No. of children	0.39	0.90	0	5	0.33	0.83	0	5	0.51	1.00	0	5
Time-static variables												
US-born	0.12	0.33	0	1	0.10	0.29	0	1	0.17	0.38	0	1
Male	0.34	0.48	0	1	0.30	0.46	0	1	0.42	0.50	0	1
Less than high school	0.24	0.43	0	1	0.27	0.45	0	1	0.18	0.38	0	1
High school	0.63	0.48	0	1	0.59	0.49	0	1	0.71	0.45	0	1
College or university	0.13	0.34	0	1	0.14	0.35	0	1	0.11	0.31	0	1
Current Age	32.40	8.81	18	53	34.48	8.19	19	53	28.70	8.70	18	52
Age at marriage	21.96	5.19	12	43	21.96	5.19	12	43	.	.	.	.
Born in 1960s	0.22	0.42	0	1	0.27	0.45	0	1	0.13	0.34	0	1
Born in 1970s	0.39	0.49	0	1	0.45	0.50	0	1	0.27	0.44	0	1
Born in 1980-90s	0.39	0.49	0	1	0.28	0.45	0	1	0.60	0.49	0	1
N	311				199				112			

[1]Time-varying variables are lagged by 1 year. Also, because their values change over time, their value at one year before marriage or censoring was used for the descriptive statistics.
Source: Southwest Migration Study, 2009.

Table 2 Descriptive Statistics by the Experience of First Marriage in Mexico

Variable	Total				Ever Married				Never Married			
	Mean	Std.	Min.	Max.	Mean	Std.	Min.	Max.	Mean	Std.	Min.	Max.
Time-varying variables[1]												
No. of international trip	0.02	0.16	0	2	0.02	0.20	0	2	0.00	0.00	0	0
No. of interstate trip in the U.S.	0.00	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0	0
No. of interstate trip in Mexico	0.13	0.43	0	3	0.08	0.35	0	3	0.22	0.57	0	3
No. of intercity trip in the U.S.	0.00	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0	0
No. of intercity trip in Mexico	0.14	0.48	0	5	0.12	0.32	0	1	0.19	0.73	0	5
Employment status	0.35	0.48	0	1	0.33	0.47	0	1	0.39	0.49	0	1
Health(diabetes or asthma)	0.04	0.20	0	1	0.04	0.19	0	1	0.06	0.23	0	1
No. of children	0.11	0.45	0	3	0.07	0.33	0	2	0.20	0.66	0	3
Time-static variables												
Male	0.22	0.42	0	1	0.16	0.37	0	1	0.37	0.49	0	1
Less than high school	0.20	0.40	0	1	0.25	0.43	0	1	0.07	0.26	0	1
High school	0.39	0.49	0	1	0.42	0.49	0	1	0.33	0.48	0	1
College or university	0.41	0.49	0	1	0.33	0.47	0	1	0.59	0.50	0	1
Current Age	34.36	10.51	18	53	37.26	9.41	18	53	27.37	9.79	18	53
Age at marriage	20.68	4.36	10	38	20.68	4.36	10	38	.	.	.	.
Born in 1960s	0.39	0.49	0	1	0.47	0.50	0	1	0.19	0.39	0	1
Born in 1970s	0.23	0.42	0	1	0.29	0.46	0	1	0.09	0.29	0	1
Born in 1980-90s	0.38	0.49	0	1	0.24	0.43	0	1	0.72	0.45	0	1
N	184				130				54			

[1]Time-varying variables are lagged by 1 year. Also, because their values change over time, their value at one year before marriage or censoring was used for the descriptive statistics.
Source: Southwest Migration Study, 2009.

