Border Enforcement and Return Migration by Documented and Undocumented Mexicans

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Abstract

Using data from the Mexican Migration Project we compute probabilities of departure and return for first and later trips to the United States in both documented and undocumented status. We then estimate statistical models to analyze the determinants of departure and return according to legal status. Prior to 1986, Mexico-U.S. migration was characterized by great circularity, but since then circularity has declined markedly for undocumented migrants but increased dramatically for documented migrants. Whereas return migration by undocumented migrants dropped in response to the massive increase in border enforcement, that of documented migrants did not. At present, the Mexico-U.S. migration system has reached a new equilibrium in which undocumented migrants are caged in as long term settlers in the United States while documented migrants increasingly range freely and circulate back and forth across the border within rising frequency.

The Mexico-U.S. migration system is the largest and most durable migration system in the world and for most of its history movement within it was largely circular. The degree of circularity, however, has always been affected by U.S. immigration and border policies. The Bracero Program, for example, was a large temporary worker program that operated from 1942 through 1964 and it *required* annual return migration by issuing short-term 6 month work visas. The termination of the Bracero Program led to an era of circular undocumented migration between 1965 and 1985 as former Braceros and new migrants moved back and forth across the border without authorization. Prior to 1986, a lack of documents presented no real barrier to employment or earnings and most migrants were able to move regularly between seasonal jobs in the United States and families back in Mexico.

Beginning in 1986, however, the U.S. Congress outlawed undocumented hiring and imposed sanctions on employers while at the same time launching a progressive expansion of border enforcement. With much less fanfare, Congress also quietly revived guest worker migration, slowly at first but expanding more rapidly as time went on. Since then rates of return migration back to Mexico have declined steadily among undocumented migrants but progressively increased among those with documents. Here we seek to shed light on these contradictory trends by analyzing the behavior of documented and undocumented Mexican migrants with respect to departure and return.

We begin with a history of U.S. border policies and their influence on the circulation of migrants and then review prevailing theories of migrant decision-making, using this review to specify models predicting the likelihood of departure and return from the United States. We then draw upon data from the Mexican Migration Project (MMP) to examine trends in the likelihood of departure and return on first and later trips by documented and undocumented migrants. In doing so, we seek to explain the emergence of a new Mexico-U.S. migration system in which undocumented migrants are rooted north of the border and no longer circulate while documented migrants move back and forth with ever greater frequency.

A HISTORY OF CROSS-BORDER CIRCULATION AND SETTLEMENT

Migration between Mexico and the United States historically has been a circular affair, with migrants coming and going in response to economic fluctuations on both sides of the border. From 1942 through 1964 circulatory migration prevailed under the auspices of the Bracero Program, a binational temporary labor program that annually sponsored the entry of Mexicans for short-term work in the United States (Massey, Durand, and Malone 2002). The status quo changed in 1964, when Congress terminated the Bracero Program **over Mexican protests** and in 1965 imposed the first-ever limitations on legal immigration from the Western Hemisphere. Given the continuing labor demand and well-developed migrant networks, the inflow of Mexican migrants did not cease, but simply continued under undocumented auspices (Massey and Pren 2012). The status quo changed again in 1986 when Congress passed the Immigration Reform and Control Act (IRCA) which, among other things, launched a massive increase in border enforcement. Police actions along the border intensified during the early 1990s and increased exponentially after 2001, progressively militarizing the border between Mexico and the United States (Massey and Pren 2012). Although border enforcement was intended to reduce undocumented departures, in the end it did far more to reduce the undocumented returns back to Mexico (Reyes 2004a) a drop in return migration has been labeled a "caging effect" of border enforcement (Rosenblum 2012).

As a result, the *net* volume of unauthorized migration rose during the 1990s and early 2000s causing undocumented population growth to accelerate and reach a record 12 million persons in 2008 (Hoefer, Rytina, and Baker 2012). With the onset of the Great Recession, however, conditions changed yet again and between 2008 and 2009 the population of undocumented migrants fell by about a million persons. Since then it has fluctuated closely around a total of 11 million persons, indicating a net rate of zero (Passel, Cohn, and González-Barrera 2012).

In contrast to the decrease in undocumented migration from Mexico, documented migration has risen, with entries by permanent residents climbing from 90,000 to 146,000 between 1995 and 2012 while entries by temporary workers rose from 27,000 to 623,000. Since 2008 permanent entries have averaged 157,000 per year and temporary entries have remained above 500,000 per year despite the recession. The increase in temporary legal migration reflects largely unnoticed congressional actions taken to raise the number temporary work visas beginning in the 1990s. The number of entries by temporary workers grew from

12,500 in 1990 to 284,000 in 2012. The temporary inflow has also been boosted by a growing number of Mexicans eligible for visas under the North American Free Trade Agreement (NAFTA). From 1990 to 2012 the number of entries by treaty investors and traders grew from 190 to 98,000 and entries by intra-company transferees rose from 3,000 to 84,000, while entries by temporary NAFTA professionals grew from 0 to 110,000 (U.S. Office of Immigration Statistics 2014).

The continued inflow of permanent residents reflects an ongoing process of "defensive naturalization" undertaken by legal Mexican immigrants since 1996, when Congress passed harsh legislation to limit the social, civil, and economic rights of non-citizens. In order to protect themselves, millions of legal permanent residents decided to become U.S. citizens. Whereas the number of Mexicans naturalized averaged just 20,000 per year from 1975 through 1995, after that date the annual average rose to 123,000, yielding an additional 2.1 million U.S. citizens with the right to sponsor the *immediate* entry of spouses, minor children, and parents *without numerical limitation*.

A second contributor to the surge of new citizens after 1995 was the legalization process authorized by IRCA, which ultimately granted permanent residence to 2.3 million former undocumented Mexicans. As a condition of receiving permanent residence, migrants were required to take civics courses and demonstrate competence in English, requirements usually not imposed until an application for citizenship. As a result, when Congress began to strip away the rights of non-citizens in 1996, the millions of people legalized under IRCA were ready to apply for citizenship.

Official data thus suggest that documented migration from Mexico is up while undocumented migration is down. Although deportations from Mexico rose from 15,000 in 1990 to 307,000 in 2012 these removals have apparently not had a significant effect on undocumented population size. According to official estimates, the number of undocumented Mexicans dropped by just 200,000 between 2008 and 2012, despite more than 1.9 million deportations over the period (U.S. Office of Immigration Statistics 2014). Since the MMP data do not distinguish between voluntary and involuntary departures, we cannot study the effect of deportations here.

Although a number of studies have studied the determinants of undocumented migration (Massey and Espinosa 1997; Reyes 2004a; Massey and Riosmena 2010; Angelucci 2012) and several observers have noted declining rates of return migration by unauthorized migrants (Massey, Durand, and Malone 2002; Reyes 2004b; Rocha et al. 2014), little attention has been paid to the determinants of legal migration or the effects of enforcement on documented migrants. Massey and Espinosa (1997) did model documented as well as undocumented departures and returns, but their data predated the border militarization of the 1990s and their models did not include a direct measure of enforcement. Riosmena (2010) studied documented migration more recently, but he did not consider return migration or the effects of enforcement. Here we offer the first systematic analysis of the border crossing behavior of legal Mexican migrants and the effects of border militarization on their likelihood of departure and return.

