

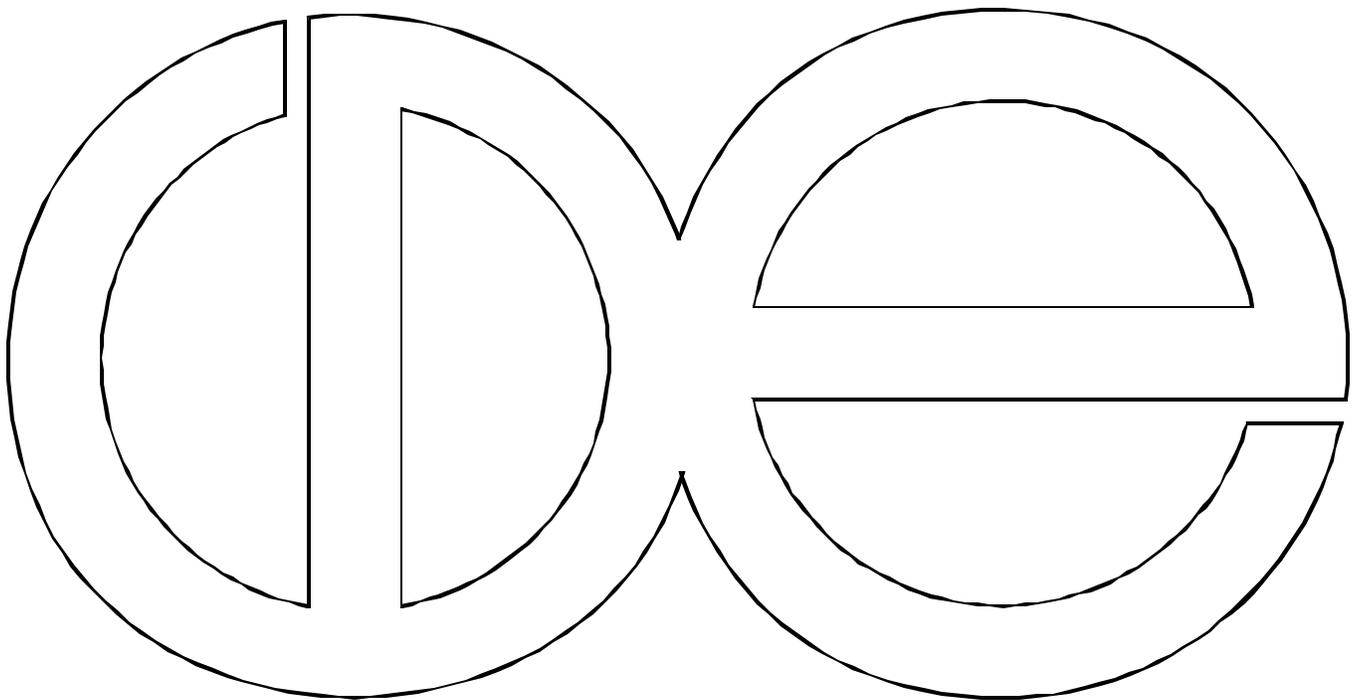
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Reframing the Migration Question:

An Empirical Analysis of Men, Women, and Gender in Mexico

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by

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Abstract

The migration literature agrees on several key factors that motivate individual decisions to move: human capital investments, socioeconomic status, familial considerations, social networks, and local opportunities in origins relative to opportunities abroad. Yet further analysis of the social forces underlying these relationships reveals interwoven gender relations and expectations that fundamentally differentiate migration patterns, in particular who migrates and why. Data analysis of 14,000 individuals in 43 Mexican villages reveals several mechanisms through which the effects of gender play out in the migration process. Results suggest that although migrant networks provide support to new men and women migrants alike, high female employment rates reduce the likelihood that men, but not women, begin migrating. Education effects also emphasize the importance of examining gender differences. In keeping with the literature on Mexican migration, I find that men are negatively selected to migrate, but, conversely, higher education increases migration among women. My findings also question the portrayal of women as associational migrants, disclosing positive migration risks for never-married and previously-married women.

Reframing the Migration Question:

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Recent scholarly research provides information on the trends and patterns of women's migration, but less is known about the causes and consequences of their movement, and the policy implications of increasing numbers of women migrants. In the 1980s, researchers pointed out the inadequacies of existing research by contrasting the growing volume of women migrants to their lack of representation in the literature (e.g., Houstoun et al. 1984, Tyree and Donato 1986). Currently, half of the world's migrants are women (UNFPA 1993). What is needed, researchers have argued, is a more systematic examination of the determinants of female migration, which are different in many respects from those of male migration (Morokvasic 1984, Thadani and Todaro 1984). Gender, referring to the product of social relationships in which men and women are embedded, influences individual decisions and action (Smith-Lovin and McPherson, 1994). As such, a theory of migration that does not consider the macro and micro level effects of gender falls short of an accurate portrayal of human behavior.

This research presents theoretical considerations and analyses showing that migration is a profoundly gendered process and that conventional explanations of men's migration in many cases do not apply to women. Migration decisions are made within a context of socially recognized and mutually reinforcing expectations that reflect different dimensions of gender relations -- between individuals, within families and in societal institutions. In the case of Mexico examined here, U.S. migration has a long history, dating back to the late-1800s, and to this day, figures prominently in U.S. industry and development. By considering the social and economic roles of men and women, in addition to historical

migration precedent and policies, we gain a deeper understanding of this migration process and of who migrates. Overall findings of this study support the contention made by others that gender must be treated as a theoretical basis of differentiation and not simply a control variable in migration analyses.

THEORETICAL PRECURSORS: THE DETERMINANTS OF MIGRATION

Taking gender into account in migration does not necessarily require creating a new set of variables, but rather reconsidering through a gendered lens several well-established determinants identified by migration experts:

Conventional Explanations of Migration

Conventional approaches generally agree that the following factors are important to the decision to move: *human capital* investments, *socioeconomic status*, *familial considerations*, *social networks*, and *local opportunities* in origins relative to opportunities abroad.

Human capital investments include individual characteristics such as education, work history, and prior migration experiences that influence household roles and migration decisions. It is well-known that migrants are self-selected because they overcome barriers such as cost, risk, and distance. As a result, they are positively selected with respect to traits such as ambition, energy, and motivation. Some studies find that migrants are also positively selected on education, but this depends on the relative returns to education in origin and destination communities. Research suggests, for example, that recent flows of U.S. immigrants are negatively selected on education, because lack of English skills and/or legal status reduces the returns to education in the U.S., relative to high returns in national labor markets. Educated individuals are less likely, therefore, to migrate internationally (Borjas 1990, Taylor 1987).

Socioeconomic status is included in most theories of labor migration. Typically, wealthier households are less apt to migrate, while “target earning” strategies designed to meet specific household needs mobilize those with less income and assets in origins (Piore 1979, Arizpe 1981). Research portrays recent U.S. immigrants as poor and unskilled, however, when compared to the pool of potential migrants in origins, they less often come from the poorest households who cannot afford the start-up costs associated with international mobility (in the Mexican case, see Dinerman 1982, Weist 1983, Massey et al. 1987).

Household demands over the lifecycle influence considerably the timing and frequency of migration (Harbison 1981, Massey et al. 1987). Certain expectations and needs accompany marriage, childbirth, and entries of children into school and the labor force. Principal economic providers, for instance, may be more inclined to migrate in response to a growing family, whereas primary caregivers might be less likely to move during reproductive years.

Recent migration theorists also have emphasized the importance of social networks. Massey (1987, 1990) argues that migration is ultimately a social process that gains its own momentum, outstripping its economic origins. As human networks develop between origins and destinations, they contribute to the institutionalization of migration in sending communities. Over time, these ties become a source of social capital to residents, defined as the wealth of informal family, kinship and community ties between migrants and others built up over the cumulative process of historical migration between two countries. For households, such capital means decreased risks of migration via greater information prior to migration, and facilitated border crossing, job connections and economic assistance (Massey 1990, Massey and Espinosa 1997).

Finally, local opportunities and economic conditions are known to affect migration patterns. Studies record how village context, relative to opportunities elsewhere, influences migration through mechanisms such as employment levels, wages and income, land tenure arrangements, technological change, economic and political structures, climatic conditions, and cultural norms. Well-documented incentives to migrate include constrained local conditions (e.g., poor job and wage structures), and rapid, expansive changes in technology and crop production (see Bilsborrow 1984, Arizpe 1982, Massey et al. 1987). In many societies, for example, thriving local economies enable households to allocate their labor locally. Financial crises are handled by sending more members to work, hopefully averting both poverty and migration (Selby et al. 1990, Chant 1991). Employment and economic downturns, on the other hand, stimulate migration (Grindle 1988, Massey 1987).

Most contemporary models of migration draw upon some or all of these five mechanisms. The neglected factor plaguing many research approaches, however, is that gender shapes each of the relationships mentioned. Although numerous analyses have included sex of individuals to control for the differences associated with being male or female, this simple binary assignment lacks theoretical significance and does little to clarify what being a man or a woman means to migration behavior. Below, I consider how each of these five determinants interacts with gender systems and social context, building the argument that migration is a process influenced by gender relations that are established and perpetuated within families and society.

Reconsidering the Determinants of Migration

First, **human capital attainment** is a straightforward concept included in most migration analyses. Yet both the extent of the investment and the accrual of benefits are shaped by structural and

normative forces. In societies where patriarchally designated activities and relations between men and women prevail, the rewards that human capital investments yield may be disproportionately distributed by sex, and as such discourage investment by women. Human capital investment of women may be discouraged not only as an individual response to structural inequalities, but also as a reaction to socialized behavior and expectations taught in families and daily life.

