



## Patterns of U.S. Migration from Mexico, the Caribbean, and Central America

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### ABSTRACT

Data from the Latin American Migration Project (LAMP) and the Mexican Migration Project (MMP) is combined to analyze migration patterns for Mexico, Puerto Rico, the Dominican Republic, Nicaragua, and Costa Rica. Drawing on samples of 31 communities, we document the frequency and timing of migration, the date, duration, destination, and documentation of the first and the most recent U.S. trips, the employment characteristics of migrants on those trips, and migrants' socioeconomic characteristics and selectivity. Results show that a significant share of the migration is unauthorized. The distinctive features separating Mexican migration from other flows are its concentration in farm labor, lack of educational selectivity, more frequent trips, and shorter durations of stay. All groups are showing a pronounced tendency to settle away from traditional destination areas. The analysis suggests a commonality of basic patterns and processes of migration structured and expressed in distinct ways according to context. This analysis shows that data from the LAMP and the MMP can be combined effectively to undertake comparative quantitative studies.

*Keywords:* 1. international migration, 2. migration patterns, 3. surveys, 4. Latin America, 5. Caribbean.

### RESUMEN

Se comparan datos de las encuestas Latin American Migration Project (LAMP) y Mexican Migration Project (MMP) para analizar patrones migratorios a los Estados Unidos desde México, Puerto Rico, República Dominicana, Nicaragua y Costa Rica. Usando muestras de 31 comunidades, se documenta la frecuencia y tiempos de migración, la fecha, duración, destino y documentación del primer y más reciente viaje a los Estados Unidos, las características laborales de los migrantes en estos viajes, y las características socioeconómicas y la selectividad de los migrantes. Los resultados muestran que una proporción significativa de la migración es indocumentada. Las características distintivas de la migración mexicana con respecto a otros flujos son su concentración en el trabajo agrícola, la falta de selectividad educativa, la mayor frecuencia de los viajes y tiempos de estancia más cortos. Todos los grupos muestran una pronunciada tendencia a establecerse lejos de las áreas de destino tradicionales. El análisis sugiere patrones y procesos de migración comunes, estructurados y expresados en maneras distintas de acuerdo al contexto. Este análisis muestra que los datos del LAMP y del MMP pueden conjugarse con efectividad para llevar a cabo estudios cuantitativos comparativos.

*Palabras clave:* 1. migración internacional, 2. patrones migratorios, 3. encuestas, 4. América Latina, 5. el Caribe.



## 6 MIGRACIONES INTERNACIONALES

The largest sustained migratory flow in the world occurs between Mexico and the United States. In the twentieth century, some 5.8 million Mexicans were admitted into the United States as legal permanent residents, with 2.2 million arriving in the 1990s alone. It is not surprising, therefore, that Mexican immigration has been much studied by researchers, not only those in Mexico and the United States, but throughout the world. Research has established a high rate of undocumented migration among Mexicans, a high circularity of movement, and a pattern of selectivity that historically has favored young, poorly educated males from smaller communities, who arrived to take unskilled, unstable jobs in the U.S. secondary labor market.

Inevitably, this profile colors what most observers see as “Latino” migration to the United States. After all, Mexicans constitute nearly 60% of all legal immigrants from Latin America and around 80% of those who arrive without documents (see Bean et al., 1998; Woodrow-Lafield 1998). Despite Mexico’s prominence among sending countries, however, many hundreds of thousands of immigrants come from other Latin American nations. According to data from the U.S. Immigration and Naturalization Service (2002), during the 1990s, some 527,000 legal immigrants arrived from Central America; another 505,000 came from the Spanish-speaking Caribbean, and 540,000 came from South America. During the 1990s, nearly 1.6 million Latin Americans entered the United States from countries *other than* Mexico.

Given these large numbers, generalizations about Latin American immigration based on the Mexican experience are likely to be misleading, and often, they are completely wrong. As Massey et al. (1998, 107) point out in their exhaustive review of the empirical literature on immigration to North America, “far too much of the research is centered in Mexico, which because of its unique relationship to the USA may be unrepresentative of broader patterns and trends.”

To address this gap in the research literature, the Latin American Migration Project (LAMP) was launched in 1998. Modeled on the Mexican Migration Project (MMP), which began in 1982, the explicit goal of the LAMP was to compile data on immigration from non-Mexican source countries by applying a similar blend of ethnographic and survey methods to sending communities throughout Latin America. To date the LAMP has made data publicly available from surveys of 21 communities in Puerto Rico, the Dominican Republic, Nicaragua, and Costa Rica, each accompanied by a purposive sample of settled out-migrants, who were located and interviewed in the United States. In this analysis, we draw upon these data to develop a profile of Caribbean and Central American migrants to the United States, comparing their patterns of migration with those of Mexican migrants.

*Sample Design*

The LAMP was designed to emulate the MMP and to produce comparable data. Although questionnaires and procedures were tailored to the specific circumstances of each country, to the extent possible investigators sought to standardize questionnaires while applying identical sampling methodologies and fieldwork procedures. As in the MMP, the LAMP compiled simple random samples of households within specific communities, deliberately chosen to represent a range of positions on the urban

*Table 1.* Communities Sampled by the Latin American Migration Project and the Mexican Migration Project, 1988-2002.

<i>Country and Community</i>	<i>Year of Survey</i>	<i>Approximate Population</i>	<i>Survey Site as Proportion of Community</i>	<i>Fraction</i>
<i>Mexico</i>				
Community 72	2000	41,000	0.11	0.15
Community 73	1999	23,000	0.12	0.34
Community 74	1999	9,000	0.27	0.27
Community 75	1999	1,000	1.00	0.40
Community 76	1999	427,000	0.01	0.19
Community 77	2000	226,000	<0.01	1.00
Community 78	2001	5,000	0.17	1.00
Community 79	2001	4,000	0.15	1.00
Community 80	2001	658,000	<0.01	0.28
Community 81	2001	1,000	0.40	1.00
<i>Puerto Rico</i>				
Community 1	1998	4,000	0.12	0.22
Community 2	1998	438,000	0.01	0.20
Community 3	1998	6,000	0.14	0.47
Community 4	1998	6,000	0.42	0.10
Community 5	1998	29,000	0.10	0.11
<i>Dominican Republic</i>				
Community 1	1999	7,500	0.27	0.29
Community 2	1999	21,000	0.06	0.34
Community 3	1999	2,193,000	<0.01	0.04
Community 4	1999	2,193,000	<0.01	0.12
Community 5	1999	108,000	0.03	0.16
Community 6	2000	43,000	0.06	0.22
Community 7	2000	10,000	0.33	0.22
<i>Nicaragua</i>				
Community 1	2000	14,000	0.56	0.13
Community 2	2000	4,000	1.00	0.25
Community 3	2002	10,000	0.33	0.29
Community 4	2002	6,000	0.62	0.26
Community 5	2002	18,000	0.37	0.15
<i>Costa Rica</i>				
Community 1	2000	7,000	0.35	0.36
Community 2	2002	6,000	0.55	0.25
Community 3	2002	36,000	0.14	0.16
Community 4	2002	21,000	0.18	0.20

*Note:* Population data is from the most recent census before the survey date.

continuum. Table 1 lists the communities sampled by the LAMP, along with recent samples gathered by the MMP. The MMP, of course, includes many more samples than the 10 shown in this table (currently, an additional 71); but the ten shown here are the most recently completed and contemporaneous with those of the LAMP.

As is evident from the second column, the samples compiled for Mexico, Puerto Rico, and the Dominican Republic run the gamut of population sizes, from small villages to large metropolitan areas. The communities sampled in Nicaragua and Costa Rica are restricted in their range, extending only from villages to small cities (further metropolitan surveys are planned in the future). Specific states represented in the Mexican surveys include Guanajuato and Durango, traditional sending states in Mexico's interior, as well as Chihuahua and Nuevo León, which are border states (though none of the communities was on the border itself). Although Puerto Rico is a commonwealth of the United States and its inhabitants, as U.S. citizens, are not considered immigrants when they move to the mainland, we sought to include Puerto Rico as a theoretically interesting case, representing the patterns of "international" migration that would result if there were no legal restrictions on movement.

Within cities and metropolitan areas, LAMP investigators selected and demarcated neighborhoods for study. The communities listed in Table 1 include one neighborhood in San Juan, Puerto Rico, as well as two in Santo Domingo, the Dominican Republic, and one each from the large Mexican cities of Chihuahua and Monterrey. Depending on the size of the settlement, the neighborhoods chosen for the sample constituted varying shares of the community-wide population. In large metropolitan settlements with populations over 100,000, the geographic area of the sample generally contained less than 1% of the area's total population, whereas in small villages, it sometimes covered the entire community (see Table 1, third column).

At each field site, investigators conducted a house-to-house enumeration of dwellings, taking care to include any structure that might conceivably be used as a residence. From the resulting list, a simple random sample of 100 to 200 households was selected within each location, which produced varying sampling fractions, depending on the total number of households in the study area. Sampling fractions ranged from a low value of 0.04 to a high of 1.0, with the latter indicating 100% coverage of the specified geographic area (see fourth column of Table 1). If a selected unit proved to be vacant or not a dwelling, it was discarded as ineligible and another potential unit was drawn from the list. By this method, investigators sought to ensure inclusion of poorer families in irregular housing.

