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Current Trends and Patterns of Female Migration: Evidence from Mexico

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Abstract

This study uses a new source of data to assess trends and patterns of female migration from Mexico. Data were collected from migrants interviewed in ten Mexican communities during 1987 through 1990, as well as from out-migrants from those communities who later located in the United States. In the first part of the analysis, we examine changes in migrant behavior throughout the 1980s by estimating trends in the probability of first-time and repeat migration and assessing the impact of the Immigration Reform and Control Act (IRCA) on these trends. In general, migration probabilities were lower for women than those reported elsewhere for men, but the evidence suggests that like men, once women begin migrating, they are virtually assured of migrating on a second trip. Results from the departure models in the second half of the paper suggest that recent female migration reflects access to the productive resources in Mexican society and a process of family migration, whereby women migrate after their husbands and fathers legalized as part of IRCA.

Current Trends and Patterns of Female Migration: Evidence from Mexico

During the twentieth century, the national origin and sex composition of U.S. immigration has changed. Women are now as likely as men to migrate to the United States, and developing nations, such as Mexico and the Philippines, are the primary source of migration rather than European countries. Although these changes have been the subject of recent studies and special volumes on migration,[1] we know little about the migration process of women from particular countries.

The largest source of migration to the United States is Mexico (Passel and Woodrow, 1987; Warren and Passel, 1987). Men have comprised the majority of Mexican-U.S. migrants throughout the twentieth century, and their overwhelming presence meant they were the most likely candidates for study. Recently, however, migration specialists have made substantial efforts to understand the role that women play in Mexican migration (Stier and Tienda, forthcoming; Lindstrom, 1991; Mines and Massey, 1985; Kossoudji and Ranney, 1984; Simon and DeLey, 1984; Reichert and Massey, 1980; Reichert and Massey, 1979). These efforts examined the characteristics of immigrant women, the timing and volume of their migration from sending communities in Mexico, and the adaptation process of female immigrants in the United States, including labor market differences between documented and undocumented migrant women.

Although most found women are increasingly part of the migration flows from Mexico, many studies rely on data from one or two Mexican sending communities from which broad generalizations are not possible (Durand and

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[1]See a special issue of International Migration Review (1984) and two books, International Migration: The Female Experience (1986) and Seeking Common Ground: Women Immigrants to the United States (forthcoming), devoted entirely to women and migration. See also Pedraza (1991) and Gabaccia (1991).

Massey, 1992). One consequence is that research has not yet shed light on the extent of women's participation in Mexico-U.S. migration. Thus, despite the fact that scholarship on female migration has improved substantially since the early 1970s, many questions about female migration remain unanswered. In the this paper, therefore, I examine the extent to which women migrate from Mexico, a nation that has long sent male migrants to the United States, and uncover relevant characteristics related to female migration.

Using a unique dataset, the present study fills this gap by estimating probabilities of taking a first trip to the United States with and without documents, and making subsequent legal and illegal U.S. trips. After documenting women's migration from ten Mexican communities, I then consider the determinants of female Mexican-U.S. migration by examining whether and how women's recent moves reflect their personal characteristics, the resources in their households, or a process of family reunification. In the final section, I discuss my results in the context of previous research that examined men's migratory experience.

MIGRATION AND WOMEN IN MEXICO

During the twentieth century, migration to the United States has ebbed and flowed and the variation is in large measure due to rapid growth and economic development in Mexico (Massey, 1988). The impetus for migration arose from changes that transformed and consolidated the agrarian economy and resulted in a large supply of wage laborers available to move. Specific events in the United States contributed to Mexican-U.S. migration, including labor shortages during World War II, which resulted in the Bracero program and encouraged Mexicans to seek employment as temporary workers in the United States. Throughout this period, however, men were the main actors in the migration flows. Migration was often passed down from fathers to their

children, especially to sons, and brothers who were U.S. migrants maintained strong ties with each other (Massey et al., 1987; Reichert and Massey, 1979:486; Massey and Liang, 1989:221).

Studies of recent migration suggest that Mexican women are increasingly likely to migrate, and that women often play an important role in the migration process. Although female participation is always less than men's, estimates suggest it is not trivial. From Guadalupe in the 1970s, for example, Reichert and Massey (1979) found women comprised 44 percent of all legal migrants, and 19 percent of undocumented migrants of working age. The latter figure was considerably higher than previous estimates, suggesting that female illegal migration may have been underestimated in the past. The authors also found that women's substantial presence among legal migrants was not motivated solely by their desire to follow their husbands; fully 93 percent of these women worked for wages on their most recent U.S. trip.

In a second paper, Reichert and Massey (1980) took a longer view of U.S. migration by constructing migrant cohorts from the detailed histories of Guadalupe residents. Their efforts revealed two distinct waves of migration and a relationship between them and the sex composition of migrants. The earlier wave (1940 to 1964) comprised men who migrated legally as braceros. Only toward the end of this period, when bracero contracts became difficult to obtain, did the proportion of undocumented men begin to increase. In the later phase (1964-1978), migration from Guadalupe increasingly comprised women and children who entered as immediate relatives of the men who were formerly braceros but who had become permanent U.S. residents. Women also increasingly entered without documents; by 1975-78, they made up almost half of the undocumented migrants from Guadalupe. Reichert and Massey argued that women's

increased participation among undocumented migrants reflected a pattern of family migration, whereby women entered without documents after someone in their family received permanent residency.

