

NIH Public Access

Author Manuscript

Ann Am Acad Pol Soc Sci. Author manuscript; available in PMC 2010 September 2

Published in final edited form as:

Ann Am Acad Pol Soc Sci. 2010 July 1; 630(1): 294–321. doi:10.1177/0002716210368114.

Undocumented Migration from Latin America in an Era of Rising U.S. Enforcement

DOUGLAS S. MASSEY and FERNANDO RIOSMENA

Abstract

Available data have consistently pointed up the failure of U.S. policies to reduce undocumented migration from Latin America. To shed light on the reasons for this failure, we estimated a series of dynamic models of undocumented entry into and exit from the United States. Our estimates suggest that undocumented migration is grounded more in mechanisms posited by social capital theory and the new economics of labor migration rather than neoclassical economics. As a result, U.S. efforts to increase the costs of undocumented entry and reduce the benefits of undocumented labor have proven unsuccessful given the widespread access of Latin Americans to migrant networks. The main effect of U.S. enforcement efforts has been to reduce the circularity of Latin American migration.

Keywords

international migration; Latin America; undocumented migration

Since 1965 the United States has mounted a concerted effort to curtail immigration from Latin America. For many years, the only exceptions to this generalization were migrants fleeing countries headed by leftist regimes. During the cold war, for example, it was virtually impossible for a Cuban to become an undocumented migrant, as all those who made it to the United States, by whatever means, were quickly admitted as refugees and then offered an easy path to legal permanent residence (Portes and Bach 1985; Portes and Rumbaut 1992). Likewise, Nicaraguans exiting their homeland during the rule of the Sandinistas were granted temporary protected status in the United States and later offered permanent resident status on generous terms (Lundquist and Massey 2005). Apart from these two exceptions, most Latin Americans, and especially Mexicans, have faced reduced possibilities for legal entry and rising barriers to undocumented entry over the past several decades.

Until the mid-1960s, U.S. immigration law imposed no limits on the number of legal immigrants admitted from the Western Hemisphere and at the same time sponsored a large temporary worker program that annually imported up to 450,000 Mexicans. This guest worker program was terminated in 1964, and in 1965 Congress amended the Immigration and Nationality Act to cap the number of visas for immigrants from the Western Hemisphere at 120,000 per year (Keely 1979). Although the 1965 legislation imposed no country-specific limits, Congress capped the annual number of residence visas at 20,000 per country in 1976, combined the separate hemispheric quotas into a single worldwide quota of 290,000 in 1978, lowered the latter quota to 270,000 in 1980, and imposed new limits on family migration in 1990 (Jasso and Rosenzweig 1990).

As Congress was passing laws to make legal entry more difficult, beginning in the 1980s it also undertook an escalating series of measures to combat undocumented migration. In 1986 the Immigration Reform and Control Act (IRCA) criminalized the hiring of undocumented

immigrants and increased the Border Patrol's budget to give it more officers and sophisticated new detection equipment (Dunn 1996). These congressional measures were augmented by executive branch decisions in 1993 and 1994 that launched Operation Blockade and Operation Gatekeeper to seal the border in El Paso and San Diego, respectively. Enforcement was further bolstered by congressional legislation in 1990, 1996, 1998, and 2001 that provided more funds to the Border Patrol, granted new powers to immigration prosecutors and judges, curtailed the rights of foreigners to fight deportation in court, and restricted the access of all immigrants legal as well as illegal—to public services (Zolberg 2006).

As a result of these and other policies, during the 1990s legal entry from Latin America grew considerably more difficult, and the Mexico–U.S. border became the most militarized frontier between two peaceful nations anywhere in the world. Indeed, the Border Patrol grew into the largest arms-bearing branch of the federal government except for the military itself (Massey, Durand, and Malone 2002). From 1986 to 2004, its budget increased tenfold, the number of officers tripled, the number of hours they spent patrolling the border grew eight times, and internal deportations expanded by a factor of ten (Massey 2005).

Despite these energetic efforts at restriction, immigration from Latin America did not decline but continued apace. Whereas legal immigration from Mexico averaged 101,000 persons per year during the 1980s, the volume increased to 276,000 per year during the 1990s and then fell back to 173,000 per year after 2000, which was still well above the level of the 1980s. Likewise, immigration from the Caribbean averaged 79,000 per year in the 1980s, 100,000 in the 1990s, and fell only slightly to 94,000 after 2000. Immigration from Central and South America, meanwhile, grew steadily over the decades, going from 74,000 per year during the 1980s to 118,000 in the 1990s and reaching 142,000 per year after 2000 (U.S. Department of Homeland Security 2007).

All told, some 10.3 million immigrants from Mexico, the Caribbean, and Central and South America were admitted to permanent residence from 1980 through 2006. These legal immigrants were joined by a growing number of undocumented migrants. Although the legalization program authorized by IRCA reduced the undocumented population to around 3.5 million persons by 1990, thereafter it began to grow again; and after the launching of border blockades in El Paso and San Diego in 1993 and 1994, rates of return migration fell and undocumented settlement rose (Massey, Durand, and Malone 2002; Riosmena 2004). As a result, the number of unauthorized migrants living in the United States rose from around 3.5 million to around 12 million between 1990 and 2006, with approximately 60 percent of them from Mexico (Passel 2007).

Obviously, then, U.S. attempts to restrict Latin American immigration after 1990 by closing off legal channels for entry and toughening border enforcement have been less than successful. Indeed, Mexican population growth in the United States more than doubled in the 1990s, and in 2003 Hispanics became the nation's largest minority, surpassing African Americans years before government demographers had originally projected (Massey 2005). Around half of all Mexicans present in the United States are now undocumented, constituting one-fifth of all persons of Mexican origin (Massey 2007).

The continued expansion of the Hispanic population through legal and illegal migration has raised alarms in many quarters (Huntington 2004; Dobbs 2006) and has brought about calls for enacting even tougher enforcement measures, including the construction of a steel wall along the Mexican border and the mass arrest and deportation of undocumented immigrants within the United States (Buchanan 2006). Unfortunately, few of those calling for more enforcement have stopped to ask why the border buildup and increasingly tough immigration laws have failed to date. In this article, we undertake a quantitative analysis to understand why

and how restrictionist measures thus far have been unable to curb the inflow of immigrants from Latin America, using newly available data gathered from ethnosurveys done in selected communities of Mexico, the Dominican Republic, Costa Rica, and Nicaragua.

The Theory of Immigration Control

Although it is rarely stated explicitly, U.S. immigration and border policies basically follow the precepts of neoclassical economics, which views migration as a cost-benefit decision taken by individuals seeking to maximize earnings net of various costs (Sjaastad 1962). Average wages in the United States are around five times higher than those in Mexico, yielding a geographic discontinuity that in the absence of constraints is hypothesized to spur the immigration of workers northward (Borjas 2007). In theory, Mexicans and other Latin Americans choose to migrate to the United States because a simple mental calculation is positive: the difference between their expected earnings in the United States and their expected earnings at home exceeds the cost of moving from south to north (Todaro and Maruszko 1986).

Given that the Mexico–U.S. wage differential is fixed in the short run, under neoclassical theory the obvious way to slow immigration is by raising the costs of migration—financial, material, and psychic—and thereby reducing or reversing this positive calculation. This is precisely the approach followed by U.S. authorities since 1965. Legislative changes have curtailed opportunities for the legal entry of workers in both temporary and permanent status, in essence requiring those who enter with authorization to possess greater amounts of capital, either financial (to qualify for an investment visa), human (to qualify for an occupational visa), or social (to qualify for a family visa). Those who cannot meet these higher capital requirements and wish to raise their earnings through migration must do so through undocumented channels where, as we have seen, they have been met by increasingly stringent enforcement measures.

The rising tide of enforcement measures has clearly driven up the costs of migration. Out-ofpocket costs of border crossing are certainly much higher. The blockading of border-crossing points in El Paso and San Diego deflected migration flows away from traditional urban points of entry that were close to major destinations and shifted them to more remote zones that are far from leading urban labor markets, thus raising travel costs (Massey, Durand, and Malone 2002; Orrenius 2004). At the same time, more distant staging areas and tougher enforcement actions increased smuggling costs, tripling the fees for a "coyote" from an average of around \$400 per trip before IRCA to around \$1,200 in 2002 (Massey 2005). The need to cross more remote and hostile terrain also increased the risks of injury and death, thereby raising psychic costs of undocumented migration (Eschbach et al. 1999; Cornelius 2001; Massey, Durand, and Malone 2002). Moreover, among Mexicans living in the United States, the number of deportations rose from an average of just 11,000 per year during the 1980s to 140,000 per year after 2000, thus increasing the psychic costs of undocumented life in the United States (U.S. Department of Homeland Security 2007).