A few months after the completion of the community surveys, field interviewers traveled to destinations in the United States to locate people from the origin communities who had settled abroad. Names, addresses, phone numbers, and other information of potential contacts were compiled during fieldwork in the sending communities, and these contacts provided points of entry into the destination communities. Beginning with these initial sources, fieldworkers assembled snowball samples using the chain-referral method, ultimately seeking to interview a number of households equal to around 10% of that of the origin community. To qualify for inclusion in the U.S. sample, a household had to be headed by someone born in one of the sending communities in the database.

Table 2 shows summary sampling statistics by source country. In Mexico, 1,658 households were surveyed out of the 4,881 households in the 10 geographic areas defined as "communities," yielding a sampling fraction of 34%. Only 1% of the households contacted declined to be interviewed. The five communities sampled in Puerto Rico yielded 585 households, 17% of all households in those communities. Although the refusal rate was slightly higher, at 3%, it is still low by conventional standards. The highest rates of refusal were encountered in the Dominican Republic, where just over 4% of households declined to participate in the survey. Across the seven Dominican communities, 904 households completed the survey for

*Table 2. Sampling Information for Surveys Conducted in Selected Countries by the Latin American Migration Project and the Mexican Migration Project.*

<i>Sampling Information</i>	<i>Mexico</i>	<i>Puerto Rico</i>	<i>Dominican Republic</i>	<i>Nicaragua</i>	<i>Costa Rica</i>
<i>Community Samples</i>					
Number of Communities	10	5	7	5	4
Number of Eligible Households	4,881	3,378	6,902	5,066	3,562
Number Interviewed	1,658	585	904	997	793
Sampling Fraction	34.0	17.3	13.1	19.7	22.3
Rejection Rate	1.0	2.9	4.3	3.2	3.2
<i>U.S. Samples</i>					
Number of Households	77	61	74	20	18
Number of Persons	324	319	370	86	79
<i>Total Sample</i>					
Number of Households	1,735	646	978	1,017	811
Number of Persons	10,568	2,878	5,913	6,892	4,394
Number of U.S. Migrants	1,677	759	737	349	257

*Note:* Rejection rate equals refusals divided by eligible households visited.

a sampling fraction of 13%. Likewise, 997 households were surveyed in the five Nicaraguan field sites, and 793 were interviewed in the four Costa Rican settings, yielding respective sampling fractions of 20% and 22%. In both cases, refusal rates were low, around 3%.

The middle panel of Table 2 shows the number of settled households and people surveyed within the United States. Because these samples are non-random, rates of refusal and sampling fractions are not shown. The number of people captured by the out-migrant surveys ranged from 79 for Costa Rica to 370 for the Dominican Republic. The bottom panel of the table shows the total sample compiled for each country. Mexico is largest, with 1,753 households and 10,568 people, followed by Nicaragua with 6,892 people and 1,017 households, the Dominican Republic with 5,913 and 978 households, and Costa Rica with 4,394 people and 811 households. The smallest sample was compiled for Puerto Rico: just 646 households and 2,878 people.

Given that the purpose of both the LAMP and the MMP was to study migration to the United States, the bottom line of the table shows the number of people from each country who had made at least one trip to the United States. In the Mexican sample, 1,677 had been to the United States, whereas in Puerto Rico and the Dominican Republic the figures were 759 and 737, respectively. In Nicaragua 349 people were current or former U.S. migrants, whereas in Costa Rica, the number was just 257.

### *Questionnaires and Interviewing*

The construction of questionnaires followed the ethnosurvey design of the Mexican Migration Project (see Massey, 1987, 1999). Data were gathered using a semi-structured instrument, which in organization was midway between the highly structured instrument of the survey researcher and the guided conversation of the ethnographer. Rigidly structured instruments and closed-form questions are excessively obtrusive for a study of undocumented migration, yet standardization is essential in order to collect comparable information across subjects.

The ethnosurvey represents a compromise that balances the goal of unobtrusive measurement with the need for standardization and quantification. It yields an interview that does not use a standard question-answer format. Careful training ensures that the interviewers understand the specific meaning of each piece of information that they are asked to collect. The interview schedule contains guiding questions, but it allows interviewers flexibility to collect the data in whatever way they believe works best, especially for sensitive information on wages and documentation. Thus, a non-standard interview produces a standard set of data.

Ethnosurvey data gathered in Mexico have been validated in a series of direct quantitative comparisons between estimates derived from the MMP and those derived from nationally representative surveys (Zenteno and Massey, 1999; Massey and Zenteno, 2000). In Mexico, at least, the ethnosurvey yields an accurate and robust profile of international migrants and their characteristics. It is better at capturing the migratory experience of family members who have been away for extended periods, and who thus fall outside the coverage of national surveys, which only collect information on current household residents.

The LAMP interview schedule is arranged in a series of tabular forms, with columns for different variables and rows referring variously to people, events, years, or other conceptual categories. While holding a natural conversation with the subject, the interviewer fills in the tabular form by soliciting the required information in ways that the situation seems to demand, using his or her judgment as to the timing and wording of questions and probes. Each form is organized around a specific topic, giving coherence to the conversation. Specialized follow-up interviews are included from time to time to elaborate particular themes of interest.

Whereas the MMP employed a fixed instrument across all field sites, consistency is not possible in the LAMP. Conditions, patterns of social and economic organization, and variables of interest, such as documentation, border crossing, and land tenure, differ from country to country. As a result, there is no single "LAMP Questionnaire" in the same way that there is a uniform MMP questionnaire. Rather, investigators developed a set of core tabular forms to create a "LAMP Template Questionnaire." This questionnaire was then adapted to each local situation to yield a standard body of data on international migration. (For copies of questionnaires and documentation, see the project website at <http://www.ssc.upenn.edu/lamp/>.)

The LAMP Template Questionnaire contains 16 tabular forms, lettered A through P, each covering a distinct topic. In this analysis, we rely mainly on data compiled using Forms A and D. Form A instructs interviewers to gather basic social and demographic information about the head of household, the spouse, all living children, irrespective of whether they currently live in the household or have left, and other individuals living in the household. Variables include sex, relation to head, household membership, year of birth, place of birth, marital status, education, and occupation. Form D applies to each person listed in Form A who has ever been to the United States. It records, for the first and for the most recent U.S. trips, the year of departure from country of origin, duration of stay, destination, occupation, and wage; it also ascertained the total number of U.S. trips ever taken, and the migrant's marital and legal status at the time of each trip.



Interviewing in Mexico most often occurred in the winter months because much of that country's migration is seasonal, and that is the time of year when circular or seasonal migrants are most likely to be home. This is in contrast to emigration from other countries (for example, virtually no Puerto Ricans, Dominicans, Nicaraguans, or Costa Ricans worked in agriculture, the most seasonal of industries). Thus, in those cases, we made no special efforts to concentrate interviewing at a particular time of year. Four of the five Puerto Rican community surveys were administered during the summer, and one during the autumn. Five of the Dominican communities were surveyed in the summer, one in the spring, and one in the winter. Two of the five Nicaraguan community surveys took place in the spring and three in the summer; and in Costa Rica, one survey was fielded in the spring and three others in the summer. The years of each survey are shown in Table 1. In general, fieldwork teams spent at least one month at each field site during the data collection stage. The survey interviews were typically complemented by ethnographic research to ensure a deeper knowledge of each community, and this field research often continued for longer periods.

#### *Level of U.S. Migration*

In their analysis of data from the Mexican Migration Project, Massey and Phillips (1999) documented the very high incidence of out-migration from Mexican communities to the United States, particularly from the states of western Mexico, which is the traditional heartland for migration to the United States (Durand, Massey, and Zenteno, 2001). They found that 20% of all people aged 15 to 64 had made at least one U.S. trip and that 41% of all household heads had been north of the border. In comparing MMP estimates with those derived from representative surveys, however, Zenteno and Massey (1999) found that the former overstated the frequency of U.S. migration by 20%. To account for this overstatement, Massey and Phillips deflated their estimates by that percentage to conclude that around 16% of all Mexicans of labor-force age, and 32% of all household heads, had been to the United States at some point.

Based on these figures, the authors opined, "Mexicans can count on a substantial reserve of migration-specific human capital to enable their continued movement back and forth across the border." In other words, Mexico contains a lot of people with knowledge and experience relevant to crossing the border, finding a job, and living and working in the United States. What has always been unclear, however, is whether Mexico constitutes a special case in terms of its prevalence of emigration, or

whether other countries in the Western Hemisphere display similarly elevated frequencies of U.S. migration.

The top panel of Table 3 addresses this issue by showing the relative incidence of U.S. migration among people, household heads, and households in different source countries. In computing these and all remaining figures, we employed sampling weights equal to the inverse of the sampling fraction. We did so to ensure that sending- and receiving-community samples were combined appropriately according to their relative sizes, using a method developed by Massey and Parrado (1994) to estimate the U.S. sampling fractions and weights (see also Massey and Espinosa, 1997).

*Table 3.* Frequency of Trips Taken to the United States from Communities Sampled by the Latin American Migration Project and the Mexican Migration Project.