Armed with data from two communities, Guadalupe and Las Animas, Mines and Massey (1985) extended previous research by comparing the social process of migration. In both communities, early migration was led by men, who usually traveled alone to find work in the United States. These men relied heavily on social contacts who helped reduce the costs of migration by providing housing and job information. As more men migrated, some stayed permanently and stable migrant networks began to develop. Women and children were gradually incorporated into the process, as migrants began to accumulate property and resources. One consequence was even more migration and an increasing likelihood of U.S. settlement.

These studies describe when and how women fit in the migration process, and as a result, they suggest women's entry reflects a process of family migration in which women and men work in the United States. Lindstrom (1991) goes one step further by examining the differential effects of family networks on male and female migration. Although networks lower the costs of migration for all migrants from Mexico, Lindstrom argued they have a differential impact on women. Immediate family already in the United States protect the women who migrate and thereby encourage female migration, which is consistent with the traditional family and gender norms that govern opportunities for Mexican women. Thus, active family networks in the United States were more important for the migration of women than men.

Despite efforts to compare findings to other studies and to describe sample design limitations, these studies share a common weakness. They rely

on generalizations from isolated settings, which may or may not represent broader trends (Durand and Massey, 1992). Thus, we are not sure whether the patterns and trends suggested above approximate those in the aggregate. In the present paper, I use a new source of data that covers multiple communities in Mexico. The data are longitudinal, provide a large sample size, include samples of settled U.S. migrants, and yield reliable information on Mexican immigration up through 1989. They permit separate examination of the different events that together determine the overall flow of legal and undocumented female migrants: the probability of making a first trip, and making two or more trips to the United States. The data also permit us to estimate the determinants of female migration.

IRCA AND ITS EFFECTS

Before assessing the volume and pattern of female migration, let us take a moment to examine the provisions of the Immigration Reform and Control Act (IRCA) of 1986 and speculate about its effects on female migration from Mexico. IRCA was unusual in U.S. history because it represented the first legislative attempt to regulate illegal migration. Its provisions were extensive, and included sanctions against employers who knowingly hire undocumented migrants, increased resources to boost the policing of U.S. borders, and amnesty for many illegal migrants already resident in the United States. Two types of migrants were eligible for legalization: those who resided continuously in the United States since 1982 (known as Legally Authorized Workers, or LAWS), and those who had worked for at least 90 days as agricultural laborers during 1984-86 (known as Special Agricultural Workers, or SAWS).

These provisions resulted in several important changes in Mexican

migration. First, the amnesty provisions resulted in massive legalizations and some 2.3 million Mexicans were granted temporary residence (Bean et al., 1989). Second, the Immigration and Naturalization Service (INS) received a 50 percent budget increase of some $400 million to hire additional border patrol officers in 1987 and 1988, and additional funds were made available to the Department of Labor to inspect employer records (Bean et al., 1989; Goodis, 1986).

As a result, researchers have begun the task of evaluating IRCA's impact on migration from Mexico. In general, prior studies have focused either on IRCA's deterrent effects or its consequences on the U.S. labor market. Research on whether IRCA accomplished its intended goal of deterring undocumented migration from Mexico relied on two types of data. Using apprehensions data from the INS, two studies found a decline in the number of arrests made at the U.S.-Mexico border following IRCA's passage in 1986 (Bean et al., 1990; White et al., 1990). Although researchers have noted that the reduction may be due in part to removing over over two million newly legalized migrants from the regular seasonal migrant flow (Bean et al., 1990; Espenshade, 1990), and to variations in the efficiency and resources of the U.S. Border Patrol (White et al., 1990), the use of apprehensions statistics to measure undocumented migration is problematic (see Donato et al., 1992).

Studies using data from Mexican sending communities provide evidence that IRCA deterred undocumented migrants (Cornelius, 1989, 1990; Gonzáles and Escobar, 1990; Massey et al., 1990). A comprehensive study of migrants from seven Mexican communities, for example, found that IRCA did not reduce the likelihood of migrating on a first U.S. trip or making recurrent trips, and that it did not increase the costs of crossing the border or the probability

of being apprehended (Donato et al., 1992).

Researchers have also examined how IRCA changed conditions in the U.S. labor market. These studies found that IRCA resulted in discriminatory hiring practices against Hispanics (GAO, 1990), and that it increased the economic penalties accruing to illegal status in the post-IRCA period, including lower wages and fewer hours of work (Donato and Massey, 1991; Donato et al., 1992). Despite the growing number of studies, however, most have focused entirely on men. Thus, IRCA clearly affected the migration process of men but little is known about whether it had any effect--deterrent or otherwise--on female migration. One purpose of this study is to assess the impact of IRCA by examining how the likelihood of female migration has changed over time, before and after IRCA's implementation in 1986.

