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Author(s): Elizabeth Fussell and Douglas S. Massey

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THE LIMITS TO CUMULATIVE CAUSATION: INTERNATIONAL MIGRATION FROM MEXICAN URBAN AREAS*

ELIZABETH FUSSELL AND DOUGLAS S. MASSEY

We present theoretical arguments and empirical research to suggest that the principal mechanisms of cumulative causation do not function in large urban settings. Using data from the Mexican Migration Project, we found evidence of cumulative causation in small cities, rural towns and villages, but not in large urban areas. With event-history models, we found little positive effect of community-level social capital and a strong deterrent effect of urban labor markets on the likelihood of first and later U.S. trips for residents of urban areas in Mexico, suggesting that the social process of migration from urban areas is distinct from that in the more widely studied rural migrant-sending communities of Mexico.

The theory of the cumulative causation of migration explains why once a migration flow begins, it continues to grow. Much of the research that has tested this theory has focused on the perpetuation of Mexico–U.S. migration, mainly from rural areas (Massey 1990; Massey, Goldring, and Durand 1994; Massey and Zenteno 1999; Stark and Taylor 1989). Studies have explored changes in rural socioeconomic institutions that contribute to the growth of the migration stream, particularly the diffusion of migration-related social capital that facilitates international migration and feedback mechanisms that change rural labor markets. We propose that these mechanisms are unlikely to operate in a similar fashion in urban areas, where social networks are less pervasive and the feedback effects of migration have less influence on local labor markets. In this article, we consider how residents of large urban areas, small cities, rural towns, and *ranchos* participate in the process of Mexico–U.S. migration and whether our current understanding of the structural forces underlying this movement needs to be reconsidered as a result. Our findings suggest that the theory of cumulative causation is likely to be limited to rural contexts.

The recent literature on international migration has proposed that a synthetic theoretical account, which draws on multiple disciplines and levels of analysis, comes closer to explaining international migration than does any single theoretical model (Massey 1999; Massey et al. 1998). Neoclassical economics (Todaro 1989), the new economics of migration (Stark and Bloom 1985), segmented labor-market theory (Piore 1979), world systems theory (Portes and Walton 1981; Sassen 1988), social capital theory (Massey 1987; Taylor 1986, 1987), and cumulative causation theory (Massey 1990) have all contributed to a synthetic understanding of international migration. Within any particular setting, different theoretical mechanisms may play stronger or weaker roles in explaining out-migration.

*Elizabeth Fussell, Sociology Department, Tulane University, 220 Newcomb Hall, New Orleans, LA 70118; E-mail: efussell@tulane.edu. Douglas S. Massey, Office of Population Research, Princeton University. The analysis was undertaken with support from the Social Science Research Council's International Migration Program, the William and Flora Hewlett Foundation, and the National Institute of Health, Grants F32 HC08551-01 and R01 HD35643-01. An earlier version of this article was presented at the annual meeting of the American Sociological Association, Anaheim, California, August 18–21, 2001. We thank Gretchen Livingston and Nolan Malone for their technical assistance and two anonymous reviewers for their comments and suggestions.

Here, we contrast the operation of cumulative causation in rural and urban contexts to demonstrate the differential explanatory power of this theory across settings, thus refining our understanding of international migration. It is not our task to assess the relative strength of all the different theories in explaining Mexican migration, since this analysis has been presented elsewhere (Massey and Espinosa 1997).

By demonstrating that the mechanisms of cumulative causation work less effectively in urban contexts than in rural contexts, we contribute to a growing body of work that seeks to understand how urbanization in migrant-sending countries affects the outflow of international migrants. Mexico, like other countries of Latin America, is becoming increasingly urban, with 61% of its population living in areas of more than 15,000 residents (Instituto Nacional de Estadística, Geografía e Informática 2001). Recent research on Mexican migration has suggested that a growing proportion of the flow of migrants from Mexico has urban origins, owing both to the urbanization of the population in general and to the growing propensity of urbanites to engage in international migration (Durand, Massey, and Zenteno 2001; Fussell 2004; Lozano-Asencio, Roberts, and Bean 1999; Marcelli and Cornelius 2001). By demonstrating that the social process of international migration differs between urban- and rural-origin communities, we can better theorize the determinants of international migration that are associated with this shift in the composition of the migratory stream.

THE CUMULATIVE CAUSATION OF MIGRATION

The theory of cumulative causation of migration was developed by Myrdal (1957) and extended by Massey and his colleagues (Massey 1990; Massey et al. 1994; Massey and Zenteno 1999) to explicate the perpetuation of Mexico–U.S. migration. The primary mechanism underlying cumulative causation is the accumulation of social capital, by which members of a community gain migration-related knowledge and resources through family members and friends who have already traveled to the United States (Massey 1999). Social networks lower the costs associated with migration by providing aspiring migrants with information and assistance in making the trip north and in finding work and shelter, as well as a social support network in the destination area (Massey 1990; Massey et al. 1994; Taylor 1986). By entering the U.S. labor-migration stream, new migrants convert their migration-related social capital into financial capital (Bourdieu 1986; Coleman 1988).

In turn, international migration alters community socioeconomic structures in ways that promote additional out-migration, giving international migratory streams a strong internal momentum. In the following paragraphs, we elaborate the process by which migration-related social capital is accumulated and the socioeconomic structures of communities are transformed to perpetuate international migration. Migration-related social capital is a set of resources that are embodied in social networks that acquire instrumental value for people who wish to emigrate. A connection to a current or former migrant yields social capital because people who have already been to the United States are in a position to help others travel northward, cross the border, and obtain work by providing information, contacts, or material assistance (Espinosa and Massey 1998). As a result, people who are socially connected to U.S. migrants are better able to move and thus are more likely to migrate themselves.

Each act of migration creates social capital among a migrant's friends and relatives, which encourages some of them to migrate, which creates more social capital, which produces still more migration (Massey and Zenteno 1999). Therefore, other things being equal, people who come from communities from which migration is prevalent are more likely to migrate than are people who come from places from which migration is rare (Massey and García España 1987; Massey and Espinosa 1997). The causal order of such a system is reiterative—knowing a migrant increases the probability of becoming a migrant, which

increases the number of people who are likely to know migrants—a process that unfolds and grows over time.

Community structures are altered in a variety of ways through the cumulative causation of migration. Changes in the income distribution of a community that are brought about through migrants' remittances often bring about an increase in the sense of relative deprivation, creating new motivations to migrate (Stark and Taylor 1989). Often migrants' remittances and savings are spent on purchases of agricultural land, not for production purposes, but more as long-term investments. Because these lands are no longer farmed, the demand for day laborers in these communities falls, creating more pressure for out-migration (Mines 1984; Reichert 1981). Alternately, some migrants farm newly purchased land, but they do so using capital-intensive methods, which again reduce the demand for agricultural labor (Massey et al. 1987). Finally, at a cultural level, once the process of migration begins, it changes a community's values—by glorifying and romanticizing migrants, young people are drawn into the labor-migration stream (Chavez 1998; Kandel and Massey 2002; Martínez 1994), and by providing them with the information and assistance, young people are able to follow through with their migratory plans (Alarcón 1992; Massey et al. 1987).