Table 3 Descriptive Statistics by the Experience of First Cohabitation in USA

Variable	Total				Ever Cohabited				Never Cohabited			
	Mean	Std.	Min.	Max.	Mean	Std.	Min.	Max.	Mean	Std.	Min.	Max.
Time-varying variables[1]												
No. of international trip	0.52	0.62	0	3	0.52	0.62	0	3	0.52	0.62	0	3
No. of interstate trip in the U.S.	0.10	0.41	0	5	0.11	0.66	0	5	0.09	0.33	0	2
No. of interstate trip in Mexico	0.08	0.30	0	2	0.08	0.33	0	2	0.08	0.29	0	2
No. of intercity trip in the U.S.	0.08	0.32	0	2	0.03	0.26	0	2	0.10	0.33	0	2
No. of intercity trip in Mexico	0.08	0.40	0	5	0.10	0.35	0	2	0.07	0.41	0	5
Employment status	0.43	0.50	0	1	0.48	0.50	0	1	0.42	0.49	0	1
Health(diabetes or asthma)	0.11	0.31	0	1	0.13	0.34	0	1	0.10	0.31	0	1
No. of children	0.39	0.90	0	5	0.33	0.60	0	2	0.41	0.96	0	5
Time-static variables												
US-born	0.12	0.33	0	1	0.16	0.37	0	1	0.11	0.32	0	1
Male	0.34	0.48	0	1	0.21	0.41	0	1	0.38	0.49	0	1
Less than high school	0.24	0.43	0	1	0.20	0.40	0	1	0.25	0.43	0	1
High school	0.63	0.48	0	1	0.72	0.45	0	1	0.61	0.49	0	1
College or university	0.13	0.34	0	1	0.08	0.28	0	1	0.14	0.35	0	1
Current age	32.40	8.81	18	53	31.15	7.47	18	49	32.70	9.10	18	53
Age at cohabitation	22.93	6.48	12	41	22.93	6.48	12	41	.	.	.	.
Born in 1960s	0.22	0.42	0	1	0.13	0.34	0	1	0.24	0.43	0	1
Born in 1970s	0.39	0.49	0	1	0.49	0.50	0	1	0.36	0.48	0	1
Born in 1980-90s	0.39	0.49	0	1	0.38	0.49	0	1	0.40	0.49	0	1
N	311				61				250			

[1]Time-varying variables are lagged by 1 year. Also, because their values change over time, their value at one year before marriage or censoring was used for the descriptive statistics.
Source: Southwest Migration Study, 2009.

Table 4 Descriptive Statistics by the Experience of First Cohabitation in Mexico

Variable	Total				Ever Cohabited				Never Cohabited			
	Mean	Std.	Min.	Max.	Mean	Std.	Min.	Max.	Mean	Std.	Min.	Max.
Time-varying variables[1]												
No. of international trip	0.02	0.16	0	2	0.00	0.00	0	0	0.02	0.17	0	2
No. of interstate trip in the U.S.	0.00	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0	0
No. of interstate trip in Mexico	0.13	0.43	0	3	0.31	0.60	0	2	0.11	0.41	0	3
No. of intercity trip in the U.S.	0.00	0.00	0	0	0.00	0.00	0	0	0.00	0.00	0	0
No. of intercity trip in Mexico	0.14	0.48	0	5	0.19	0.40	0	1	0.13	0.48	0	5
Employment status	0.35	0.48	0	1	0.25	0.45	0	1	0.36	0.48	0	1
Health(diabetes or asthma)	0.04	0.20	0	1	0.19	0.40	0	1	0.03	0.17	0	1
No. of children	0.11	0.45	0	3	0.31	0.79	0	3	0.09	0.41	0	3
Time-static variables												
Male	0.22	0.42	0	1	0.19	0.40	0	1	0.23	0.42	0	1
Less than high school	0.20	0.40	0	1	0.38	0.50	0	1	0.18	0.38	0	1
High school	0.39	0.49	0	1	0.25	0.45	0	1	0.40	0.49	0	1
College or university	0.41	0.49	0	1	0.38	0.50	0	1	0.41	0.49	0	1
Current age	34.36	10.51	18	53	37.56	9.89	24	53	34.05	10.55	18	53
Age at cohabitation	23.44	7.16	15	39	23.44	7.16	15	39	.	.	.	.
Born in 1960s	0.39	0.49	0	1	0.44	0.51	0	1	0.38	0.49	0	1
Born in 1970s	0.23	0.42	0	1	0.38	0.50	0	1	0.22	0.42	0	1
Born in 1980-90s	0.38	0.49	0	1	0.19	0.40	0	1	0.40	0.49	0	1
N	184				16				168			