<i>Variable</i>	<i>Mexico</i>	<i>Puerto Rico</i>	<i>Dominican Republic</i>	<i>Nicaragua</i>	<i>Costa Rica</i>
<i>Incidence of Migration</i>					
<i>Persons</i>					
% Persons Ever Migrated	20.2	28.8	18.1	5.9	5.2
Number of Persons in Sample	10,568	2,878	5,913	6,892	4,394
<i>Households</i>					
% Heads Ever Migrated	44.4	46.3	29.7	10.5	9.7
% Households with Migrants	55.8	57.1	45.5	19.5	17.0
% Households Recent Migrants	30.4	9.1	13.0	6.8	10.4
Number of Households	1,735	646	978	1,017	811
<i>Total U.S. Trips</i>					
1 Trip	68.3	83.7	85.0	90.1	77.3
2 Trips	15.8	12.2	10.7	7.5	13.3
3 + Trips	15.9	4.0	4.2	2.5	9.5
<i>Expected Net Returns</i>					
Per Capita Income	\$9,000	\$11,500	\$6,100	\$2,500	\$8,500
Amount Under U.S.					
Income	\$28,600	\$26,100	\$31,500	\$35,100	\$29,100
Probability of					
Successful Entry	0.83	1.00	0.94	0.89	0.94
Expected Income Gain	\$23,783	\$26,100	\$29,600	\$31,239	\$27,353
Costs of Migration	\$1,282	\$300	\$627	\$1,903	\$2,967
Expected Net Return	\$22,456	\$25,800	\$28,983	\$29,336	\$24,387

Use of these weights eliminates bias emanating from the use of different sampling fractions in different communities. Naturally, they do

not yield a representative picture of the total population in each country—just a representative snapshot of the combined population of the sample communities we selected. One problem in comparing results across countries is that there are cross-national differences in the distribution of sample communities by size. Although the results reported below are for the total sample, in order to make sure that observed results were not artifacts of differences in the relative number of rural and urban communities sampled, we repeated all calculations using data only for communities of 10,000 or fewer inhabitants. (For the alternative tables, please send a request to lamp@pop.upenn.edu.) Here we simply note differences between the full and this “rural” sample.

Given Puerto Ricans’ unhindered access to the U.S. mainland, it is perhaps unsurprising to find that the Puerto Rican samples evince the highest frequency of U.S. migration. Of all people in the sample, 29% had been to the United States, and among household heads, 46% had had some experience in the United States, and 57% of households contained at least one U.S. migrant. It is also clear, however, that the most dynamic phase of migration occurred some time ago. Only 9% of households contained a recent U.S. migrant (defined as someone who had resided or worked in the United States within the five years prior to the survey). This pattern is consistent with known trends in Puerto Rico–U.S. migration. After reaching its peak in the 1940s and 1950s, Puerto Rican out-migration fell by more than 50% during the 1960s, and again by two-thirds in the 1970s, recovering only partially during the 1980s (Rivera-Bátiz and Santiago, 1996).

The second-highest frequency of U.S. migration is observed in Mexico, where 20% of all people and 44% of household heads had been to the United States, and 56% of all households contained at least one member with U.S. experience. These frequencies approximate those obtained by Massey and Phillips (1999) using prior MMP samples. They also nearly equal the frequencies observed among Puerto Rican households, but unlike migrants from Puerto Rico, those from Mexico have much fresher U.S. experience. Indeed, 30% of all Mexican households contained someone who had been to the United States within the past five years, more than three times the frequency observed among Puerto Rican households.

Next in terms of migration incidence is the Dominican Republic. Among Dominicans, 18% of all people and 30% of household heads had at least some U.S. experience, and 46% of all households contained someone who had been to the United States. Although these figures are lower than those observed for Puerto Rico, the incidence of current migrants is once again higher. Whereas 9% of Puerto Rican households contained someone who had been to the United States in the five years prior to the survey, the figure was 13% among Dominican households.

Nicaragua and Costa Rica have much lower but quite similar frequencies of U.S. migration. Around 6% of people in the Nicaraguan samples and 5% of those in the Costa Rican samples had U.S. migratory experience. Among household heads, the respective frequencies were 11% and 10%; and roughly one-fifth of all households in both data sets contained a U.S. migrant (20% in Nicaragua and 17% in Costa Rica). When current migratory experience is considered, moreover, we see that around 10% of Costa Rican households contained someone who had been to the United States in the five years prior to the survey, as did 7% of Nicaraguan households.

These results do not change much when we restrict our attention to rural communities of 10,000 or fewer inhabitants. The overall proportion of migrants is generally higher in small communities—rising to 33% for Puerto Ricans, 27% for Mexicans and 19% for Dominicans—but as these numbers suggest, the relative ordering among these countries remains much the same. The only difference is that when computations are carried out for rural communities alone, the relative frequency of Costa Rican migrants increases slightly to exceed that of migrants from Nicaragua.

The second panel of Table 3 shows the distribution of migrants by number of U.S. trips ever taken. To be considered as having made a trip, a person had to have resided in the United States; and a trip only ended when the migrant returned home to live. Across all countries, the modal number of trips was one: Most migrants had been to the United States just once in their lives. Among Mexicans, however, roughly one-third made at least two trips, and 16% had made three or more trips to the United States. At the other extreme are Puerto Ricans, Dominicans, and Nicaraguans, among whom just 16% or fewer had made two or more trips, and practically none had made three or more. Costa Ricans were in-between: around one quarter (23%) had made more than one trip and nearly 10% had made three or more. Thus, Mexicans clearly exhibit the longest tail in the distribution of trips, followed by Costa Ricans, suggesting at least some recurrent seasonal migration from both places. When the computations are redone using data from rural communities alone, only the distribution for Mexico changes significantly: The relative number of single trips increases while the frequency of multiple (three or more) trips is reduced.

A rough sense of the potential economic gains to be achieved through emigration can be ascertained by considering each country's per-capita income relative to that of the United States. In order to control for differences in the cost of living across countries, we express per-capita incomes using dollars adjusted for purchasing power parity (see CIA, 2003). As shown in the bottom panel of Table 3, all countries displayed per-capita annual incomes well below the \$37,600 observed in the United States in 2002. The smallest income gap was observed for inhabitants of the commonwealth of

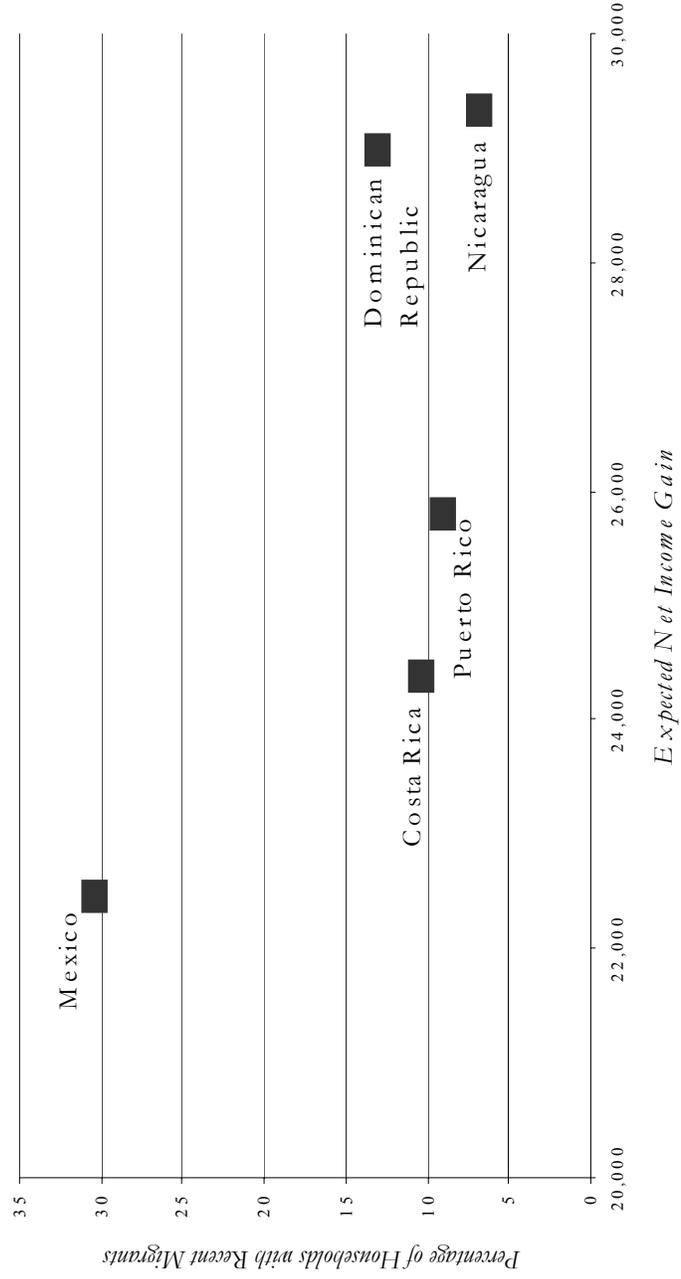
Puerto Rico, who earned \$26,100 per year less than their fellow U.S. citizens on the mainland. The income gap for Mexicans was \$ 28,600, compared with differences of \$29,100 in Costa Rica, \$31,500 in the Dominican Republic, and \$ 35,100 in Nicaragua.

Considering income by itself, migrants from all countries could expect to achieve a substantial premium by going to the United States. According to neoclassical economics, however, migrants not only consider potentially higher earnings in deciding whether to migrate but also factor in the probability of being able to gain entry to the United States and find a job there (see Todaro and Maruszko, 1986; Massey and García España, 1987). For documented migrants, the probability of gaining entry to the United States is 1.0: They can enter the country at will. Undocumented migrants, however, must consider whether they will be able to overcome barriers placed in their path by agencies such as the U.S. Department of State, the Immigration and Naturalization Service, and the Border Patrol. Both the MMP and the LAMP included questions about how many times respondents were apprehended while trying to enter the United States illegally, and whether or not they were ultimately successful. These data allow us to estimate the probability of arrest while attempting undocumented entry, following the method of Massey and Singer (1995).