In sum, policy actions taken by the United States over the past several decades have substantially closed the doors to documented entry from Latin America and made unauthorized border crossing and undocumented living increasingly expensive along a variety of dimensions. If U.S. efforts have so clearly raised the costs and risks of undocumented migration, why is it that illegal migration has not only persisted, but grown? From a neoclassical viewpoint, the obvious answer is that, however much the costs have risen, they have not yet reached a point where they offset the large gains to be had by working illegally in the United States—hence the call by some for even stricter enforcement measures.

Of course, neoclassical economics is not the only framework that has been advanced to account for international migration (see Massey et al. [1998] for a review), and alternative explanations

for the failure of restrictionist policies may be derived from other theoretical perspectives. Within economics, the principal alternative to neoclassical theory is the new economics of labor migration (Stark 1991). Rather than conceiving of migration as an individual decision taken to maximize earnings, this model views migration as a household decision taken collectively (through some form of internal bargaining) to overcome missing markets for capital, credit, and insurance, thus implying a natural preference of households to concentrate their consumption in origins rather than destinations (see Lindstrom 1996). By sending different family members to work in different regional labor markets, households self-insure against risks to income—in essence diversifying their labor portfolio in the absence of viable social insurance programs. Likewise, by sending one or more members out to work for high foreign wages, households to focus consumption and investment in the absence of accessible markets for credit and capital. Given the general preference of households may also seek to increase their incomes relative to those around them rather than maximizing absolute earnings.

Whatever the specific motivation posited under the new economics of labor migration, the goal of migration is generally to work abroad *temporarily* to solve an economic difficulty *at home*, not to relocate abroad permanently to maximize lifetime earnings. If the desire motivating migrants is more to overcome local market failures than to maximize earnings, it is possible that efforts to raise the costs and risks of migration might backfire by frustrating the natural desire of migrants to return home. Having suffered the high costs and risks of undocumented entry, and fearing even higher costs and risks in the future, migrants may hunker down and stay for fear of not being able to reenter should circumstances again warrant a working sojourn in the United States. Even in neoclassical terms, raising the costs of migration implies longer trip durations among successful border crossers, because those who gain entry must work longer to amortize the greater costs of entry.

Social capital theory and the cumulative causation of migration constitute a third line of reasoning about international migration (Massey 1990). According to social capital theory, interpersonal networks inevitably emerge in the course of migration to create a self-perpetuating dynamic that progressively reduces the costs and risks of future migration and, in doing so, renders it increasingly independent of the forces that originally caused it—and also relatively impervious to rising costs associated with stricter enforcement measures (Massey, Goldring, and Durand 1994). Although the costs and risks of undocumented migration may be very high for the first person to leave a community and seek work abroad, if that person is successful, then a social tie to him or her becomes a valuable source of social capital for others in the community, dramatically reducing their costs and risks of movement. Friends and relatives draw on these ties to gain access to information, assistance, and material support in making a trip, thus tipping the decision-making calculus decidedly in the direction of migration (Massey and García España 1987).

Causation becomes cumulative because each new migrant lowers the costs and risks of migration for people in that person's social network, inducing some of them to migrate, which further expands the size of the migrant network to create more social capital and promote additional out-migration, yielding a self-reinforcing process that has been shown to be quite powerful in promoting international migration over time (Massey and Zenteno 1999), especially in smaller sending communities (Fussell and Massey 2004). Access to social capital emanating from migrant networks thus constitutes a potent resource enabling migrants to overcome whatever restrictive barriers might be imposed. If migrant networks are already in place and well developed when the restrictive policies are implemented, any effect they have in raising the costs and risks of migration might well be offset by even larger declines in costs and risks that are simultaneously occurring through the expansion of migrant networks.

In conceptual terms, these theories of migration are not mutually exclusive (Massey et al. 1998). Migrants may be heterogeneous in their motives for migration, with some seeking to move abroad permanently to maximize earnings and others seeking to move abroad temporarily to overcome market failures at home. In addition, migrants' motivations may change over time, and whether migrants follow the dictates of neoclassical theory or the precepts of the new economics of labor migration, social capital constitutes a valuable resource for those seeking to migrate. Deciding which model is most important in accounting for the dynamics of international migration at a particular historical juncture is an empirical question, and in the following analysis we draw on all three theories to specify and interpret a statistical model of undocumented migration from Latin America to the United States in recent decades.

Data and Methods

A primary reason for the relative lack of studies of the consequences of U.S. enforcement actions is the scarcity of reliable data on immigration (Levine, Hill, and Warren 1985). Even for documented migrants, good data are few and far between (Massey and Capoferro 2004). Statistics on legal immigrants come mainly from applications for permanent residence, which are collated, tabulated, and published on an annual basis by the Office of Immigration Statistics of the U.S. Department of Homeland Security (DHS), but they offer little information about the characteristics and behaviors of immigrants, especially after arrival in the United States. Except for the New Immigrant Survey (NIS), which so far has released data only from its baseline sample (see Jasso et al. 2005), prospective longitudinal data on legal immigrants do not exist.

Naturally, the situation is even more dire with respect to undocumented migrants. Official statistics come from records of apprehension and deportation maintained and published each year by the DHS, but they contain little personal information and are plagued by missing data (Massey and Capoferro 2004). Although undocumented migrants are known to be enumerated in the Decennial Census and Current Population Survey (see Woodrow-Lafield 1998), it is not possible to identify *which* foreign-born have documents and which do not (Bean et al. 2001), thus making it impossible to distinguish between legal and illegal migrants in census- or survey-based studies, which causes many problems for analysis (Massey and Bartley 2005). Although the NIS does identify legal immigrants with prior undocumented experience (Massey and Malone 2003), this group is necessarily a selective subset of all undocumented migrants, and until the NIS follow-up survey becomes available, prospective longitudinal data of any sort will not exist.

In practice, the only realistic sources of longitudinal data on documented and undocumented migrants for an extended period in the recent past are the Mexican Migration Project (MMP) and the Latin American Migration Project (LAMP). Each year these projects survey specific migrant-sending communities at various levels of urbanism and compile complete life histories for all household heads in the samples, which include detailed histories of migration and border crossing as well as yearly occupational histories. Respondents are followed year by year from first entry into the labor force until the survey date and asked to report on the job they held, where they worked, and their legal status if they were working in the United States. These data have been used extensively in empirical research (see Durand and Massey [2004] for a recent compilation) and have been systematically cross-checked internally and compared with external sources to verify their reliability and validity (Massey 1987; Zenteno and Massey 1999; Massey and Zenteno 2000; Massey 2000; Massey and Sana 2004; Massey and Capoferro 2004).

The MMP was piloted in 1982, and since 1987 it has annually surveyed communities throughout Mexico to build a data file that covers dozens of communities in states throughout

the country. Based on the success of the MMP, the LAMP was launched in 1998 with a pilot survey of four communities in Puerto Rico. This project subsequently expanded to survey selected sending communities in other Latin American nations, including seven in the Dominican Republic, nine in Nicaragua, and seven in Costa Rica.

The MMP and the LAMP employ survey instruments and methodologies that are identical except for minor adjustments necessary to accommodate specific national circumstances (Massey and Sana 2004). In each project, communities are selected to cover a range of socioeconomic structures and to represent the full continuum of population size, from small villages to large cities. Once a community is selected for study, field workers create a map of all dwellings in the study site and use it as a frame for selecting a simple random sample of some one hundred to two hundred households. Each household is then administered a semistructured interview known as the ethnosurvey (see Massey 1987; Massey 2000; Massey and Zenteno 2000; Massey and Capoferro 2004), which blends ethnographic and survey research methods to compile standardized data through an in-depth conversation with one or more household members, typically the head and spouse.

After identifying all children of the head and which of them are still members of the sample household, the ethnosurvey ascertains which of these individuals has ever been to the United States and then gathers information about the first and most recent trips along with the total number of trips. Each household head is also administered a life history module, which includes a full labor history and a complete history of migration and border crossing. Heads with U.S. experience also answer a detailed series of questions about experiences on their last U.S. trip.

These community surveys quickly reveal where in the United States migrants go, and several months later a team of interviewers is sent to specific U.S. destination areas to locate settled out-migrant households using chain referral or "snowball" sampling methods and to apply the ethnosurvey to them. Typically the U.S. sample size is 10 percent of that in the sending community. The two samples are then combined to create a binational data set that represents the binational population of settled and returned migrants from each community.¹

Table 1 presents basic information about the samples used in our analyses. Across the four countries—Mexico, the Dominican Republic, Nicaragua, and Costa Rica—the sampling fraction ranged from 20 to 30 percent and the refusal rate averaged around 5 percent. Given the long history of the MMP, the number of communities sampled in Mexico, eighty-eight, is naturally greatest and yields the largest sample size, consisting of 11,228 male household heads (we eliminated the small number of female household heads), compared with 610 in the Dominican Republic, 1,004 in Nicaragua, and 969 in Costa Rica. For this analysis, we draw on the life histories provided by male heads to estimate a discrete-time event history model that predicts first undocumented migration to the United States, return from this first trip, later undocumented migration, and return from later U.S. trips, thus enabling a precise analysis of undocumented entries and exits during a time of rising border enforcement and increasingly restrictive immigration laws.