The foregoing mechanisms of cumulative causation have been shown to be particularly strong in rural communities (Massey et al. 1994; Massey and Zenteno 1999). To this point, however, no study has specifically considered their operation in urban settings, even though the stream of U.S.-bound migrants includes a growing number of urbanites (Durand et al. 2001; Lozano-Asencio et al. 1999; Marcelli and Cornelius 2001). We argue that the processes of cumulative causation cannot be expected to operate as fully or as effectively in urban as in rural settings for several reasons.

First, the accumulation of social capital is limited in a complex urban social system. Social relations in urban settings are more selective than they are in small settlements; that is, friends and acquaintances are drawn from members of one's neighborhood and occupation-based social groupings, rather than from the community as a whole (Fischer 1972, 1975, 1982, 1995). In other words, the social networks of urbanites are composed more of weak ties to acquaintances and workmates than of strong ties to kin and lifelong friends. As a result, the exchange of community-level social capital in urban settings is constrained, although such exchanges may still occur. Thus, the migration experience within a community may be more precisely characterized as the potential for gaining access to migration-related social capital, rather than the presumed existence of a relationship with a migrant. We expect that the greater complexity of social relationships within urban contexts diminishes the potential of community-based migration-related social capital to perpetuate migration.

Second, the population is much denser in cities than in small towns or villages, yielding greater anonymity (Wirth 1938). Although urbanites come into daily contact with more people, they know less about them, including their migratory experiences. In the course of daily life, urban dwellers may interact with one or more migrants and never know it. If someone from a small rural community migrates, virtually everyone in town has a personal connection to him or her through years of face-to-face contact and overlapping networks of kinship and friendship. In contrast, if someone migrates from a city, it is *likely* that the person is unknown to his or her fellow urbanites, even to those who share the same residential block, much less to those who live one or more blocks away.

Third, the feedback effects of migration that have been documented in rural areas are unlikely to have an impact on urban communities. In rural areas, migrants may use their savings to purchase land, which then lies fallow or may be farmed with capital-intensive farming methods, both of which contribute to the weakening of the demand for labor in the rural labor market (Mines 1984; Reichert 1981). In contrast, in urban areas, a migrant's savings and remittances are unlikely to make such an impact, since they are more likely to

be used for personal consumption or improvements to one's home. Furthermore, if those remittances are invested in small businesses or other enterprises, they are more likely to increase the demand for labor, rather than weaken it (Durand, Parrado, and Massey 1996).

Fourth, overall motivations for international migration are not as great in urban areas as in rural areas because urban areas offer more routes to higher earnings through a diversified labor market. In urban areas, skills, education, and social connections can be converted more readily into employment opportunities in a range of low-skill jobs, which sometimes compare favorably to those that are available through undocumented labor abroad (Taylor 1987). In urban settings, it is also easier to borrow money, accumulate capital, and manage risk. Insurance markets, credit institutions, and informal lending mechanisms (e.g., rotating credit associations) are better developed and more accessible. Thus, the urban structural context, but particularly the labor market, reduces the necessity of international migration from large cities compared with smaller cities, towns, and rural villages.

Fifth, in developing countries, such as Mexico, urban dwellers are often former rural-to-urban migrants who are enmeshed in social networks that are based in rural communities. These rural-based networks are likely to contain U.S. migrants, especially in western Mexico. In contrast, urban-based networks of U.S. migrants are generally newer and much less extensive. Consequently, rural-to-urban migrants who are determined to emigrate thus turn to friends and relatives in their rural communities of origin, rather than to connections they have made in the urban environment, and urbanites may be unable to find such assistance (Massey et al. 1987; Roberts, Frank, and Lozano-Ascensio 1999).

Finally, aspiring migrants in cities may simply forge their own pathways to the United States without drawing upon any network ties at all (Roberts et al. 1999). One potential pathway to *El Norte* is step-migration to a Mexican border city. Lacking strong social ties to U.S. migrants at home, urbanites may travel to northern border cities and there acquire the contacts and information that are necessary to enter the United States. By living and working in a border community, urban migrants put themselves in a better position to learn about potential opportunities in the U.S. labor market and to make contact with border residents, *fronterizos*, who can assist them in crossing the border and finding jobs.

In our study, we investigated the degree to which processes of cumulative causation operate in urban versus rural settings. In doing so, we examined well-established predictors of migration to assess their operation in large urban areas, smaller cities, and rural towns and ranchos. We used data from the Mexican Migration Project (MMP), the same data set used by Massey and his colleagues, but with expanded regional coverage that includes for the first time communities on the Mexico–U.S. border.

After discussing these data, we present and interpret trends in the prevalence of U.S. migration in different-sized communities. We then specify and estimate models that predict first and later trips to the United States from distinct types of communities. These analyses provide little evidence of cumulative causation in large urban settings. Instead, the migration that occurs in large urban areas appears to be a more idiosyncratic process, facilitated by family-based social capital but not as strongly driven by community-level characteristics. By uncovering these limitations to the theory of cumulative causation, we gain a better understanding not only of current international and internal migratory processes but also of the potential for future migration between Mexico and the United States.

DATA AND METHODS

The MMP data came from household surveys that were conducted in selected communities of central and western Mexico, plus four neighborhoods in Tijuana. Currently, the database includes samples from 70 communities in the states of Jalisco, Michoacán, Guanajuato, Nayarit, Zacatecas, Guerrero, Oaxaca, San Luis Potosí, Sinaloa, Colima,

Puebla, Aguascaliente, and Baja California, all surveyed between 1987 and 1998.¹ The first five states share a long history of migration to the United States (Durand et al. 2001), and the expanded geographic coverage afforded by the addition of the latter states allowed us to explore of newer migrant-sending regions.

The Mexican community samples generally consist of 150–200 households that are randomly selected from a census of dwellings that was conducted at each location. In smaller places, the entire community was canvassed, but in large urban areas, specific working-class neighborhoods were demarcated and enumerated. These samples were supplemented with nonrandom samples of U.S. migrants who were located in destination areas of the United States, on the basis of references from the Mexican communities' households. The community samples were weighted by the inverse of the sampling fraction used at each Mexican and U.S. site. For the Mexican communities, the sampling fraction was the number of households in the sample divided by the number of households in the sampling frame. In the United States, the sampling fractions were estimated by dividing the number of households surveyed by the estimated number of households in the out-migrant community. The size of the out-migrant community was estimated from the information on the current location of the offspring of household heads who were no longer household members. The ratio of the non-household-member children living in the United States to their counterparts living in Mexico was applied to the Mexican sampling frame to estimate the size of the out-migrant community and to form the basis for the U.S. sampling fraction. Pooling the samples and applying the sample weights provided a profile of the binational communities at the time of each survey (see Massey and Espinosa 1997). Systematic comparisons between the MMP and Mexico's National Survey of Population Dynamics (a representative national survey) indicated that the former provides an accurate and remarkably unbiased profile of the characteristics and experiences of Mexican migrants to the United States (Massey and Zenteno 2000; Zenteno and Massey 1999).