THEORIZING DEPARTURE AND RETURN

Obviously Mexicans migrate to the United States because they see a benefit in doing so. Neoclassical Economics (NE) posits the benefit to be higher lifetime earnings. Rational actors are assumed to observe expected incomes at the place of origin and various potential destinations, compute the income stream they expect to accrue at each location over their working lifetimes subject to temporal discounting, subtract out the costs of migration, and then move to the location that maximizes net lifetime earnings (Todaro and Maruszko 1986). In contrast, the New Economics of Labor Migration (NELM) argues that the benefits of migration accrue not to individuals, but to households which use migration to manage risks and overcome a lack of access to markets for capital, credit, and insurance (Stark 1991). By sending out migrants to work in geographically distinct labor markets, households diversify their labor portfolio to protect against a downturn in any single location; and by sending out migrants to a high wage area households can accumulate funds rapidly to overcome a lack of access to markets for capital and credit.

Whatever their economic motivations, migrants are always embedded in social structures---networks based on kinship, friendship, and acquaintance as well as formal and informal social organizations. According to Social Capital Theory, the migration of one person within a social network not only creates a potential motivation for reunion among those left behind (especially within families) but also generates social capital that other network members may draw upon to reduce their costs and risks of movement, spurring some of them to migrate, thereby expanding the network further to yield a self-feeding cycle of cumulative causation over time (Massey et al. 1998).

The NE and NELM models predict very different scenarios of migration and return. Whereas NE does not envision return migration unless the earnings gap shrinks to the point where the net gain in earning approximates the costs of movement, NELM assumes that migrants plan to return from the very beginning, either repatriating their earnings to diversify household income or returning with accumulated savings to overcome local market failures. The motivations hypothesized by NE and NELM are not mutually exclusive, of course, and research suggests that both play a role in migrant decision-making (Massey and Espinosa 1997; Garip 2012).

U.S. immigration and border policies have implicitly rested on a neoclassical foundation, seeking to drive up the costs and risks of undocumented border crossing while lowering the odds of unauthorized employment and depressing earnings to reduce the incentives for migration. If Mexican migrants are indeed operating according to the precepts of NE, then the main issue is whether expected U.S. earnings can be reduced enough to deter migrants from heading northward. If, however, migrants are operating according to the precepts of NELM, then driving up the costs and risks of border crossing could well backfire by curtailing circular migration. Having experienced higher costs and risks at the border, migrants might hunker down and stay north of the border rather than returning home to face those costs and risks again. Border enforcement, therefore, can be expected to play an outsized role in the decision making of undocumented as opposed to documented migrants.

Prior work indicates that until 1986 movement between Mexico and the United States was heavily circular, in keeping with expectations from NELM, suggesting a significant risk of backfire from a policy of intense border enforcement. Massey and Singer (1995) estimated that from 1965 to 1985 around 85% of undocumented entries were offset by departures; and Jasso and Rosenzweig (1982) estimated that 56% of legal immigrants from Mexico who arrived in 1970 had returned by 1979. Although we cannot know for sure how many documented and undocumented migrants moved with motivations assumed by NE versus NELM, it is clear that clear that circulation was common in both groups.

DATA AND METHODS

Our data come from the Mexican Migration Project, which since 1987 has annually conducted representative surveys in communities throughout Mexico. The MMP database currently includes 23,851 households surveyed in 143 communities located in 24 Mexican states, along with paired samples of migrants from those communities living in U.S. destination areas, yielding information on a total of 151,785 persons of whom 24,203 had prior U.S. migratory experience at the time of the survey. Communities in the MMP were chosen to build socioeconomic, geographic, and demographic diversity into the sample over time and to include a range of urbanism, from small rural villages to neighborhoods in large urban areas. Within each community, households were selected using simple random sampling. In the course of doing the interviews, MMP field workers collected additional contact information on friends and family members settled in the United States and used these as leads to build network samples of migrants in U.S. destination communities, thereby capturing the experience of settled households whose members no longer return home with any regularity.

Interviews were guided by a semi-structured instrument that compiled information about the household head, the spouse, all children of the head, and any additional household members. Interviews were conducted with the household head or spouse, who provided information on other members of the family, including all children of the household head and any other persons present in the household at the time of the interview. Grown children who had left the household were flagged to indicate they were no longer household members. Migrants temporarily in the United States were considered to be members if they were expected to rejoin the household upon returning to Mexico.

The survey compiled basic social, economic, and demographic information about all household members, including data on first and last trips to the United States plus the legal status in which trips were made. Each household head provided a complete history of migration and border crossing and answered a detailed series of questions about experiences on the last U.S. trip. Documentation was defined at the point of entry or attempted entry into the United States and since our model predicts departures within 12 months we observe no changes in status during this short interval. Undocumented migrants include those who sought to cross the border without authorization and those who entered with a tourist visa but then violated its terms by working or staying too long. Since 1970, only 5% all undocumented household heads have entered with a tourist visa with little year-to-year variation.

Documented migrants include legal permanent residents, naturalized U.S. citizens, and those holding a visa permitting temporary work or residence in the United States. Unlike their undocumented counterparts, however, the composition of the documented inflow has undergone marked changes over time. Figure 1 plots the percentage of documented household heads entering on a temporary visa from 1970 to the present. Prior to 1995 this percentage never exceeded 5%, but during 1995-1999 it increased suddenly to 17.2% and jumped to 51.8% in 2000-2004 and reached 61.1% in 2005.

To compute probabilities of first migration we draw upon life histories provided by household heads, following each subject year-by-year from the point of entry into the labor force up to the date of the first trip or the survey. A trip is defined as a journey northward in which entry to the United States was attempted or achieved. The probability of taking a first trip was computed as the number of observed first trips in year t divided by the number of people at risk of taking a first trip in that year (persons of labor force age who have never been to the United States).

To compute the probability of taking an additional trip, we followed each migrant from the point of return to Mexico up to the date of the next trip or the survey and divided the number of additional trips observed in year t by the number of migrants at risk of making an additional trip in that year. A return was defined as a trip back to the home community lasting at least three months. We computed the probability of return migration by recording whether a return occurred within twelve months of the last entry and then dividing the frequency of return trips to Mexico by the number of successful entries.

The independent variables we use to predict decisions about migration and return are listed in Table 1. To the extent that migration is economically motivated, we expect the likelihood of departure to vary in conjunction with personal characteristics that affect earnings capacity. Our model of migration thus includes demographic indicators such as age, gender, marital status, and household composition as well as human capital measures such as labor force experience, education, and occupational skill. We also include two measures of migration specific human capital, cumulative U.S. experience and number of prior U.S. trips, and in addition measure ownership of physical capital such as land, a home, or business. These assets might serve either as a source of money to finance a trip or as a motivation to accumulate capital for investment.