Modeling Undocumented Migration and Return

The independent variables used in our analysis are summarized in Table 2, which draws on earlier models specified by Taylor (1986,1987,1992), Massey and Espinosa (1997), and Palloni et al. (2001). Human capital theory states that the odds of migration vary with experience and are, hence, curvilinear with respect to age, rising during the years of early adulthood as the

¹Further information about the surveys, the samples, and the methodology is available online from the project websites at mmp.opr.princeton.edu and lamp.opr.princeton.edu, from which all data used in this study may also be downloaded.

Ann Am Acad Pol Soc Sci. Author manuscript; available in PMC 2010 September 2.

potential benefits of migration increase with rising productivity, but then falling as the expected lifetime of higher earnings shortens. Among males, marriage is well established as a positive predictor of labor force participation and earnings. Although having children is also positively related to most labor market outcomes, the presence of young children may constrain the behavior of international migrants seeking to avoid separation during the earliest years of child growth and development. Hence, we control for the presence of infants and children in the household.

Human capital theory also predicts that migration will be selective with respect to education, though the nature of the selection depends very much on the returns on education in sending and receiving societies (Massey et al. 1998). Most studies of undocumented migrants find that, lacking the legal right to work in the United States, they are unselected or negatively selected with respect to education (Massey et al. 1994). No matter what their education, undocumented migrants are restricted by their legal status to a narrow segment of poorly paid, low-mobility jobs. Hence, people with education are more likely to migrate internally than to move abroad without documents (Taylor 1987). A similar logic may also be hypothesized with respect to occupational skill, wherein those with skills are more likely to move internally rather than try to relocate to the United States, where the financial returns on skill are constrained by a lack of documentation.

Research from around the world has shown that a primary motivation for international migration is to finance the acquisition or construction of a home in the absence of accessible mortgage markets and that under favorable macroeconomic, structural, and life cycle circumstances, migrants do channel their earnings into productive investments to capitalize business enterprises in the absence of effective capital markets (Taylor et al. 1996a, 1996b). We thus include controls for whether the household head owns a house or lot and whether the household owns some kind of business enterprise.

We measure social capital by assessing whether or not various relatives of the household head had migrated to the United States by the person-year in question, focusing specifically on parents, siblings, and children. Using data on the age of first U.S. trips compiled for all household members, we are also able to estimate the percentage of people aged fifteen or older within each community who had ever been to the United States by the year in question (see Massey, Goldring, and Durand 1994). In our analysis, we also take into consideration certain forms of migration-specific capital: whether the person entered the United States using a tourist visa or simply crossed the border without inspection as well as the number of months of U.S. experience accumulated on the trip.

Among contextual factors we control for the size of the community, as there are clear crosscountry differences in the distribution of sample communities by population size (see Table 1). We also include the ratio of GDP per capita in the United States to that in the sending country to approximate the leading causal factor specified by neoclassical theory—the transnational earnings differential. Of greatest interest here, however, are three policy-related variables whose effects we seek to assess: *linewatch hours*, the number of person-hours spent each year by Border Patrol officers policing the Mexico–U.S. frontier; *deportations*, the annual number of illegal migrants deported from the U.S. interior; and *relative access to legal entry visas*, which we measure as the number of temporary and permanent legal visas granted to citizens of a nation in a particular year divided by the nation's population in that year.

Table 3 presents means and standard deviations for these variables. Given Mexico's uniqueness (among the Latin American nations) in sharing a land border with the United States and the large number of cases included in the Mexican sample, in certain of our statistical models we analyze that country separately while grouping the other countries together and controlling for

MASSEY and RIOSMENA

national origin using dichotomous indicators. As can be seen, household heads from Mexico share the same average age with their counterparts in other Latin American nations, but little else. Mexican male heads are more likely to be married, to have young children, and to report fewer years of education and less skilled occupational backgrounds than other Latin American migrants. Mean education stood at less than 6 years for Mexicans but was 8.2 for other Latin Americans. Likewise, whereas the percentage of skilled workers was 30 percent among Mexicans, it was 41 percent among other Latin Americans. Mexicans also ranked lowest in terms of material capital, with just 20 percent owning a home or lot and only 4 percent owning a business, compared to figures of 40 percent and 17 percent, respectively, for other Latin Americans.

Although Mexicans may be poor in terms of human and physical capital, they are wealthy in terms of social capital (see Massey et al. 1987). Consistent with their long history of migration to the United States (see Cardoso 1980), 13 percent of Mexican heads reported having a parent with prior migrant experience, 26 percent a sibling who had been to the United States, and 8 percent a child who had been north of the border. In contrast, the respective figures for respondents from elsewhere in Latin America were just 4, 15, and 4 percent; and whereas in the average person-year Mexican household heads could count on 13 percent of their fellow community members having prior experience in the United States, the figure was only 8 percent in other countries.

Very few Mexicans entered the United States on a tourist visa, either on first or later trips. In both cases, well over 90 percent of Mexican migrants simply crossed the border without inspection rather than entering with a visa and then violating its terms by staying too long. Non-Mexican migrants are much more likely to overstay their visas than to enter without inspection. On their first U.S. trip, for example, 59 percent of other Latin Americans entered the United States on a tourist visa and then moved into unauthorized status; on the second trip, the figure rose to 73 percent. Entering without inspection is more difficult for non-Mexican Latin Americans, whose countries do not share a land border. They must either cross open water (notably in the case of the Dominican Republic), traverse Mexico to reach the southern U.S. border, or somehow gain access to Canada to reach the northern U.S. border.

Consistent with these geographic realities, Mexicans display more of a sojourner pattern of circular migration than do other Latin Americans. Given easy access to the border, trip lengths are shorter, as we would expect. Whereas the average Mexican migrant spent just twenty months in the United States on both first and later trips, the average migrant from the Dominican Republic, Costa Rica, and Nicaragua stayed thirty-eight months on the first trip and forty-three months on later trips. Since the life histories of non-Mexicans are, on average, more recent than those of Mexicans, the former generally face a harsher enforcement regime because of the recent escalation of U.S. enforcement efforts, with more linewatch hours and more deportations, though with roughly the same degree of access to legal entry documents. The incentives for migration, however, are greater for non-Mexicans. The ratio of U.S. to home-country income stood at around 17 to 1 for non-Mexicans, compared with 5 to 1 for Mexicans.

Taking a First Undocumented Trip

To examine first undocumented migration, we follow male household heads from the age of fifteen up to the date of the first trip, age sixty-five, or the survey, whichever comes first; and we exclude all person-years after the first trip or age sixty-five. We use multinomial logistic regression to predict two mutually exclusive behavioral outcomes: migrating on a tourist visa or migrating without inspection (versus not migrating). When estimated over person-years, the model yields a discrete-time event history analysis of first migration (Allison 1996). All variables except country and gender are in theory time varying, though in practice education

is largely fixed at the beginning of the labor history. The results of this estimation are summarized in Table 4.

Holding constant individual- and contextual-level factors, there are clear differences between the countries in the mode of entry. Costa Ricans, and to a lesser extent Nicaraguans, are significantly more likely than Mexicans or Dominicans to enter the country using a tourist visa; and non-Mexicans are less likely to enter the United States without inspection than are Mexicans. The remaining coefficients in the model provide relatively little evidence in support of the neoclassical model of migration. The odds of taking a first trip are unrelated to age and weakly related to marital status and display no systematic relationship to relative wages in the United States. They are also largely unrelated to visa access, linewatch hours, and deportations. Indeed, if anything, the imposition of more restrictive measures appears to backfire, as deportations are associated with a greater likelihood of crossing the border without inspection.

The taking of a first undocumented trip is quite sensitive to human capital, but the effect of education differs depending on the mode of entry. Whereas undocumented migrants who enter the United States on a tourist visa are positively selected with respect to education, those crossing without inspection are negatively selected. Likewise, unskilled migrants are more likely to become undocumented border crossers than visa overstayers. The initiation of undocumented migration does not appear to be very strongly selective of property ownership, except for a marginally significant effect of owning a business, which is consistent with the new economics of labor migration, as those already owning a business are less motivated to migrate to raise funds to capitalize an enterprise.