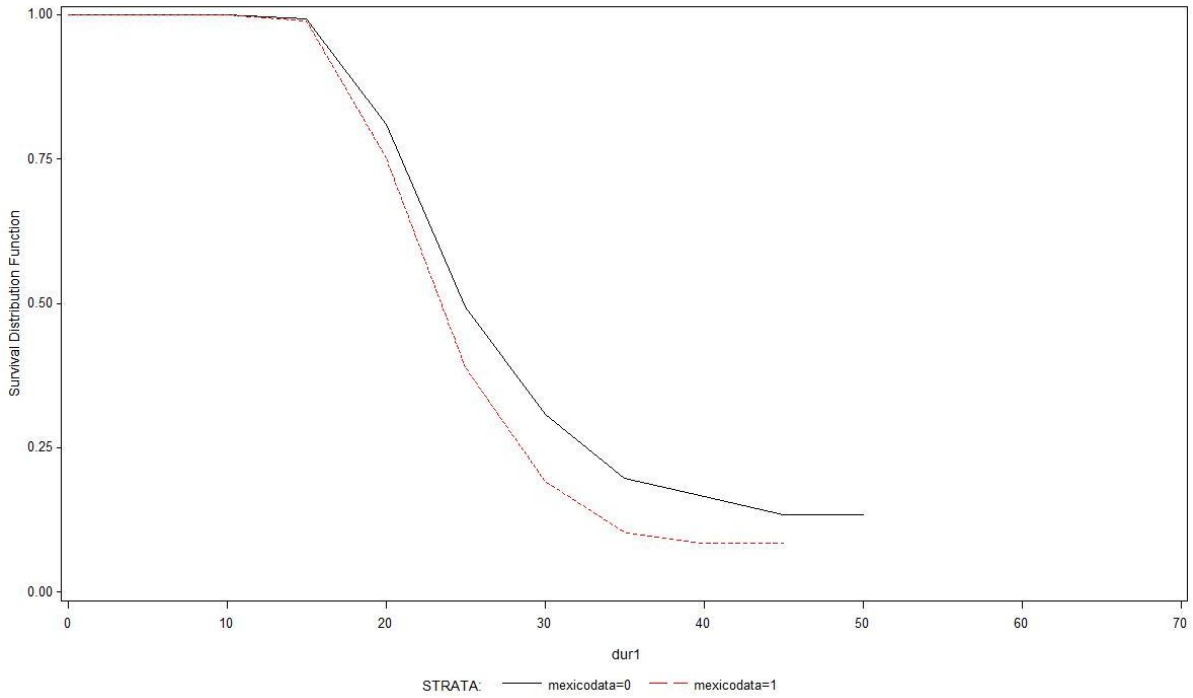
[1]Time-varying variables are lagged by 1 year. Also, because their values change over time, their value at one year before marriage or censoring was used for the descriptive statistics.
Source: Southwest Migration Study, 2009.

Table 5 Odds ratios and significance statistics for discrete-time hazard models of the effects of residential mobility on the hazard of first marriage or cohabitation in USA and Mexico

	Transition to First Marriage						Transition to First Cohabitation					
	USA (Model 1)			Mexico (Model 2)			USA (Model 3)			Mexico (Model 4)		
	Odds	S.E.		Odds	S.E.		Odds	S.E.		Odds	S.E.	
Residential Mobility												
No. of international trips	1.312	0.139	†				1.559	0.221	*			
No. of interstate trips in each country	1.098	0.284		0.797	0.274		1.622	0.334		3.015	0.471	*
No. of intercity trips in each country	1.041	0.310		1.098	0.277		0.377	0.763		1.104	0.735	
Employment Status	0.750	0.173	†	1.643	0.226	*	1.407	0.292		0.487	0.729	
Health (Diabetes or asthma)	1.019	0.279		0.967	0.516		1.812	0.405		14.929	0.844	**
Controls												
Male	0.522	0.170	**	0.360	0.280	**	0.265	0.339	**	1.074	0.790	
Education[1]												
Less than high school	1.098	0.179		1.259	0.265		0.735	0.353		7.617	0.900	*
College or university	1.130	0.223		0.411	0.230	**	0.526	0.487		2.981	0.867	
No. of children	0.858	0.104		0.521	0.287	*	0.784	0.184		1.743	0.466	
US-born[2]	1.022	0.267					1.928	0.397	†			
Birth Cohort[3]												
Born in 1960s	0.767	0.186		0.744	0.230		0.298	0.421	**	0.339	0.672	
Born in after 1980	0.947	0.197		0.635	0.268	†	1.029	0.338		0.573	0.809	
Time	1.664	0.056	**	1.831	0.079	**	1.429	0.083	**	1.313	0.139	†
Time^2	0.984	0.002	**	0.981	0.003	**	0.991	0.003	**	0.996	0.005	
-2LL	1,426.489			834.705			557.192			152.795		
Person-years	4,345			2,315			4,345			2,315		