Indicators of social capital focus on ties to people with prior migratory experience, such as parents, spouses, siblings, and children; but we also include general indicators such as the prevalence of migrants in the community. To assess the effect of the progressive shift from permanent to temporary visas among documented migrants we include a dummy variable indicating whether entry was achieved with a temporary visa. To assess the legacy of IRCA's legalization program we include dummy variable indicating whether legal status was achieved under IRCA. Among undocumented migrants, we measure whether or not entry occurred with a tourist visa that was subsequently violated by working or staying too long.

Whatever individual characteristics a person displays, the likelihood of undocumented migration also depends on contextual circumstances at origin and destination. Among the

most salient is labor demand in the United States, which we measure as the annual percentage change in the number of U.S. residents who are gainfully employed (obtained from the U.S. Bureau of Labor Statistics 2014). The supply of migrant labor is filtered, of course, by U.S. immigration and border policies. The probability of undocumented migration is likely to be determined, at least partially, by access to legal visas, which we measure as the annual number of legal entries by Mexicans for work or residence in any year (from the U.S. Office of Immigration Statistics 2104) divided by Mexico's population in that year (from the United Nations 2014). Since 1986, the United States has mounted a great effort to apprehend unauthorized migrants and to assess this effort we include the real value of the U.S. Border Patrol's Budget (compiled from various sources at the U.S. Department of Homeland Security (2014). In real terms, the budget rose from $282 million in 1970 to 3.8 billion in 2010, a thirteen-fold increase.

In addition to rising enforcement efforts at the federal level, between 2005 and 2010 the number of immigration-related laws introduced into state legislatures rose from 200 to 1156 (National Council of State Legislatures 2014) and numerous enforcement agreements were negotiated between state and local authorities and the federal government (U.S. Immigration and Customs Enforcement 2014). A plethora of local anti-immigrant measures were also adopted around the country, but o the extent that such actions influence the behavior of migrants, they seem to affect decisions about where to locate more than whether to leave; and evidence suggests that their influence on locational decisions is limited (Parrado 2012), so we do not address state and local enforcement actions here.

On the sending side, we focus on three conditions. Population pressure was measured by the crude birth date 15 years before the person-year in question in order to proxy the size of cohorts entering the labor force (from Mitchell 2007). Economic opportunity in Mexico is measured using the annual percentage change in GDP expressed in constant 2005 dollars (from the U.S. Department of Agriculture (2014). Finally, we consider violence as a potential driver of migration using the annual homicide rate in Mexico, which we obtained from Aguirre Botello (2011) who culled the information from several sources. Data for 1970-1974 came from printed volumes of the *Anuario Estadístico de la República Mexicana*, published by Mexico's Instituto Nacional de Estadística y Geografía (INEGI). Data for 1975-1976 were obtained from annual editions of *Health in the Americas*, published by the Pan American Health Organization. Data for 1977-1978 came from the website *Fortalezas de México*, operated by the government agency Proméxico. Data for 1979-1989 were downloaded from the online data base of the Sistema Nacional de Información en Salud, operated by Mexico's Secretaría de Salud. Finally, data for 1990 onward were obtained from INEGI's online Consulta Interactiva de las Estadísticas de Mortalidad.

All variables listed in Table 1 are time-varying except gender, education, and community size which are measured at the survey date. To model departures we selected all person-years lived from 1970 onward and followed household heads from the point of entry into the labor force to the date of the first trip or the survey and used logistic regression to predict migration in year t+1 (1 if yes, 0 otherwise) from independent variables defined in year t, thus yielding a discrete-time event history analysis. To model returns we selected those

person-years in which a successful entry was achieved and predicted whether a return occurred within 12 months, measuring both independent and dependent variables in year t.

TRENDS IN DEPARTURE AND RETURN

Figure 2 shows annual probabilities of taking *first* documented and undocumented trips to the from 1970 through 2007, smoothed here and elsewhere using three-year moving averages to eliminate short-term fluctuations. As one might expect, given the limits on legal entry enacted after 1965, the probability of taking a first documented trip is substantially less than that of taking a first undocumented trip. Whereas the annual probability of taking an initial documented trip averaged round 0.0009 per year and varied from 0.0004 to 0.0015, the probability of taking a first undocumented trip averaged around 0.009 per year and ranged from 0.003 to 0.014. We also observe greater variation over time in the likelihood of undocumented than documented migration, with peaks and valleys corresponding roughly to U.S. economic cycles.

The trend in unauthorized departure probabilities is consistent with aggregate estimates of net undocumented migration, which slowed after 2000 and fell to zero or negative after 2008. Since net migration depends on out-migration as well as in-migration, Figure 3 shows trends in the probability of returning to Mexico within 12 months of entering on a first undocumented trip. Prior to 1986 the probability of return was quite high irrespective of legal status, with the average being 0.52 for documented migrants and 0.55 for undocumented migrants. After 1986, however, return probabilities for the two legal status groups moved in opposite directions. As shown in the figure, the probability of returning from a first documented trip steadily rose to reach 1.0 in 2006 while the likelihood of returning from a first undocumented trip fell steadily to reach an all-time low of 0.21 in that same year.

Figure 4 plots the probability of taking an additional U.S. trip among those migrants who had made at least one trip. Unlike what we observed on first U.S. trips, the likelihood of taking an additional trip is higher for documented than undocumented migrants. From 1970 through 1990 the probability additional migration averaged 0.041 for undocumented migrants but 0.054 for documented migrants. Thereafter the probability of taking an additional *documented* trip rose from 0.056 to 0.152 through 2000 whereas the likelihood of an additional *undocumented* trip increased only from 0.043 to 0.062. Beginning around 2000 both probabilities began to fall but after 2007 probability of additional migration rose sharply for documented migrants while continuing to fall for the undocumented. As of 2010 the probability of taking an additional trip stood at 0.125 for those with documents but had dropped to 0.029 for the undocumented.

Figure 5 completes our descriptive analysis by showing estimated probabilities of return within 12 months of taking an additional U.S. trip. As can be seen, the likelihood of returning from an additional trip was quite high, averaging 0.83 for documented migrants and 0.78 for undocumented migrants between 1970 and 1985. Once again, however, the trends diverge markedly beginning in 1986, with the likelihood of return rising to 0.92 by 2007 for those with documents and falling to 0.43 for those without documents. As the

border became more militarized and the U.S. and Mexican economies more integrated under the NAFTA, legal immigrants grew more likely to return to Mexico while illegal migrants grew more likely to remain in the United States. Depending on legal status, the circularity of Mexican migration moved in opposite directions.

INITIAL DEPARTURE AND RETURN

Table 2 presents the results of a discrete-time event history analysis estimated to identify the determinants of taking a first U.S. trip in documented and undocumented status. The determinants of initial *undocumented* migration are shown in the first two columns. Here we see that the likelihood of a first undocumented departure displays the familiar curvilinear pattern with respect to age, rising to a peak in the late 20s and declining thereafter. Compared with males, females are less likely to initiate undocumented migration, consistent with the fact that in Mexico undocumented migration tends to be very much a male-led phenomenon (Cerrutti and Massey 2001). Holding age and gender constant, taking a first undocumented trip is less likely for those who are married and have children in the household.