If we let  $p$  represent this empirical estimate of the apprehension probability, then the probability of achieving a successful entry is  $1-p$ . To determine the overall probability of entry, we assume that all undocumented migrants experience an entry probability of  $1-p$  and all documented migrants an entry probability of 1. We then average across migrants to determine the overall probability of entry (bottom panel of Table 3). In general, the probability of achieving a successful entry was quite high, ranging from a low of .83 among Mexicans to a high of .94 among Dominicans and Costa Ricans, with a figure of 1.0 applying to Puerto Ricans, by definition. Multiplying the probability of entry by the income differential yields the expected improvement in income to be achieved by migrating to the United States.

From this potential gain, however, one must subtract the costs of migration to derive the net return from international migration (Todaro and Maruszko, 1987). The ethnosurvey also asked how much money undocumented respondents paid to smugglers to bring them into the United States. For all undocumented migrants, we calculated the total costs of international migration as being the reported smugglers' fees (if any) plus \$300 in travel costs (roughly the price of the cheapest airfare currently available from San Juan or Santo Domingo to New York, Guadalajara to Los Angeles, and San Jose or Managua to Los Angeles). Documented migrants, of course, pay no smugglers' fees. Thus, the cost of entry for Puerto Ricans was simply the \$300 for airfare to New

Figure 1. Frequency of Recent Migration, by Expected Net Gain in Income.





York, whereas the average cost of entry for migrants from other countries was much higher because of smuggling costs. Thus, the expected cost of migration was \$627 for Dominicans, \$1,282 for Mexicans, \$1,903 for Nicaraguans, and \$2,967 for Costa Ricans.

Subtracting these costs from the expected gains yields a very approximate estimate of the expected financial returns to U.S. migration, given the distribution of documented and undocumented migrants observed in each country and the reported probabilities and costs of entry for those without documents. The last line in Table 3 suggests that undertaking migration to the United States pays off handsomely for people in all sending regions. The expected net return to international movement ranged from \$22,456 for those contemplating a trip from Mexico to \$29,336 for those thinking about leaving Nicaragua.

According to the neoclassical model, the expected return should be the primary determinant of emigration. Figure 1 therefore plots the frequency of household migration over the five years prior to the survey versus the expected net return to U.S. migration. If migration were only a product of the forces specified by neoclassical economics, then we would expect an upwardly sloping distribution of points. Yet the figure shows that rates of U.S. migration are not strongly associated with expected net returns, suggesting that other causal mechanisms are likely involved (see Massey *et al.*, 1998, for a review of alternative theoretical mechanisms).

Whereas Mexicans face the smallest net return to U.S. migration, they had by far the highest frequency of recent migration to that country. Likewise, Nicaraguans faced the highest expected return but evinced the lowest rate of current migration, less than that of the Dominican Republic and very near that of Puerto Ricans. What perhaps most perplexing from a purely neoclassical point of view is why Puerto Rican migration has not continued at a high rate given the large potential gains to be had from moving to the mainland.

#### *Characteristics of First Trip*

We now turn to the circumstances of an individual's first trip to the United States. Table 4 shows the year, duration, destination, and documentation for all first U.S. trips. The average year of first migration indicates the relative age of the migration stream. According to this measure, Puerto Rico represents by far the earliest migration stream. With a mean year of 1973 and an average departure year of 1974, it has been a quarter century since the typical Puerto Rican began migrating to the U.S. mainland. The modal year was 1988, suggesting a peak well in the past, and the earliest recorded departure was in 1934!

Table 4. Characteristics of First Trip to the United States.

<i>Variable</i>	<i>Mexico</i>	<i>Puerto Rico</i>	<i>Dominican Republic</i>	<i>Nicaragua</i>	<i>Costa Rica</i>
<i>Year</i>					
First Recorded	1942	1934	1950	1933	1953
Modal	1998	1988	1994	1988	1999
Average	1986	1973	1985	1989	1991
Median	1989	1974	1987	1989	1994
<i>Trip Duration</i>					
0-5 Months	7.5%	2.4%	7.9%	6.1%	5.9%
6-11 Months	13.1	2.8	4.1	1.7	10.1
12-23 Months	15.8	6.2	3.3	10.1	21.3
24-59 Months	24.4	20.6	11.4	13.1	30.6
60 + Months	39.2	68.0	73.3	69.0	32.0
Average	72	166	142	107	62
<i>Documentation</i>					
Documented	26.6%	100.0%	74.5%	13.7%	14.6%
Undocumented	73.4	0.0	25.5	86.3	85.4
<i>Destination</i>					
Northeast	10.0%	86.1%	97.1%	8.4%	53.5%
Midwest	33.7	5.5	0.3	0.5	4.0
South	24.9	6.7	2.1	67.3	29.9
West	31.4	1.7	0.4	23.7	12.6
<i>Number of Migrants</i>					
	1,674	758	736	349	256

Like Puerto Ricans, Mexicans began migrating to the United States quite early: The first recorded trip was in 1942, which happens to be the first year of labor recruitment under the Bracero Program (Calavita, 1992). Rather than cresting and falling like Puerto Rican migration, however, international movement from Mexico has continued to develop and expand over time. The modal year for Mexican migration was 1998, meaning that expansion has continued to the present. Likewise, the median year of 1989 implies that about half of all Mexicans migrants in this sample left during the 1990s.

Nicaraguan migration to the United States also began very early, with the first trip recorded in 1933, during the occupation of the country by U.S. Marines. As in Mexico, however, the bulk of the trips occurred much later. The modal year of first migration was 1988, which nearly coincides with the average year of 1989 (both the mean and median year), indicating a distinct peak of departures in the late 1980s, corresponding to the culmination of the U.S.-sponsored Contra War (Lundquist and Massey, 2003).

Although the first recorded Dominican move to the United States



also occurred quite early (in 1950), there were not many departures until the 1960s (Georges, 1990). The mean year of first trip was 1985 and the median was 1987, yet the mode did not occur until 1994, indicating that growth in migration occurred well into the 1990s. Emigration from Costa Rica is even more recent, beginning only in 1953 and reaching its median in 1994, meaning that half of all migrants left on their first trip during the mid- to late 1990s. Very similar results are found when computations are carried out for rural communities alone.

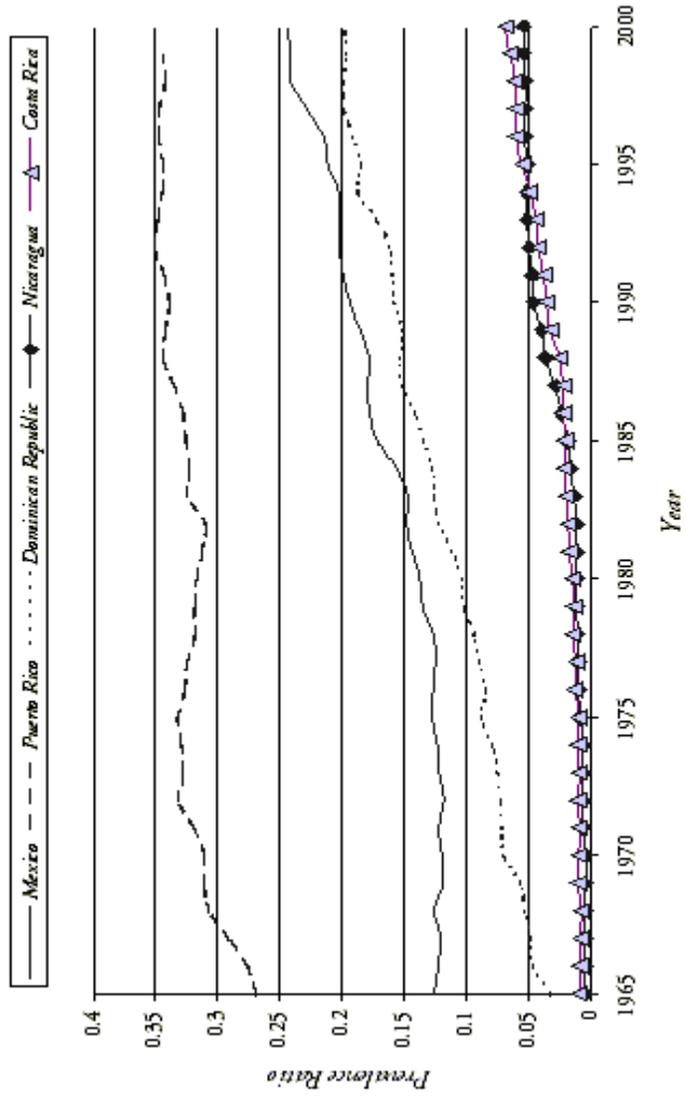
One way of considering the evolution of U.S. migration is to consider trends in the migration prevalence ratio. As defined by Massey, Goldring, and Durand (1994), the prevalence ratio for any year  $t$  is constructed by dividing the number of people in the sample who had taken an initial U.S. trip on or before year  $t$  by the total number of people in the survey who were aged 15 or over in that year. Over time, the ratio goes down if the number of people turning age 15 exceeds the number migrating in a given year, and it moves upward if the number migrating exceeds the number reaching this age.