Education and employment experiences, then, may hold different import to the migration activities of men and women. In the example of Mexico, male migrants to the United States are negatively selected with respect to education, because internal labor market advantages accrue to more educated men. For women, however, in addition to overcoming traditional norms and expectations, higher relative returns to education may be found in the United States because of greater gender discrimination in Mexican labor markets (Benería and Roldan 1987). Thus, low returns to education in U.S. destinations may cap overall levels of gender discrimination, and more importantly, higher U.S.-Mexico wage ratios may attract women migrants.

Gender relations also influence how **socioeconomic status** and assets affect men's and women's migration, owing to normative standards of control over economic resources and commercial and agricultural investments. For example, households with businesses or land may not need to migrate, except to accumulate savings for further investment in local holdings. But where women are not primary economic providers, their migration may be less closely tied to local business activities.

Family considerations create different migration risks for men and women throughout the life course. Previous research has labeled women, 'secondary' or 'associational' migrants, whose "decisions are a consequence of the decision made by the primary movers" (Balan 1981: 228).

Research also emphasizes women's participation in stage migration strategies where they later join husbands, the primary purpose being family reunification rather than economic gain (Enchautegui and Malone 1997). Men, on the other hand, are more often single or traveling alone, usually regarded as economically motivated sojourners. In many regions, a traditional division of productive and reproductive labor encourages married women and those with young children to remain home while men migrate (Brettell 1986, Kanaiaupuni 1998, Hoodar 1992, Boyd 1989). Alternatively, households may find men completing their migration careers as they near the end of the labor productive years, whereas women may be migrating for the first time to visit or help grown children and relatives living elsewhere. Studies indicate that early marriage and childbearing deter, while older children and extended family members enhance, women's mobility (Escobar et al. 1987, Casillas Moreno 1985, Young 1978, Kanaiaupuni 1995, Stier and Tienda 1992).

Gender relations, influenced by macro-level and community structures, are mediated within the family in response to household needs and function (Grasmuck and Pessar 1991, Harbison 1981, Tienda and Booth 1991). In many societies, however, women's lesser status holds direct consequences for their migration for reasons apart from the household division of labor (Lean Lim 1993, Donato and Kanaiaupuni 1998). Women migrate less often in search of work opportunities if they are considered less virtuous as a result. For example, ethnographic evidence from Ghana finds that villagers discourage single women from migrating because they fear the possibility of immoral sexual conduct. Hausa women in Nigeria are completely secluded after marriage, any autonomous migration is permanent and tantamount to prostitution (Pittin 1984). In other areas, however, women are expected to migrate and remit earnings home to families. Additionally, cultural obligations and birth parity may

raise the chances that older sisters migrate to work while other siblings invest in education (see Ware 1981, Radcliffe 1990, Lean Lim 1993).

Similarly, considering the structure of **migrant networks** in the community as gendered networks implies different expectations for men and women. Yet, as Boyd notes, “little systematic attention is paid to gender in the development and persistence of networks across time and space” (1989:656). Where migration is dominated by men, networks tend also to be comprised of men and arranged around their concerns. In the same way that male dominated networks serve to exclude women from certain types of jobs and promotions (Reskin and Padavic 1994), they encourage certain individuals to migrate and discourage others. Interviews in Chicago revealed the reluctance of established US migrants to sponsor (informally) female friends or relatives because they implied additional responsibility and obligation, relative to men (personal interviews, Kanaiaupuni 1993). Other research confirms the importance of women-based networks to both single and married female migrants in California (Hondagneu-Sotelo 1994).

Opportunities in origins appear in most theories of migration. If we account for how gender shapes local opportunities, however, new theories and hypotheses emerge about *who* migrates in migration strategies. Well-documented advantages for men prevail in the structure and operation of most employment markets. Even in cases where employers prefer female laborers, women experience poorer outcomes, relative to men, due to occupational discrimination and segregation, and global and national wage inequality (Benería and Roldán 1987, Garcia et al. 1979, Crummet 1987, Sassen-Koob 1983; Tienda and Booth 1991). Consequently, migration as a response to macro-level conditions is shaped by the relative opportunity structures for men and women in origins and destinations.

In developing country contexts, the demand for female employment has been important to the entry of women into the male-dominated labor market in recent decades (for research on the Mexican case, see Szasz 1992, Chant 1991, Arias 1992). Migration outcomes are not clear a priori, however. Given local employment prospects, women may work in origins instead of migrating, thereby freeing up the migration potential of men (Kanaiaupuni 1998). Alternatively, a high level of female labor force participation eventually may lead to greater tolerance for non-traditional activities of women, such as international migration (Espinosa Aguilar 1993). And, as women become aware of their own capacity as economic agents, they may be more likely to transfer work experiences to a destination where wages are higher. The relationship is not direct, however, between increasing female labor force participation and growing autonomy or awareness among women -- especially poor women, who work because they are impoverished rather than empowered.

In sum, although the arguments above are not new, the scholarly challenge they raise remains unmet:

Rather than discovering that female migration is an understudied phenomenon, it is more important to stress that the already existing literature has had little impact ... on the main body of migration literature, where male bias has continued to persist... (Morokvasic 1984:899).

To achieve a fuller understanding of migration, I examine the Mexican case with three primary objectives: first, to analyze theoretically how societal gender relations and the sexual division of labor in households affect migration; second, to combine qualitative and quantitative data to understand these relationships; third, in doing so, to portray how migration decision making is embedded in historical, cultural, and social conditions that influence human action.

The analysis uses the household¹ as a conceptual tool. Households use migration to adapt to

economic change and volatility (Arizpe 1982, Grindle 1988, Stark and Levhari 1982). This concept of the household does not demand domestic harmony or permanence, but is flexible enough to acknowledge that migration decisions are gendered decisions, and depend upon the interplay between household reproduction and production, and social institutions including the economy, religion, and other structural elements of society (Rouse 1989, Selby et al. 1990, Trigueros 1992, Weist 1983, Kanaiaupuni 1998).

UNDERSTANDING GENDER AND MIGRATION: A MEXICAN CASE STUDY

This section analyzes several key elements of the socially constructed gender system in Mexico in order to contextualize our understanding of migration behavior. I argue that migration from Mexico is predominantly male as a result of three factors: first, social norms that govern the migration and social behaviors of men and women within households; second, institutionalized economic roles and structural characteristics of the labor market that contribute to the financial dependence of women; and third, U.S. immigration policy that has reinforced both male-biased migration and gendered power differentials.

Familial and Social Roles

In Mexico, the family, involving both nuclear and extended members, ultimately provides the primary source of economic, emotional, and social security (Selby et al. 1990, Mirandé and Enriquez 1979). Gender and power relations within the family define the actions and roles of individual members, and are manifest in the normative and practical demarcation of male and female roles and statuses (LeVine 1993, Benería and Roldán 1987, Chant 1991). Traditionally, men have the culturally-defined obligation to provide for the economic subsistence of their families and to protect female

members (Beals 1946, LeVine 1993). And, by accounts both new and old, the ideal woman is subordinate to men, primarily responsible for domestic duties, and key to the integrity of the family unit.² The ideal woman is, of course, a stereotype and does not always reflect reality, but it is a key ideological component underlying gender relations.

As such, both women and men reiterate verbally and through their actions the centrality of the domestic sphere to women's lives. When leaving that sphere, women usually are accompanied, if not by a brother or husband, by a younger sibling or grandmother (Viramontes 1983, Fernandez 1998). In some areas, women who are frequently seen alone risk the reputation of being "*muy callejera*,"³ a description which bears negatively on their virtuosity.

As in all countries, gender socialization begins very early. For example, in rural *ranchos*, mothers I interviewed described teaching their daughters various household tasks by age four or six, such as making tortillas. Like boys, they may help in the fields by age six or eight, but from earliest childhood most young girls are socialized to expect that they will one day be responsible for child-rearing and for their own households, and to believe that, as women, some jobs are more appropriate for them than others (see also Gonzalez de la Rocha 1994, Díaz-Guerrero 1974, and more generally, Ware 1993).⁴

Women's roles in raising their children have always been paramount, and, in general, women are in charge of educating the children, sending them to school and caring for them. (Casillas Moreno 1985, Elu de Lenero 1973). As one respondent reflected, "I always felt that my life was for my children."⁵ Accordingly, childbearing and marital experiences hold sex-specific implications for labor force participation and migration -- in particular, women's mobility is "more intimately linked than [that]

of men to the structure of the family and the social forces defining the sexual division of labor...” (United Nations, 1995: 29).

Classic studies by Arizpe (1981) and others demonstrate that family structure and events related to family formation generate opposite patterns of migration for men and women. Evidence suggests that men more often migrate in response to the economic necessities of marriage and children, and the needs of a growing family. Women’s migration, however, does not increase with family formation, and the rate of movement among women remains quite low throughout the early familial years (Kanaiaupuni 1995).

Three reasons emerged from my informants (see Data section) that help explain these patterns. First, norms associated with the role of women with children limit the social acceptability of migration among mothers. Second, greater demands imposed by children impede the geographical and job mobility often required of migrants. Third, the lower costs of raising a family in Mexico relative to the United States tend to encourage split household migration strategies. Hence, married women with children are more likely to remain in the sending communities while male family members migrate, than to migrate themselves (Kanaiaupuni 1998). These are, however, general patterns -- some couples resist traditional expectations, and some women find ways to migrate with their spouses (e.g., see Hondagneu-Sotelo 1992).