The MMP questionnaire gathered basic information on the social, economic, and demographic characteristics of the household head, the spouse, the head's children, and other household members. It determined which of these people had ever been to the United States, and for each person with migratory experience, it compiled data on the date, duration, destination, legal status, occupation, and wages earned on the first and last trips to the United States. A trip was defined as a move to the United States that involved a change in usual residence, excluding short visits for vacation, shopping, and commuting in the case of border residents. Thus, the purpose of the trip, more so than the duration, was the criterion for defining it as a U.S. trip. The questionnaire also compiled detailed life histories for all household heads that included histories of employment, migration, border crossing, marriage, fertility, residence, and property ownership. In addition, information on the community and national context throughout the period was collected.

Our analysis proceeded in two phases. Using the date of birth and the date of the first U.S. trip, we first computed ratios that measured the prevalence of migration to the United States from 1950 to 1998. Following Massey et al. (1994), we defined *migration prevalence* as the ratio of the number of persons aged 15 and older who had ever been to the United States over the total number of persons aged 15 and older within a given year. The numerator was computed retrospectively from the date of the first U.S. trip, and the denominator, from the date of birth.

This ratio is potentially biased by permanent out-migration from the sample community to other areas of Mexico. Such out-migration would overstate the prevalence of U.S. migration by removing people from the denominator (permanent emigration abroad, however, is accounted for by the U.S. sample). The size of the bias can generally be expected

1. We excluded one community from our analysis because it did not have the necessary measures to calculate the migration-prevalence ratio, one of our key theoretical measures.

to increase as one moves back in time. Although it cannot be corrected (since we know nothing about the number of out-migrants to other Mexican communities), it is conservative. Because migration-prevalence ratios tend to increase over time, the effect of the bias is to make the increase more gradual, especially in rural communities, which are more prone than cities to permanent internal out-migration.

Potential bias from in-migration is also a concern, especially in large urban areas that receive a large number of rural-origin migrants. Massey et al. (1994) avoided this bias by analyzing nonurban communities that contained few in-migrants. If one seeks to study urban-based migratory processes, however, internal migration represents a clear source of bias, pushing the prevalence ratio artificially downward because in-migrants appear in the denominator from age 15 onward, even though they may have spent some portion of this time elsewhere. Although in-migrants also contribute observations to the numerator, this contribution is proportionately less important, since only a fraction of in-migrants become international migrants. Hence, the overall bias is downward, that is, it lowers the migration-prevalence ratio.

We partially corrected this bias by removing person-years lived outside the sample community from the prevalence ratio. For example, in Tijuana, the sample with the most in-migrants, 53% of the respondents were born out of the state. Because 95% of these people came to Baja California on their last internal trip, we used the date of this trip as the starting point from which they contributed to the denominator of the prevalence ratio. Elsewhere, the percentage born out of state ranged from 8% in Guanajuato to 23% in Nayarit.

Although the destination of the last internal trip was not always the place of the survey, we used the time of the last internal trip as the starting point for calculating the number of person-years contributed by internal migrants to the migration-prevalence ratio. Doing so removes the contribution of person-years by internal migrants who arrived in a community with international migration experience, a source of upward bias, as well as that of internal migrants with no international migration experience, a source of downward bias since they expand the denominator. However, it also removes person-years contributed by internal migrants who return to their home communities, a source of unknown bias. Overall, this makes for a more conservative measure, although with the exception of the Tijuana communities, it differs relatively little from the uncorrected measure.

In the second phase of the analysis, we undertook a series of discrete-time event-history analyses to compare the determinants of migration across places of different sizes and locations: large urban areas, smaller cities, and rural towns and ranchos. The first model predicts the likelihood of taking a first U.S. trip from one of these three types of communities. Following Massey and Espinosa (1997), we followed male household heads from age 15 to the date of the first U.S. trip or the administration of the survey, whichever came first.² If the respondent did not leave on a first U.S. trip in a given person-year, the outcome was coded 0; if he did leave in that year, it was coded 1, and all remaining years were excluded from consideration. A second model was estimated to predict the odds of taking an additional trip, controlling for the number of trips already taken. For this analysis, we followed migrants from the year they returned to Mexico from their first U.S. trip to the survey date. In each person-year, we coded the outcome 1 if they made an additional trip to the United States and 0 otherwise.

Drawing on prior work (Massey and Espinosa 1997; Massey and García España, 1987; Taylor 1986), we specified a model in which out-migration to the United States is a function of human and social capital, as well as of the community economic context and U.S. policy context. We included demographic variables to control for the effects of

2. We restricted our sample to men, since women have been shown to follow a different process of migration (Cerrutti and Massey 2001; Kanaiaupuni 2000)

age, marital status, and number of minor children in the family. These measures are all time varying and thus change across person-years as the respondent's circumstances shift. Indicators of human capital included standard measures, such as years of education and experience in the Mexican labor force (in this sample, the former is, for all intents and purposes, fixed by age 15, but the latter is time varying). Measures of social capital included family migration experience, migration experience within Mexico, migration experience to the northern border, and the migration-prevalence ratio. In models predicting additional as opposed to first U.S. trips, we also measured the number of trips already taken, which is an indicator of migration-specific human capital (Massey and Espinosa 1997).

The indicators of migration-related social capital make crucial theoretical distinctions between social capital emanating from ties within the family and social capital emanating more broadly from the community. We argue that kinship network ties should be equally important in predicting out-migration from urban and rural households. Within-family social capital was measured in terms of two basic ties: whether the respondent's parents had prior U.S. experience and whether any sibling had ever been to the United States. Because these indicators of social capital are time varying, measuring access to social capital independently in each person-year, they capture the effect of a parent's or sibling's migration experience on the probability that the respondent will make a trip to the United States only if the U.S. experience occurred prior to the respondent's first trip. In this way, we address the issue of causal order in the relationship between a household head's likelihood of taking a first U.S. trip in a given year and the migration experience of his immediate family in that person-year.