The theoretical model that is most strongly and consistently supported by the estimates of Table 4 is social capital theory. The greater a household head's access to other people with prior U.S. migratory experience, the more likely the head is to initiate undocumented migration. Having a migrant parent, a migrant sibling, and a migrant child all separately increase the odds of leaving on a first undocumented trip substantially and significantly, and the effects are essentially the same whether one chooses to enter on a tourist visa or without inspection. The odds of initiating undocumented migration are also strongly affected by general social capital, here indicated by the prevalence of U.S. experience within the community. The pattern is slightly different, however, depending on the mode of entry. As prevalence increases, the likelihood of entering on a tourist visa rises rapidly but then reaches an early peak and quickly declines. In contrast, the odds of entering without inspection rise more gradually as prevalence increases, peaking at a higher level before falling less rapidly as prevalence continues to increase.

In general, then, the foregoing analysis suggests that out-migration from Latin America is more heavily influenced by the ongoing accumulation of social capital than by shifts in the relative costs and benefits of migration, either as influenced by U.S. policy actions or by broader economic trends in the United States and migrant-sending nations. Moreover, education plays less of a role in predicting undocumented out-migration per se than in predicting the auspices under which it occurs: through a port of entry using a tourist visa inspected by an immigration officer (for the well educated) or outside of a port of entry without inspection (for the poorly educated).

To test for possible differences in patterns and processes of first migration between Mexico and other Latin American sources, Table 5 reestimates the discrete-time event history model separately for Mexicans and respondents from the other three origin countries. The predominance of social capital continues when the multinomial prediction equation is estimated separately for Mexicans and non-Mexicans. As before, having a social tie to someone with prior U.S. experience strongly increases the likelihood of migrating to the United States

from both Mexico and other locations in Latin America. The effect of having a parent or sibling with migrant experience is particularly strong in predicting entry without inspection by non-Mexicans (note that the number of children with migratory experience is too small among non-Mexicans to enable stable estimation, given the smaller number of community samples and the more recent history of migration compared with Mexico).

Although migratory prevalence is significant and curvilinear both in and outside of Mexico, the effect is much more pronounced in non-Mexican settings, both in rising and falling. Whereas the coefficient for migratory prevalence among Mexicans was 0.098 in predicting entry with a tourist visa and 0.118 in predicting entry without inspection, among non-Mexicans the respective coefficients were 0.222 and 0.350, both significantly higher (p < .05). At the same time, the squared terms for the effect of prevalence for non-Mexicans (-0.007 and -0.010) are also higher than among Mexicans, suggesting an earlier peak and steeper decline. Nonetheless, the linear term captures the general pace of the upward shift in migratory probabilities with rising prevalence. The earlier peak among non-Mexicans may reflect the fact that prevalence tends to be lower in communities outside of Mexico. In any event, it seems that the more distant a country is from the United States—and the higher the costs and risks of migration—the more important social capital is in raising the likelihood of an undocumented trip (see Aysa and Massey 2005).

Other notable differences appear when contrasting undocumented migration originating in Mexico and other nations in Latin America. First, the distinctive process of educational selection described earlier—positive for visa overstaying but negative for entering without inspection—appears to prevail only among migrants from Mexico. Education is not strongly related to undocumented migration elsewhere in Latin America, and to the extent that it has any effect, it is always positive (though quite weak) for entering without inspection as well as overstaying a visa.

A second salient difference concerns the influence of rising deportations on the odds of undocumented migration. Among Mexicans, a rising number of deportations from the interior of the United States is perversely associated with a *greater* likelihood of entering without inspection, with a positive coefficient of 0.056; whereas among migrants from elsewhere in Latin America, deportation has the effect presumably intended by policymakers, with a significant negative coefficient of -0.092. Rising deportations apparently serve as a deterrent to non-Mexicans' contemplating a first trip to the United States, given the substantial costs of migration and the high losses if one is caught and deported early on an undocumented trip. Among Mexicans, however, who face much lower costs of migration, a rising number of deportations has the opposite effect, seeming to prompt Mexicans to migrate in anticipation that conditions for undocumented migrants will get even worse.

Finally, in one instance, we detect a weak effect of linewatch hours: among Mexicans contemplating entry without inspection. Although rising border enforcement has no effect on the odds that a non-Mexican will initiate undocumented migration, either with a tourist visa or without inspection, and whereas it has no influence on the odds that a Mexican will decide to become a visa over-stayer, it does have a slight negative effect on the odds of entering without inspection, though the coefficient at -0.004 is small and significant only at the 10 percent level, even given the large size of the Mexican sample.

In sum, recent U.S. enforcement efforts yield a very mixed set of results with respect to undocumented migration. Whereas rising deportations may deter non-Mexicans from attempting to enter the United States without inspection, they encourage Mexicans to do so. Since Mexico is by far the largest component of the undocumented inflow and relatively few non-Mexicans attempt to enter without inspection, the strategy of deportations must be said to

backfire on a net basis, encouraging far more Mexicans to enter without inspection than it deters non-Mexicans from making the attempt. Even the most targeted enforcement action, the rising number of hours devoted to patrolling the Mexico–U.S. border, has only a marginal effect in deterring Mexicans from attempting undocumented entry, certainly much less of an effect than the very powerful effects of social capital, which is abundantly spread throughout Mexico (see Massey and Phillips 1999).

Returning from the First Trip

The left-hand columns of Table 6 show the results of a logit model estimated to predict the odds of returning from a first trip to the United States for migrants from all countries combined. We follow migrants year by year after they first enter the United States without inspection or with a tourist visa and then remain in undocumented status; we then regress a dummy variable for departure on the same variables as before, while controlling for the mode of entry and the duration of the trip. Overall, the average probability that a Mexican household head returns from his first trip by the survey date is 0.60, whereas for non-Mexicans it is 0.21. This finding suggests that Mexican decision-making is dominated by the motivations specified under the new economics of labor migration, in which return to the country of origin is a key element of the migration strategy. In addition, as other studies have shown, the likelihood of return falls with increasing time spent in the United States, though at a decelerating rate (Massey 1986;Massey and Espinosa 1997;Riosmena 2004,2005;Reyes 2004). Other things being equal, however, the odds of return do not differ by mode of entry: those who enter without inspection are just as likely to return as those who enter on a tourist visa.

Holding these basic effects constant, returning from a first trip to the United States appears to be much less likely for Dominicans and Nicaraguans than for Mexicans or Costa Ricans. The decision to return is heavily conditioned by a migrant's demographic situation. The odds of return rise with age at an accelerating rate, suggesting a well-established pattern of retirement migration, and the likelihood of return is significantly increased if the migrant has a child under the age of one. Once a migrant has children with their own migratory experience in the United States, however, returning to the country of origin becomes much less likely, suggesting a family reunification settlement pattern. In general, migrants are less likely to return if they are employed in the United States, especially in a skilled job. Migrants are also less likely to return to larger communities, suggesting that return migration is more common among rural than urban dwellers.

If stricter U.S. enforcement measures were intended to encourage undocumented migrants to return home, we find little evidence of success here. Neither linewatch hours, deportations, nor access to documents had any effect on the likelihood of returning from a first undocumented trip. Although prior work has found a decline in the propensity to return to Mexico following the launching of Operation Blockade and Operation Gatekeeper in 1993 and 1994, these special operations are not well captured by the increase in linewatch hours for the entire border. When the model of return migration is estimated separately for Mexicans, however, the coefficient for linewatch hours does turn negative (not shown), though it is not significant (the small sample size does not permit reliable estimation of a separate model for non-Mexicans). In general, the only positive influence on return migration appears to be ownership of a house or lot in the home community, although the effect is again relatively weak. Despite its marginal significance (at p < .10), this finding is nonetheless consistent with predictions from the new economics of labor migration. Those who migrate to self-finance the acquisition of a home are likely to return once the goal has been met.

Migration and Return on Later Trips

Table 7 shows the results of a discrete-time model estimated to predict the likelihood of taking a later undocumented trip to the United States, given that at least one has already occurred. We follow migrants year by year from the point of their return from any trip to the United States until the year of the survey or their next U.S. trip and, as before, use a multinomial logit model to predict whether or not they take an additional undocumented trip by overstaying a tourist visa or entering without inspection. Owing to the limited degrees of freedom, we estimate only one model for respondents from all countries combined, controlling for country effects using dummy variables. These reveal that compared to the other countries, Costa Ricans are much more likely to take later trips by overstaying a tourist visa as opposed to entering without inspection.