IRCA's amnesty provisions may increase the likelihood of women's entry if amnesty provided an impetus for family reunification. Based on fieldwork in Mexico, Cornelius (1989) suggested that women and children were likely to come to the United States to join the men in their families who legalized. Evidence from Bean et al. (1990) indirectly supports this idea. They found increases in the number of women and children apprehended after IRCA's implementation in 1986, and reported that the migration of women and children was more likely than the migration of men to be motivated by noneconomic factors. In the present study, I examine whether IRCA deterred female undocumented migration during the post-IRCA (1987-90) period and whether amnesty increased the likelihood that women would migrate to the United States.

DATA AND METHODS

The analysis is based on a survey of ten Mexican communities conducted

during the winters of 1987-88 through 1989-91. The communities are located in the Mexican states of Jalisco, Michoacán, Guanajuato, and Nayarit, which have traditionally sent many migrants to the United States (Dagodag, 1975; North and Houstoun, 1976; Jones, 1988). Within each, a simple random sample of 150-200 households was drawn and households were interviewed during December and January in successive years between 1987 and 1991 (two communities in 1987-88, four in 1988-89, three in 1989-90, and one in 1990-91). Because these months are the best time to locate U.S. migrants in Mexico, the sample is representative of housing units occupied in these communities during the winter months of 1987-91.

We supplemented this sample with a non-random survey of out-migrants located in U.S. destination areas during the summer after each period of Mexican fieldwork. Using data from Mexican communities, fieldworkers uncovered where in the United States migrants went and then went to those locations to interview households that had established themselves permanently. Snowball sampling methods were used to compile samples of 20 out-migrants households per community, yielding a total of 100 U.S. households for five communities. (U.S. surveys were not carried out for two communities because an interviewer dropped out of the project.) It is clear that these data are not representative of all out-migrants from the sample communities, but they do provide some control for the biases due to selective emigration.

The communities vary in their degree of urbanization. Among the ten sample communities, four are from the state of Guanajuato: San Francisco del Rincón is a newly industrialzed city in an otherwise rural area; León is a large, diversified city of more than a million inhabitants; Romita is a commerical center in a rich agricultural region; and Mineral de Pozos is an

isolated, half-abandoned mining town located in the mountains. The rural towns of San Diego de Alejandría and Unión de San Antonio are located in the Los Altos region of Jalisco; La Yerbabuena, Ario de Rayón, and Los Reyes are agricultural towns located in Michoacán. Iztlán del Rio is a small commercial center in a poor mountainous farming region in the state of Nayarit, just north of Jalisco.

The survey questionnaire gathered information on the social and demographic characteristics of household heads, their spouses, children, and other household members. Among household members with U.S. migrant experience, the survey obtained additional information about the first and most recent trip to the United States, which included the date of initial entry, duration, occupation, wage, place of destination, and legal status. The survey also contained information about the characteristics of households.

The analyses for the present study take two forms. First, we examine trends in female migration to the United States. For this analysis, we use the subject's birth date and date of the first U.S. trip (compiled for all household members) to construct a year-by-year life history up to the date of the first U.S. trip. This procedure builds a discrete-time person-year file that follows each subject from birth to the date of the survey or the initial U.S. trip, which ever came first. While retrospective histories such as these contain some recall error, checks for internal consistency revealed that migrants were able to remember the years when they left for the United States with considerable accuracy (see Massey, 1985).

The outcome measure is whether or not the woman migrated within the person-year in question. If a woman did not migrate in a given year, the migration variable is coded 0; if she migrated in that year, it is coded 1 and

all later years of life are excluded from the file. For each year in which a migration took place, we also created variables to record the legal status under which the trip was taken. Legal migrants have valid U.S. documents that entitle them to work in the United States, whereas undocumented migrants do not.

This person-year file provided the basis for estimating an age-period model of the probability of taking a first trip to the United States (age-period-cohort models were originally estimated but cohort coefficients were always insignificant). The 0-1 migration variable was regressed on dummy variables representing each woman's age and period in the person-year, and additional dummy variables were included to indicate the community from which the migration occurred. The model was estimated using a maximum likelihood logistic regression procedure, which yields estimates of the probability of making a first U.S. trip in any year, given that no prior migration had occurred.

Information on migrant's most recent U.S. trip was used to build person-year files that enabled the estimation of trip progression probabilities, or the probability of taking a second trip given that a first trip already occurred. Beginning from the point of return from the first trip, we followed a woman through life year-by-year noting her age and the period in which the person-year is located. We constructed a migration variable by coding each person-year as 0 if the woman did not take a second trip and 1 if she did; all years after the second trip were excluded from the file. Following this procedure, we constructed a series of person-year files to estimate second trip progression probabilities that pertain to migration to destinations in the United States.

In these analyses, the period dummies are specified for single years from 1980 to 1989. This provides a basis for assessing the magnitude of female Mexican migration and trends in the specific migration events that women undertake: making a first trip and then a second trip. It also permits us to evaluate whether IRCA had an effect in deterring female undocumented migration to the United States. If IRCA did have an effect, then we expecte declines in migration probabilities after 1986 compared to a baseline period from 1980 to 1985.