With respect to human capital, those initiating undocumented migration are negatively selected with respect to education and occupational skill, suggesting that returns to education and skill in U.S. labor markets are lacking for those without legal work. In terms of social capital, the initiation of undocumented migration is positively predicted by having a U.S. migrant parent, siblings, and children and by coming from a community with a high prevalence of U.S. migrants, consistent with social capital theory. However, departure is negatively predicted by having a migrant spouse, suggesting that households either send either a head or a spouse, but not both. Departure is also negatively predicted by having U.S.-born children but this condition is extremely rare among those contemplating a first trip. Ownership of physical capital such as land, a home, or a business negatively predicts the initiation of undocumented migration, consistent with the NELM hypothesis that financing the acquisition of assets is a major motivation for migration. Those who already possess these assets thus lack a key motivation for movement.

In terms of the U.S. context, individuals who hold a tourist visa are much more likely to initiate undocumented migration than those who face the prospect of unauthorized border crossing. The initiation of undocumented migration is also strongly and positively predicted by employment growth in the United States but negatively predicted by the relative supply of legal visas. The size of Border Patrol budget, however, has no significant effect on the likelihood of initiating undocumented migration. On the Mexican side, the likelihood of an undocumented departure is negatively predicted by the lagged crude birth rate, suggesting that larger cohorts of 15 year-olds entering the labor force ages predict *lower* likelihoods of taking a first undocumented trip. This seeming anomaly may reflect the fact that we are measuring demographic pressures at the national rather than the community level owing to data limitations. The coefficients for community size suggest that first undocumented departures are more likely from small cities and towns than from large urban areas, with the odds being especially high in rural villages.

The second set of columns in Table 2 show the determinants of taking a first *documented* trip to the United States. Demographically we see the same pattern of results as for first undocumented departures, with one exception. Although the odds of initiating documented migration display the familiar curvilinear pattern with respect to age and those who are married and have young children in the household are less likely to depart, women are much *more* likely than men to depart on a first trip with documents, suggesting that the legal migration of women depends on the prior legalization of a father or husband. Unlike their undocumented counterparts, however, documented migrants are positively selected on the basis of education. The initiation of documented migration is also more likely among those having U.S. migrant children and those coming from a community with a high prevalence of U.S. migrants and less likely among those having a migrant spouse or U.S. born children (again a very rare circumstance); but the odds of initiating documented migration are unrelated to having a migrant parent or siblings and negatively related to labor market experience, in contrast to effects estimated in the undocumented departure model. As was the case with new undocumented migrants, however, first-time documented migrants are negatively selected with respect to home ownership, though the possession of land or a business has no significant effect on the likelihood of departure.

Other things equal, the odds of undertaking a first documented departure are most strongly predicted by having access to a temporary visa, which increases the odds of departure by a huge factor of 138 (exp[4.6272]=137.99). Not surprisingly those who manage to secure a temporary visa for work or residence in the United States are very likely to use it. Although the odds of taking a first undocumented trip are positively predicted by a larger supply of U.S. visas, the coefficient is not significant, though it is the same absolute size as the negative coefficient exhibited by undocumented migrants. As with undocumented migrants, the odds of initiating documented migration are positively predicted by higher U.S. labor demand and negatively predicted by the lagged crude birth rate; but ironically it is documented departures, not undocumented departures, that are negatively predicted by rising border enforcement. In keeping with both NE and NELM, first documented departures are inhibited by economic growth in Mexico. However, whereas first *undocumented* trips were most likely to originate in small cities and towns first *documented* migration are most likely to emanate from large urban areas.

Finally, those migrants who legalized under IRCA are much less likely than other documented migrants to have *begun* their migratory careers as documented migrants, which is true almost by definition since those qualifying for legalization under IRCA are required to have prior undocumented experience in the United States. However, IRCA's farmworker legalization program was so poorly administered and so ambiguous in its criteria that it induced many Mexicans who had never worked in U.S. agriculture, or even been in the United States, to cross the border in hopes of being legalized (Massey, Durand, and Malone 2002).

Table 3 takes up the issue of what migrants do once they arrive in the United States by showing logistic regression equations estimated to predict the likelihood of returning home within 12 months of entry. *Undocumented* migrants display a curvilinear relationship with respect to age, with the odds of return rising up to age 38 before declining. Return migration

is also more likely for undocumented migrants who are married, though women are less likely than men to return within a year of entry. Although women are less likely to begin migrating without documents, when they do migrate they are less likely to return. Likewise, although educated and skilled migrants are less likely to take a first trip without documents those that do depart are much less likely to go back. Return migration is also deterred by having a migrant parent, siblings, and children whereas ownership of a home and a business positively predicts the likelihood of returning from a first undocumented trip, though land ownership has the opposite effect.

By far the strongest effect in the model, however, is that of U.S. border enforcement. Whereas the size of the Border Patrol budget had no significant effect on the likelihood of departing on a first undocumented trip, each million dollar increase in the real value of the agency budget reduces the odds of yearly return migration by 44%. As one might expect, the likelihood of returning within 12 months is significantly greater for undocumented migrants who enter with a tourist visa, since they do not experience the rising costs and risks of unauthorized border crossing. The likelihood of return migration is negatively related to U.S. labor demand, but positively influenced by a rising homicide rate in Mexico, suggesting that undocumented migrants may be induced to return home during violent times for fear of leaving family members unprotected.

The likelihood of return from a first *documented* trip within 12 months is predicted by many fewer variables. The only demographic factor that is significant is the number of minors in the household (negative) and the only significant social capital indicator is the proportion of U.S. migrants in the community (positive). As with first-time undocumented migrants, the likelihood of return is negatively predicted by rising occupational skill, but unlike undocumented migrants return is *positively* related to education among the documented. The only contextual effect that is significant is the negative influence of the lagged crude birth rate, replicating the anomalous effect found for undocumented migrants.

As with departures, by far the strongest effects in the model are those pertaining to documentation. Not surprisingly, the odds of return migration for those traveling on a temporary visa are 59 times greater than those traveling with a permanent resident visa or U.S. passport (the latter is a tiny number). However, the odds of returning from a first documented trip are 82% less for those legalized under IRCA. As one might expect, the size of the Border Patrol budget had no significant effect on those migrating with legal documents. Whereas border enforcement was the strongest predictor of return by new *undocumented* migrants and had a negative effect, it is the holding of a temporary visa that most strongly predicts the return of *documented* migrants and its effect is positive.