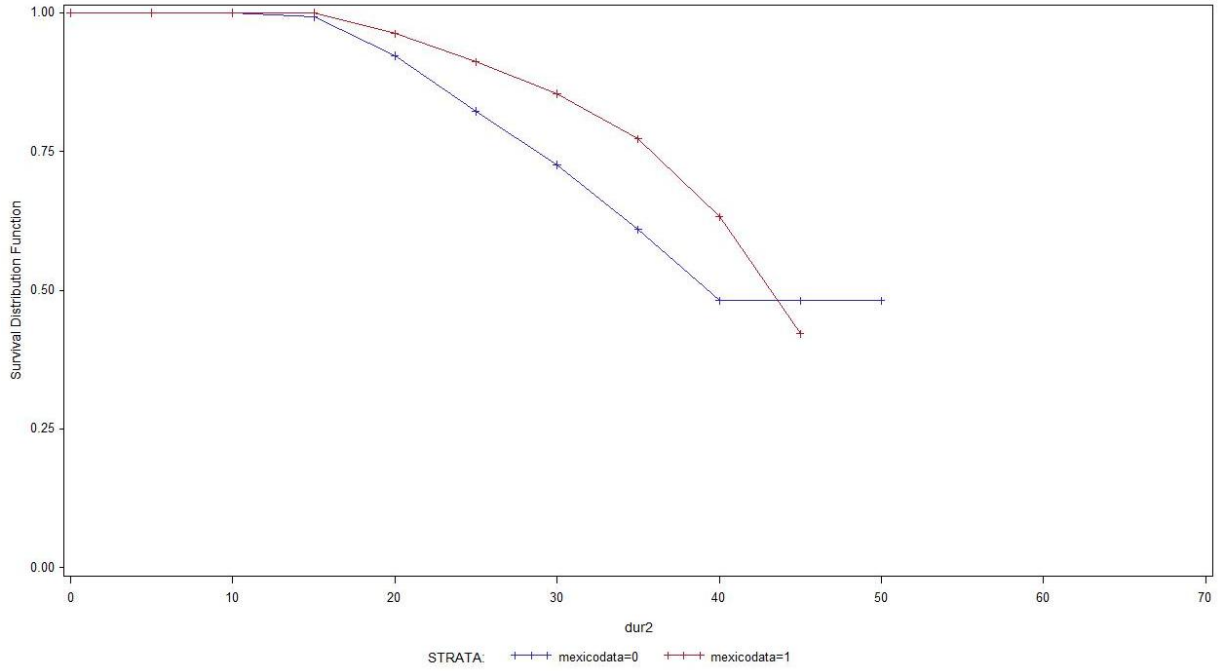
[1]Reference group: high school graduate; [2]Reference group: immigrants; [3]Reference group: born in 1970s.
†p<0.10; *p<0.05;**p<0.01, two-tailed tests.
Source: Southwest Migration Study, 2009.

Figure 1 Survival Plot of the Transition to First Marriage with Cohabitation as Competing Risk by Country



Note: *p*-value for log-rank test is .0160.

Figure 2 Survival Plot of the Transition to First Cohabitation with Marriage as Competing Risk by Country



Note: *p*-value for log-rank test is .0179.