For the second part of the paper, we estimate departure models of female migration to the United States. To do this, we merged the social and demographic information on female household members with characteristics of the households from which they originate. (We do this for seven of the original ten communities for which household data are currently available.) Using logistic regression, we predicted the likelihood of female migration for household members resident in these communities at the beginning of a four-year period up to the year of the survey.[2] Women in these households were coded as 1, U.S. migrants, if they left for the United States during the period, and they were coded as 0, non-migrants, if they did not leave during that period.

The dependent variable is predicted from a set of personal and household characteristics that include age, education, marital status, whether the household owns land or a business, whether children are present in the household, the number of adults present, and rural origin. In addition, female migration is expressed as a function of migrant characteristics, such

[2]For two communities the three-year interval was 1985-88, for four communities, the period was 1986-89, and for one community, 1987-90.

as whether the migrant had an active U.S. or Mexican network, whether she had previous migrant experience, and whether or not she was part of a household in which an amnesty receipient (SAW or LAW) was a member. This permits an assessment of whether IRCA encouraged women's entry through its amnesty provisions, and the extent to which women's movement is linked to their personal characteristics and to the productive resources that their families own in Mexico.

MAKING A FIRST AND SECOND TRIP

The propensity for Mexican women without prior U.S. experience to take a trip to the United States is examined in Table 1. The model assumes constant migration rates below age 15 and above age 54, and constant rates within five-year intervals from 15 to 54. We captured period effects using 14 dummy variables: 1965-69 and 1970-74 indicate periods of increasing legal restriction on Mexican immigration and growing undocoumented migration; 1975-79 represents a period of cyclical economic growth in Mexico and sustained unemployment and inflation in the United States; and the single years from 1980 through 1989 establish trends for the last decade. The reference period included year before 1965.

TABLE 1 ABOUT HERE

During the 1980s, economic conditions in Mexico and the United States fluctuated considerably. Early in the decade, Mexico experienced strong economic growth as the United States slugged through a recession. During 1982 to 1986, conditions reversed; a severe financial crisis loomed in Mexico while rapid growth was the norm for the United States. The 1987-89 interval represents the post-IRCA period when border enforcement strengthened. These shifting conditions may constrain and facilitate women's movement during the

decade, and we expect higher probabilities of female migration during 1980-1982, when Mexico experienced strong economic growth. Moreover, if IRCA had any deterrent effect on undocumented female migration, we expect to observe a break in the probabilities after 1986.

The left-hand columns of Table 1 show coefficients estimated for undocumented U.S. trips, whereas the right-hand columns reveal coefficients for first legal trips. These estimates depict similar age-migration profiles. Migration was unlikely in childhood, it became increasingly likely during adolescence, peaked in young adulthood, and then declined to a low at age 50 or 55. Small differences between the two sets of estimates emerged for the community effects. Compared to the reference community of San Francisco del Rincón (a newly industrialized city in Guanajuato's countryside), the likelihood of legal and illegal migration was highest in the agrarian towns of Ario de Rayón, La Yerbabuena, and Los Reyes. The main difference between legal and undocumented migration appeared in the urban center of León. Compared to San Francisco del Rincon, the likelihood of a first undocumented trip was lowest from this town while the probability of making a first legal trip was no different from the reference community.

Differences in the period coefficients across the two equations refer primarily to differences in absolute values. In general, coefficients were higher for undocumented first trips, except in 1989 and the 1965-74 period. The latter was a time when many women legally migrated as relatives of Mexican men who were formerly employed in the United States as agricultural workers under the Bracero Agreement.

During the late 1970s and early 1980s, coefficients were quite high for both undocumented and legal U.S. female migration. This was a time of

economic growth and development in Mexico, when most U.S. settlers in our dataset were likely to have left for the United States. The coefficients for the 1980s suggest that the probability of becoming an illegal migrant remained high throughout the decade. After 1982, although the year-to-year coefficients ebb and flow with peaks in 1986 and again in 1989, there was no consistent shift in the probability of making an undocumented trip during the three years before and after 1986. Coefficients for legal trips were lower than those for illegal trips during the decade, but again they displayed no stable pattern. Early in the 1980s, they were high but they dropped during the 1982-84 period, then increased to circa-1980 levels in 1985-86, dropped significantly in 1987, and finally rose back to a high in 1989. The decline in 1987 may indicate a hesitancy on the part of legal migrants to cross the U.S.-Mexican border immediately after IRCA, but the increase in 1989 suggests that the effect was short term. Thus, the 1980s witnessed continued female migration to the United States and an increasing likelihood of legal and undocumented migration.

To assess migration chances directly, we used these equations to generate predicted probabilities of making a first illegal trip in different years, given an age, a period, and a community. From these predicted probabilities, we derived a set of life-tables to compute the cumulative probability of illegal and legal migration by age, assuming the rates of out-migration prevailing from 1980 through 1989 (see Massey, 1985). The first panel of Table 3 shows the cumulative probability of migrating on a first trip by age 40 for four communities that have the highest rates of out-migration. (Complete life tables are available upon request.)