Economic and Labor Market Opportunities

The household as the transmitter of cultural ideals and values influences employment and labor migration behavior. In Mexico and other parts of Latin America, women often will not consider wage labor because of widely-held beliefs that married women’s ‘proper’ place is at home, and because of

patriarchal norms that give men power over their wives' labor (Chant 1991, LeVine 1993, Safilios-Rothschild 1990). Consequently, the economic activities of women, though increasingly important to survival, are often viewed as marginal to household income generation (de La Paz 1998, Kanaiaupuni 1998).

Economic marginality is reinforced structurally in legal, political,⁶ and labor institutions. At one time, women were required by law to have the formal written permission of their husbands before engaging in paid employment, however, structural modifications in the labor market have created change. Between 1930 and 1993, female labor force participation rates climbed from 5 to about 33 percent (CONAPO 1995). Employment rates among divorced or separated women rose even more markedly to about 70 percent in 1995 (de La Paz 1998).

Rising demand for female employees in the manufacturing industry was key to increases in the 1980s and 1990s, yet most women were, and still are, denied entry into positions of authority or skill and remunerated at inferior rates relative to men (Benería and Roldan 1987, Fernández-Kelly 1983, Safa 1981, Chant 1991). As a result, married women often remain economically dependent on their husbands. In general, therefore, greater female labor market participation and income generation have not yielded greater power or control in households, and have done little to change patriarchal authority structures at a more systemic level (González de la Rocha 1994:28).

Within this context, women and men weigh their options and, at least with respect to migration, usually come up with quite different results. Women sometimes migrate to generate income, but as secondary earners, they may work only in times of family hardship, providing a "shock absorber" effect compelled by high male unemployment and financial strain (González de la Rocha 1994, Lomnitz 1977,

Chant 1991). Therefore, because their income is considered supplementary to men's earnings, they may not migrate to the highest paying jobs if other paid work can be obtained close by. To men, on the other hand, falls the responsibility of primary economic provision, which in many cases means emigration (Deere and León de Leal 1987, Safa 1981).⁷ Overall, recognizing power differentials and the factors that contribute to them does not mean that women are powerless. However, dominant economic and domestic relations, combined with the dangers of migrating, do mean that many women are afraid to migrate; most do not have the independence to do so, financial or otherwise; and if they do migrate, they are usually accompanied by male family members.

Historical Migration Patterns

A well-documented strategy common to many Mexican rural households relies on the seasonal migration of men while wives and children remain in origins to care for domestic responsibilities (Crummett 1987, Grindle 1988, Massey et al. 1987). This division of labor has its advantages, both economic and practical. For the typical migrant laborer who prefers not to remain permanently in “*el norte*,” it is much easier to negotiate a strange country alone with a wife at home sustaining the family and social relationships. Having a wife at home is cost-efficient, conforms to gender norms, and also enables him to move back and forth without losing social standing in village and kinship structures. (Kanaiaupuni 1995, 1998).

This pattern of male migration has a lengthy historical precedent dating back to the late 1800s and fortified over the years by immigration policy and labor recruitment practices of U.S. employers. The most notable of these was the Bracero Program. An agreement between Presidents Ávila Camacho and Franklin D. Roosevelt, this program sponsored Mexican laborers (predominantly men) in

the United States from 1942 through 1964.

In 1965, immigration policy further strengthened migration links between the two countries with amendments to the Immigration and Nationality Act that emphasized family reunification.⁸ Migration rates continued to rise, prompting the 1986 Immigration Reform and Control Act (IRCA). Although intended to curtail undocumented Mexican migration in particular, IRCA initiated more migration by offering amnesty to approximately several million undocumented workers and inadvertently strengthening the social capital resources of migrant networks (Donato, Durand and Massey 1992).

Traditionally, U.S. immigration policies have been geared toward male workers. Until 1952, women could not sponsor their husbands as migrants (Salvo and Ortiz 1992), and the Bracero program never involved women. The 1965 amendments to the Immigration and Nationality Act enabled more women to migrate legally, especially as spouses or children of male migrants. Having less access to formal labor markets, immigrant women worked principally in ill-paid, informal domestic labor arrangements (Nakano Glenn 1992). Among other disadvantages of this type of work, research in Houston indicates that informal sector employment reduced women's chances for amnesty, whereas men were more likely to have had formal employment and the connections necessary to legalize under IRCA (Hagan 1998). Thus, overall, the precedent set by immigration policies has perpetuated predominantly male migrant streams and reinforced cultural values of female domesticity and dependence on men.

Studies suggest, however, that women-based networks can transform the female migrant experience, providing links to employment, assistance, and information in destinations (Donato and Kanaiaupuni 1998, Guest 1993, Hondagneu-Sotelo 1994). Additionally, in origin villages, ethnographic

evidence suggests that social perceptions of women's migration are more relaxed in areas where female migrants are numerous, and their earnings potential more highly valued, relative to other areas (Kanaiaupuni 1995, Espinosa Aguilar 1993). Thus, in general, as more women comprise the migrant flow, relative to men, the networks they establish appear to provide valuable information and precedent, encouraging new women migrants.

DATA AND METHODS

Qualitative fieldwork in 1991, 1992, and 1993⁹ suggested that Mexican men and women have very different experiences in the process of migration. This work revealed that migration decisions were influenced by gender relations as well as the social and economic conditions of individuals, their households and communities. This work provided the basis for arguments presented here, specifically with reference to analysis of the Mexican case.

The quantitative analyses that follow use data collected by the Mexican Migration Project [MMP]. I use information from 43 villages located in the states of Jalisco, Michoacán, and Guanajuato, which to this day comprise the heart of Mexico's traditional migrant-sending region (Dagodag 1975, Gamio 1930), in addition to Zacatecas, San Luis Potosí, Nayarit, Guerrero and Oaxaca. The communities vary extensively by ethnic and political characteristics, economic industry and infrastructure, migration activity, and rural or urban context. 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 1997. Thus, the sample is representative of housing units occupied in these areas during the winter months of 1987-97. Because these months are the best times to locate U.S. migrants in Mexico, seasonal migrants are well-represented.¹⁰

A multilevel survey instrument solicited information about individuals, their households and communities. The data include demographic, and first and last migration trip information on all household members. Detailed information was collected from self-reported household heads on household assets, family composition, employment and migration histories. Approximately 83 percent of all heads were male.¹¹ Additional village-level data, collected from the Mexican census and local and municipal archives, provide information from approximately 1940 to 1996 (see MMP 1999). From these data, I draw contextual information about village employment rates and population size.

I estimate the likelihood of making a first trip to the United States from a year-by-year life history for each individual, built from retrospective information about men and women.¹² Two selections, inclusion of household heads and spouses and analysis of the first trip only, are attributable to the survey design, which collected full migration information for heads (male and female), but only first and last trip information for other household members (e.g., wives) in the sample. This selection yields approximately 14,000 individuals.

A dichotomous dependent variable measures whether or not an individual migrated within the person-year in question (excluding trips shorter than one month or for school). Migration is regressed on a series of independent variables at the beginning of each year interval in a pooled model (see Appendix 1), then separate models are presented for men and women. All covariates, measured in year t , predict migration in year $t+1$, and upon making a U.S. trip, individuals are eliminated from the data file. The explanatory variables vary over time with respect to individual and household attributes (age, education, marital status, children, economic assets) and village conditions in each person-year.¹³ This enables a more dynamic approach to first migration risks over the lifecourse.

Hypothesized effects for the five sets of migration determinants were generated from the foregoing case study and earlier theoretical arguments (see Table 1). Table 1 displays several determinants that should affect men and women oppositely; for example, whereas educational attainment may decrease male migration, I expect it will elevate female international migration probabilities. Likewise, children are expected to reduce women's, but increase men's migration.

TABLE 1 ABOUT HERE

Other mechanisms may operate in parallel ways for men and women, but differ in magnitude of effects. Given the role of social norms and the character of migrant networks, for example, I hypothesize that migrant networks encourage migration for both men and women, but that the effect is stronger for men. The proportion of migrant women in villages, relative to men, however, is expected to hold greater weight on the chances that a woman decides to move. Regarding village opportunities, men should be most strongly affected by labor market shifts, since they dominate the workforce and sustain households economically.¹⁴

FINDINGS

Descriptive Results

The last two decades have witnessed increasing women's migration. Figure 1 marks steady growth in U.S. migration from Mexican villages in the sample, measured by the average cumulative proportion of migrants to the population alive in each year. Notable increases in women's migration began in the mid-1970s, whereas the pace of increase among men was highest in earlier years surrounding the Bracero period.

FIGURE 1 ABOUT HERE

Three-year running averages in Figure 2 give the percent distribution of migrants in the current sample by year and sex. The graph confirms that a substantial number of men made their first trip during the Bracero period, whereas the overwhelming majority of women traveled just after the Bracero program in the mid-1960s and after IRCA legislation in the late 1980s and early 1990s (see also Binational Study on Migration 1997, Bean et al. 1990).

FIGURE 2 ABOUT HERE

Recent increases in women's migration involve both legal and illegal movement, and in the Mexican case several pivotal factors differentiate women's and men's migration. Most important among these are education, migrant networks, and family considerations. In general, prevailing views about women's migration stress family reunification, reflecting a traditional emphasis in social science research on familism and strong family ties in Mexican households. Empirical research also confirms that a large proportion of Mexican immigrant women join spouses in the U.S. under family reunification policies (Houstoun et al. 1984). However, most of these analyses rely on samples limited to women already in the United States.