As on first trips, we see the distinctive pattern of positive educational selection into overstaying a tourist visa and negative educational selection into entering without inspection. The odds of taking an additional undocumented trip generally fall with age no matter what the mode of entry, and the likelihood of entering on a tourist visa is lowered by having preschool-aged children. Marriage, however, seems to raise the odds of entering on a tourist visa, though it has no effect on the relative odds of entering without inspection. As other researchers have found, social capital is less important in predicting departure on later trips compared to first trips, as experienced migrants are less dependent on network ties to make their way to the United States and find a job (see Massey et al. 1987; Massey and Espinosa 1997). With the exception of having a migrant child, specific ties to migrants are either insignificant to or negatively predictive of the likelihood of taking additional trips. However, the odds of repeat migration are once again significantly predicted by the prevalence of migration in the community, though the relative effect is weaker than on the first trip.

As before, we find little evidence that U.S. enforcement efforts have any discernible effect in deterring undocumented migrants from taking additional U.S. trips. Although the coefficients for linewatch hours are negative in predicting entry on a tourist visa and entry without inspection, both are small and not close to statistical significance. Moreover, once again we find evidence that a rising number of deportations may actually backfire, in this case substantially increasing the odds of taking another undocumented trip in both modes of entry. An increase of 10,000 deportations is associated with an increase of 6.7 percent and 9.2 percent in the odds of entering with a tourist visa and without inspection, respectively, both highly significant at p < .01 (the relative odds are equal to $100 \times \{1 - \exp(\text{beta})\}$, where beta = 0.065 and 0.088 respectively—see Table 7). The perverse effects of deportations thus seem to be to encourage more migrants to take additional undocumented trips.

The right-hand columns in Table 6 examine the process of return from later trips. As with first undocumented trips, the likelihood of return declines with each additional month spent in the United States and is strongly discouraged by having children with migratory experience. Holding constant these effects, migrants from the Dominican Republic are significantly less likely to return home than migrants from Mexico and Costa Rica, and the same may also be true for Nicaraguans, though the effect is not reliably estimated. Not much else in the model predicts the odds of returning from a later trip to the United States, though the likelihood falls marginally with rising age and is marginally encouraged by having a child under the age of one. As before, there is no evidence that stricter immigration enforcement in any way encourages return migration, as neither deportations nor linewatch hours have statistically detectable effects on the likelihood of going home.

Why Restrictionist Policies Failed

That American attempts to limit undocumented migration from Latin America have failed is obvious from descriptive data reviewed at the outset of this article. All sources coincide in revealing an unambiguous increase in the number of Latin Americans living in the United States and a record increase in the number of undocumented Mexicans, in particular. To shed light on the reasons for this failure, we used event history data gathered from representative surveys of Mexican and other Latin American communities to estimate dynamic models of undocumented entry into and exit from the United States. Specifically, we estimated discrete-time models to predict undocumented migration in two modes of entry—with a tourist visa and without inspection—for first and later trips to the United States, we then estimated discrete-time event history models of return migration from first and later trips.

The estimated models clearly reveal the powerful role played by social capital in promoting undocumented migration to the United States, among non-Mexican as well as Mexican male household heads, especially on first trips. The odds that a household head initiates illegal migration to the United States rise substantially if he has a parent, sibling, or child with prior U.S. experience; the likelihood of departure increases steadily as the share of migrants in the community rises. The prevalence of migration is especially potent in dynamizing migration from non-Mexican sources, and this source of social capital continues to play a key role in promoting undocumented migration on later U.S. trips.

Consistent with expectations derived from the new economics of labor migration, entering without inspection was less likely for business owners, and return migration was more likely for home owners on the first trip. That the likelihood of return migration is substantially greater for Mexicans than for other Latin Americans (0.61 versus 0.21 on the first trip) suggests that the former are more often motivated by goals posited by the new economics of labor migration (overcoming market failures or improving relative income) than the latter, who seem more drawn by the motivations postulated by neoclassical theory (maximization of net earnings).

Little else in our models provided support for a neoclassical conceptualization of Latin American migration. Undocumented migration was not related to the size of the income differential between the United States and the sending country, for example, or to life cycle characteristics such as age or marital status, as one might expect from standard economic models. Moreover, although education was significantly related to out-migration, it tended to predict the mode of entry more than the fact of migration itself, and only for Mexicans. People with greater schooling tended to enter with a tourist visa, whereas those with less schooling tended to enter without inspection.

We also found little evidence that recent American attempts to raise the costs of migration had a deterrent effect on Latin Americans contemplating an undocumented entry or an encouraging effect on those living in the United States contemplating a return home. The likelihood of returning from either a first or a later trip was unrelated to the number of deportations or linewatch hours or the relative scarcity of visas. Likewise, neither visa scarcity nor linewatch hours had an effect on the likelihood of taking a first or later trip. Only among Mexicans was there a slight negative effect of linewatch hours on the odds of entering without inspection, but only for first trips, and this effect was at the margins of statistical significance.

To the extent that the rising tide of deportations had any influence on the likelihood of taking an undocumented trip to the United States, moreover, it tended to be *positive* rather than negative. For all nationalities combined, a rising number of deportations was associated with a greater likelihood of entering the United States without inspection on a first trip and of taking an additional trip by whatever means. Thus, people appear to migrate in anticipation that

conditions in the United States will be even worse for undocumented migrants in the future. When the analysis of first trips is broken down by nationality, we find that the unintended positive effect of deportations on the odds of entering without inspection is particularly strong for Mexicans. The number of deportations did have a negative effect on the likelihood of entering without inspection among non-Mexicans, but relatively few of this group choose this mode of undocumented migration. Most non-Mexicans enter on a tourist visa, and deportations had no effect on that mode of entry.

In sum, U.S. efforts to deter undocumented migrants through unilateral police actions appear to have had either very weak effects in the expected direction or relatively strong effects in the opposite direction. In theoretical terms, this means either that the costs imposed by policies enacted to date have been insufficient to outweigh the expected gains of undocumented migrants and/or that migrants are moving for reasons other than maximizing earnings. Whatever the effects of enforcement indicators, they pale in comparison to those of social capital, especially on the first trip. To illustrate this divergence in explanatory power, Figure 1 compares the effects of linewatch hours, migratory prevalence, and deportations on the predicted probability of entering the United States without inspection for Mexicans on their first undocumented trip.

To generate these predicted values, all variables except the one under consideration were held constant at the mean, and the selected characteristic was then varied from two standard deviations below the mean to two standard deviations above the mean to generate predicted values from the equation in Table 5. As can be seen, the deterrent effect of linewatch hours on the likelihood of entering without inspection is barely detectable—and recall that linewatch was the *only* enforcement variable that approached statistical significance in the expected direction. The perverse effect of deportations in increasing the odds of entering without inspection is more readily apparent, with the probability rising from around 0.0125 per year at two standard deviations above. In other words, the massive increase in deportations since the 1980s may actually have ended up tripling the rate of undocumented migration, at least for Mexicans.

To illustrate the effect of social capital, we generated predicted values by shifting migratory prevalence two standard deviations below and above the mean under two circumstanceshaving a migrant sibling and not having a migrant sibling—and applying the coefficient's prevalence and its square. Even without a direct connection to a migrant, the overall stock of social capital in a community has a strong effect in raising the probability of entry without inspection, which goes from close to 0 at two standard deviations below the mean to around 0.027 at two standard deviations above (the squared term is only beginning to have an effect at plus two standard deviations). Having a migrant sibling raises the likelihood even more, with the range going from around 0.007 at the minimum to around 0.055 at the maximum. Adding in other sources of social capital-having a migrant parent and a migrant child-raises the likelihood of migration even further. Given a migrant parent, a migrant sibling, and a migrant child, the odds of entering without inspection rise to around 0.44 per year when migration prevalence reaches two standard deviations above the mean. In other words, for someone with such abundant access to migration-related social capital, the likelihood of leaving on a first trip within five years is nearly 100 percent, given a 44 percent chance of migrating in any given year.

In the end, U.S. enforcement efforts have failed because the influence of social capital in promoting undocumented migration is vastly greater than the influence of linewatch hours in deterring it, at least at the levels observed to date. At this late juncture, access to social capital is widespread in Latin America, especially in Mexico. According to Massey and Phillips (1999), 48 percent of all Mexicans have a member of their immediate family with experience

in the United States, and 20 percent have an immediate family member living there. Similarly, 54 percent of all Mexicans have a member of their extended family with U.S. experience, and 48 percent have a member of their extended family living north of the border. Given such extensive social connections between migrants and nonmigrants, which accumulated over six decades of continual movement back and forth across the border, it is perhaps unsurprising that U.S. enforcement efforts have either failed or had perverse consequences. Migration flows are much easier to turn on than to turn off. Indeed, as Massey and Phillips (1999, 33) have noted, no matter what policies the United States adopts, the stock of social capital that currently exists in Mexico will constitute an "engine of immigration" for years to come.