DEPARTING AND RETURNING ON LATER TRIPS

Table 4 presents discrete time event history models estimated to predict the likelihood of departure on an additional trip to the United States. As on first trips, the likelihood of a later *undocumented* departure is curvilinear with respect to age and lower for women than men, but on later trips the odds of departure are increased rather than decreased by being married and having minor children in the household. The likelihood of taking additional

undocumented trips is negatively predicted by rising human capital, with one exception. Although labor force experience, education, occupational skill, and cumulative U.S. experience decrease the odds of migrating again, the likelihood of going again is positively predicted by the number of prior U.S. trips. Holding cumulative U.S. experience constant, the more undocumented trips one has taken the more likely one is to take another, as multiple trips likely indicate the adoption of a strategy of recurrent migration (Massey et al. 1987).

The likelihood of taking another undocumented trip is positively related to the prevalence of U.S. migrants in the community but negatively predicted by having other U.S. social ties, with significant negative coefficients associated with the number of migrant siblings, having a migrant spouse, and the number of migrant and U.S.-born children. The likelihood taking of additional undocumented trips is also negatively predicted by home ownership, once again suggesting the importance of financing home acquisition as a migrant motivation. As with first trips, the odds of undocumented departures on additional trips are greatest in small cities, towns, and rural villages.

Whereas border enforcement had no effect on the likelihood of taking a *first* undocumented trip, it has a very pronounced effect in reducing the likelihood of taking *additional* trips. Each real increase of a million dollars in the Border Patrol budget reduces the odds of an additional undocumented departure by 89%, confirming the importance of border enforcement in shutting down circular undocumented migration. As one might expect, the odds of an additional departure are much greater (by about four times) among undocumented migrants traveling with a tourist visa; and as on first trips, the likelihood of taking an additional undocumented trip is reduced by a greater supply of legal visas. The likelihood of additional undocumented migration is once again negatively predicted by the lagged crude birth rate in Mexico. In addition, the homicide rate also has a significant negative effect, perhaps suggesting that former migrants are less likely to depart without documents and leave their families unguarded during violent times.

Turning to the determinants of additional *documented* migration, the likelihood of migrating again is curvilinear with respect to age, but gender has no effect; and whereas being married increases the odds of going again, the presence of children in the household reduces them, in contrast to the positive effect observed among undocumented migrants. The effects of human capital on the likelihood of additional documented migration generally parallel those observed for undocumented migrants, however, falling with skill, education, and U.S. experience but rising with each trip taken. With respect to social capital, the odds of taking another documented trip are greater for those with migrant parents and siblings and those living in communities characterized by a high prevalence of U.S. migrants, but less for those with migrant spouses, migrant children, and U.S.-born children. Documented migrants owning land and a home are more likely to migrate again and repeat migration is greatest in mid-sized cities and small rural villages.

As on first trips, the odds of taking an additional documented trip are strongly predicted by having a temporary work visa, though the effect is not as powerful as in the earlier model, raising the odds of an additional departure "only" 9.9 times. Moreover, when it comes to

later documented trips, having received documents initially through IRCA is associated with a greater propensity toward repeat migration. Indeed, the odds of an additional documented departure are 75% greater among those who legalized under IRCA, people who of course began their careers as undocumented migrants, many of whom circulated.

Although additional *undocumented* trips are strongly inhibited by rising border enforcement, the size of the Border Patrol budget has a strong *positive* effect on the likelihood of taking additional *documented* trips. Each million-dollar increase the Border Patrol budget raises the odds of additional documented migration by 70%. During times when border enforcement is intense and the costs and risk of undocumented border crossing are high, documented migrants become the ones who adopt a strategy of recurrent migration. As on first trips, the odds of taking an additional documented trip rise with U.S. labor demand but unlike on first trips they are also boosted by a larger supply of legal visas.

Additional documented trips are also positively predicted by the lagged crude birth rate, which is consistent with view that demographic pressure is a driver of Mexican migration northward. Although the homicide rate had no effect on initial out-migration with or without documents, and whereas the effect on additional *undocumented* trips was negative, it has a positive effect on the likelihood of taking an additional *documented* trip, suggesting that those with the freedom to depart northward at will do so during periods of rising violence. As expected, departure on additional undocumented trips is negatively related to growth of the Mexican economy.

Table 5 completes our cycle of analysis by presenting logistic regression models predicting the likelihood of return within 12 months of entry on an additional undocumented or documented trip. The effect of age on the likelihood of returning from an additional trip is, as always, curvilinear for both documented and undocumented migrants and the odds of return are similarly greater for married persons in both groups. Whereas females are less likely than males to return from an additional trip if they are undocumented, it is females who are much more likely to return when they are documented.

Once again although skilled and educated undocumented migrants are less likely to leave on an additional trip, those who do leave are less likely to return home, and the odds of return also fall as the number of trips and U.S. experience increase. Likewise, skilled and educated documented migrants are less likely to return within 12 months of entry. As on first trips, the odds of returning from an additional trip are lower for undocumented migrants with U.S. social ties, with negative effects observed for having a migrant parent, migrant siblings, a migrant spouse, and U.S- born children. The probability of return is also lower in communities with a high prevalence of U.S. migrants. Although documented migrants are similarly less likely to return home if have migrant parents and spouses, they are more likely to return when they have migrant and U.S.-born children, and neither the number of migrant siblings nor the prevalence of U.S. migrants in the sending community have any discernable effect on the likelihood of return.

Whereas ownership of assets has no effect on the return behavior of undocumented migrants, those with documents are more likely to return if they own land. Likewise,

whereas community size has no effect on the odds of return migration by undocumented migrants, the likelihood of return is significantly lower for documented migrants coming from small cities and rural villages. As on first trips, the probability of returning from an additional undocumented trip is reduced by rising border enforcement but the size of the Border Patrol budget has no effect on the return behavior of documented migrants. As before undocumented migrants traveling with a tourist visa and documented migrants traveling with a temporary visa are significantly more likely to return within 12 months of entry. However, whereas documented migrants who legalized under IRCA were less likely to return from a first trip, they were more likely to return from additional trips, again suggesting the divergent effects of IRCA on new and experienced migrants.

Although U.S. contextual variables strongly influence the return behavior of undocumented migrants they have no effect on those with documents. Each million dollar increment in the Border Patrol budget lowers the odds of undocumented return by about 25%, each percentage point increase in U.S. employment reduces the odds of return by 5.5%, and each unit increase in legal visas per capita lowers the odds of return by around 0.1%. On the Mexican side, the likelihood of return from an additional trip is reduced among both undocumented and documented migrants by the lagged crude birth rate. In addition, among documented migrants the odds of return migration are lowered by a rising homicide rate, again consistent with expectations.

THE NEW REALITY OF MEXICAN MIGRATION

Drawing on descriptive data from the Mexican Migration Project we assessed trends in the likelihood of departure and return among documented and undocumented migrants to the United States. The probability of taking a first trip to the United States among the undocumented averaged about ten times that of documented migrants over the period 1970 to 2010, reflecting the numerical limitation of entry visas after 1965. Throughout the period both documented and undocumented migrants responded to fluctuations in U.S. labor demand and Mexican economic growth, but secular variation in migration probabilities was greater among undocumented migrants, who are not constrained by visa limitations but willing to face the costs and risks of unauthorized border crossing. In general, limiting the supply of legal visas seems to channel migrants into the undocumented flow who otherwise would have migrated with temporary visas.