Analysis that includes non-migrant women in Mexico uncovers quite a different picture of marital migration -- one depicting very little migration among wives of migrants. Table 2 shows that nearly half of all married or cohabiting women in the sample had migrant partners. By far the vast majority of migrants' wives, however, never migrated themselves (73 percent), some despite their partners' long migrant careers. A small fraction (2.5 percent) migrated before their partners (most before marrying) or alone (2.9 percent). Among the remainder, a few women moved in the same year as their partners or followed within a five year period (about 10 percent). Other women waited

between ten and forty years before traveling to the U.S. for the first time. Increasing percentages of legal migrants indicate that some women wait until they obtain legal documents before initiating a first trip, however undocumented migration is most common, overall.

TABLE 2 ABOUT HERE

Aside from migration among married women, relatively little is known about the risks of international migration among single (which from here forth refers to never-conjugal), cohabiting and previously-conjugal women. Theoretically, young women may be more mobile before marrying, as reflected by their high internal migration rates. Additionally, the economic hardships confronting unmarried and previously-conjugal women may increase migration. Typical occupations available to women -- domestic services, informal street vending, and the like -- usually are insufficient to maintain families, making temporary migration and higher relative wages attractive (González de la Rocha 1994, Kanaiaupuni 1998). On the other hand, the mobility of men may be less severely affected by separation or widowhood because, unlike women who are less likely to work to begin with, men should retain the same occupational profiles held while married.

We gain an initial idea of these relationships in Table 3, which charts each of the key determinants hypothesized to reveal gender differences. In the first panel, family status effects suggest that married men and women were less likely to move, relative to single individuals. Thus, although about half of migrant women (not shown) were married on their first trip, the risk of migrating was higher among single, relative to married, women. The results also convey opposite implications for previously married individuals. Among women, migration increased after the termination of a marriage or union, whereas it decreased among men. Observations with missing marriage information also show

lower migration risks, relative to single people. Finally, whereas the number of young children raised migration probabilities among men, as expected, children insignificantly affected women's migration.¹⁵

TABLE 3 ABOUT HERE

Shown in the middle panel, educational investments produced opposite effects on migration as predicted. Individuals who terminated their primary school education prematurely had higher chances of making a first trip than those with no formal education. However, the interesting results concern more highly educated people: decreasing chances of migration accrued with each additional level of schooling among men, whereas risks increased with greater education among women. In fact, whereas high school educated men were 60 percent *less* likely to migrate, high school educated women were 2.3 times more likely to migrate, relative to those with no education.

The last panel examines migrant network effects on migration decisions. Two schools of thought describe how women's networks evolve. One view argues that women's movement increases as the migration process matures in origin areas (Boyd 1989). In this view, women may take advantage of lower migration risks that accumulate from widespread migrant networks developed by men and social capital linking origins and destinations (Kossoudji and Ranney 1984). The second view is that women develop separate networks as they grow in numbers, thereby gaining and facilitating access to migration information and assistance via these networks (Hondagneu-Sotelo 1994).

These concepts are operationalized with four time-varying measures. The first two are measures counting the number of children and other relatives with U.S. experience reported by the household head. The third is a ratio of migrants to the population that measures the density of migration networks in each community (see the middle line graphed in Figure 1). From 1940 on, it calculates the

number of persons aged 15 or more who had **ever** been to the United States to all persons 15 or older alive in each year (in the analysis, the variable is lagged by one year). It thereby evaluates the effect of cumulative migration networks in time t on the probability of an individual migrating for the first time in time $t+1$.¹⁶ Substantively, it enables an assessment of how previous patterns of migration influence individual behavior (Kanaiaupuni and Donato 1999, Massey et al. 1994).

Next, to test the effects of the composition of migrant networks, a fourth variable is a yearly ratio of the proportion of women migrants among all women exposed to the risk of migration to the proportion among all men. It thus compares the relative shares of migrant women and men weighted by their proportionate distribution in the population. A first look at these relationships in Table 3 suggests that migration risks increase significantly among women and men in households and villages with larger migrant networks. Net of village migration levels, however, the sex composition of networks discourages male, while encouraging female, migration.

I next examine these relationships using multivariate explanatory models. Table 4 describes the variables included in the model for all women and men in the survey year (first two columns), and over all person-years (last two columns). As suggested by the case study of Mexico, U.S. migration is much less common among women, relative to men. After selecting out child migration, trips lasting one month or less, and student trips, only 8 percent of the women in this sample had ever made a U.S. trip prior to the survey year, whereas over forty percent of the men had traveled across the border at least once.

A time-varying measure of educational attainment estimates the effects of **human capital** on migration behavior. Educational attainment at the time of the survey was about five years and slightly higher for men than women (not shown). Constituting the most marketable group with high levels of

human capital investment was a mere 8 percent of men and 4 percent of women who had attained 12 or more years of education. Age is also included to capture other unmeasured human capital attributes associated with work and productivity.¹⁷ The modal age range is 20 to 29 years.

TABLE 4 ABOUT HERE

Three variables control for **socioeconomic status** of the household. These are ownership of real estate, businesses, and farmland. Across person-years, about one-third of men and women lived in their own home before migrating. Approximately one out of ten respondents owned businesses or more than five hectares of land (roughly equivalent to eleven acres) in origins.

Average **family characteristics** suggest that most respondents were involved in a conjugal relationship at the time of the survey, but that more men exited the life history analysis by migrating before or just after union formation. Less than one percent of observations had missing marriage information and are entered in the model as a dummy variable. Men and women had one minor child at home, on average.

Social capital and migrant networks built by relatives and other villagers are assessed with the four measures described in Table 3. In the survey year, about half of all respondents had relatives in the United States (not shown), and the average across all respondents was 1 or 2 relatives. The lower number of migrant children among men indicates that most men migrated before their children, whereas a large number of women followed their children. Regarding the development and sex composition of village networks, the average man or woman lived in a community where about 20 percent of those aged 15 and over had made at least one U.S. trip, and one of every five migrants was female.

Community opportunities include men's and women's labor force participation rates, which

capture changing structural and economic opportunities in origins that may influence both gender relations and migration behavior.¹⁸ Measured at the municipal level, male employment rates fluctuated heavily over time, with highs appearing in the 1980s followed by a steady decline, whereas women's rates climbed slowly over the years (not shown). Because contextual effects attributable to female employment may be particularly important to recent increases in migration rates, the latter measure is classified into the 25th and 75th percentiles of the cross-community distribution in each year (the reference category includes mid-range female employment levels). In the survey year, the economically active labor force constituted about two-thirds of all men and one-third of all women.

Other village level information includes the logged population size (distinction by state or municipal political district was omitted after analysis showed no model improvements). Finally, period controls are included to measure pre- and post-Bracero program (prior to 1965, and the reference category, 1966 to 1986) and post-IRCA (1987 to 1996). These measures control for macro-level changes in U.S. immigration policies and also capture broad shifts in the Mexican economy, which expanded rapidly up through the 1960s, thereafter slowing to a grinding halt by the early 1980s. Since then, Mexico continues to suffer recessionary setbacks and economic instability.

Multivariate Results

Using the life history file described above, maximum likelihood logistic regression was used to predict first migration probabilities to the United States. Table 5 presents the separate models for men and women. Recall that the analysis considers individuals across the lifecourse, including all person years from age 13 through 80. To examine changes in migration risks over the lifecourse, I add interactions between civil status -- single, married, cohabiting, or previously in a conjugal relationship

(i.e., widowed, divorced, or separated) -- and the number of minor children under 10 years at the beginning of each year. For comparative purposes, Models I and II exclude contextual effects and Model II adds the interactions between marital status and young children. Coefficients remain quite stable across the models, so I focus primarily on Model III, which includes the full set of covariates and interactions (the final column notes significant differences between men and women).

The underlying hypothesis is that migration decision-making is a gendered process: the cultural context within which decisions are made assigns different values to activities and characteristics of men and women, thus specific determinants often have quite opposite behavioral effects on migration. The effects of **human capital** and **socioeconomic characteristics** support this logic. Beginning with the former, results confirm findings in Table 3 that whereas men's migration declines with education, the relationship is positive for women. In particular, net of other determinants, men with up to six years of education are equally likely to migrate, but thereafter demonstrate negative migration risks (e.g., with reduced odds by 58 percent among the most highly educated), relative to those with no education. On the other hand, more highly educated than uneducated women initiate migration, and those with the most education are no less likely to migrate than those with no education at all. Women who attained more than a primary school but less than high school degree are 2.7 times more likely to migrate than those with no education.

TABLE 5 ABOUT HERE

Age patterns describe more similar experiences, reflecting declining probabilities with age. The magnitude of the effects are larger for men than women in most age categories, however, suggesting that first migration risks among men concentrate more densely in the 20 to 29 age range. Moreover,

after age 50, older men witness a relatively greater drop in migration, and women are statistically more likely than men to travel in the older age bracket.

The effects of socioeconomic characteristics also reveal gender differences, creating a larger impact on male migration likelihoods. First, ownership of a residence deters the incentive to work abroad, a finding not at odds with other evidence that home construction needs often motivate migration (in the MMP data, for example, migrant earnings went primarily to daily sustenance, but aside from this, about one-third of households reported spending remittances on home construction or repair). Although not statistically relevant to women's migration, business ownership also discourages men's movement, as expected, and land ownership increases women's migration.

Continuing on, **family considerations** are clearly important to migration decisions, but the positive impact of family formation on male migration is most dramatic in this set of results. It is relevant here to bring in the findings generated by the pooled model. Referring to this set of results in Appendix 1, the interactions by sex suggested first, that married women are less likely to migrate than married men and single women; and second, that women with children are less likely to migrate than men with children in each marital status category. Examining the determinants of migration in separate models, however, uncovers a slightly different interpretation. Generally, as also found in Table 3, women do migrate more before marriage. For all marital status categories, however, effects for minor children fall short of statistical significance among women, but they substantially elevate first migration risks among men (for example, raising the odds of migration among previously conjugal men 2.8 times – see Table 5). Thus, separate analysis of women and men reveals that gender differences in family-related determinants are driven primarily by increased migration among men with children.