References

- Allison, Paul D. Fixed-effects partial likelihood for repeated events. Sociological Methods and Research 1996;25:207–22.
- Aysa, Maria; Massey, Douglas S. Social capital and international migration from Latin America. Paper presented at the XXV International Congress of the International Union for the Scientific Study of Population; Tours, France. July; 2005.
- Bean, Frank D.; Corona, Rodolfo; Tuiran, Rodolfo; Woodrow-Lafield, Karen A.; Van Hook, Jennifer. Circular, invisible, and ambiguous migrants: Components of difference in estimates of the number of unauthorized Mexican migrants in the United States. Demography 2001;38:411–22. [PubMed: 11523268]
- Borjas, George J. Mexican immigration to the United States. Chicago: University of Chicago Press; 2007.
- Buchanan, Patrick J. State of emergency: The third world invasion and conquest of America. New York, NY: Thomas Dunne Books; 2006.
- Cardoso, Lawrence. Mexican emigration to the United States 1897–1931. Tucson, AZ: University of Arizona Press; 1980.
- Cornelius, Wayne A. Death at the border: Efficacy and unintended consequences of U.S. immigration control policy. Population and Development Review 2001;27:661–85.
- Dobbs, Lou. War on the middle class: How the government, big business, and special interest groups are waging war on the American dream and how to fight back. New York, NY: Viking; 2006.
- Dunn, Timothy J. The militarization of the U.S.-Mexico border, 1978–1992: Low-intensity conflict doctrine comes home. Austin: Center for Mexican American Studies, University of Texas at Austin; 1996.
- Durand, Jorge; Massey, Douglas S., editors. Crossing the border: Research from the Mexican Migration Project. New York, NY: Russell Sage Foundation; 2004.
- Eschbach, Karl; Hagan, Jacqueline; Rodriguez, Nestor; Hernandez-Leon, Ruben; Bailey, Stanley. Death at the border. International Migration Review 1999;33:430–54. [PubMed: 12319738]
- Fussell, Elizabeth; Massey, Douglas S. The limits to cumulative causation: International migration from Mexican urban areas. Demography 2004;41:151–71. [PubMed: 15074129]
- Huntington, Samuel P. Who are we: The challenges to America's national identity. New York, NY: Simon & Schuster; 2004.
- Jasso, Guillermina; Massey, Douglas S.; Rosenzweig, Mark R.; Smith, James P. Immigration, health, and New York City: Early results based on the U.S. New Immigrant Cohort of 2003. Federal Reserve Bank of New York Economic Policy Review 2005;11(2):127–52.
- Jasso, Guillermina; Rosenzweig, Mark R. The new chosen people: Immigrants in the United States. New York, NY: Russell Sage Foundation; 1990.
- Keely, Charles B. The United States of America. In: Kubat, Daniel, editor. The politics of migration policies. Staten Island, NY: Center for Migration Studies; 1979. p. 51-66.
- Levine, Daniel B.; Hill, Kenneth; Warren, Robert, editors. Immigration statistics: A story of neglect. Washington, DC: National Academies Press; 1985.
- Lindstrom, David P. Economic opportunity in Mexico and return migration from the United States. Demography 1996;33:357–74. [PubMed: 8875068]

- Lundquist, Jennifer H.; Massey, Douglas S. The Contra War and Nicaraguan migration to the United States. Journal of Latin American Studies 2005;37:29–53. [PubMed: 20852719]
- Massey, Douglas S. The settlement process among Mexican migrants to the United States. American Sociological Review 1986;51:670–85.
- Massey, Douglas S. The ethnosurvey in theory and practice. International Migration Review 1987;21:1498–1522. [PubMed: 12280921]
- Massey, Douglas S. Social structure, household strategies, and the cumulative causation of migration. Population Index 1990;56:3–26. [PubMed: 12316385]
- Massey, Douglas S. When surveys fail: An alternative for data collection. In: Stone, Arthur A.; Shiffman, Saul; Atienza, Audie A.; Nebeling, Linda, editors. The science of self-report: Implications for research and practice. Mahwah, NJ: Lawrence Erlbaum; 2000. p. 145-60.
- Massey, Douglas S. Trade Policy Analyses no. 29. Washington, DC: Center for Trade Policy Studies, Cato Institute; 2005. Backfire at the border: Why enforcement without legalization cannot stop illegal immigration.
- Massey, Douglas S. Categorically unequal: The American stratification system. New York, NY: Russell Sage Foundation; 2007.
- Massey, Douglas S.; Alarcón, Rafael; Durand, Jorge; González, Humberto. Return to Aztlan: The social process of international migration from western Mexico. Berkeley, CA: University of California Press; 1987.
- Massey, Douglas S.; Arango, Joaquín; Hugo, Graeme; Kouaouci, Ali; Pellegrino, Adela; Taylor, J Edward. An evaluation of international migration theory: The North American case. Population and Development Review 1994;20:699–752.
- Massey, Douglas S.; Arango, Joaquín; Hugo, Graeme; Kouaouci, Ali; Pellegrino, Adela; Taylor, J Edward. Worlds in motion: International migration at the end of the millennium. Oxford, UK: Oxford University Press; 1998.
- Massey, Douglas S.; Bartley, Katherine. The changing legal status distribution of immigrants: A caution. International Migration Review 2005;34:469–84.
- Massey, Douglas S.; Capoferro, Chiara. Measuring undocumented migration. International Migration Review 2004;38:1075–1102.
- Massey, Douglas S.; Durand, Jorge; Malone, Nolan J. Beyond smoke and mirrors: Mexican immigration in an age of economic integration. New York, NY: Russell Sage Foundation; 2002.
- Massey, Douglas S.; España, Felipe García. The social process of international migration. Science 1987;237:733–38. [PubMed: 17751562]
- Massey, Douglas S.; Espinosa, Kristin E. What's driving Mexico-U.S. migration? A theoretical, empirical and policy analysis. American Journal of Sociology 1997;102:939–99.
- Massey, Douglas S.; Goldring, Luin P.; Durand, Jorge. Continuities in transnational migration: An analysis of 19 communities. American Journal of Sociology 1994;99:1492–1532.
- Massey, Douglas S.; Malone, Nolan J. Pathways to legalization. Population Research and Policy Review 2003;21:473–504. [PubMed: 20830313]
- Massey, Douglas S.; Phillips, Julie. Engines of immigration: Stocks of human and social capital in Mexico. Social Science Quarterly 1999;81:33–48.
- Massey, Douglas S.; Sana, Mariano. Patterns of U.S. migration from Mexico, the Caribbean, and Central America. Migraciones Internacionales 2004;2(2):1–39.
- Massey, Douglas S.; Zenteno, René. The dynamics of mass migration. Proceedings of the National Academy of Sciences 1999;96(8):5328–35.
- Massey, Douglas S.; Zenteno, René. A validation of the ethnosurvey: The case of Mexico-U.S. migration. International Migration Review 2000;34:765–92.
- Orrenius, Pia. The effect of U.S. border enforcement on the crossing behavior of Mexican migrants. In: Durand, Jorge; Massey, Douglas S., editors. Crossing the border: Research from the Mexican Migration Project. New York, NY: Russell Sage Foundation; 2004. p. 281-99.
- Palloni, Alberto; Massey, Douglas S.; Ceballos, Miguel; Espinosa, Kristin; Spittel, Mike. Social capital and international migration: A test using information on family networks. American Journal of Sociology 2001;106:1262–99.