These probabilities show what would happen if a women born into each

community were to go through life subject to the rates of out-migration prevailing in different years. The hypothetical probabilities were lower than those reported elsewhere for men and they fluctuated across communities and periods more widely than those for men (see Donato et al., 1992). In general, the chances of undocumented migration were higher than for legal migration, except for women from La Yerbabuena where the probability of legal outmigration was very high.

In all four communities, the probability that a woman could eventually become an illegal migrant varied throughout the decade. It was highest in 1980 and 1981, fell in 1983 and 1984, increased in 1985 and 1986, dropped in 1987, but recovered by 1989. The decline in 1987 is evidence that IRCA deterred female undocumented migration, but by 1989 the likelihood increased back up to pre-1986 levels. Thus, even at its lowest level in 1987, a young woman from San Diego de Alejandría had at least a 33 percent chance of becoming an illegal migrant. By 1989, the probability that a woman from San Diego or Ario de Rayón would take an illegal trip by age 40 was .46 and .62, respectively.

The lifetime probability of legal migration also varied by community. In 1980 and 1981, young women from San Diego de Alejandría, Los Reyes, and Ario de Rayón had a small chance (less than 20 percent) of becoming a legal migrant, whereas women from La Yerbabuena faced an 80 percent chance of legal migration. Like those for illegal migration, legal outmigration probabilities varied across the period, dropping substantially in 1987, but they were at their highest level by the decade's end. In 1989, women with legal documents from La Yerbabuena were very likely to migrate on a first U.S. trip but women from Los Reyes and Ario de Rayón had a 30 percent chance of becoming a legal

migrant.

TABLE 2 ABOUT HERE

Table 2 presents estimates of the probability that women from these communities will make an additional trip to destinations in the United States. These coefficients reveal different age-migration profiles than those for first trips. Legal migration was unlikely in young adulthood and increased gradually throughout middle age to a high at age 55. The only significant age coefficient for illegal second trips was that for the 45-49 age group; migration was less likely for this group than for those under age 20.

Period coefficients suggest a gradual increase in the migration of women. The coefficient for women who migrate illegally on a second trip doubled between 1984 and 1989, while the effect that women will migrate legally on a second U.S. trip peaked in 1989. In general, the coefficients displayed wide variation by community of origin. The likelihood of making an second illegal U.S. trip given one prior trip was highest in Unión de San Antonio and lowest in La Yerbabuena (2.926 and -2.926, respectively). Legal recurrent migration was highest for the reference community, San Francisco del Rincón, and lowest for Unión de San Antonio.

TABLE 3 ABOUT HERE

The figures in the second panel of Table 3 show that probabilities of recurrent migration was very high and relatively stable throughout the decade. The lowest probabilities appeared for women migrating on second legal trips, but with the exception of Ario de Rayón, the communities were comparable and had high probabilities by 1985. Among residents of the four communities, the likelihoods of making a second illegal U.S. were close to unity throughout the decade. The cumulative probability of making a second legal trip was also

very high; in Ario de Rayón, for example, the lifetime probability of making a second trip never fell below .83 and in San Diego de Alejandría and La Yerbabuena, it ranged from .96 to 1.00.

Thus, once women began a migrant career, they were virtually certain to migrate again by age 40. This is consistent with the view that international migration operates as a self-sustaining social process (see Massey et al., 1987). The recurrent migration of women to the United States appears to have become a strategy for economic mobility, and policy change in the United States did not change this fact. We now examine the factors that produce female migration and test various propositions that help explain why women have become increasingly likely to participate in the migration process.

DETERMINANTS OF FEMALE MIGRATION

A common problem inherent to research on female migration is the paucity of knowledge in the area. Although there is a growing literature on the determinants of female migration (see Pedraza, 1991), to my knowledge there are no studies that specifically examine the determinants of female migration from Mexico. As a result, we examine findings from other studies to help us point to important factors that underlie women's decision to migrate.

As Massey et al. (1987) and Grasmuck and Pessar (1991) argued, households are the units in which decisions about who migrates and when occur. In Mexico, households adopt a strategy of sending at least one member, usually the male household head or son, to work in the United States. Gender is central in these decisions (see Pedraza, 1991) in part because they are shaped to a large extent by cultural beliefs and traditional values about the roles of women and men in families (Hondagneu-Sotelo, 1992).

Prior work on departure models for men found migration strongly

determined by access to the productive resources of households, such as land and commerce, as well as prior migrant experience, age and the number of dependents (Massey, 1987). In contrast to these findings, for women we expect that land ownership will exhibit a negative effect, depressing their chances of migrating to the United States. Because Mexican family norms restrict their spatial mobility, women will not migrate from households owning land unless economic pressures for families become intolerable. With the long-standing traditions of male migration to the United States, families usually designate women as caretakers of their land and livestock (Cárdenas, no date).

Not all productive resources in households are likely to depress women's migration to the United States, however. We expect that owning a business in Mexico is likely to increase the likelihood that women migrate. If the traditional division of labor by sex is carried out in these households, men will be the most likely candidates to run the business and thus women from these households may be more likely to migrate than women than other, non-entreprenuerial households. Finally, given that IRCA resulted in extensive legalization of Mexicans, we expect to observe higher probabilities of migration for women from families in which a member received amnesty.