The community-level migration-related social capital is the key measure that we expect to operate differently in large urban and smaller communities. We measured the amount of within-community social capital in terms of the migration-prevalence ratio, a time-varying variable that gives the relative number of persons aged 15 or older who had ever been to the United States within any person-year. Prior research has shown that the connection between the prevalence of migration within the community and individual probabilities of migration is a powerful link in the process of cumulative causation (Massey and Espinosa 1997; Massey and García España 1987). According to estimates by Massey and Zenteno (1999), each additional trip made by someone else in the community increases the odds of individual migration by 20%, and each month of U.S. experience accumulated by others in the community raises the odds of out-migration by 1.1%.

If cumulative causation operates within a community, we expect to find a strong positive effect of migration prevalence on the likelihood of individual out-migration, whether on first or later trips. The absence of such a connection, we argue, suggests the lack of a mechanism of cumulative causation. Furthermore, the effect of the migration-prevalence ratio should increase as the level of migration prevalence increases. To test whether similar levels of migration prevalence have similar effects in different-size communities and to capture any nonlinearities in the relationship, we recoded the migration-prevalence ratio into a series of eight discrete intervals: 0–4, 5–9, 10–14, 15–19, 20–29, 30–39, 40–59, and 60 or greater. We expect that the individual risk of U.S. migration will have a significant and curvilinear relationship to migration prevalence in rural areas, but that no such relationship will exist in urban areas.

Migrating within Mexico is an additional way of gaining migratory experience and entering new social networks, especially for those who move to the northern border of Mexico. At the border, potential migrants can acquire the information and assistance through contact with *fronterizos* that they would not be able to acquire in their communities of origin, particularly in urban communities. Having internal migratory experience within Mexico, although not necessarily to the border, provides a different measure of access to migration-based social capital. In urban areas, where many migrants come from

rural areas, this variable may capture the effect of social ties to rural-based migrant networks. We also included the measure of internal-migration experience to differentiate migration to the border from migration to other destinations within Mexico. In the equation predicting later U.S. trips among migrants who had already made one trip, we used the number of previous U.S. migratory trips to measure migration-specific human capital, that is, human capital that one acquires in the course of U.S. migration itself, which is the embodiment of previously acquired migration-related social capital.

Although the measures of social capital just described facilitate migration in most contexts, the economic context of the community also operates to motivate or deter migration, particularly through a scarcity or abundance of employment in specific occupational groupings and a weak or strong demand for labor. To account for this economic context, we included a set of lagged indicators of the respondent's occupation in the previous year. The categories included agricultural, manufacturing, service, transportation, and professional or managerial occupations, as well as not having been in the labor force. Occupation is the best indicator of the job skills an individual has to offer in the local labor market. This set of variables may also account for some of the effects of economic crisis, since the effects of job loss or wage contraction are most directly mediated through employment.

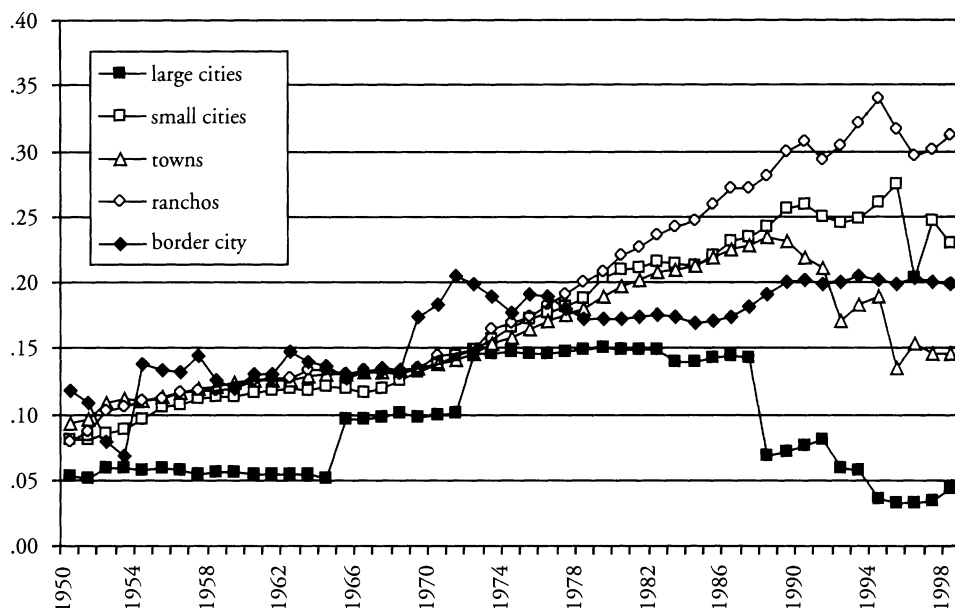
In addition, we included period indicators to control for shifts in U.S. immigration policy and changing economic conditions in Mexico. A *de facto* open-border policy was in place for most of the period under investigation (1965–1985). Although migrants were technically entering illegally, they were not deterred from entering (Massey, Durand, and Malone 2002). Mexico's critical economic crisis occurred between 1982 and 1986, stimulating unemployed workers to migrate to the United States (Heath 1998; Lustig 1990, 1997; de Oliveira and Roberts 1993). After 1986, when the Immigration Reform and Control Act (IRCA) went into effect, U.S. authorities put greater effort into preventing the entry of undocumented migrants, but the amnesty that was granted to those who had been in the United States since 1981 or who were admitted under the Special Agricultural Workers (SAW) Program effectively increased the number of Mexicans who entered the country at that time. Beginning in 1991, more active efforts to deter migrants from entering at all points along the border, and some effort to keep them out of workplaces, reduced migration modestly relative to the IRCA period and the post-Bracero period (Durand, Massey, and Parrado 1999). We roughly measured the economic changes in Mexico and policy changes in the United States by including dummy variables for the period of Mexican economic growth and a relatively open border (1965–1981); the period of economic crisis (1982–1986); the immediate post-IRCA period, in which the amnesty and SAW provisions of U.S. migration policy facilitated migration (1987–1991); and the post-1991 period, in which efforts to patrol the U.S. border more effectively were heightened (1992–1998).

TRENDS IN MIGRATION PREVALENCE

To discern whether urban areas are shaped by the same forces of cumulative causation as are their rural counterparts, we present trends in the prevalence of U.S. migration from 1950 to 1998 in five distinct kinds of communities: large urbanized areas in the interior of the country and the four communities along the border (metropolitan areas of 75,000 people or more), small urban areas (15,000–75,000 inhabitants), towns (3,000–15,000 inhabitants), and ranchos (fewer than 3,000 inhabitants). Although we present figures through 1998, most of the community samples are truncated before that date, depending on the date of the survey for the community in question. As we move forward from 1987 to 1998, therefore, the number of communities contributing to the data series declines, making these figures less stable.