Outside of unions, however, patterns also differ markedly. Previously-conjugal women migrate significantly *more* than other individuals, whereas men are unaffected. Taken together, these results suggest that men and women face very different migration-related decision making processes as parents with young children and also after ending a marriage or union.

Table 5 also shows that U.S. **migrant networks and social capital** heighten first migration risks among both men and women. Migrant children and other relatives motivate new migration among males and females in the sample. And, confirming prior study and field evidence, one of the strongest determinants of migration is the development of village networks, which dramatically raise the odds of mobility. Converging migration sex ratios had less of an impact, relative to other factors.

Measures of **community opportunities and structure** also reveal different risk factors between men and women. The presence of local economic opportunities was expected to reduce the need for household migration strategies. Accordingly, men's migration risks fall in areas characterized by higher, relative to medium, levels of female labor force attachment, and they are also lower in communities where female employment is very low, net of male employment rates.¹⁹ Low female labor force participation may imply a good supply of jobs for men, keeping them employed at home, whereas high female employment may offer local opportunities for more household members, thereby releasing men from needing to migrate. Men also migrate less often from larger cities, which may too stem from more numerous opportunities in urban settings. Finally, women had lower migration risks prior to the Family Reunification Act of 1965, but, relative to the reference category, were not more likely to travel after the passage of IRCA legislation.

Altogether the findings presented in Table 5 reveal major differences in how standard migration

determinants affect men and women. Figures 3 and 4 summarize some of the key results with odds ratios calculated from Table 5.

FIGURES 3 AND 4 ABOUT HERE

Several important differences arose with explicit consideration of education, which was one of the biggest predictors of women's migration. Compared to uneducated individuals, the figure reveals climbing risks of international migration among educated women and falling risks among educated men. Figure 4, on the other hand, displays the impressive influence of children on men's migration. These findings strongly implicate education and family as primary mechanisms through which we observe the interplay between gender and migration.. Additionally, I found higher likelihoods of migration when individuals had access to larger networks composed of prior migrants, but, as hypothesized, lower migration risks among men who owned homes and businesses. High female labor force participation also reduced male migration.

DISCUSSION AND CONCLUSIONS

Despite intensive calls for the inclusion of women in migration studies over the past decade (e.g., see United Nations 1993, 1995, and special issue of International Migration Review,1984), social researchers still lack a major theoretical paradigm that applies to women's migration. One primary reason that women have been invisible in most migration treatments may be a result of common perceptions of them as 'associational' migrants who follow spouses. However, as policy concerns in receiving societies about immigrant politics, housing, access to healthcare, education and other social services parallel the more traditional complaints about job displacement and wage deflation, and as more women come to join the global migrant market as economic agents, studies that neglect the

migration of women are left severely incapacitated. They only tell half the story.

To begin with, even if women make an associational move, perhaps prompted by family reunification objectives, once they arrive they are exposed to a variety of different forces that lead them to become economic participants despite their original motivations. Often, in fact, economic motivations are hidden under the pretext of an associational move, which not only represents the “proper” reason for migration in many social contexts, but also the mode that most easily facilitates entry into the United States.

Furthermore, although not an emphasis in the present analysis, the role that non-migrant women play by not migrating is critical to the migration behavior of other household members. In the case of Mexico, circular male migration patterns in which the majority of the family continues to reside locally would not be possible without women to assume the household productive and reproductive responsibilities in origin communities (Kanaiaupuni 1998). These split household strategies are found not only in Mexico, but exist world-wide -- in South Africa, Egypt, Turkey, Portugal, China, the Philippines, Brazil, Colombia, Peru and so on. All things considered, therefore, it makes sense to view migration through a different lens and to understand how gender influences migration.

This paper presents a theoretical argument that migration is best understood as a series of relationships between social and economic factors and gender. These relationships reflect normative guidelines by which societies organize. Gender, the social meaning assigned to sex, is a universal aspect of all societies, and accounting for how it shapes social reality and human behavior demands fundamentally revised theories and analysis of migration patterns. This study focused on the determinants of migration, however, the general perspective framed here can be extended to analyses

of the consequences of migration and the incorporation of men and women immigrants in host societies.

From the broad overview provided by this research, several key findings emerged regarding migration patterns of men and women from Mexican communities. First, significant gender differences appeared in individual age and education effects. Regarding the latter, findings revealed that human capital investments in education oppositely affected migration risks among men and women.

This finding is provocative in light of proposed theories concerning the declining quality of migrants to the United States (see Borjas 1990), which argue that disproportionate rewards available to educated workers in developing countries increase selective migration of less-educated, less-skilled individuals. Thus, greater education discourages men from migrating because of low returns abroad to education acquired in Mexico in addition to opportunity costs associated with positive internal employment prospects. My findings suggest that less-educated men do self-select as U.S. migrants, but that this is not true for women. The question is, why should gender matter?

Accumulated evidence documents that human capital rewards are conditional upon other factors such as structural aspects of the labor market and socialized behavior patterns. Researchers argue that the relationship between class and gender produces gaps in the outcomes men and women experience as a result of human capital investment, in this case their educational attainment (Benería and Roldán 1987). Preliminary evidence, for example, suggests that educated women experience greater gender discrimination and fewer occupational rewards in Mexico and may be more likely to migrate across the border where they will earn greater relative wages than they would otherwise (De La Paz López et al. 1993, Kanaiaupuni and Kandel 1995); that is, they may benefit less than men from

migrating internally as opposed to internationally. Accordingly, an investigation for further research is the impact of relative labor market opportunities on migration choices of men and women.

Second, gendered mobility patterns are influenced by marital status and family formation. Noteworthy findings emerged with explicit consideration of never-conjugal, cohabiting, married and previously-conjugal statuses that question the general portrayal of women as ‘associational’ migrants. Migration risks were actually higher among single, relative to married, women. The situation facing previously-conjugal women also presented a strong motivating force for a first U.S. trip -- one not shared by men. These women most likely migrated for economic reasons rather than family reunification goals, as suggested by their high employment rates after arrival to the United States. Compared to about half of married women, 70 percent were employed on their first trip, the majority as domestic workers and in restaurants (not shown).

Third, findings indicated that village networks and their composition were critical to migration decisions. In spite of arguments that women do not always have direct access to social networks linking households to the United States (Hondagneu-Sotelo 1992, 1994, Hagan 1994), I found higher risks of women’s and men’s migration with increasing numbers of kin and compatriots with U.S. experience. This finding suggests several implications about women’s status as migrants. First, I find support for the idea that women’s movement draws upon mature migration networks in origins. Women are able to take advantage of lower migration risks and greater social capital resources developed by historically male networks. Therefore, as migrant networks develop sufficiently to include women, they help to reduce the costs and maximize the benefits to other women who wish to migrate. Over the long term, it is also possible that the growth of women migrants in the population will contribute to gains in women’s

status in origin communities and diminishing social constraints on women's mobility (Donato and Kanaiaupuni 1998).²⁰ These results, however, may not necessarily contradict theories discussing differential access to networks. In fact, since occupational and other activities pursued in the destination also differ quite widely, an issue for further study is whether social networks function differently for men and women once they arrive to the United States.

Overall, this paper has analyzed the ways in which the Mexican gender system affects migration to the United States, thereby helping to understand why most women do not migrate. Obviously, many of these patterns are specific to Mexico. Although we expect other patterns where gender systems differ -- for example, in the case of some Caribbean countries where women are primary breadwinners and more frequently migrate, or in the Philippines or China, where migrant daughters to urban centers may sustain rural families with their earnings), this research suggests that the interrelations between gender and migration are a critical backdrop to understanding migration behavior and outcomes.

Endnotes

1. Domestic unit, household and family are all used interchangeably throughout the text. For my purposes, a household is defined as a group that ensures its maintenance and reproduction by generating and disposing of a collective income base (Arizpe 1981, Wood 1981); it has a limited set of resources (e.g., land, capital and labor) and a set of needs and consumption desires.
2. See Beals 1946, Belshaw 1967, Benería and Roldán 1987, Elu de Lenero 1973, Lewis 1959 and 1960, Lomnitz 1977, Loyden Sosa 1986, González de la Rocha 1994, Casillas Moreno 1985, Solorzano y Rivera 1980, Tanori-Villa 1989, Trigueros 1992, Kanaiaupuni 1995. The patterns described here reflect general trends, thereby hiding considerable diversity of experiences. In addition, the centrality of women's domestic roles is not found only in Mexico, but has been a central feature of many societies throughout history and is linked crucially to women's subordination (Fraser 1991).
3. "Street-roaming", a deviation from idealized, saintly mother images of women at home. For these reasons, most of my female assistants in Mexico sought someone to accompany them on their interview assignments when venturing into less familiar neighborhoods.
4. Or, as described by one author, "to become adults is, for girls, to be more jealously looked after, to be even more dependent on their parents' will, to be even more confined and isolated within the household, than ever before" (González de la Rocha 1994:135).
5. *Yo siempre pensé que mi vida nada mas era para mis hijos* (personal interview, Kanaiaupuni 1995). Casillas Moreno (1985:95) also cites commonly expressed views of women with young children in Chihuahua: "I would like to work but with the kids, no," and "How can I leave the children to go to work?"
6. For example, only six women have ever operated as secretaries to the president (the highest level of the executive branch under the president); in 1994, only 4.5 percent of Mexico's municipal presidents were women (CONAPO 1995).
7. See Grasmuck and Pessar 1991, Aymer 1997 for cases where the opposite is true when women control resources.
8. This act left the Western Hemisphere without a quota until 1976 when a per country ceiling of 20,000 clamped down on the number of immigrants admitted annually.
9. Doctoral research involved in-depth interviews with about 40 women, and shorter surveys of over 400 women in three villages located in the states of Morelos, Guanajuato and Jalisco with follow-up interviews in Chicago, Illinois.
10. At the time of taking a village census, enumerators also probed neighbors for information about any vacant homes on the survey roster.
11. In the relatively rare instances that heads were not present during the survey period, the acting head was asked to supply as many details as possible about the absent person.