- Passel, Jeffrey S. Unauthorized migrants: Numbers and characteristics. Washington, DC: Pew Hispanic Center; 2007. Available from pewhispanic.org/files/reports/46.pdf
- Portes, Alejandro; Bach, Robert. Latin journey: Cuban and Mexican immigrants in the United States. Berkeley: University of California Press; 1985.
- Portes, Alejandro; Rumbaut, Rubén G. Immigrant America: A portrait. Berkeley, CA: University of California Press; 1992.
- Reyes, Belinda. U.S. immigration policy and the duration of undocumented trips. In: Durand, Jorge; Massey, Douglas S., editors. Crossing the border: Research from the Mexican Migration Project. New York, NY: Russell Sage Foundation; 2004. p. 299-320.
- Riosmena, Fernando. Return versus settlement among undocumented Mexican migrants, 1980 to 1996. In: Durand, Jorge; Massey, Douglas S., editors. Crossing the border: Research from the Mexican Migration Project. New York, NY: Russell Sage Foundation; 2004. p. 265-81.
- Riosmena, Fernando. PhD diss, Graduate Group in Demography. University of Pennsylvania; Philadelphia: 2005. Within, between, and beyond space-time: Three essays on Latin America–U.S. migratory dynamics.
- Sjaastad, Larry A. The costs and returns of human migration. Journal of Political Economy 1962;70S: 80–93.
- Stark, Oded. The migration of labor. Cambridge, UK: Basil Blackwell; 1991.
- Taylor, J Edward. Differential migration, networks, information and risk. In: Stark, Oded, editor. Migration theory, human capital and development. Greenwich, CT: JAI; 1986. p. 147-71.
- Taylor, J Edward. Undocumented Mexico-U.S. migration and the returns to households in rural Mexico. American Journal of Agricultural Economics 1987;69:626–38.
- Taylor, J Edward. Remittances and inequality reconsidered: Direct, indirect, and intertemporal effects. Journal of Policy Modeling 1992;14:187–208.
- Taylor, J Edward; Arango, Joaquin; Hugo, Graeme; Kouaouci, Ali; Massey, Douglas S.; Pellegrino, Adela. International migration and community development. Population Index 1996a;63:397–418.
- Taylor, J Edward; Arango, Joaquin; Hugo, Graeme; Kouaouci, Ali; Massey, Douglas S.; Pellegrino, Adela. International migration and national development. Population Index 1996b;62:181–212. [PubMed: 12292019]
- Todaro, Michael P.; Maruszko, L. Illegal migration and U.S. immigration reform: A conceptual framework. Population and Development Review 1986;13:101–14.
- U.S. Department of Homeland Security. 2006 yearbook of immigration statistics. Washington, DC: Government Printing Office; 2007.
- Woodrow-Lafield, Karen. Migration between Mexico and the United States: Binational study, vol. 3, Research reports and background materials. Washington, DC: U.S. Commission on Immigration Reform; 1998. Estimating authorized immigration; p. 619-82.
- Zenteno, René; Massey, Douglas S. Especifidad versus Representatividad: Enfoques Metodológicos para el Estudio de la Migración Internacional. Estudios Demográficos y Urbanos 1999;40:75–116.
- Zolberg, Aristide. A nation by design: Immigration policy in the fashioning of America. Cambridge, MA and New York, NY: Harvard University Press and Russell Sage Foundation; 2006.

Biographies

Douglas S. Massey is the Henry G. Bryant Professor of Sociology and Public Affairs at Princeton University and the president of the American Academy of Political and Social Science. His research focuses on international migration, race and housing, discrimination, education, urban poverty, and Latin America, especially Mexico. His most recent books are *New Faces in New Places: The Changing Geography of American Immigration* (Russell Sage Foundation 2008) and *Categorically Unequal: The American Stratification System* (Russell Sage Foundation 2007).

Fernando Riosmena is an assistant professor in the Population Program, Institute of Behavioral Science, at the University of Colorado at Boulder. His research interests lie at the intersection

MASSEY and RIOSMENA

of the fields of formal and social demography with an emphasis on how demographic processes are associated with the social mobility, well-being, and development in Latin American societies and in Latin American immigrant communities in the United States.



FIGURE 1.

Effect of Linewatch Hours, Migratory Prevalence, and Deportations on the Likelihood of Taking a First Trip from Mexico to the United States

Samples Used in the Analysis of Undocumented Entry and Exit from Selected Countries in Latin America

Sample Characteristics	Mexico	Dominican Republic	Nicaragua	Costa Rica
Sampling fraction (%)	29.2	19.7	25.5	23.5
Refusal rate (%)	5.5	4.6	5.2	4.8
Community size (%)				
<15,000	69.5	7.1	27.2	14.4
15,000–99,999	15.1	59.1	62.2	37.8
100,000+	15.4	33.8	10.6	47.8
Number of communities	88	7	9	7
Number of male heads	11,228	610	1,004	969

Independent Variables Used in Analysis of Undocumented Migration and Return from Four Latin American Countries

Variable	Definition
Demographic background	
Age	Years since birth
Married	Currently married in person-year
Number children 0-1	Number of children age 0-1 in household during person-year
Number children 2–5	Number of children age 2–5 in household during person-year
Socioeconomic background	
Years of schooling	Years of schooling completed in person-year
Occupation	
Not working	Not employed in person-year
Unskilled	Agricultural workers, operatives, clerks, waiters, restaurant attendants, and other unskilled workers
Skilled	Technicians, professionals, artists, managers, supervisors, equipment operators in manufacturing, sales, clerical, and other administrative workers
Owns real estate	Owned house or land in person-year
Owns business	Owned business enterprise in person-year
Social capital	
Parent ever U.S. migrant	Parent had been to U.S. by person-year
Sibling ever U.S. migrant	Sibling had been to U.S. by person-year
Child ever U.S. migrant	Child had been to U.S. by person-year
Migratory prevalence	Percentage of those aged 15+ with U.S. experience in person-year
Migration-specific capital	
Entered on tourist visa	Entered U.S. with a tourist visa
Duration of trip	Months spent in U.S. on latest trip
Contextual factors	
Community population (× 1,000)	Number of inhabitants in person-year
Linewatch hours (× 1,000,000)	Hours spent by U.S. Border Patrol patrolling border
Deportations (× 10,000)	Number of deportations from interior of U.S.
Access to documents (per 100)	Legal U.S. visas (temporary and permanent) per capita
Relative GDP per capita	Ratio of GDP in U.S. relative to Mexico

Mean Values of Independent Variables Used in Analysis of Undocumented Migration and Return from Four Latin American Countries

		Mexico	0	ther Countries ^a
Variable	Mean	Standard Deviation	Mean	Standard Deviation
Demographic background				
Age	34.2	12.5	34.0	12.4
Married	0.74	0.47	0.67	0.47
No. children 0–1	0.28	0.51	0.20	0.44
No. children 2–5	0.56	0.83	0.38	0.70
Socioeconomic background				
Years of schooling	5.58	4.45	8.15	4.71
Occupation				
Unskilled	0.64	0.48	0.47	0.50
Skilled	0.30	0.46	0.41	0.49
Owns real estate in home community	0.20	0.40	0.40	0.49
Owns business	0.04	0.20	0.17	0.38
Social capital				
Parent ever U.S. migrant	0.13	0.34	0.04	0.19
Sibling ever U.S. migrant	0.26	0.44	0.15	0.36
Child ever U.S. migrant	0.08	0.28	0.04	0.20
Migratory prevalence	13.0	9.5	8.0	8.7
Migration-specific capital				
Entered with tourist visa on first trip	7.7	26.7	58.9	49.2
Entered with tourist visa on later trips	6.1	23.9	72.5	44.6
Duration of first trip in months	20.6	31.1	38.4	46.7
Duration of later trips in months	20.2	36.3	42.6	56.9
Contextual factors				
Community population (× 1,000)	269	392	140	318
Linewatch hours (× 1,000,000)	4.64	17.73	9.63	32.96
Deportations (× 10,000)	3.95	4.00	4.70	4.90
Access to documents (per 100)	0.22	0.20	0.18	0.20
Relative GDP per capita (ratio to U.S.)	5.3	0.51	16.9	12.6
Person-years		298,106		85,353

^{*a*}Dominican Republic, Costa Rica, and Nicaragua.

Discrete-Time Event History Analysis Using Multinomial Logit Model to Predict the Relative Likelihood of Taking a First Undocumented Trip to the U.S.

		Mode	of Entry	Entry		
	With Touri	st Visa	Without Ins	pection		
Variable	В	SE	В	SE		
Demographic background						
Age	0.023	0.036	-0.002	0.026		
Age squared	-0.001	0.001	-0.001	0.001		
Married	0.050	0.171	0.175*	0.098		
Number children 0-1	-0.045	0.141	-0.049	0.074		
Number children 2-5	-0.242**	0.104	-0.058	0.053		
Socioeconomic background						
Years of schooling	0.067***	0.014	-0.046***	0.009		
Occupation						
Not working	_		—	_		
Unskilled	-0.127	0.202	0.513***	0.136		
Skilled	0.022	0.199	0.178	0.145		
Owns real estate	-0.228	0.142	-0.073	0.085		
Owns business	0.153	0.147	-0.202*	0.113		
Social capital						
Parent ever U.S. migrant	0.667***	0.221	0.667***	0.104		
Sibling ever U.S. migrant	0.865***	0.135	0.823***	0.075		
Child ever U.S. migrant	0.662**	0.318	0.849**	0.267		
Migratory prevalence	0.200***	0.025	0.118***	0.011		
Prevalence squared	-0.005***	0.001	-0.002***	0.001		
Contextual factors						
Log of community population	0.118***	0.039	-0.143***	0.023		
Linewatch hours	-0.002	0.002	-0.003	0.002		
Deportations	-0.002	0.016	0.038***	0.010		
Relative access to documents	-0.315	0.341	-0.125	0.145		
Relative GDP per capita	-0.006	0.014	0.014	0.013		
Country						
Mexico	—	_	—	—		
Dominican Republic	-0.029	0.300	-1.685***	0.274		
Nicaragua	0.707^{*}	0.426	-1.511***	0.383		
Costa Rica	1.555***	0.174	-0.951***	0.164		
Intercept	-9.644***	0.694	-3.351***	0.439		
Person-years		165	,251			

		Mode	of Entry	
	With Tou	rist Visa	Without I	nspection
Variable	В	SE	В	SE
Log likelihood		-7,54	8.1***	

p < .10.