Figure 1 depicts the “stock” of U.S. migratory experience at different points in time for different segments of the Mexican urban hierarchy. In general, the stock of U.S. experience in ranchos, towns, and small urban areas increased throughout the period to reach

Figure 1. Migration-Prevalence Ratios, by Type of Community



relatively high levels during the 1990s. With the exception of large urban areas, including Tijuana, migration prevalence generally rose from 1950 to 1965, when the U.S.-sponsored Bracero Program was actively recruiting hundreds of thousands of Mexican guest workers for periods of short-term agricultural labor in the United States. Although the Bracero Program ended in 1965, migration-prevalence ratios continued to increase in nonurban communities, and even Tijuana and the large urban areas saw an increase in migration prevalence at this time. This pattern reflects the continued and increasing demand for agricultural labor in the United States. When the Bracero Program ended, the possibilities for legal migration were limited, but there was also little resistance to undocumented migration in the United States (Calavita 1992). In small cities, rural towns, and ranchos, where the upward trend continued through the mid-1990s, the pattern was consistent with the theory of cumulative causation: once a migration stream begins, it is nearly impossible to halt. However, in the large urban areas, the migration-prevalence ratio flattened out after the early 1970s and never picked up again.³

From the 1970s through the 1990s, several changes in the Mexican economy and U.S. migratory policies might have been expected to exert pressure that would increase the migration-prevalence ratio. The economic crisis in 1982 and the subsequent restructuring of Mexico's economy from an import-substitution industrial model to an export-oriented industrial model may have increased Mexicans' motivations to migrate. As a

3. The slight upturn at the end of the 1990s was probably due to the reduction in the number of communities contributing to the pattern and the relatively higher rates of migration prevalence in border cities that were surveyed in 1998.

result of this crisis, many households suffered shortages of income and placed more members in the labor market to recuperate their loss of income, including sending more family members to the United States to work (Lustig 1990, 1992; Massey et al. 2002). The IRCA of 1986 also stimulated more migration, especially from small cities and rural areas. The act legalized many former undocumented migrants who had been in the United States since 1981, but it was also intended to begin a new era of greater vigilance at the border and the enforcement of workplace rules prohibiting the employment of undocumented workers. The main effect of this legislation was to legalize Mexicans and others who were already in the United States and to open the door for them to sponsor their relatives (Durand et al. 1999). The post-IRCA increases in the migration-prevalence ratios were most apparent in small rural communities (ranchos) owing to IRCA's SAW Program, which offered privileged access to legalization for migrant farm workers. Although there have been increased efforts to "control" undocumented migration, their effect has been minimal (Andreas 2000; Massey et al. 2002).

While such pro-migratory pressures were felt by the entire Mexican population, we see the strongest evidence for the operation of a process of cumulative causation in ranchos, towns, and smaller cities but not in large urban areas or border cities. Indeed, the pattern of increase in the migration-prevalence ratio for small cities, towns, and ranchos displayed in Figure 1 closely matches the shape of the curve generated by Massey and Zenteno (1999) in their simulation that was based on a dynamic quantitative model of cumulative causation. In contrast, the prevalence curve is low and rises sporadically in large urban areas and border cities, providing weak evidence for a process of cumulative causation in those contexts. In the following section, we consider how the determinants of migration differ by the size of communities to elucidate the distinct mechanisms of international migration that operate at different points in the urban hierarchy.

PREDICTING FIRST U.S. TRIPS

In Table 1, we present means and standard deviations for the variables used in our analyses. These figures were computed across person-years lived by household heads aged 15 and older after 1964 up to the year of the survey. The figures were computed separately for two types of places: (1) urban communities, including Tijuana, and (2) smaller cities, towns, and ranchos, which displayed similar trends in migration prevalence (see Figure 1).

In general, differences in average characteristics were modest across the two broadly defined contexts. Residents of large urban areas were slightly younger (36.4 versus 37.5 years), were nearly as likely to be married (75% versus 76% ever married), and had fewer minor children (2.0 versus 2.5) than did residents of small cities and rural communities. As one may expect, years of education were greater in large urban communities than in small cities and rural areas (7.0 versus 4.5 years). Urban residents generally had more months of labor-market experience in Mexico than did those in small cities and rural areas (160 months versus 155 months). Internal migratory experience was common in both contexts, with nearly a third of the respondents having internal migratory experience in Mexico, although such experience was slightly more common among those from rural areas. Those in large cities, including Tijuana, were more likely to have migrated to the border. Most of these data came from the Tijuana samples, in which more than half the respondents were born outside Tijuana's state of Baja California.

With respect to U.S. migratory experience, whereas the residents of smaller cities and rural areas reported an average of 2.4 total trips to the United States, the residents of large urban areas reported an average of only 0.6. Likewise, whereas 17% of the residents of small cities and towns and ranchos had a U.S. migrant parent and a third had at least one migrant sibling, only 12% of the urban dwellers had a migrant parent and only one fifth had a migrant sibling. These contrasts in access to family-based, migrant-related social capital are evident at the community level as well as the family level. Whereas the

Table 1. Means and Standard Deviations of the Variables Used in the Analysis of International Migration and Community Size

	Large Cities		Small Cities, Towns, and Ranchos	
	Mean	SD	Mean	SD
Demographic Background				
Age	36.4	14.03	37.5	14.7
Ever married	74.9	—	75.7	—
Number of minor children in the household	2.0	2.1	2.5	2.5
Human Capital				
Years of education	7.0	4.6	4.5	4.2
Months of labor-force experience	159.8	102.8	154.9	99.6
Social Capital in the Family				
Parent a prior U.S. migrant	12.4	—	17.0	—
Number of siblings who were prior U.S. migrants	19.6	—	33.0	—
Social Capital in the Community				
Migration-prevalence ratio	10.1	8.4	21.8	16.2
Occupational Sector (in previous year)				
Not in the labor force	5.7	—	3.0	—
Agricultural sector	6.4	—	46.9	—
Manufacturing sector	39.9	—	26.2	—
Service sector	31.0	—	14.9	—
Professional, managerial, transportation	17.0	—	9.1	—
Migratory Experience				
Internal migrant to the border	17.1	—	4.0	—
Internal migrant in Mexico	30.2	—	34.0	—
% Person-years in Tijuana	26.6	—	2.0	—
Number of U.S. trips	0.6	2.0	2.4	4.9
Mexican Economic and U.S. Policy Context				
Post-Bracero period (1965–1981)	44.2	—	52.9	—
Economic crisis (1982–1986)	18.6	—	17.8	—
Post-IRCA period (1987–1991)	16.3	—	14.7	—
New era immigration policy (1992–1998)	20.9	—	14.6	—
Dependent Variable				
% Taking first migratory trip	0.7	—	1.4	—
% Taking later migratory trip ^a	0.8	—	1.6	—
<i>N</i>	46,199		175,234	

Source: Mexican Migration Project.