By the late 2000s, probabilities of undocumented departure had fallen to very low levels. Before 2000 the probability of initiating undocumented migration went as high as 0.124 but by 2010 it had fallen to an all-time low of 0.001. Our analyses suggest that this decline stemmed from the aging of the Mexican population, the weakening of U.S. labor demand, rising levels of Mexican education, a decline in the number of rural dwellers, greater access to home and business ownership, and the rising prevalence of spouses and children in the United States. It is definitely *not* because of increased U.S. border enforcement, which had *no* significant effect on the likelihood of taking a first undocumented trip. For documented migrants, the likelihood of taking a first U.S. trip was driven primarily by social connections to people in a position to sponsor legal entry or provide access to a temporary work visa.

Once in the United States, new documented and undocumented migrants displayed divergent trends in the likelihood of returning home. Prior to 1986 the probability of returning from a first U.S. trip was high irrespective of legal status, averaging 0.52 for documented migrants and 0.55 for undocumented migrants. After 1986, however, the likelihood of return migration rose to 1.0 for documented migrants but fell to 0.21 for undocumented migrants. Although rising border enforcement had no apparent effect on the likelihood that undocumented Mexicans would *depart* for the United States, it had a very strong effect in *reducing* likelihood that they would *return* to Mexico. Statistical analysis indicates that the rising rate of return migration among documented migrants stemmed from increased access to temporary visas.

Among experienced migrants, probabilities of taking an additional U.S. trip also diverged after 1986 on the basis of legal status. Whereas the likelihood of a *documented* departure rose from around 0.060 in 1986 to around 0.152 in 2000, the probability of additional *undocumented* migration rose only from 0.049 to 0.062 over the same period. After 2000 the probability of taking another U.S. trip fell for both groups, but beginning in 2007 the decline reversed itself for documented migrants but continued to fall for undocumented migrants. As of 2010 the probability of taking an additional U.S. trip stood at 0.125 for documented migrants compared to just 0.029 for undocumented migrants.

Our analyses indicate that the drop in the likelihood of additional undocumented migration was driven mainly by the increase in border enforcement after 1986. Each million dollar increase in the real value of the Border Patrol budget reduced the odds of an additional undocumented departure by 89%. Rising border enforcement thus played a key role in curtailing the circulation of undocumented migrants that had prevailed before IRCA. As the supply of legal visas later rose, the likelihood of undocumented departure fell. Thus shifts in the circular migration of undocumented migrants were driven by U.S. policies, not by changes in economic conditions in Mexico or the United States,

Precisely the opposite dynamic prevailed among documented migrants, whose odds of taking additional trips rose with the supply of legal visas and were greatly increased by individual access to a temporary visa. Moreover, as the real value of the Border Patrol budget increased, the likelihood of taking an additional documented trip steadily rose. Migrants legalized under IRCA displayed a significantly higher likelihood of repeat migration than other documented migrants and documented migrants generally displayed departure probabilities that were closely connected to social and economic circumstances in each nation, rising in response to U.S. labor demand and falling with economic growth in Mexico.

The divergence in return probabilities by legal status observed for first trips was also detected on later trips. Whereas in 1989 the probability of returning from an additional trip within 12 months was 0.77 irrespective of legal status, by 2007 the probability had risen to 0.92 for documented migrants but fallen to 0.43 for documented migrants. Statistical models again indicate that the falling rate of return migration among undocumented migrants stemmed from the increasing intensity of border enforcement and greater access to legal visas, which dominated the effects of binational economic conditions. Among documented

migrants, the likelihood of returning from a later trip was powerfully affected by U.S. policies. Those having temporary visas and those legalized under IRCA were much more likely than other documented migrants to return from a latter trip. The odds of returning from a later documented trip were not directly influenced by economic conditions in Mexico or the United States, however, but they did fall as the size of labor market cohorts increased and violence in Mexico rose.

Obviously Mexico-U.S. migration is a complex and dynamic system with many internal feedbacks and numerous endogenous processes. From 1965 through 1985 the system was characterized by circular movement, with the vast majority of undocumented migrants moving back and forth across the border on a regular basis. As a result, the undocumented population grew slowly from 1965 to 1985. Although IRCA's legalization reduced the undocumented population after 1986, border militarization subsequently reduced the likelihood of return migration by those without documents but had no effect on their likelihood departure, which increased the net inflow and accelerated undocumented population growth, which climbed from 1.9 million in 1988 to 12 million in 2008.

Among documented migrants, in contrast, migration continues in response to changing economic circumstances on both sides of the border, facilitated by a substantial expansion of access to temporary visas and the growing use of family preferences to sponsor new permanent residents. The persistence of northbound migration by documented migrants has been accompanied by a sharp increase in their likelihood of return. As a result, circular migration has ironically become the province of documented migrants while settlement now characterizes the situation of undocumented migrants, who are "caged in" and unable to return while those with documents are "free range" and able to cross the border at will.

Our findings have both theoretical and policy implications. Theoretically they point to the salience of mechanisms posited by Social Capital Theory and NELM as driving forces in the Mexico-U.S. migration system, but they also underscore the role of the state in shaping migration flows in practice. With respect to policy, our results underscore the counterproductive nature of border enforcement. Rather than *reducing* undocumented departures, border enforcement instead lowered the undocumented returns to *accelerate* undocumented population growth. The high rate of return migration among those with documents also suggests the efficacy of legalization as a component of immigration reform. Temporary work visas match the preference for circular migration posited by NELM and the high rate of return even among those with legal residence visas suggests that regularization could well produce a net outflow of former unauthorized migrants back to Mexico.