Figure 2 graphs trends in migration prevalence from 1965 through 2000 in the five countries under study. Obviously, the trajectory is fairly flat for Puerto Ricans, whose experience was accumulated mostly before 1965. The ratio is already 27% when the series begins, it rises to around 34% by 1973, and then declines slowly to around 31% in 1984. It then rises again to 35% in 1992, where it has more-or-less remained. Although the cumulative stock of U.S. experience may be greatest among Puerto Ricans, therefore, it has grown little over the past 35 years.

In contrast, the trajectory for Mexicans is static until the mid-1970s, followed by a sustained increase, and a notable acceleration in the prevalence ratio after 1994, when Mexico simultaneously joined the North American Free Trade Agreement and experienced a severe currency crisis. The acceleration leveled off at a prevalence of 25% during the late 1990s.

The trajectory of Dominican migration prevalence is also one of sustained increase, though it began from a lower level than the Mexican samples. Before 1965, there was little Dominican emigration: Only approximately 3% of adults in the sample communities had ever been to the United States. Dominican migration mushroomed as the U.S. government undertook deliberate actions to promote the emigration for political reasons. In his memoirs, U.S. Ambassador John B. Martin (1966) relates how top U.S. officials requested that he speed up visa-processing and loosen restrictions to allow more emigration in order to reduce political tensions after the assassination of dictator Rafael Trujillo. This used emigration essentially as a "safety valve" to defuse political tensions (see also Georges, 1990; Grasmuck and Pessar, 1991). This intervention was followed in 1965 by a full-scale invasion by U.S. armed

Figure 2. Prevalence of U.S. Migration, by Year.



forces, whereupon out-migration accelerated. From a prevalence ratio of around 5% in 1969, it rose steadily, peaking at around 20% by the late 1990s, only 5 points below the much older outflow from Mexico.

There is little evidence of significant out-migration from the two Central American nations until around 1980. The key event appears to have been the fall of Nicaragua's Somoza regime in 1979. After the Reagan Administration came to power in 1981, it began to fund a proxy army of Nicaraguan expatriates to challenge the Soviet-backed Sandinista regime. As the Contra War escalated, the number of out-migrants from Central America surged, reaching 109,000 in 1989 and 146,000 in 1990 (U.S. Immigration and Naturalization Service, 2002). As the graph indicates, Nicaraguan prevalence increases sharply in about 1986 and quickly doubles from 2.5% to 5% by 1990, whereupon it stabilizes and remains more-or-less fixed through 2000. In Costa Rica, prevalence began to rise around 1988-1989, and rather than peaking at 5%, it continued to grow throughout the 1990s, reaching 7% by the end of the decade.

So far, the LAMP data reveal clear differences in the timing of U.S. migration from the countries under study. Puerto Rican migration built to a high level early on, before 1965, and then stagnated; Mexican and Dominican migration grew steadily after 1965 to reach relatively high levels by 2000; and Costa Rican and Nicaraguan migration only began in the 1980s and has not yet reached a high level (15% or greater) of prevalence. The second panel of Table 4 also reveals clear differences in the duration of U.S. trips.

At the low end of the duration spectrum, the first U.S. trip for 8% of Mexicans lasted less than 6 months, and for another 13%, just six months to a year. Thus, roughly one-fifth of all migrants came and went in fewer than 12 months. In contrast, this was true for only 5% of Puerto Ricans, 8% of Nicaraguans, and 12% of Dominicans. Costa Ricans were closer to Mexicans, with 16% making a first trip of less than one year; and they were even more likely than Mexicans to take a trip of one to two years. Whereas the first trip for 21% of Costa Ricans lasted 12 to 23 months, that was the case for only 16% of Mexicans, 3% of Dominicans, 6% of Puerto Ricans, and 10% of Nicaraguans.

Corresponding contrasts are found at the other end of the duration distribution. Whereas 39% of Mexicans and 32% of Costa Ricans stayed at least five years (60 months) on their first U.S. trip, the figure was 68% for Puerto Ricans, 69% for Nicaraguans, and 73% for Dominicans. These differences in the distribution of trips by duration yield rather large differences in average trip lengths. Whereas the average Costa Rican stayed just 62 months (5.2 years) on his or her first U.S. trip and the average Mexican remained 72 months (6.0 years), the typical Puerto Rican stayed 166 months (13.8 years), the average Dominican stayed 142 months (11.8 years), and

the average Nicaraguan, 107 months (8.9 years). In other words, the overwhelming majority of Dominicans, Nicaraguans, and Puerto Ricans were long-term settlers who spent at least three years abroad on their initial trip, but a substantial share of Mexicans and Costa Ricans (36%-37%) quickly came and went on trips of two years or less. These conclusions change little when rural communities are considered by themselves.

The third panel of Table 4 reports on the documentation held by migrants on their first trip to the United States. Corresponding to the above contrast in durations of stay, 73% of Mexicans and 85% of Costa Ricans lacked legal papers on their initial U.S. trip. Among the remaining countries, the mean length of first trips is directly associated with the percentage of migrants holding legal documents. Duration of stay is longest for Puerto Ricans, all of whom are documented, followed by Dominicans, 75% of whom are documented, and then by Nicaraguans, only 14% of whom are documented.

Although the Costa Rican and Nicaraguan samples display a similar low percentage of undocumented migrants, these groups entered the country by different channels. Whereas 20% of undocumented Costa Ricans entered the United States through a clandestine border crossing, only 10% of Nicaraguans did so (data not shown). When the figures were re-computed for rural communities only, we found that the share of undocumented rose slightly among Costa Ricans, but overall patterns and conclusions remained much the same for both Costa Ricans and Nicaraguans. Thus, the balance of both groups presumably entered on a tourist visa and overstayed it, but during the 1980s, Reagan Administration officials were turning a blind eye to the entry of Nicaraguans fleeing the Sandinistas, most of whom headed to Miami to join other conservative Latin Americans in exile. In contrast, Costa Ricans overstayed visas to work in other regions of the country and did not receive the benefit of a blind eye.

This interpretation is consistent with the data on region of destination, which is presented in the last panel of Table 4. Whereas two-thirds of Nicaraguans went to the South (Florida) on their first U.S. trip, only 30% of Costa Ricans did so. In contrast, 54% of the Costa Ricans went to the Northeast, compared with just 8% of Nicaraguans. Costa Ricans were also about half as likely as Nicaraguans to go to the West (13% compared with 24%).

The first trips of Dominicans and Puerto Ricans were overwhelmingly focused on the northeastern United States, with 97% of the former and 86% of the latter heading to this region (most to the New York metropolitan area). Most of the small balance was concentrated in the South, again Miami. By far the most even distribution across regions was that of Mexicans. Roughly one-third went to the West on their first trip (mainly to Los Angeles and other California destinations), one-

third went to the Midwest (mainly Chicago and northwestern Indiana), a quarter went to the South (mainly Texas but also Florida), and a tenth went to the Northeast (mainly the New York metropolitan area). Re-computation of the figures for rural communities only heightened the regional skew already evident in each distribution.

### *Characteristics of Most Recent Trip*

Table 5 continues the analysis of country-specific migration patterns by considering the characteristics of migrants on their latest U.S. trip, looking only at migrants who made at least two trips. One third of Mexican migrants and one quarter of Costa Ricans fall into this category, but only 16% of Puerto Ricans, 15% of Dominicans, and 10% of Nicaraguans do so (Table 4). Thus, the patterns described in Table 5 apply to far more Mexicans and Costa Ricans than to members of the other three groups.

*Table 5.* Characteristics of Most Recent Trip to the United States.

<i>Variable</i>	<i>Mexico</i>	<i>Puerto Rico</i>	<i>Dominican Republic</i>	<i>Nicaragua</i>	<i>Costa Rica</i>
<i>Year</i>					
Years Since First Trip	6	10	6	7	6
Modal Year	1999	1990	1999	2001	2000
Average Year	1992	1983	1991	1996	1997
Median Year	1997	1986	1993	1999	1999
<i>Duration</i>					
0-5 Months	11.2%	1.2%	14.0%	19.4%	6.1%
6-11 Months	34.0	4.5	13.3	10.0	30.3
12-23 Months	20.6	11.9	11.9	24.2	18.2
24-59 Months	16.9	27.9	8.6	8.1	35.4
60+ Months	17.2	54.5	52.2	38.4	10.1
Average	35	138	99	63	30
<i>Documentation</i>					
Documented	52.6%	100.0%	83.3%	57.8%	22.6%
Undocumented	47.4	0.0%	16.7	42.2	77.4
<i>Destination</i>					
Northeast	26.8%	86.3%	95.5%	16.0%	53.7%
Midwest	25.5	2.6	0.6	1.9	4.5
South	26.7	5.7	3.9	44.1	38.1
West	21.0	5.3	0.0	38.0	3.7
Number with 2+ trips	504	99	82	40	59

For all countries except Puerto Rico, the time between the first and most recent trip averaged six or seven years. The gap of ten years observed for Puerto Ricans implies that they are not only prone to take a single long trip, but those who take additional trips are quite likely to do so very infrequently. Likewise, for all groups except Puerto Ricans, the modal year of most recent U.S. trip was in 1999, 2000, or 2001, indicating that migration has continued to accelerate up to the present time. The modal year for Puerto Ricans was 10 years ago, and the median was 1986, meaning that half of all most recent trips occurred before that date. Thus, many Puerto Ricans with U.S. experience appear to be “retired” migrants. In contrast, the median year of departure for Nicaraguans and Costa Ricans was 1999, and for Mexicans, 1997, underscoring the fact that migration from these sources is continuing and that the latest trips were quite recent indeed (with half occurring within two or three years of the survey date).