TABLE 4 ABOUT HERE

Table 4 describes the determinants of female migration from households in Mexico. The left-hand columns refer to women from all households, whereas the right-hand columns refer to women from households of rural origin. The only personal characteristic significantly affecting female migration in both equations was education. The probability of migration increased as education increased, and the effect was especially strong for women who completed at

least six years of school.[3] For women in rural households, age was also important; the likelihood of migration declined with age up to a point but thereafter increased. Consistent with our expectations, household ownership of land and business affected the migration of women. For land ownership, the effect was negative. Women who are part of households that own land were tied to responsibilities in Mexico and were thus less likely to migrate than women from landless households. Although being from an entrepeneurial household significantly raised the chances that women will migrate to the United States, the likelihood that women migrate was lowered when they reside in households with other adults. With more adults in the households, women were less likely to migrate.

As my earlier results suggested, prior migration experience was an important predictor of female migration. Women who made a U.S. trip in the past were very likely to migrate again, a finding consistent with the effect for men (see Massey, 1987). Moreover, women were likely to migrate when someone from their immediate family was a U.S. migrant during the same period. Thus, having a family member who is an active U.S. migrant encouraged women's migration, a finding first uncovered by Lindstrom (1991). Finally, amnesty effects appear in the two models. Women from families in which an agricultural worker (SAW) received amnesty in the United States were more likely to migrate than women from other households. Although the effect for LAW was not significant, it was in the right direction and consistent with expectations. Women from families in which a member received amnesty by documenting continuous residence in the United States since 1982 were more

[3]Although one reviewer suggested recoding education in a way that would capture a curvilinear relationship between it and migration, I was unable to do so because there were too few women who completed more than six years of school.

likely to migrate than women from families without this type of amnesty.

To visualize what these effects really mean, Table 5 presents predicted probabilities of female migration calculated from the coefficients in Table 4. The probabilities show how property and business ownership, IRCA's amnesty provisions, migrant experience and education affected the likelihood that a women with an active U.S. network migrates. For example, a woman with no education, previous migrant experience, land, or business had only a two percent chance of migrating, whereas a woman with these same attributes whose family contained a SAW recipient had about a 10 percent chance of migrating. Having a primary school education increased the chances of migration and prior migrant experience in United States raised the probabilities even further to 55 and 87 percent, respectively.

TABLE 5 ABOUT HERE

Women from households owning property had lower probabilities of migration. With no education or experience, the chance of migration was miniscule. Having completed six or more years of schooling increased the chance that women migrate to 16 percent for those with a SAW family member. Although the experience of migrating in the past magnified the chances that women will migrate, overall probabilities were less than those for women having no access to land or commerce in Mexico. With experience but no education, the chance of migration ranged from seven to 30 percent; with at least some education, the probabilities rose to 11 and 40 percent.

The potential for U.S. migration was greatest for women who originate from a household that owns a business. Even without U.S. migration experience or education, at least 45 percent of women who have a LAW recipient in their families and 57 percent of those with a SAW recipient were likely to migrate.

For women with prior migrant experience and a primary school education, the chance that women from families with amnesty members will migrate varied narrowly from 91 percent with no education to 99 percent with at least six years of education. Thus, the potential for female out-migration was considerable for women from entrepeneurial households in Mexico, for educated women and those with U.S. migrant experience, and for women from households in which a member received amnesty, especially a SAW recipient.

DISCUSSION

Throughout this paper, we performed a variety of analyses that described the extent to which women migrate to destinations in the United States and Mexico. Based on a dataset gathered from Mexican migrants located in their home communities and the United States, we documented women's presence among Mexican migrants during the 1980s. We found that the chances of undocumented female migration are on the whole higher than legal U.S. migration, with one exception.

Among migrants in our sample, the probabilities that women migrate on a first legal U.S. trip were higher in 1988 and 1989 than in other years throughout the decade. The likelihood of migrating on illegal first trip appeared to drop in the late 1980s, a finding we attribute to the deterrent effect of IRCA. This effect was relatively short-lived, however; by 1989, the chance that a women would migrate illegally on a first trip rose back up to pre-IRCA (specifically 1985) levels.

The probabilities for recurrent migration illustrate that women are virtually assured of migrating if they made one prior trip in the past. This effect holds for women from most communities, and for migrants with and without documents to the United States. It is consistent with the experience

of men (Donato et al., 1992), but never before documented for women. It also provides further evidence of the self-sustaining process of Mexican migration to the United States (Massey et al., 1987) because the probability that women with past U.S. experience will migrate again does not appear to have declined despite IRCA's passage.

Results from the departure models suggest that female out-migration is a function of the structural characteristics of Mexican households, but the effects operate differently than those reported elsewhere for men (Massey, 1987). In contrast to the experiences of men, land ownership reduces the likelihood that women migrate to the United States. Land ties women to their Mexican homes, freeing men to seek employment in the United States. Other productive resources, such as business ownership, reinforce men's attachment to their homes, and by doing so, increase the probability that women migrate. In the future these findings need to be understood in terms of the mechanisms that produce them, especially those related to recent trends of urbanization and development in Mexico.