12. The data are organized into a discrete-time event history file in which subjects are exposed to the risk of first migration from age thirteen to the date of the survey, the initial trip, or age eighty, whichever occurs first. The lower age bound, in contrast to many analyses that consider decision makers from age 18 and older, was selected to reflect earlier entry into the labor force and marriage. For example, many individuals barely complete primary school before going to work (see mean education, Table 4) – a common complaint of secondary school educators in rural areas is that children too often terminate their schooling in order to migrate, especially during national economic crises (personal interviews, Kanaiaupuni, 1995, 1996).

13. In order to include contextual effects, the file is restricted to transitions that occur between 1940 and 1996, thus my results do not consider migration risks prior to 1940. This restriction also reduces the chances of recall error. Additionally, the analysis excludes person-years in which individuals migrated out of the state for more than 1 month (2.5% of the sample). For individuals with fewer than five trips, year and duration of middle trips were estimated based on information about the first and the last trip; for those with five or more trips, I deleted all years between the first and last trip (1.3% of the sample).

14. Based on prior work, I also expect that men's labor force and migration activities affect women's migration decisions, but cannot examine this here because the activities of prior partners are unavailable for household heads.

15. Table 4 presents the percent of missing observations. Most of these involved people who at the time of the survey were in a second union, but missing data from the first union, or in fewer cases, individuals who were widowed or separated, but missing their marital history information. In general, the occurrence of second unions is very low – more than 95% of men and women reported only one union.

16. Ideally, an independent measure of migrant networks in villages would be preferable. In the absence of such data, I use cumulative proportions derived from representative samples in each village, and assume, first, that the randomly sampled population represents the migration characteristics of the overall community; and second, that the estimated prevalence of migration experience in the population would not change much if we had access to information from dead individuals and permanent emigrants unaccounted for at the time of the survey. Keep in mind that because the survey collects data on *all* children and because most Mexico-U.S. migrants move *temporarily* rather than permanently, the vast majority of migrants still contribute to the cumulative proportion.

17. For example, prior work experience of women is not available in the data set, although such experience may be an additional measure of human capital important to the likelihood of migration. Ongoing data collection efforts are designed to address this limitation for future analyses.

18. I dropped municipal education measures because they were collinear with other explanatory variables, precluding statistically reliable estimates.

19. Categorical classification of male labor force participation rates did not change the results.

20. Social networks vary in meaning by legal status, which was not part of this analysis. In these data, none of the women reported legal documents in the year prior to migration (thereby nullifying inclusion of legal status as a determinant). The majority, however, did migrate without documents and previously-conjugal and consensual union partners were slightly more likely to do so than married women and men. In addition, a prior study concluded that migration choices of undocumented women, compared to legal,

were driven more by economic necessity than non-economic factors (Donato and Kanaiaupuni 1998). Together, these findings suggest that the gender and migration relationship is further complicated by issues of legal status.

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Table 1. Hypothesized Effects of Migration Determinants (doubled sign denotes stronger relationship in indicated direction)

	WOMEN	MEN
<u>Human Capital, Age, Socioeconomic Status</u>		
Education	+	G
Age	G	G
Home ownership	G	G
Business ownership	G	GG
Agricultural land ownership	G	+
<u>Family Considerations</u>		
Never married/conjugal	--	+
Married/conjugal	+	+
Previously married/conjugal	+	G
Children at home	G	+
<u>U.S. Migrant Networks/Social Capital</u>		
Family networks	+	++
Village networks	+	++
Proportion women in village networks	++	+
<u>Local Opportunities/Structure</u>		
Male employment	G	GG
Female employment	+	++
Population size	G	G
<u>Time Period</u>		
1965 - 1986 (compared to <1965)	+	+
1987 - Present (compared to <1965)	+	+

Table 2. Migration among Married and Cohabiting Women in 43 Mexican Villages

Timing	Total (%)	Documentation Status		
		Legal	Undocumented	Tourist
Before partners	79 (2.5)	34.6	46.2	19.2
In same year	99 (3.1)	8.1	64.3	27.6
1 to 5 years later	235 (7.4)	16.3	70.9	12.8
6-10 years later	157 (4.9)	16.7	67.3	16.0
11-15 years later	78 (2.5)	28.9	52.6	20.5
16-20 years later	51 (1.6)	37.3	43.1	19.6
21-30 years later	65 (2.0)	33.9	50.8	15.4
31-50 years later	47 (1.5)	12.8	40.4	46.8
Non-migrant (ever) partners	93 (2.9)	11.9	58.7	29.4
Never migrated	<u>2,278 (71.6)</u>	n/a	n/a	n/a
Total	3,182 (100.0)			
Non-migrant (ever) couples	3,464 (100.0)			

Source (for this and other tables): Mexican Migration Project 1999

Table 3. Key Relationships Predicting First Migration among Men and Women in 43 Mexican Villages (based on weighted logistic regression with robust standard errors)

Explanatory Variables	Women			Men		
	Odds	B	SE	Odds	B	SE
Family Status (reference: single)						
Married	0.747	-0.291*	0.157	0.674	-0.395**	0.093
Consensual union	0.514	-0.666	0.635	0.533	-0.630**	0.217
Previously conjugal	1.949	0.667**	0.165	0.629	-0.463*	0.274
Missing marriage information	0.143	-1.947*	0.980	0.426	-0.853**	0.557
Number of Children (<10 years)	1.071	0.068	0.082	1.124	0.117**	0.041
Intercept		-6.067**	0.212		-4.226**	0.223
Education (reference: no formal education)						
One to 5 Years Education	2.095	0.740**	0.229	1.522	0.420**	0.137
Primary School Education	1.584	0.460**	0.193	0.983	-0.017	0.121
7-12 Years Education	2.819	1.036**	0.217	0.873	-0.136	0.211
13 Plus Years Education	2.348	0.854*	0.457	0.407	-0.898**	0.228
Intercept		-6.630**	0.225		-4.338**	0.161
U.S. Migrant Networks/Social Capital						
Migrant children networks	1.501	0.406**	0.053	1.096	0.092	0.216
Other relatives networks	1.153	0.142**	0.048	1.193	0.176**	0.022
Village migrant networks	41.455	3.724**	0.839	382.834	5.948**	0.731
Sex composition of networks	2.259	0.815*	0.450	0.186	-1.683**	0.713
Intercept		-6.951**	0.165		-4.871**	0.124
N Observations (person years)	215064			145969		

Table 4. Descriptive Statistics for Sample Characteristics Used to Predict First Migration for Men and Women in 43 Mexican Villages (unweighted)

POPULATION CHARACTERISTICS	Survey Year		Person Years	
	(all persons)		(all years at risk)	
	WOMEN	MEN	WOMEN	MEN
<u>Dependent Variable</u>				
Prop. ever migrated	7.88	40.86	.00	.02
<u>Human Capital and Age</u>				
No formal education	.24	.24	.31	.31
1-5 years education	.33	.31	.35	.29
6 years education	.21	.20	.19	.18
7-12 years education	.17	.17	.11	.14
13 plus years education	.05	.09	.04	.08
Age 15 to 19	.01	.00	.23	.28
Age 20 to 29	.19	.15	.29	.30
Age 30 to 39	.25	.25	.21	.19
Age 40 to 49	.22	.22	.14	.12
Age 50 plus	.32	.38	.13	.11
<u>Socioeconomic Characteristics</u>				
Prop. home owners	.65	.66	.36	.28
Prop. business owners	.20	.21	.10	.08
Prop. agricultural land owners (5+ hct.)	.11	.12	.09	.07
<u>Family Considerations</u>				
Prop. single	.03	.03	.37	.43
Prop. married	.81	.88	.56	.53
Prop. consensual union	.06	.06	.03	.02
Prop. previously conjugal	.10	.03	.06	.01
Prop. missing marital information	.00	.00	.00	.01
Number of minor children at home	1.11	1.19	1.32	1.07
<u>U.S. Migrant Networks/Social Capital</u>				
Migrant children networks	.89	.83	.23	.09
Other relatives networks	1.47	1.58	.66	.41
Village networks	.18	.18	.13	.11
Composition of village networks	.21	.21	.13	.13
<u>Local Opportunities/Community Structure</u>				
Male employment	.67	.67	.73	.74
Female employment	.16	.16	.14	.14
Population size	92010	96529	48737	53969
<u>Period Variables</u>				
Period prior to 1964	0	0	.28	.33
Period 1964 to 1979	0	0	.55	.53
Period 1987 to 1993	1	1	.17	.14
N Observations	7290	6372	215064	146104

Table 5. Maximum Likelihood Coefficients Predicting First Migration for Mexican Women and Men in 43 Mexican Villages (based on weighted logistic regression with robust standard errors)