^aSince it is possible to take more than one additional trip, these percentages are larger than those for first migratory trips.

migration-prevalence ratio averaged 21.8 in small cities, and towns, and ranchos, it was only 10.1 in large urban areas.

Individuals' positions in the labor market also differed between urban and rural areas, reflecting the more diversified economies of cities and the agricultural basis of rural

economies. In rural areas, nearly half the person-years in the sample were spent in agricultural work, whereas in urban areas, only 6.4% of the person-years were so distributed. Manufacturing work and service-sector work in rural areas accounted for 26% and 15% of the person-years, respectively. In large cities, however, the majority of person-years were spent employed in the manufacturing and service sectors. Furthermore, manufacturing and service work in rural economies may be different from that in cities, where it is more highly capitalized and better-paid work requiring different skills. Professional-managerial and transportation employment are both larger occupational sectors in large urban areas than in smaller cities, towns, and ranchos. These distributions of person-years are consistent with our expectations of the differences between urban and rural labor markets.

The essence of our argument is that structural conditions in large urban areas are not conducive to the cumulative causation of migration. We tested this hypothesis formally by estimating a discrete-time event-history model that predicts the likelihood of leaving on a first U.S. trip (see Table 2). In the first equation, we included all the demographic and social and human capital variables and period measures, along with indicators of whether the respondents lived in large urban areas, to distinguish them from those of smaller cities, rural towns, and ranchos. This test demonstrates that the likelihood of taking a first U.S. trip from large urban areas is significantly lower than it is in other types of places. Therefore, in the interaction model, we included the same variables, along with interactions between key variables and residence in a large urban setting. In this second model, the statistical significance of the indicator of living in a large urban community falls to insignificance, suggesting that the interactions account for most of the effect of living in an urban area.

We argue that in urban settings, the density and visibility of extrafamilial network ties are insufficient to permit a self-feeding accumulation of social capital at the community level. Furthermore, the more diversified labor market of large cities, with greater opportunities for low-skill employment, is likely to be an attractive alternative to international migration. This argument is supported by two main findings in the interaction model: the lack of effect of the migration-prevalence ratio at the levels that are most commonly observed in urban areas and the distinct effects of occupations in rural and urban areas. These results highlight the ways in which the social process of migration differ between urban and nonurban contexts and the specific effect of urban labor markets on the likelihood of migration.

Since the process of migration is fundamentally a social process, it is not surprising that the equation with interactions shows that in all contexts, international migration is driven by family-based social networks. Across the board, having a migrant parent or siblings strongly increases the likelihood of undertaking a first U.S. trip, an effect that intensifies in urban areas. In small cities, rural towns, and ranchos, the odds of taking a first U.S. trip are increased by a factor of 1.6 for those with a migrant parent (figured by taking the exponent of the associated logit regression coefficient). In large urban areas, having a migrant parent raises the odds even higher, by a factor of 2.5 (figured by taking the exponent of the product term, a ratio of odds ratios, and multiplying it by the odds for those in rural communities, thus isolating the odds for those in urban communities). Likewise, having at least one sibling who has migrated also increases the odds of out-migration, though slightly more in large cities than in small cities, rural towns, and ranchos (2.6 versus 1.4). Thus, within-family social capital operates powerfully to promote international migration at all levels of the urban hierarchy, but especially in urban communities where the stock of community-based migration experience is relatively low. Outside the family context, however, differences are more apparent.

Communities differ significantly in the capacity of community-level social capital to promote first U.S. migration. As expected, the greater the prevalence of migration experience within a community, the greater the odds of individual out-migration from small

Table 2. Coefficients From Discrete-Time Event-History Analysis Predicting First U.S. Trip

Variable	Equation With Interactions					
	Equation Without Interactions		Main Equation		Interactions With Urban Areas	
	<i>B</i>	Robust <i>SE</i>	<i>B</i>	Robust <i>SE</i>	<i>B</i>	Robust <i>SE</i>
Demographic Background						
Age	-0.003	0.02	-0.005	0.02	—	—
Age squared	-0.001**	0.0002	-0.001**	0.0002	—	—
Ever married	-0.09	0.06	-0.09	0.06	—	—
Number of minor children in the household	0.01	0.01	0.01	0.01	—	—
Human Capital						
Years of education	-0.04**	0.006	-0.04**	0.006	0.01	0.02
Months of labor-force experience	-0.002**	0.0007	-0.002**	0.001	-0.002*	0.001
Social Capital in the Family						
Parent a prior U.S. migrant	0.51**	0.05	0.46**	0.05	0.46**	0.12
Siblings were prior U.S. migrants	0.36**	0.02	0.36**	0.02	0.58**	0.10
Social Capital in the Community						
Migration-prevalence ratio (0–4)	-0.99*	0.15	-0.97**	0.18	0.13	0.31
5–9	-0.09	0.12	-0.11	0.12	0.11	0.31
10–14 (reference)	—	—	—	—	—	—
15–19	0.35**	0.10	0.35**	0.11	0.004	0.22
20–29	0.57**	0.13	0.59**	0.14	-0.10	0.26
30–39	0.95**	0.15	0.96**	0.16	—	—
40–59	0.74**	0.19	0.77**	0.20	—	—
60 or more	0.34*	0.15	0.36*	0.16	—	—
Occupational Sector (in previous year)						
Not in the labor force	0.69*	0.28	0.76*	0.32	-0.81	0.48
Agricultural sector (reference)	—	—	—	—	—	—
Manufacturing sector	0.61**	0.14	0.63**	0.15	-0.53**	0.25
Service sector	0.46*	0.20	0.57*	0.22	-1.02**	0.30
Professional, managerial, transportation	-1.51**	0.23	-1.68**	0.29	0.19	0.37

(continued)

cities, towns, and ranchos. The effect rises in a curvilinear fashion, peaking when 30% to 39% of the population has ever been to the United States. In urban areas, the effect of migration prevalence is not significantly different, but rarely reaches the levels at which migration prevalence has a powerful effect. Only when 15% to 19% or more of the urban population has ever been to the United States does the migration-prevalence ratio increase the likelihood that a man will take a first U.S. trip. Recall, however, that the mean migration-prevalence ratio for urban areas is 10.1, and Figure 1 shows that the levels exceeded 10 only between 1973 and 1988 in interior urban areas, although they were

(Table 2, continued)

Variable	Equation With Interactions					
	Equation Without Interactions		Main Equation		Interactions With Urban Areas	
	<i>B</i>	Robust <i>SE</i>	<i>B</i>	Robust <i>SE</i>	<i>B</i>	Robust <i>SE</i>
Internal Migratory Experience						
Internal migrant to the border	0.42**	0.09	0.42**	0.10	-0.11	0.41
Internal migrant in Mexico	0.03	0.06	-0.02	0.07	0.08	0.14
Internal border migrant surveyed in Tijuana	-0.69**	0.17	-0.37	0.43	—	—
Community Characteristics						
Large urban community	-0.44**	0.12	-0.16	0.29	—	—
Mexican Economic and U.S. Policy Context						
Post-Bracero period (1965–1981)	—	—	—	—	—	—
Economic crisis period (1982–1985)	0.07	0.08	0.04	0.09	0.24	0.16
IRCA period (1986–1991)	0.18	0.11	0.12	0.12	0.42*	0.21
New era immigration policy (1992–1998)	-0.02	0.13	-0.01	0.15	0.04	0.32
Intercept	-3.31**	0.26	-3.30**	0.27	—	—
-2 Log-Likelihood	23,369.2				23,299.0	
Chi-square	< .0001				< .0001	
<i>df</i>	26				43	
Number of Person-Years	147,741				147,741	

Source: Authors' calculations of data from the Mexican Migration Project.