*

** p < .05. ***

p < .01.

Discrete-Time Event History Analysis Using Multinomial Logit Model to Predict the Relative Likelihood of Taking a First Undocumented Trip to the U.S. from Mexico and Other Latin American Countries

MASSEY and RIOSMENA

		Mex	ico		Other I	atin Am	erican Count	ries
	With Touri	ist Visa	Without Ins	spection	With Touri	ist Visa	Without Ins	spection
Variable	В	SE	В	SE	В	SE	В	SE
Demographic background								
Age	0.057	0.040	-0.048^{*}	0.029	0.013	0.028	0.120	0.092
Age squared	-0.001^{**}	0.0005	-0.001^{*}	0.0006	0.000	0.001	-0.003^{**}	0.001
Married	-0.105	0.234	0.093	0.111	0.164	0.209	0.774^{**}	0.317
Number children 0–1	-0.352^{*}	0.207	-0.018	0.064	0.189	0.165	-0.365*	0.210
Number children 2–5	-0.284^{**}	0.134	-0.046	0.041	-0.188	0.145	-0.106	0.129
Socioeconomic background								
Years of schooling	0.094^{***}	0.030	-0.056^{***}	0.011	0.047^{*}	0.027	0.044	0.034
Occupation								
Not working								
Unskilled	0.204	0.492	0.529^{***}	0.121	-0.447	0.165	0.374	0.391
Skilled	0.312	0.351	0.302^{**}	0.143	-0.280	0.187	-0.267	0.320
Owns real estate	-0.270	0.270	-0.118	0.103	-0.141	0.156	-0.016	0.264
Owns business	-0.188	0.277	-0.255	0.156	0.334^{*}	0.195	-0.249	0.251
Social capital								
Parent ever U.S. migrant	0.331	0.393	0.586^{***}	0.131	1.428^{***}	0.257	1.155^{***}	0.336
Sibling ever U.S. migrant	1.006^{***}	0.196	0.750***	060.0	0.697***	0.247	1.524^{***}	0.305
Child ever U.S. migrant	1.209^{**}	0.557	0.841^{***}	0.295	0.546	0.335		
Migratory prevalence	0.098^{**}	0.047	0.118^{***}	0.020	0.222^{***}	0.080	0.350^{***}	0.099
Prevalence squared	-0.002^{***}	0.001	-0.002^{***}	0.001	-0.007^{***}	0.003	-0.010^{***}	0.004
Contextual factors								
Log of community pop.	0.010	0.117	-0.114	0.066	-0.055	0.107	-0.068	0.167
Linewatch hours	-0.001	0.006	-0.004	0.003	-0.001	0.002	0.004	0.004

MASSEY and RIOSMENA

		Mex	ico		Other I	atin Am	erican Count	ries
	With Touri	st Visa	Without Ins	spection	With Touri	st Visa	Without Ins	pection
Variable	В	SE	В	SE	В	SE	В	SE
Deportations	0.026	0.036	0.056^{***}	0.013	-0.014	0.021	-0.092**	0.040
Relative access to docs	-0.477	0.484	0.043	0.181	0.224	1.245	-1.378	2.215
Relative GDP per capita	0.264	0.188	-0.053	0.089	-0.006	0.018	-0.007	0.022
Country								
Dominican Republic								
Nicaragua				I	0.721	0.668	0.192	0.675
Costa Rica					1.446^{**}	0.659	0.396	0.867
Intercept	-10.106^{***}	1.816	-4.537***	1.022	-7.442***	1.524	-8.458***	2.420
Person-years		94,9	152			70,	299	
Log likelihood		-4,650	.3***			-1,11	2.4***	
* <i>p</i> <.10.								
$^{**}_{p < .05.}$								
p < .01.								

Discrete-Time Event History Analysis Predicting the Relative Likelihood of Returning from a First and Later Undocumented Trip to the U.S.

	First T	rips	Later 7	Frips
Independent Variable	В	SE	В	SE
Demographic background				
Age	0.070**	0.028	-0.096*	0.056
Age squared	0.001**	0.0005	0.001*	0.0006
Married	0.185	0.138	-0.155	0.190
Number children 0-1	0.274***	0.084	0.213*	0.126
Number children 2–5	-0.014	0.051	0.055	0.091
Socioeconomic background				
Years of schooling	-0.003	0.013	0.017	0.017
Occupation				
Not working	—	_	—	—
Unskilled	-0.550***	0.190	-0.107	0.363
Skilled	-0.622***	0.194	-0.585	0.364
Owns real estate	0.218*	0.116	0.150	0.179
Owns business	-0.093	0.227	0.039	0.273
Social capital				
Parent ever U.S. migrant	-0.087	0.112	-0.114	0.208
Sibling ever U.S. migrant	-0.139*	0.079	-0.058	0.113
Child ever U.S. migrant	-0.808***	0.200	-0.513***	0.160
Migratory prevalence	-0.011	0.017	0.002	0.029
Prevalence squared	0.000	0.001	0.000	0.001
Migration-specific capital				
Entered on tourist visa	0.008	0.207	0.280	0.205
Duration in months	-0.036***	0.003	-0.033***	0.004
Duration squared	0.0001***	0.00002	0.0001***	0.00002
Contextual factors				
Log of community population	-0.131**	0.065	-0.074	0.065
Linewatch hours	0.000	0.003	-0.001	0.003
Deportations	0.014	0.015	0.032	0.022
Relative access to documents	0.245	0.150	0.423	0.277
Relative GDP per capita	0.000	0.021	0.053	0.055
Country				
Mexico	_	_	—	_
Dominican Republic	-1.161**	0.432	-2.157***	0.763
Nicaragua	-1.254*	0.663	-3.220	2.168
Costa Rica	-0.220	0.210	-0.324	0.386

MASSEY and RIOSMENA

	First '	Trips	Later '	Trips	
Independent Variable	В	SE	В	SE	
Intercept	0.957	0.810	2.323*	1.400	
Person-years	4,2	46	1,384		
Log likelihood	-2,015	5.0***	-764.	0***	

* p < .10.

** p < .05.

*** *p* < .01.

Discrete-Time Event History Analysis Using Multinomial Logit Model to Predict the Relative Likelihood of Taking a Later Undocumented Trip to the U.S.

	Mode of Entry			
	With Touri	st Visa	Without Ins	pection
Variable	В	SE	В	SE
Demographic background				
Age	-0.190***	0.058	-0.152***	0.027
Age squared	0.002**	0.001	0.001	0.001
Married	0.723**	0.333	-0.190	0.129
Number children 0-1	-0.220	0.221	0.021	0.087
Number children 2-5	-0.361**	0.158	-0.011	0.059
Socioeconomic background				
Years of schooling	0.105***	0.025	-0.055***	0.014
Occupation				
Not working	_	—	_	—
Unskilled	-0.185	0.430	-0.257	0.238
Skilled	-0.382	0.434	-0.551**	0.246
Owns real estate	-0.152	0.222	-0.142	0.096
Owns business	0.137	0.214	-0.264**	0.113
Social capital				
Parent ever U.S. migrant	-1.010**	0.415	-0.066	0.113
Sibling ever U.S. migrant	-0.170	0.201	0.068	0.087
Child ever U.S. migrant	1.033***	0.268	0.160	0.175
Migratory prevalence	0.074**	0.036	0.058***	0.016
Prevalence squared	-0.002***	0.001	-0.001	0.001
Contextual factors				
Log of community population	0.103	0.067	-0.109***	0.035
Linewatch hours	-0.001	0.002	-0.002	0.005
Deportations	0.065***	0.019	0.088***	0.009
Relative access to documents	0.283	0.474	-0.445**	0.202
Relative GDP per capita	0.038	0.070	-0.020	0.035
Country				
Mexico	_		_	—
Dominican Republic	0.810	0.957	-0.703	0.829
Nicaragua	-0.485	2.589	0.150	1.199
Costa Rica	2.057***	0.330	-1.194***	0.313
Intercept	-4.344***	1.362	1.593**	0.664
Person-years		21	,122	

		Mode	of Entry	
	With Tou	rist Visa	Without I	nspection
Variable	В	SE	В	SE
Log likelihood		-3,21	0.9 ^{***}	

** p < .05.

*** *p* < .01.