POPULATION CHARACTERISTICS	Model I (individual/household variables)				Model II (plus marital interactions)				Model III (plus community variables)			
	Women		Men		Women		Men		Women		Men	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
<u>Human Capital</u>												
1-5 years education (reference: 0 years)	0.834**	0.297	0.254	0.156	0.834**	0.297	0.254	0.156	0.659**	0.298	0.233	0.141
6 years education	0.700**	0.174	-0.176	0.114	0.697**	0.177	-0.177	0.113	0.653**	0.269	0.200	0.189 *
7-12 years education	1.166**	0.311	-0.379*	0.169	1.168**	0.313	-0.378*	0.169	0.998**	0.371	-0.038	0.195 **
13 plus years education	1.048	0.614	-1.188**	0.188	1.048	0.613	-1.188**	0.188	0.863	0.693	-0.895**	0.214 **
Age 15 to 19 (reference: 20 to 29)	-0.399*	0.163	-0.614**	0.095	-0.397*	0.158	-0.613**	0.095	-0.270	0.193	-0.638**	0.095 **
Age 30 to 39	-0.401*	0.166	-0.797**	0.089	-0.403*	0.166	-0.798**	0.089	-0.457**	0.163	-0.768**	0.090 **
Age 40 to 49	-0.650**	0.204	-0.925*	0.357	-0.649**	0.203	-0.926*	0.359	-0.835**	0.185	-0.842**	0.391
Age 50 plus	-1.751**	0.277	-3.341**	0.652	-1.765**	0.298	-3.351**	0.648	-2.204**	0.388	-3.321**	0.682 **
<u>Socioeconomic Characteristics</u>												
Home owners	0.001	0.186	-0.300**	0.100	-0.002	0.189	-0.300**	0.100	-0.187	0.187	-0.338**	0.132
Business owners	-0.120	0.268	-0.520**	0.149	-0.123	0.262	-0.519**	0.148	-0.133	0.263	-0.536**	0.120
Agricultural land owners (5+ hct.)	-0.402	0.248	0.038	0.377	-0.391	0.250	0.040	0.377	-0.436*	0.246	0.004	0.288
<u>Family Considerations</u> (reference: single)												
Married	-0.541**	0.194	-0.164	0.086	-0.570	0.177	-0.167	0.087	-0.648**	0.164	-0.104	0.081 **
Consensual union	-0.570	0.506	-0.414*	0.178	-0.213	0.607	-0.328	0.210	-0.327	0.649	0.041	0.181
Previously conjugal	0.611**	0.202	-0.024	0.373	0.692*	0.309	0.160	0.481	0.679**	0.303	0.209	0.464
Missing marital status information	-1.813	0.970	-0.818	0.559	-3.248	1.988	-1.335**	0.504	-2.787	2.418	-1.142**	0.500
# of minor children at home (< 10 years)	0.108	0.115	0.097*	0.047	0.287	0.189	-1.239**	0.364	0.291	0.201	-1.147**	0.374 **
Married * minors at home					-0.163	0.189	1.338**	0.379	-0.136	0.196	1.223**	0.383 **
Consensual * minors at home					-0.421	0.220	1.279**	0.418	-0.415*	0.224	1.113**	0.402 **
Previously conjugal * minors at home					-0.317	0.353	1.143*	0.473	-0.341	0.365	0.980**	0.447 **
Missing * minors at home					0.329	0.580	1.620**	0.442	0.260	0.706	1.420**	0.433

POPULATION CHARACTERISTICS	Model I (individual/household variables)				Model II (plus marital interactions)				Model III (plus community variables)			
	Women		Men		Women		Men		Women		Men	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
<u>U.S. Migrant Networks/Social Capital</u>												
Migrant children networks	0.656**	0.093	0.695**	0.250	0.654**	0.092	0.694**	0.250	0.640**	0.093	0.650**	0.283
Other relatives networks	0.177**	0.049	0.228**	0.028	0.178**	0.049	0.228**	0.028	0.103*	0.060	0.182**	0.022
Village networks									5.321**	1.166	5.003**	0.581
Composition of village networks									0.095	0.881	0.676**	0.328
<u>Local Opportunities/Community Structure</u>												
Male employment									0.555	1.460	0.487	0.677
Low female employment (reference: Mid)									-0.157	0.280	-0.163*	0.084
High female employment									0.149	0.204	-0.308**	0.154
Community population (logged)									0.002	0.049	-0.167**	0.040 **
<u>Period Controls</u> (reference: 1964 to 1986)												
Period prior to 1964									-0.725*	0.407	0.003	0.163 **
Period 1987 to 1993									0.280	0.346	-0.383	0.341
Intercept	-6.637**	0.387	-3.721**	0.231	-6.642**	0.386	-3.721**	0.232	-7.421**	1.522	-3.086**	0.672
-2 Log Likelihood	-3251		-9472		-3249		-9470		-3211		-9260	
Wald Chi ²	1951		1640		3724		2019		14145		5013	
N Observations (person-years)	214936		145959		214936		145959		212181		143205	

** P-value < .05

* P-value < .10

^a Statistically significant difference p<.05

^b Statistically significant difference p<.10

Appendix Table 1. Maximum Likelihood Coefficients Predicting First Migration for Pooled Sample of Men and Women in 43 Mexican Villages (based on weighted logistic regression with robust standard errors)

POPULATION CHARACTERISTICS	Full Model		Full with Interactions ⁺		
	B	SE	B	SE	(Variable * Sex)
<u>Human Capital</u>					
Female	-2.096**	0.108	-4.337**	1.559	
1-5 years education (reference: 0 years)	0.292**	0.106	0.241*	0.136	
6 years education	0.244	0.161	0.208	0.185	0.444*
7-12 years education	0.134	0.158	-0.030	0.190	1.028**
13 plus years education	-0.642**	0.254	-0.886**	0.209	1.749**
Age 15 to 19 (reference: 20-29)	-0.591**	0.110	-0.638**	0.097	0.367**
Age 30 to 39	-0.698**	0.087	-0.767**	0.089	0.310**
Age 40 to 49	-0.857**	0.323	-0.839**	0.384	
Age 50 plus	-2.788**	0.253	-3.314**	0.682	1.110*
<u>Socioeconomic Characteristics</u>					
Home owners	-0.315**	0.159	-0.338**	0.132	
Business owners	-0.397**	0.088	-0.535**	0.120	
Agricultural land owners (5+ hct.)	-0.139	0.193	-0.016	0.279	
<u>Family Considerations</u> (reference: single)					
Married	-0.245**	0.093	-0.102	0.081	-0.547**
Consensual union	-0.086	0.197	0.045	0.179	
Previously conjugal	0.791**	0.190	0.181	0.458	
Missing marital status information	-1.269**	0.493	-1.142**	0.499	
# of minor children at home (< 10 years)	0.215	0.199	-1.145**	0.374	1.436**
Married * minors at home	-0.125	0.203	1.228**	0.382	-1.365**
Consensual * minors at home	-0.268	0.246	1.112**	0.401	-1.527**
Previously conjugal * minors at home	-0.416	0.312	0.993**	0.444	-1.334**
Missing * minors at home	0.063	0.280	1.419**	0.433	
<u>U.S. Migrant Networks/Social Capital</u>					
Migrant children networks	0.619**	0.090	0.650**	0.284	
Other relatives networks	0.161**	0.025	0.183**	0.022	
Village networks	4.713**	0.469	4.995**	0.587	
Composition of village networks	0.666**	0.275	0.675**	0.328	
<u>Local Opportunities/Community Structure</u>					
Male employment	0.494	0.469	0.493	0.795	
Low female employment (reference: Mid)	-0.149*	0.082	-0.158*	0.089	
High female employment	-0.213*	0.122	-0.302**	0.154	
Community Population (logged)	-0.124	0.041	-0.169**	0.040	0.171**
<u>Period Controls</u> (reference category: 1964 to 1986)					
Period prior to 1964	-0.083	0.176	-0.001	0.163	-0.725**
Period 1987 to 1993	-0.135	0.115	-0.382	0.341	
Intercept	-3.387**	0.650	-3.086**	0.679	
-2 Log Likelihood	-12797		-12652		
Wald Chi ²	19690		75329		
N Observations (person-years)	355520		355520		

** P-value < .05; * P-value < .10

⁺ only statistically significant interactions presented, remaining coefficients were insignificant (available from author).

Figure 1. Ratio of Persons Ever Migrated to the Population Alive in 43 Mexican Villages by Sex and Year