* $p < .05$; ** $p < .01$

higher than 10 between 1970 and 1998 in Tijuana. When the equation was run without the Tijuana communities, the effect of the migration-prevalence ratio in urban areas was negative and approached significance at the $p < .10$ level. This finding clearly suggests that community-level migration prevalence lacks the influence that one would expect if the cumulative causation of migration were operating in large urban contexts. This is the first piece of evidence to suggest that there is a different migration dynamic in rural than in urban Mexico.

The lack of effect of the diffusion of migration-related social capital to members of the community can be explained in three ways: (1) the more complex stratification of urban society inhibits the formation of the relationships between migrants and nonmigrants that underlie cumulative causation, (2) the level of migration experience never reaches the apparently higher level necessary in urban areas for this process to feed back into the community and ignite the process of cumulative causation, or (3) although the migration experience exists within a community, few use that form of social capital to pursue international migration because there are more attractive employment options in the local labor market. Ideally, more detailed information on the social networks of migrants and nonmigrants would be used to test the first two explanations. Our results support the second explanation, that the level never approaches what is necessary to ignite

the process of cumulative causation. This explanation fits better than the first, since in those instances in which the migration-prevalence ratio exceeds 15, the probability of making a first trip is slightly higher. However, we cannot rule out the first explanation as also exerting a negative effect on the likelihood of migration, especially in nonborder urban areas. We explore the third explanation with data from men's labor histories.

Urban labor markets offer possibilities for improving one's socioeconomic status through wage employment in a variety of economic sectors, even for workers with relatively few skills. In contrast, residents of rural areas who have little education are employed mainly in agricultural work and have few better alternatives in rural labor markets. Therefore, it is not surprising that only employment in transportation or professional or managerial occupations significantly lowered the odds of migration from rural areas to a fifth of the odds of agricultural workers. Those who were employed in other occupations in rural labor markets had even higher odds than did agricultural workers (88% higher among manufacturing workers, 77% higher among service-sector workers, and 114% higher for those who were not in the labor force). In contrast, in large urban areas, where low-skill occupations are more plentiful, employment in manufacturing lowered the odds of taking a first trip to levels similar to those of agricultural workers. Furthermore, employment in the service sector, transportation, and professional or managerial occupations significantly lowered the odds of making a first migratory trip relative to those of agricultural workers (to between .64 and .23 of the odds of agricultural workers). This is our second piece of evidence to substantiate why the logic of migration from urban Mexico is distinct from that from rural Mexico.

Although we expected that urban residents would be more likely to use step-migration to the northern Mexican border as a means of gaining additional migration-related social capital, we found that they were no more likely to do so than were those from rural interior communities. In border cities, it is possible to buy the services of a coyote or acquire knowledge about migration after one develops contacts with knowledgeable friends and relatives. In fact, some migrants to the border are able to acquire local visas or border-crossing cards after they have worked for a time in the foreign-owned factories that are based in many border towns. We found that internal migratory experience to the border with a stay lasting at least one year significantly raised the odds of making a first migratory trip by a factor of 1.5 for residents of all communities. A trip to the border is different from having migrated to any place within Mexico, which did not increase the odds of making a first U.S. trip, regardless of the size of the place of origin.

It was surprising to find that there were few differences in the likelihood of taking a first U.S. trip in the different periods distinguished here. In particular, we expected that the economic crisis would push more migrants into the migration stream and that the IRCA reforms to U.S. migration laws would allow new migrants to enter the United States with relative ease. Only when we excluded the Tijuana communities did we find period effects (equations not shown), such that there were unequivocal increases in the odds of making a first U.S. trip from urban areas during the economic crisis and the IRCA period (1982–1992). This finding partially explains the temporary increase in the migration-prevalence ratio in urban areas that is seen in Figure 1.

In sum, we see a clear contrast in the effect of social capital and labor markets on the initiation of U.S. migration across urban and nonurban settings. While family-based migration-related social capital is influential in all communities, it has an added effect in urban areas, where access to migrant networks and information is relatively scarce. This finding concurs with our finding that community-based migration-related social capital significantly contributes to the probability of taking a first U.S. trip in nonurban areas, but that there is little effect of this type of social capital in urban areas, mostly because levels of migration experience rarely reach the critical point at which they might cause the self-feeding process of migration. In addition, more diversified urban labor markets

Table 3. Coefficients for Discrete-Time Event-History Analysis Predicting Later U.S. Trips

Variable	Main Equation		Interactions With Urban Areas	
	<i>B</i>	Robust <i>SE</i>	<i>B</i>	Robust <i>SE</i>
Demographic Background				
Age	0.01	0.02	—	—
Age squared	−0.0004	0.0003	—	—
Ever married	0.13	0.07	—	—
Number of minor children in the household	0.03*	0.01	—	—
Human Capital				
Years of education	−0.02*	0.01	0.05*	0.02
Months of labor-force experience	−0.01**	0.001	−0.003	0.002
Number of U.S. trips	0.15**	0.01	0.03	0.04
Social Capital in the Family				
Parent was a prior U.S. migrant	0.05	0.08	−0.09	0.14
Siblings were prior U.S. migrants	0.04*	0.02	0.34	0.18
Social Capital in the Community				
Migration-prevalence ratio (0–4)	−0.39	0.21	−0.38	0.55
5–9	0.07	0.16	0.13	0.31
10–14 (reference)	—	—	—	—
15–19	0.33*	0.14	−0.76**	0.20
20–29	0.50**	0.16	−0.89**	0.32
30–39	0.69**	0.19	—	—
40–59	0.72**	0.20	—	—
60 or more	0.67**	0.14	—	—
Occupational Sector (in previous year)				
Not in the labor force	−0.48	0.56	−2.23**	0.76
Agricultural sector (reference)	—	—	—	—
Manufacturing sector	−0.08	0.11	−0.41**	0.16
Service sector	−0.26	0.19	−0.65**	0.30
Professional, managerial, transportation	−1.49**	0.37	0.22	0.81

(continued)

account for the lower likelihood of first migration from urban areas, since there are more labor-market opportunities in cities that effectively compete with U.S. labor migration. Thus, both the lack of migration experience within urban communities and the more diversified urban labor markets inhibit the initiation of migration from these areas.