Mexican women also migrate to the United States to reunite with their families. The amnesty provisions of IRCA facilitated the migration of women who were linked to families where at least one member became new legal residents of the United States. This is consistent with female migration from other nations to the United States (Jasso and Rosenweig, 1990; Tyree and Donato, 1985; Houstoun et al., 1984), but it is not clear whether the motivation underlying these moves is restricted only to family reunification. As Reichert and Massey (1979) noted, the migration of women in their sample was not motivated solely by the creation or reunification of families since over 90 percent of these women worked in the United States.

Whether female migration will slow after amnesty families reunite is difficult to predict, but provisions in the new Immigration Act of 1990 insure that the process of family reunification will continue at least in the short run. Between 1992-94 alone, the Immigration Act of 1990 will allocate 55,000 visas to the spouses and children of the migrants who legalized under IRCA. In the long run, however, the self-sustaining nature of female migration suggests that family reunification will be only a partial explanation for the increasing presence of women among Mexican migrants to the United States.

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Table 1. Age-period analysis of the probability that women from ten Mexican communities will migrate on a first trip to the United States

Age, Period, and Community	Without Documents B	Without Documents SE	With Documents B	With Documents SE
Age				
< 15 Years	---	---	---	---
15-19 Years	2.486**	0.159	1.813**	0.163
20-24 Years	3.008**	0.156	2.235**	0.161
25-29 Years	2.527**	0.174	1.621**	0.193
30-34 Years	1.895**	0.209	1.249**	0.224
35-39 Years	2.272**	0.194	1.272**	0.236
40-44 Years	1.002**	0.309	1.495**	0.230
45-49 Years	1.608**	0.262	1.487**	0.248
50-54 Years	1.278**	0.332	1.503**	0.269
55+ Years	0.874**	0.273	0.086	0.327
Period				
Before 1965	---	---	---	---
1965-69	0.718*	0.354	1.462**	0.289
1970-74	1.968**	0.261	2.736**	0.237
1975-79	3.006**	0.233	2.681**	0.236
1980	3.325**	0.265	2.372**	0.332
1981	3.530**	0.256	2.639**	0.305
1982	2.763**	0.289	1.610**	0.416
1983	2.589**	0.298	1.925**	0.372
1984	2.514**	0.301	1.784**	0.384
1985	2.869**	0.277	2.384**	0.317
1986	2.959**	0.270	2.566**	0.299
1987	2.459**	0.282	1.092**	0.417
1988	2.611**	0.261	2.188**	0.302
1989	2.875**	0.297	2.935**	0.292
Community				
S.F. del Rincón	---	---	---	---
León	-2.005**	0.432	0.410	0.292
S.D. de Alejandría	0.846**	0.173**	0.773	0.267
Romita	0.426*	0.188	0.169**	0.302
Mineral de Pozos	-2.567**	0.595	---	---
Pozos & Union de San Antonio	---	---	-2.468**	0.618
Unión de San Antonio	-1.594**	0.364	---	---
Ario de Rayón	1.322**	0.168	0.890**	0.270
La Yerbabuena	1.451**	0.183	3.021**	0.232
Los Reyes	1.038**	0.175	0.937**	0.269
Ixtlan del Rio	0.452*	0.203	0.610**	0.293
Intercept	-9.978**	0.289	-9.907**	0.324
Chi Square	1305.22		1092.89	
Person Years	148,553		148,553	

* p < .05 **p < .01

Table 2. Age-period analysis of the probability that women from ten Mexican communities will make an additional trip to the United States

Age, Period and Community	Given One Prior Trip: Without Documents B	SE	With Documents B	SE
Age				
< 19 Years	---	---	---	---
20-24 Years	0.002	0.135	-0.031	0.163
25-29 Years	0.016	0.134	0.296	0.156
30-34 Years	0.088	0.139	0.468**	0.158
35-39 Years	-0.175	0.152	0.643**	0.165
40-44 Years	-0.191	0.166	0.448*	0.177
45-49 Years	-0.475*	0.205	0.494*	0.198
50-54 Years	-0.157	0.217	1.464**	0.203
55+ Years	0.107	0.189	1.919**	0.184
Period				
Before 1960	---	---	---	---
1960-64	0.629	0.410	-2.053**	0.503
1965-69	0.062	0.353	-1.876**	0.377
1970-74	-0.226	0.321	-1.306**	0.293
1975-79	0.083	0.297	-1.522**	0.273
1980	0.396	0.326	-1.752**	0.324
1981	0.539	0.321	-1.808**	0.320
1982	0.569	0.317	-1.708**	0.309
1983	0.540	0.315	-1.566**	0.301
1984	0.642*	0.312	-1.493**	0.296
1985	0.733*	0.309	-1.408**	0.291
1986	0.812**	0.307	-1.282**	0.286
1987	0.892**	0.304	-0.936**	0.278
1988	1.096**	0.305	-0.421	0.276
1989	1.271**	0.306	0.592*	0.275
Community				
S.F. del Rincón	---	---	---	---
León and Romita	-0.869**	0.197	-0.295	0.212
S.D. de Alejandria	-0.272	0.160	-1.012**	0.191
Mineral de Pozos	-0.720	0.729	-0.141	0.732
Unión de San Antonio	2.926**	0.739	-3.491**	1.032
Ario de Rayón	-0.135	0.153	-1.682**	0.188
La Yerbabuena	-2.926**	0.154	-1.072**	0.150
Los Reyes	-0.708**	0.153	-0.594**	0.169
Ixtlan del Rio	-1.331**	0.165	-0.917**	0.182
Intercept	-0.286	0.276	0.179	0.263
Chi Square	1214.58		1166.02	
Person Years	5,214		5,214	