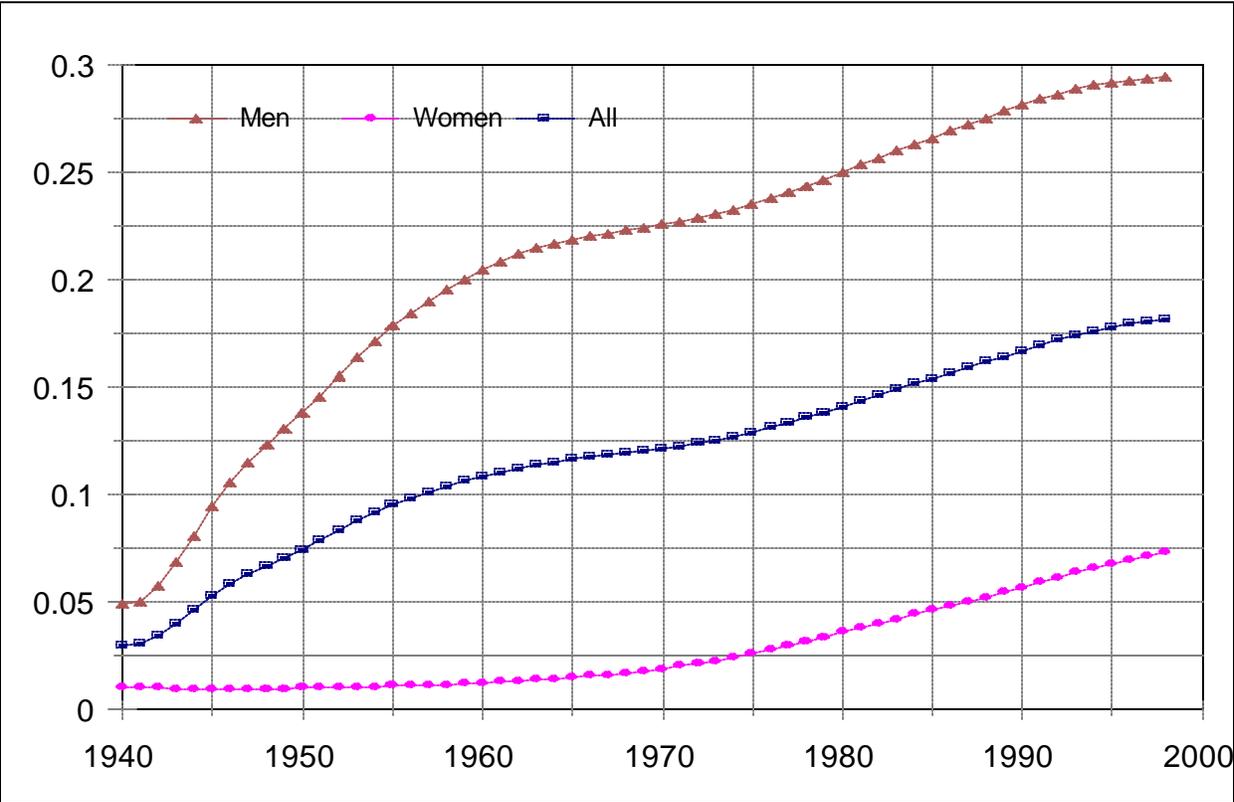


Figure 2. Percent Distribution of First-time Migrants to the United States from 43 Mexican Villages by Sex and Year

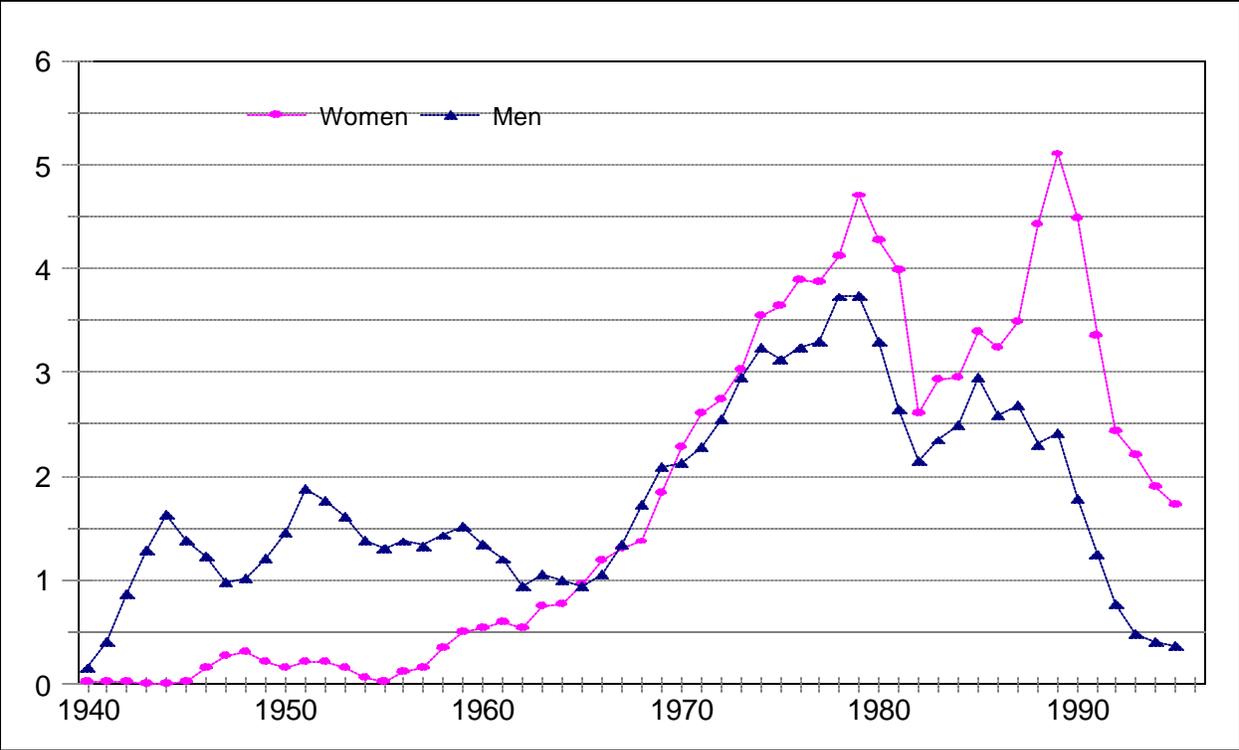


Figure 3. Odds of First Migration among Men and Women by Educational Attainment (reference category: no education)*

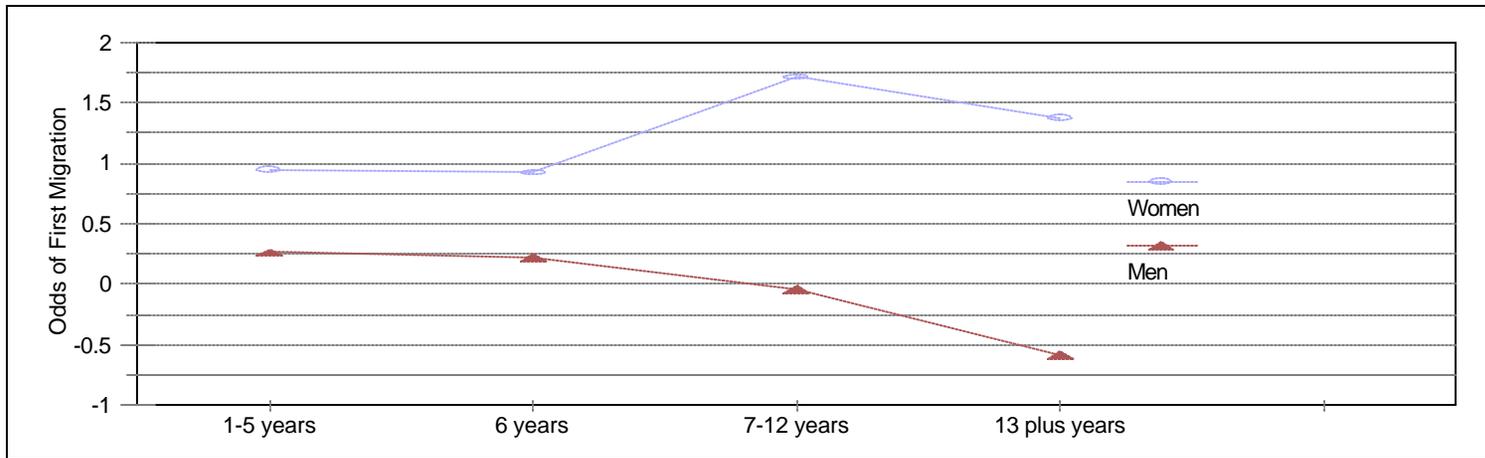
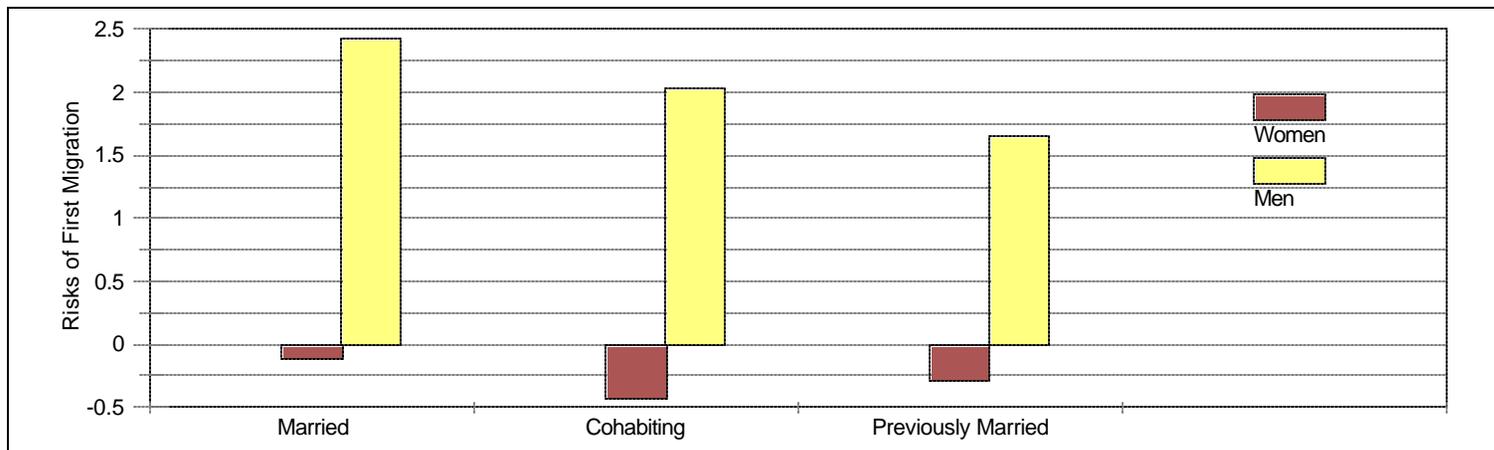


Figure 4. Odds of First Migration among Men and Women *with Children* by Marital Status (reference category: single)*



*Notes: Odds are produced from logistic regression coefficients reported in Table 5, and normalized to zero, such that 0 = no difference. See Table 5 for statistical significance levels.

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