Those who make multiple trips are self-selected into the category of recurrent migrants. Hence, the average length of stay drops across the board between first and most recent trips (and these figures are not corrected for right-hand censoring). Mean trip length was cut in half to 35 months (2.9 years) for Mexicans and to 30 months (2.5 years) for Costa Ricans, but it was also substantially reduced for other groups, though not to the same extent. The average length of most recent trip was 138 months (11.5 years) for Puerto Ricans, 99 months (8.3 years) for Dominicans, and 63 months (5.3 years) for Nicaraguans. The adoption of a strategy of recurrent migration among those with multiple trips is suggested by the fact that the duration of the most recent U.S. visit was under one year for 44% of Mexicans, 36% of Costa Ricans, 19% of Nicaraguans, and 27% of Dominicans. Puerto Ricans again stand out: For the most recent trips, only 6% of those surveyed took one of such short duration.

Between the first and most recent U.S. trip, most of the groups also displayed a significant shift toward legality. Puerto Ricans, of course, are “documented” by virtue of their birth, so there is no change over time. Among Mexicans, whereas only 27% were documented on their first trip, 53% had achieved this status by the most recent trip. Although three-quarters of Dominicans were already documented on their initial U.S. trip (reflecting the generosity of the U.S. ambassador), the figure had increased to 83% by the time of the most recent trip. Startling was the increase in documentation among Nicaraguans, which shifted from 14% to 58%, perhaps reflecting the sympathy of the Reagan administration. In contrast, the share of Costa Ricans holding documents rose only from 15% to 23%, perhaps because they lacked the cachet of being political refugees from communist aggression.

There are also contrasting patterns of change with respect to region of

destination. Dominicans and Puerto Ricans continued to migrate overwhelming to the northeastern United States, with little change between first and most recent trips. In stark contrast, Mexicans display a significant shift away from traditional destinations in the South (Texas) and West (California), and on the most recent trip, they gravitated toward new destinations in the Northeast and Midwest. Between first and most recent trips, the share going to the Northeast shifts from 10% to 27% and the percentage destined for the Midwest climbs from 26% to 34%. Clearly, as they accumulate U.S. experience, the geography of Mexican immigration diversifies. This finding is consistent with an analysis of census data by Durand, Massey, and Charvet (1999).

A similar diversification of destinations is observed for Nicaraguans. Between first and most recent trips, the South (Miami) declines from 67% to 44% of all destinations, whereas the West increases from 23% to 38% and the Northeast doubles from 8% to 16%. In contrast, relative stability characterizes the geographic pattern of Costa Rican migration. Although the percentage of migrants going to the South increased slightly from 30% on first trips to 38% on the latest trips, the percentage destined for the Northeast remained the same at 54%.

### *Employment Characteristics and Mobility*

The uniquely seasonal character of Mexican migration is underscored by the occupational distributions shown in Table 6. In the top panel, roughly one quarter of all Mexicans worked in agriculture on their first trip to the United States, and the figure increased to one third on the most recent trip, as those who self-selected into recurrent migration disproportionately adopted the role of migrant farm workers. The percentage of agricultural workers never exceeded 5% in any other country group on either first or most recent trip to the United States. This category includes all farm workers and manual laborers in agriculture, animal husbandry, or fisheries.<sup>1</sup> Interestingly,

<sup>1</sup> Agricultural foremen were defined as skilled workers, a group that also included professionals, technicians and educators; occupations in the arts, theater, and sports; administrators and directors; manufacturing and skilled repair workers; heavy equipment operators and transportation workers (except aides); all kinds of supervisors, administrative workers (except office helpers and those who perform simple or routine tasks); sales workers (except aides and helpers); security personnel; and an assortment of personal-service workers, including innkeepers, bartenders, waiters, launderers, pressers, barbers, tour guides, and funeral home workers, among others. Unskilled occupations include all aides and helpers, unskilled workers and apprentices in manufacturing or repair; administrative workers who perform simple or routine tasks, ambulatory workers and vendors; domestic-service workers, and an assortment of personal-service workers, which includes doormen, elevator operators, cleaning workers, gardeners, movers, dishwashers, and parking lot attendants, among others.

focusing only on communities of 10,000 or smaller reduces the relative frequency of agricultural workers and increases the frequency of skilled workers among Mexicans.

On their initial trip to the United States, 68% of Nicaraguans worked at skilled (blue-collar, white-collar, and professional) jobs, and 32% held unskilled occupations. They were followed by Costa Ricans, whose relative distribution was 60% skilled and 39% unskilled, and then, very closely, by Dominicans (58% skilled, 41% unskilled) and Puerto Ricans (53% skilled, 43% unskilled). Mexicans, of course, were last in terms of occupational status, with 40% skilled, 36% unskilled, and 25% in agriculture.

*Table 6.* Employment Characteristics of Migrants on First and Most Recent Trips to the United States.

<i>Variable</i>	<i>Mexico</i>	<i>Puerto Rico</i>	<i>Dominican Republic</i>	<i>Nicaragua</i>	<i>Costa Rica</i>
<i>First Trip</i>					
Occupation					
Agriculture	24.6%	4.3%	0.5%	0.7%	0.5%
Unskilled	35.7	42.6	41.2	31.6	39.1
Skilled	39.7	53.1	58.3	67.6	60.4
Number of Migrants	1,214	445	513	225	162
Hourly Wage (1998 dollars)					
Mean	\$7.89	\$10.61	\$7.75	\$7.42	\$8.58
Median	\$6.89	\$8.24	\$6.63	\$5.77	\$7.88
Number with Wage Data	509	226	231	74	81
<i>Most Recent Trip (2+ trips only)</i>					
Occupation					
Agriculture	32.6%	3.7%	0.0%	0.0%	3.8%
Unskilled	32.9	36.5	18.2	27.6	28.0
Skilled	34.5	59.8	81.8	72.4	68.2
Number of Migrants	423	71	58	27	45
Hourly Wage (1998 dollars)					
Mean	\$8.92	\$9.49	\$9.31	\$9.17	\$12.36
Median	\$8.13	\$6.85	\$8.02	\$8.26	\$10.94
Number with Wage Data	261	56	32	13	25

In terms of potential earnings, Puerto Ricans have the highest average wage at \$10.61 per hour (1998 U.S. dollars). Of course, owing to their U.S. citizenship, they are the only group to have full rights in the U.S. labor market, and they also displayed the longest trip durations, which suggests the accumulation of more migration-specific human capital. Costa Ricans are next highest, with an average wage of \$8.58 per hour, followed by Mexicans at \$7.89, Dominicans at \$7.75, and finally Nica-

raguans at \$7.42. These differentials no doubt reflect inter-group differences with respect to a variety of factors besides human capital, including legal status and region. The fact that the mean is always higher than the median suggests a skewed wage distribution where a few high earning individuals pull the average upwards and away from the wage categories in which most workers are found.

The bottom half of Table 6 presents data on occupations and wages for the most recent U.S. trip. Basically, those who go on to make multiple trips display a shift in occupations toward the distributional pattern established on their initial U.S. trip: Mexicans move toward agricultural employment (which shifts from 25% to 33% of all occupations), while the occupational distributions of other groups shift even more toward skilled employment. The greatest shift occurred among Dominicans, whose percentage of skilled workers went from 58% to 82% between first and most recent trip, compared with shifts of 68% to 72% for Nicaraguans, and 60% to 68% among Costa Ricans.

With the exception of Puerto Ricans, wages were uniformly higher on the most recent than on the first U.S. trip. The decline in Puerto Ricans' wages may reflect negative selectivity into multiple trips. For them, recurrent migration does not appear to be a strategy of economic mobility. On the most recent U.S. trip, Costa Ricans earned the highest wages, \$12.36 per hour, followed by Puerto Ricans, Dominicans, and Nicaraguans (who earned between \$9.10 and \$9.50 per hour) and Mexicans (who earned only \$8.92 per hour, reflecting their concentration in agriculture).

### *Basic Characteristics of Migrants*

The final task we undertake is to construct a socioeconomic profile of migrants to the United States. Table 7 focuses on migrants who reported a trip to the United States during the five years prior to the survey, and the table displays selected social, economic, and demographic characteristics. In terms of demographic background, Mexican migrants are the youngest, averaging approximately 29 years of age. Nicaraguans are the oldest, approximately 36 years. In between are Costa Ricans and Puerto Ricans (both averaging around 32 years) and Dominicans (averaging 30 years).

Sex composition likewise varies widely across groups. The relative number of women is highest among Puerto Ricans, 55% of whom are female. Next come Nicaraguans and Dominicans at 43% each, followed by Mexicans at 31% and Costa Ricans at 21%. In general, these percentages mirror the relative number of undocumented migrants. Clandestine entry is particularly hazardous for women, who face the risk of sexual assault in addition to the usual risks of undocumented border crossing.

Table 7. Social and Economic Background of Migrants Spending Time in the United States within the Five Years Prior to the Survey.