PREDICTING SUBSEQUENT TRIPS

Table 3 considers the process of taking a trip to the United States, given that at least one trip has already occurred. Once men have migrated to the United States and returned, they are changed in a significant way: they have acquired their own migration-specific human capital. That is, they have acquired personal knowledge about and experience in

(Table 3, continued)

Variable	Main Equation		Interactions With Urban Areas	
	<i>B</i>	Robust <i>SE</i>	<i>B</i>	Robust <i>SE</i>
Migratory Experience				
Internal migrant to the border	0.32	0.23	0.52	0.28
Internal migrant in Mexico	0.17	0.10	0.21	0.24
Internal border migrant surveyed in Tijuana	0.01	0.22	—	—
Mexican Economic and U.S. Policy Context				
Post-Bracero period (1965–1981)	—	—	—	—
Economic crisis period (1982–1985)	0.56**	0.10	0.27	0.18
IRCA period (1986–1991)	1.09**	0.15	0.13	0.24
New era immigration policy (1992–1998)	1.14**	0.14	–0.11	0.23
Intercept	–2.92**	0.46	—	—
–2 Log-Likelihood		33,269.4		
Chi-Square		< .0001		
<i>df</i>		44		
Number of Person-Years		68,620		

Source: Authors' calculations of data from the Mexican Migration Project.

* $p < .05$; ** $p < .01$

crossing the border, finding a job, and living and working in the United States without legal documents. Prior research found that this new human capital partially substitutes for social capital in predicting later U.S. trips (Massey and Espinosa 1997). Whereas a first-time migrant is totally dependent on the help of others to gain access to U.S. employment, veteran migrants can draw on their own knowledge and experience to cross the border and find a good job in the United States. As a result, on later trips, the relative importance of network connections, particularly within-family social capital, generally declines once measures of prior experience are controlled. In the present case, our measure of U.S. migratory experience was the number of prior U.S. trips, and as the estimates in Table 3 show, this indicator is highly significant in predicting the odds of taking another trip for residents of all communities. Other factors, however, distinguish career migrants from rural and urban communities.

In rural communities of the Mexican interior, the powerful feedback loop between community experience and individual migration behavior persists for later trips. However, this effect is reversed in large urban areas, with higher levels of migration prevalence actually deterring migrants from making further U.S. trips. This finding suggests that the injection of migrants' remittances into an urban community may actually increase the local demand for labor and thus reduce the pool of potential migrants, an effect that is worthy of further investigation. It provides a third piece of evidence that urban areas appear to lack the linkages that enable the cumulative causation of migration and that they may, in fact, deter it.

Among those who have ever migrated to the United States, the process of repeat migration is distinct from the process of first migration, such that family-based migration-related social capital no longer plays an important role in either the urban or

nonurban contexts. Instead, human capital, in the form of years of education and occupation, takes on a much more important role. Among migrants from small cities, towns, and ranchos, having more years of education deters additional migratory trips. In large urban areas, in contrast, the likelihood of taking additional U.S. trips increases with each year of education. Similarly, migrants from rural areas who spent the previous year in any of the predominantly low-skill occupational sectors (agriculture, service, and manufacturing) or were outside the labor force had similar odds of making additional U.S. trips, while those in more skilled professional, managerial, or transportation occupations were strongly deterred. In contrast, migrants from large urban areas who worked in predominantly low-skill occupations in the previous year were less likely to make an additional trip than were agricultural workers in urban areas. Once again, this finding suggests that levels of human capital distinguish urban and rural migration streams, such that rural migrants constitute a low-skill labor supply that is displaced from the rural labor market, while urban migrants make up a more select, highly educated, and skilled labor supply (Fussell 2004).

Having made a first U.S. trip clearly raises the odds of making subsequent U.S. trips, an effect that persisted throughout the period under investigation, regardless of the community of origin. Migrants were significantly more likely to take additional trips to the United States during the economic crisis than before, and their odds of doing so nearly doubled as the opportunity to legalize their status opened up during the IRCA period and after. While we did not differentiate between those who were able to obtain green cards and those who were not, there was ample opportunity to do so in the post-IRCA period for those who had ever been to the United States, which clearly had a positive effect on the odds of making additional U.S. trips. In this way, the process of cumulative causation of migration is reinforced through U.S. migration policy in rural and urban communities alike.

CONCLUSIONS

The theory of cumulative causation posits that once the level of migration in a community reaches a certain level, migration takes on a momentum of its own, independent of the structural forces that originally caused it, leading to "mass migration." We have deduced theoretical arguments to suggest that the principal mechanisms that promote international migration from urban areas are limited to family-level migration-related social capital. Furthermore, we have presented empirical evidence to show that the lack of effect of community-level migration-related social capital demonstrates that the principal feedback loop that propels cumulative causation is limited in urban areas by the low level of migration experience there and the deterrent effects of urban labor markets. As a result, we observed little or no increase in the prevalence of migration to the United States from urban Mexico over time that can be attributed to cumulative causation. In fact, higher levels of migration experience in a community appear to have some deterrent effect on later U.S. trips.

Although this lack of dynamism may be attributable, in part, to the weakness of community-level social ties, there is much to suggest that urban labor markets play a strong role in diminishing the motivations to migrate to the United States, particularly among those with low levels of human capital. In urban areas, manufacturing employment and service-sector employment are strong deterrents to international migration, suggesting that these types of occupations compare favorably with the uncertain risks of making a first or later U.S. trip. The new economics of migration emphasizes the importance of managing economic risks through international migration. While migration to the United States is an important means of diversifying sources of income within households in rural areas, in urban areas, there are a greater number of opportunities within the local economy to manage the risk of income shortages. The diversity of urban labor

markets allows household members to work in distinct sectors of the labor market, or at least for different employers, so that there is less risk of becoming unemployed simultaneously and thus of not maintaining an income stream. Hence, there is less need for urbanites to migrate to the United States, a conclusion that is supported by our findings.

These examples of differences between international migration from urban and rural communities do not question the theory of the cumulative causation of migration per se. Rather, they refine our conceptualization of the dynamics of mass migration to show how it may be inhibited by the greater size, social complexity, and economic heterogeneity of cities, which offer more complete markets for labor, insurance, capital, and credit and which therefore lessen many of the most powerful strategic motivations for international migration. Furthermore, they suggest that further research may focus more closely on the social networks and types of relationships that facilitate migration, the type of information that is exchanged within these networks, as well as the migration norms that shape the propensity of individuals in different types of origin communities to migrate.

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