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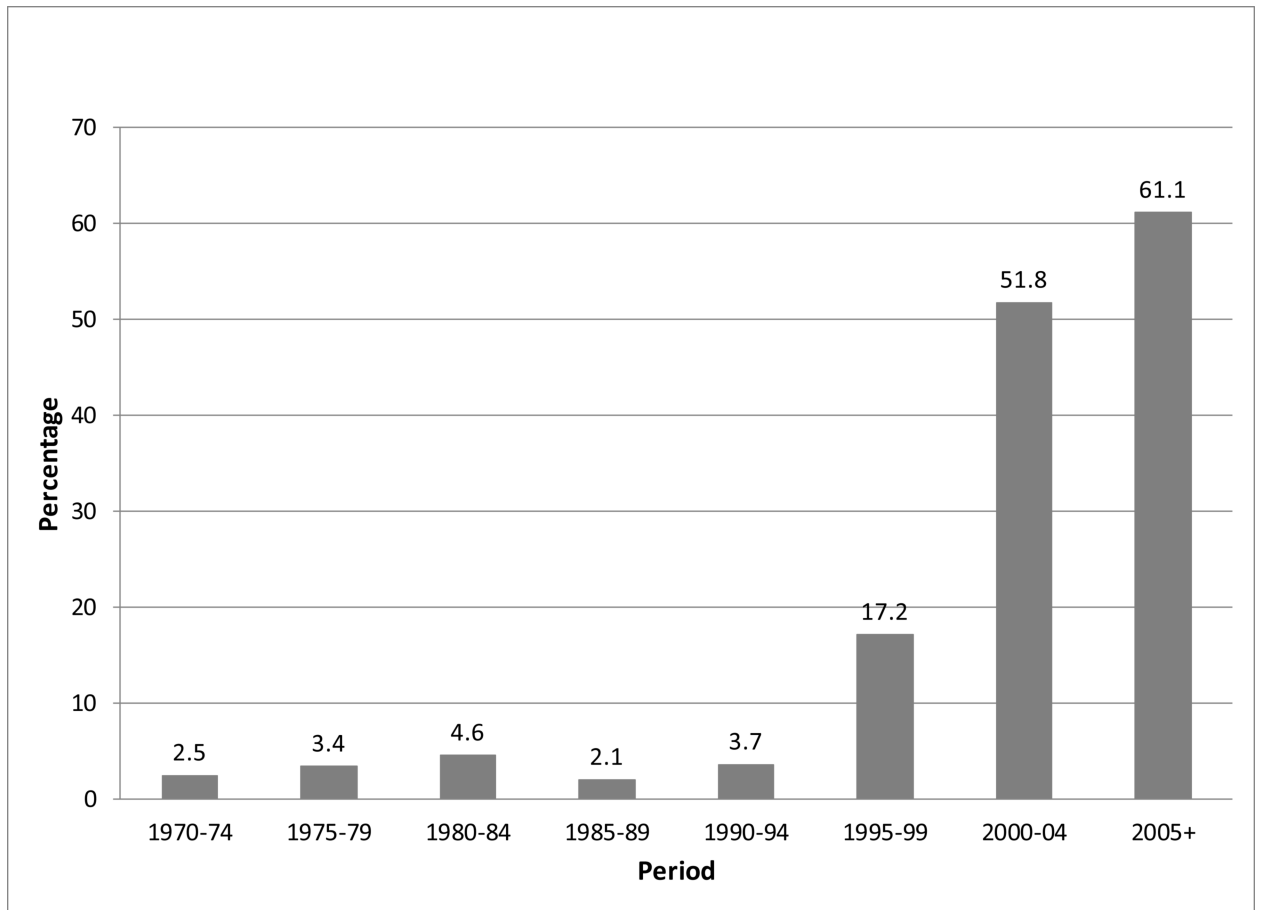
Figure 1.
Percentage of documented household heads entering the United States with temporary visas

Figure 2.
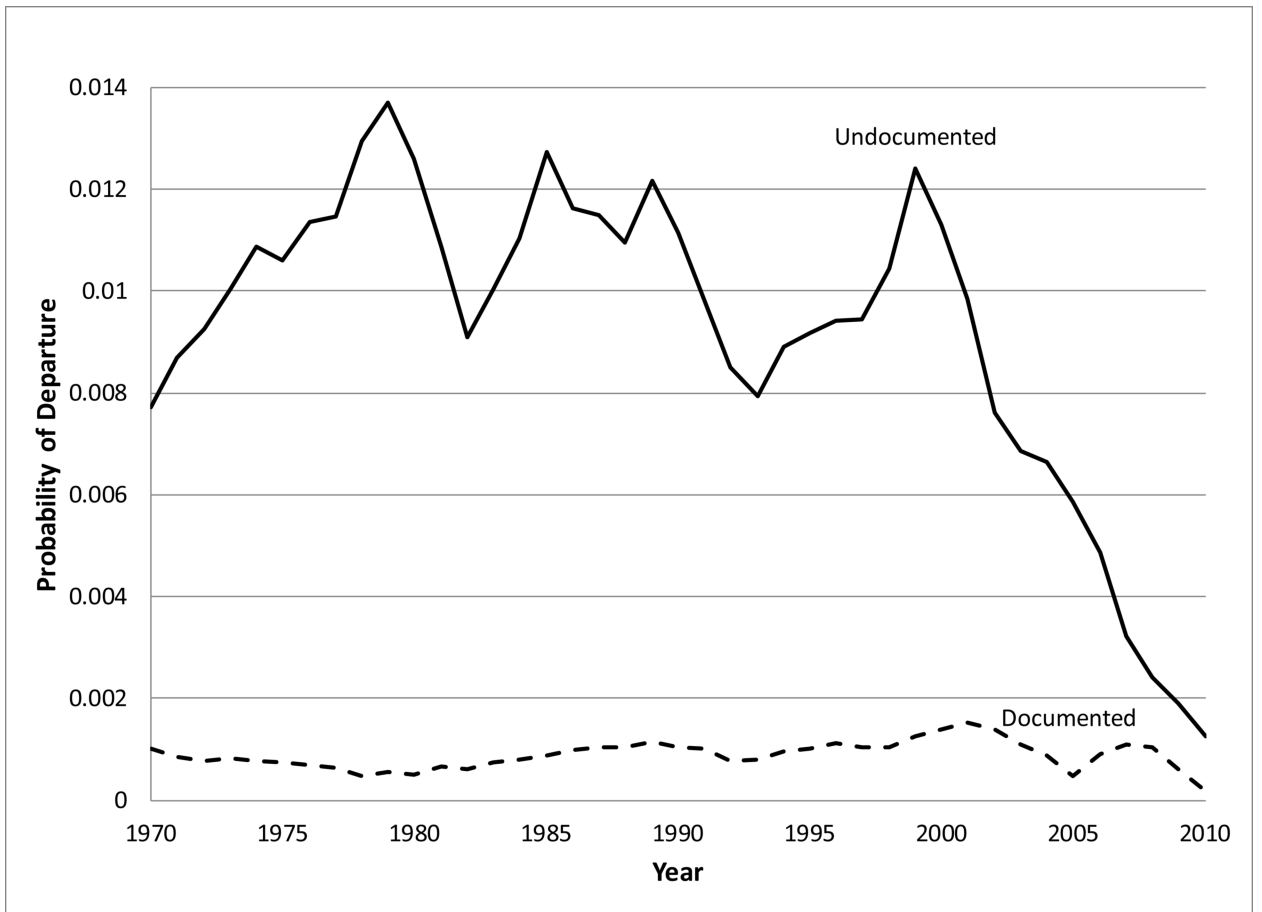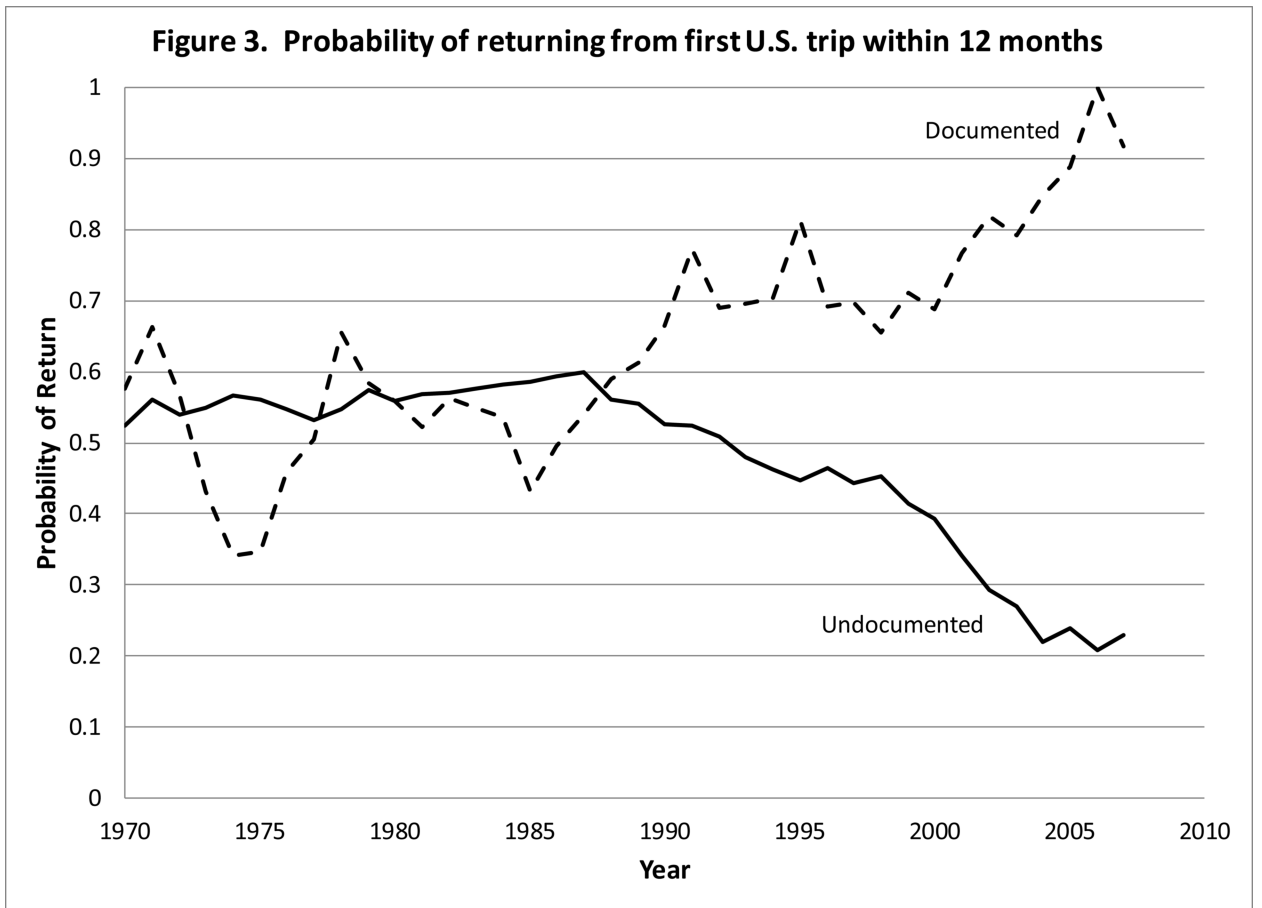Probability of taking a first U.S. trip