* p < .05 **p < .01

Table 3. Cumulative probability of women migrating by age 40 given probabilities of first and second trip migration to the United States prevailing in ten Mexican communities, 1980-89

Community	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
PROBABILITY OF MAKING A FIRST TRIP										
Without Documents										
SD Alejandría	.615	.688	.422	.370	.348	.456	.486	.333	.376	.458
Los Reyes	.680	.751	.481	.425	.401	.517	.549	.385	.431	.519
Ario de Rayón	.777	.840	.580	.519	.493	.618	.651	.474	.526	.620
La Yerbabuena	.818	.874	.626	.564	.538	.665	.697	.518	.572	.667
With Documents										
SD Alejandría	.161	.205	.079	.106	.093	.286	.192	.048	.136	.265
Los Reyes	.187	.237	.092	.124	.109	.189	.222	.056	.158	.304
Ario de Rayón	.180	.227	.088	.119	.104	.181	.213	.054	.152	.292
La Yerbabuena	.802	.877	.536	.649	.598	.806	.858	.369	.742	.938
PROBABILITY OF MAKING A SECOND TRIP (GIVEN A FIRST TRIP)										
Without Documents										
SD Alejandría	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Los Reyes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ario de Rayón	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
La Yerbabuena	.964	.984	.977	.984	.990	.993	.995	.997	.999	1.00
With Documents										
SD Alejandría	.971	.943	.976	.985	.989	.992	.996	.999	1.00	1.00
Los Reyes	.995	.993	.996	.998	.999	.999	1.00	1.00	1.00	1.00
Ario de Rayón	.842	.826	.854	.891	.907	.924	.946	.983	.999	1.00
La Yerbabuena	.964	.957	.969	.981	.986	.990	.994	.999	1.00	1.00

Table 4. Logit models predicting U.S. migration of female household members, 14 years and older: migrants from seven Mexican communities

Variable	All Households B	All Households SE	Rural Households B	Rural Households SE
Personal Characteristics				
Age	-0.073	0.046	-0.100*	0.052
Age Squared	0.001	0.001	0.001**	0.000
No Education	---	---	---	---
1-5 Years of Education	0.418	0.557	0.314	0.659
6+ Years of Education	1.656**	0.598	1.905**	0.702
Married	0.486	0.356	0.372	0.414
Household Characteristics				
Land Owned	-1.094**	0.515	-0.995**	0.531
Business Owned	2.545**	1.206	1.931	1.214
Children Present	0.304	0.307	0.535	0.374
Number of Adults	-0.619**	0.117	-0.444**	0.125
Rural Origin	0.033	0.330	---	---
Migrant Characteristics				
Past U.S. Experience	2.510**	0.345	2.329**	0.442
Past Mexican Experience	-0.092	0.430	-0.011	0.427
Active U.S. Network	1.591**	0.421	1.778**	0.465
SAW Household Member	1.698*	0.941	1.733*	0.919
LAW Household Member	1.190	0.967	1.422	0.963
Intercept	-3.580**	1.056	-3.897**	1.200
Log Likelihood	-241.1		-166.6	
% Correctly Predicted	98.4		98.0	
N	3,641		2,007	

**p < .05
* p < .01

Table 5. Predicted probabilities that a woman migrates to the United States: migrants from seven Mexican communities

	SAW	LAW	No Amnesty Recipient
NO LAND OR BUSINESS OWNED			
No Migrant Experience			
No Education	.095	.060	.019
1-5 Years of Education	.138	.088	.028
6+ Years of Education	.355	.249	.092
With Prior Migrant Experience			
No Education	.564	.438	.192
1-5 Years of Education	.663	.542	.265
6+ Years of Education	.871	.803	.554
OWNED LAND			
No Migrant Experience			
No Education	.034	.021	.006
1-5 Years of Education	.051	.031	.010
6+ Years of Education	.156	.100	.033
With Prior Migrant Experience			
No Education	.302	.207	.074
1-5 Years of Education	.397	.284	.108
6+ Years of Education	.694	.577	.294
OWNED BUSINESS			
No Migrant Experience			
No Education	.573	.446	.197
1-5 Years of Education	.671	.551	.272
6+ Years of Education	.875	.809	.562
With Prior Migrant Experience			
No Education	.943	.908	.751
1-5 Years of Education	.962	.938	.821
6+ Years of Education	.989	.981	.941

Note: Probabilities refer to a 20 year-old woman with an active U.S. migrant network and no Mexican migrant experience, from a household of rural origin with two adults and children present.