<i>Variable</i>	<i>Mexico</i>	<i>Puerto Rico</i>	<i>Dominican Republic</i>	<i>Nicaragua</i>	<i>Costa Rica</i>
Mean Age	28.9	32.2	30.4	35.8	32.1
Percent Female	31.2	54.6	42.8	42.5	21.1
<i>Household Position</i>					
Male Householder	33.9	15.8	19.4	20.5	37.6
Female Householder	10.8	23.5	14.5	15.4	5.5
Male Child	32.3	26.0	36.9	35.3	34.5
Female Child	18.4	24.0	26.4	27.0	11.6
Percent Married	64.2	41.2	47.9	63.0	60.6
Mean Years of Education	7.2	10.4	10.2	9.2	7.8
<i>Usual Occupation</i>					
Agriculture	21.6	0.0	0.7	0.0	17.6
Unskilled	35.0	19.1	27.1	31.2	21.5
Skilled	43.4	80.9	72.1	68.8	60.9
Number of Migrants	750	83	171	92	149

A distinct minority of those currently migrating to the United States are male householders. Just 16% of Puerto Rican migrants are in this category, compared with 38% of Costa Ricans, 34% of Mexicans, 21% of Nicaraguans, and 19% of Dominicans. Even fewer migrants are female householders. The modal migrant in all groups is generally the male child of a household head. In all groups save Puerto Ricans, male children comprised 32% to 37% of all migrants. Among the former, only 26% were male children, which almost equaled the number of female children (24%). In other groups, daughters were much less likely to migrate than sons.

In terms of marital status, Puerto Ricans and Dominicans stand out. Both Caribbean islands are characterized by a matrifocal family structure typified by low rates of marriage, high rates of union dissolution, significant unwed childbearing, and large proportions of female-headed households (Barrow 1996). Thus, only 41% of Puerto Rican and 48% of Dominican migrants were married. In contrast, over 60% of migrants from all other groups were married at the time of the survey.

The socioeconomic origins of migrants differ substantially. Table 7 contains information on respondent's "usual" occupation and education. Whereas a substantial share of Mexicans (22%) and Costa Ricans (18%) come from an agricultural background and had only 7 to 8 years of education, agricultural occupations are entirely absent from the other groups, despite our deliberate intent to survey smaller communities. In contrast to Mexicans, U.S. migrants from Puerto Rico, the Dominican Republic, and Nicaragua tend to have 9 to 10 years of education and

are skilled workers. Some 81% of Puerto Ricans give a job in the skilled category as their usual occupation, compared with 72% of Dominicans and 69% of Nicaraguans. Despite nearly one-fifth of Costa Ricans having agrarian origins, 61% nonetheless have a background in a skilled occupation. Mexicans are clearly the least skilled among Latin American immigrants, with only 43% having a background in a skilled occupation, 35% being unskilled, and 22% coming from agricultural backgrounds. The relative predominance of agriculture in the background of the Mexican migrants does not change when only rural samples are considered.

### *Migrant Selectivity*

Despite this information on the socioeconomic characteristics of U.S. migrants, we know nothing about the socioeconomic *selectivity* of migration from each country. An analysis of selectivity requires a comparison between migrants and nonmigrants. Inter-group variation in characteristics may indicate differences in selectivity across countries, or comparable selectivity from very different populations. Table 8 considers the characteristics already analyzed in Table 7, but divides values observed for current U.S. migrants by those observed among people who have never been to the United States. When the resulting ratio exceeds 1.0, it indicates positive selectivity: Migrants have higher values than nonmigrants on the underlying variable. When the ratio is under 1.0, it conversely indicates negative selectivity: Migrants have lower values on the underlying variable.

*Table 8.* Selectivity of Recent Migrants with Respect to Nonmigrants on Selected Demographic, Social, and Economic Characteristics.

<i>Variable</i>	<i>Mexico</i>	<i>Puerto Rico</i>	<i>Dominican Republic</i>	<i>Nicaragua</i>	<i>Costa Rica</i>
Mean Age	1.05	0.91	1.03	1.31	1.09
Percent Female	0.57	1.04	0.82	0.81	0.41
<i>Household Position</i>					
Male Householder	3.27	1.23	1.43	1.63	2.29
Female Householder	0.60	1.41	0.77	0.94	0.28
Male Child	0.94	0.74	1.07	1.04	1.05
Female Child	0.50	0.68	0.80	0.73	0.37
Percent Married	1.37	1.05	1.87	2.43	1.40
Mean Years of Education	1.05	1.13	1.29	1.46	1.08
<i>Usual Occupation</i>					
Agriculture	2.52	0.00	0.12	0.00	0.94
Unskilled	1.97	0.83	1.25	1.20	1.11
Skilled	0.59	1.05	1.00	1.07	0.98
Number of Migrants	750	83	171	92	149
Number of Nonmigrants	8,891	2,114	4,989	6,543	4,137

With the exception of Puerto Rico, migrants from all countries are positively selected in terms of age. Selectivity is greatest in Nicaragua, where the typical migrant is 1.3 times older than the typical nonmigrant. Selection is closer to parity in Costa Rica, Mexico, and the Dominican Republic, which display respective ratios of 1.09, 1.05, and 1.03. Only in Puerto Rico are migrants negatively selected in terms of age, with the average migrant being about 10% younger than the average nonmigrant. If undocumented status constitutes a significant barrier that leads to the selection of older migrants, then the fact that all Puerto Ricans are citizens may explain the apparent negative selectivity with respect to age.

Undocumented status likewise carries hazards likely to select out women, particularly in the patriarchal cultures of Mexico and Central America. Thus, women are overrepresented among migrants from Puerto Rico, where all migrants are by definition legal and family structure approaches a matrifocal type. A relatively large share of migrants from the Dominican Republic have documents and, like Puerto Ricans, they come from a matrifocal culture. Thus, although women are underrepresented, the degree is modest, only around 18% (see the ratio of .82). In contrast, Mexico and Costa Rica simultaneously have low rates of documentation and rather patriarchal family systems, thus yielding a strong under-representation of women (see the ratios of .56 for Mexicans and .41 for Costa Ricans). Nicaragua is also influenced somewhat by Caribbean family relations and has a relatively high share of legal immigrants, so its selectivity ratio is .82, as in the Dominican Republic.

The influence of patriarchy and undocumented status are also evident in the pattern of selection with respect to household position. Because of the contrasting matrifocal and patrifocal family systems in Mexico and the Caribbean, we present the data on household position separately by sex. A male householder is a male head of family or spouse, and a female householder is a female head of family or spouse. This classification scheme is necessary because in Mexico, female household heads are rare, whereas in Puerto Rico and the Dominican Republic, they are common, even in households with a male present.

The prevalence of male household heads in the Mexican migratory stream is evident in the selectivity ratio of 3.57 for male householders—the highest ratio in the entire table, and one that is five-and-a-half times that of female householders (0.6). In Puerto Rico, however, not only is selectivity for male householders much less, at 1.23, but at 1.47, the selectivity ratio for female householders is even greater. In that setting, where women have relatively greater power and autonomy in family relations and where all migrants are by definition legal, female householders are more likely to be selected into the migrant stream than their male counterparts—the only one of the five settings where this pattern is observed.

As with the other indicators, the country closest to Mexico is Costa Rica, where the selectivity ratio for male householders is 2.29, compared with a paltry 0.28 for females. The differential is less extreme but still pronounced in Nicaragua and the Dominican Republic. In the former, the respective selectivity ratios for male and female householders are 1.63 and 0.94, whereas in the latter, they are 1.43 and 0.77.

The only other household position for which we observe positive selectivity is for male children, which display ratios slightly above 1.0 in Nicaragua (1.04), Costa Rica (1.05), and the Dominican Republic (1.07). In Mexico, the ratio approaches but does not equal parity (0.94). In keeping with the relatively greater selectivity for females among Puerto Rican householders, the relative selectivity of females among Puerto Rican children is also greater. Whereas male children displayed a ratio of just 0.74—lower than that observed in any other setting—the ratio of 0.68 for female children was almost equal.

All countries except Puerto Rico also experience strong migrant selectivity with respect to marriage. In Mexico and Costa Rica, the selectivity ratio is around 1.40 in favor of those who are married, and in the Dominican Republic, the figure is 1.87 and in Nicaragua 2.43. Only in Puerto Rico is marriage selectivity close to parity at 1.05. Thus, Puerto Rico stands apart from the other migrant-sending regions in its representation of women in general, and female householders in particular, within the migrant workforce, and in its relative lack of selectivity with respect to marriage.

All the countries display positive selectivity with respect to education, though in the case of countries with substantial undocumented and seasonal migration—Mexico and Costa Rica—the degree of selectivity is quite modest, with respective selectivity ratios of just 1.05 and 1.08. In contrast, the selectivity ratio for education was 1.46 in Nicaragua, 1.29 in the Dominican Republic, and 1.13 in Puerto Rico, indicating that migrants had 46%, 29%, and 13% more years of schooling than nonmigrants, respectively.

The most notable pattern of occupational selectivity is the pronounced overrepresentation of agricultural workers among Mexican migrants. There are 2.5 more farm workers among recent migrants than in the nonmigrant population. The unskilled are also overrepresented (by a factor of nearly two) in the pool of Mexican migrants, but the skilled are considerably underrepresented (see the selectivity ratio of 0.59). Although farm workers are also present among Costa Ricans, they are not overrepresented relative to the share in the nonmigrant population. Indeed, the selectivity ratio of 0.94 suggests that they are slightly underrepresented, and that the presence of farm workers among migrants largely reflects their distribution in the underlying population.

Although around 70% to 80% of migrants from Puerto Rico, Nicaragua, and the Dominican Republic were skilled, as were around 60% of those from Costa Rica, these figures do not reflect a strong pattern of selectivity because, across these countries, the selectivity ratios range only from 0.98 to 1.07. Thus, the occupational composition of the migrant population simply represents that of the underlying community. However, in all countries save Puerto Rico, unskilled migrants are overrepresented with respect to the nonmigrant community population. Selectivity for unskilled occupations was 1.25 for Dominicans, 1.20 for Nicaraguans, and 1.11 for Costa Ricans, in addition to the 2.52 already mentioned for Mexicans.

The pattern that emerges is thus one of mildly positive educational and occupational selectivity for migrants from Puerto Rico combined with little educational selectivity and negative occupational selectivity in Mexico and a mixed pattern of selectivity for other sending regions. The significant presence of agricultural workers among Costa Ricans simply reflects the fact that 19% of the nonmigrants in our samples worked in agriculture. Given the relatively greater importance of farm labor and recurrent migration in the Mexican and Costa Rican flows, in these countries, we also observe a clear selection in favor of older, male household heads.

### *Conclusion*

We have analyzed data from the Latin American Migration Project, taking a first look at patterns of migration from the Caribbean and Central America. A key question is the degree to which patterns and processes that have been well documented for Mexican migrants are peculiar to that group, or whether those patterns are characteristic of migrants of other national origins. Our comparative analysis drew on information compiled from community samples administered in Puerto Rico, the Dominican Republic, Nicaragua, and Costa Rica and compared that information with data from samples done at about the same time in Mexico. Puerto Rico was included to represent the case of "international" migration without legal restrictions. Across these settings, 31 communities that represent various degrees of urbanism were surveyed, with sampling fractions that ranged from 13% to 34%. Refusal rates were all under 4%.

Given the complete absence of legal barriers to U.S. entry and the clear economic returns to U.S. migration, we were not surprised to find that Puerto Rico displayed the highest incidence of U.S. migratory experience. Just under 30% of all people and nearly half (46%) of all household heads had been to the United States; and almost three-fifths

(57%) of households contained someone with U.S. migrant experience. Despite this, however, relatively little out-migration has occurred in recent years. For example, only 9% of households contained someone who had been to the United States in the past five years. Most Puerto Ricans had begun migrating before 1980, made one or two trips of long duration to northeastern destinations where they worked in skilled and unskilled manual occupations, and then retired back to the island. For the past decade, the number of Puerto Ricans entering the migration stream each year has been just enough to balance the number of people entering the migration-prone age bracket, yielding a constant prevalence ratio.

Thus, the dynamic phase of Puerto Rican migration is long over, and a central theoretical question is why so few people on the island choose to migrate to the mainland when the potential economic returns remain quite large. Indeed, the potential returns are greater than for Mexicans, whose rate of current migration is much higher, and among whom the prevalence of migration is approaching that of Puerto Ricans. Those Puerto Ricans who have migrated in recent years are positively selected with respect to education and occupational skill. The lack of migration by unskilled workers in the face of sizeable expected net returns suggests mechanisms promoting international migration other than those postulated by neoclassical economics.

Our results for the incidence and timing of Mexican migration replicate those of other studies. We found that around 20% of all people and 44% of all household heads had been to the United States; that 56% of households contained someone with U.S. experience; and that nearly one-third (30%) of households contained someone who had been to the United States during the five years prior to the survey. Although Mexican migration extends considerably backward in time, unlike Puerto Rican migration, it has continued to grow up to the present. Half of all migrants only began migrating in 1990, with the largest number of initial trips occurring in 1998. The prevalence of U.S. migration among Mexicans has risen steadily since the late 1970s, and as of the year 2000, some 25% of Mexicans aged 15 or over had been to the United States in the communities we surveyed.

Mexicans evinced a distinctive pattern of migration characterized by an unusually large share of farm workers shuttling back and forth across the border on multiple trips of relatively short duration (under two years), frequently in undocumented status. Given this migratory profile, it is not surprising that agricultural origins are highly overrepresented among migrants and that there is little educational selectivity. There is also some selectivity for unskilled workers, but skilled workers are underrepresented in the outflow. Mexican migrants are very dispro-

proportionately married male family heads who are positively selected with respect to age. Those not working in agriculture generally hold unskilled manual jobs. There appears to have been a distinct geographic diversification of destinations in recent years, away from traditional receiving states in the South and West toward new destinations in the Northeast and Midwest, corroborating the findings of others (see Zúñiga and Hernández-León, 2003).

Costa Ricans have a migratory profile that is similar to Mexicans in some respects but different in others. Around one-fifth of Costa Ricans come from an agricultural background, and a significant share of them engage in recurrent circular migration, taking multiple trips of short duration in undocumented status. However, the Costa Rican migratory stream is much more recent, with half of all migrants only taking their first trip since 1994, and the overall prevalence ratio is only around 7%. Although the prevalence of U.S. migration has been rising in recent years, just 17% of all households contain someone with U.S. experience and only 10% contain someone who had been to the United States during the five years preceding the survey. Costa Rican migrants are somewhat positively selected with respect to education, and unskilled occupations are slightly overrepresented among migrants. In the United States, Costa Ricans migrate primarily to the Northeast and South (mainly New York-New Jersey and Miami), and they tend to work at skilled jobs and earn relatively high wages, especially on later trips.

The Dominican Republic and Nicaragua share a similar history of U.S. political intervention, to which we can tie the earliest emigrations from those regions. In Nicaragua, the first migrant in the LAMP sample dates from the time of the country's occupation by U.S. Marines in the 1930s, and the initiation of the modern era of U.S. migration began during the U.S.-backed Contra War to overthrow the Sandinista government. Nearly all of the expansion in migration occurred during the middle and late 1980s, and by the time of the surveys (in 2000 and 2002), around 6% of all people and 10% of household heads had been to the United States, and around 20% of all households contained someone with U.S. experience. The modal year of first trip was 1988 and by 1990, more than half of all migrants had left on their first U.S. trip. Although the first trip was overwhelmingly in undocumented status (86%), most migrants (58%) had acquired documents by their latest U.S. trip. Among Nicaraguan migrants, we observe strong positive selectivity with respect to age, education, and occupational skill, and they are disproportionately married male household heads going to the South and the West of the United States (principally Miami and Los Angeles) to take relatively skilled jobs that pay \$7 to \$9 per hour, on average.

Although the first Dominican migrant in our sample left for the United States in 1950, the onset of large-scale migration occurred during the 1960s, when the United States invaded the country and the U.S. embassy was freely distributing residence visas as a safety valve to calm the political situation. Consequently, a very high percentage of Dominicans were documented on their first trip (75% compared to no more than 26% in other groups). From 1965 to 2000, the prevalence of Dominican migration increased steadily, almost monotonically from 3% to around 20%, and as of the survey date (1999-2000), nearly one-third (30%) of all household heads had been to the United States and almost half of all households (46%) contained a current or former U.S. migrant. Like Puerto Ricans, Dominicans tend to take few trips of long duration, almost entirely directed to the northeastern United States (mainly to the New York area). While abroad, they work in skilled and unskilled manual occupations, and although Dominican migrants are positively selected with respect to education, they are not highly selected by occupational status. Indeed, unskilled occupations are over-represented in the migrant population.

This comparative analysis helps us to begin addressing the question of what characteristics are specific to Mexican migrants as compared to migrants from other Latin American countries. Although the outflow from each country has its own unique patterns and characteristics, there are also commonalities. Once begun, the prevalence of migration tends to increase at a steady pace. Moreover, contrary to widespread perceptions, migration for Mexicans is not significantly higher than we observed in other countries. Although the prevalence ratio stood at 25% in Mexico, it was 20% in the Dominican Republic. Although the ratios were only 5% in Nicaragua and 7% in Costa Rica, these streams only began in the 1980s and the ratios can be expected to rise in the future. International migration is obviously a part of life in the communities surveyed, none of which was selected for study because it was known to contain U.S. migrants.

Finally, in most settings, a significant share of the migration is unauthorized, showing that Mexicans are not the only ones to achieve undocumented entry on a large scale. The principal distinctive features separating Mexicans from others are their concentration in farm labor, lack of educational selectivity, more frequent trips, and shorter durations of stay. However, the regional distribution of migrants, which in the past has been quite distinct for each group, appears to be growing more similar as time progresses. Mexicans, in particular, have shown a pronounced tendency toward deconcentration and movement away from traditional destination areas.

In general, this analysis suggests a commonality of basic patterns and

processes of migration that are structured and expressed in distinct ways according to context. The two major structuring factors that stand out here are gender and policy. The matrifocal family system that prevails in the Caribbean produces rather distinct patterns of selectivity with respect to gender and household position, especially in comparison to the patrifocal family system that prevails in Mexico. State actions are also instrumental in explaining both the origins and patterns of international migration. They were central in beginning migration from Mexico (through a state-sponsored guestworker program), the Dominican Republic (invasion and occupation), and Nicaragua (intervention in the Contra War) and in the preferential conferral of legal status upon Puerto Ricans (by an act of Congress in 1913) and Dominicans (as an element of foreign policy in 1961). State actions were also central to the relative tolerance shown toward undocumented Nicaraguans, which strongly conditioned the nature of their insertion into U.S. society.

This analysis is obviously only a first step in attempting to understand differences in the nature and origins of international migration from various nations. We have shown, however, that data from the Latin American Migration Project can be effectively combined with comparable information from the Mexican Migration Project to undertake comparative quantitative studies of international migration. Future studies using these data sets will continue to document and explore similarities and differences in the various migration streams emanating from countries in Latin America.

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