Figure 3.
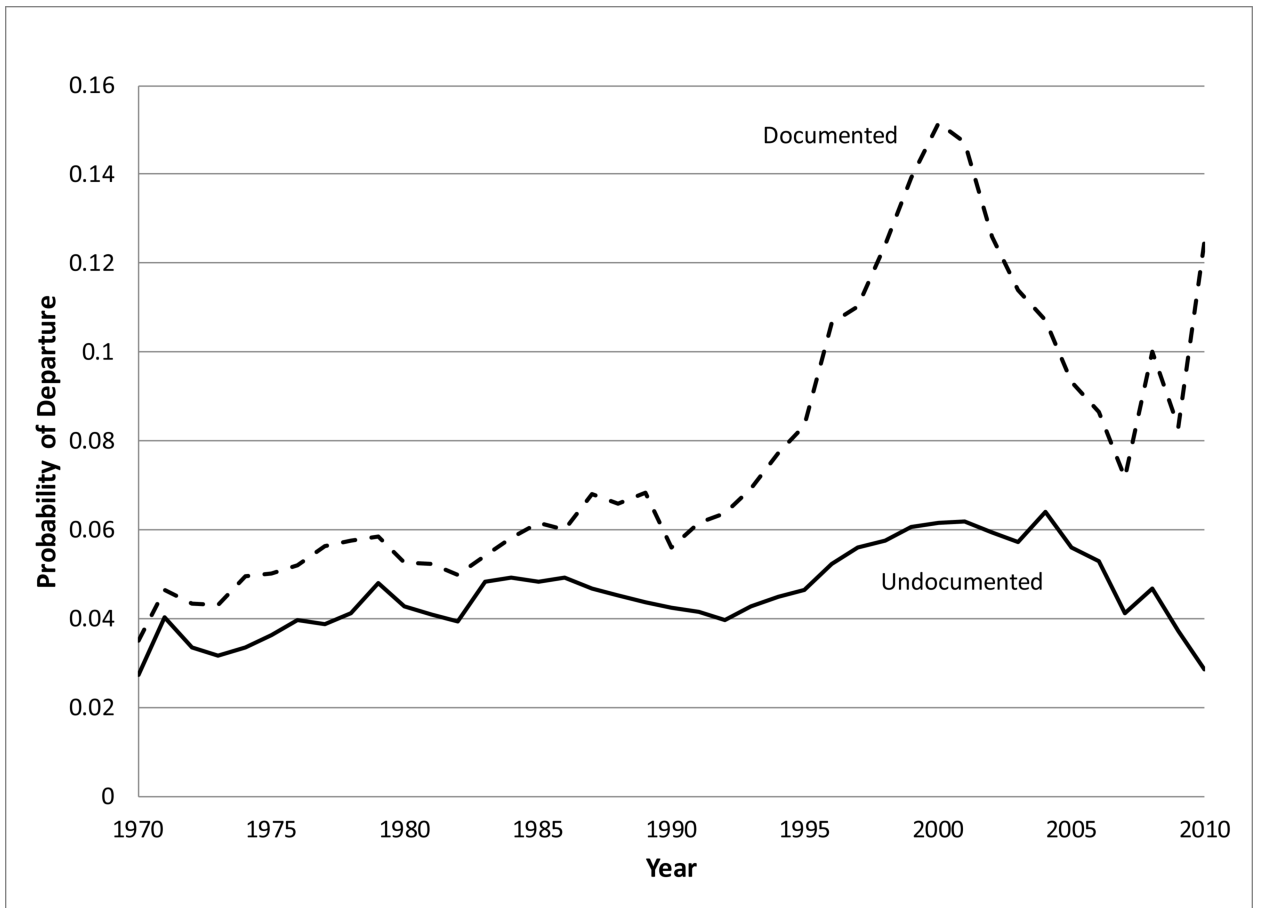Probability of returning from first U.S. trip within 12 months

Figure 4.
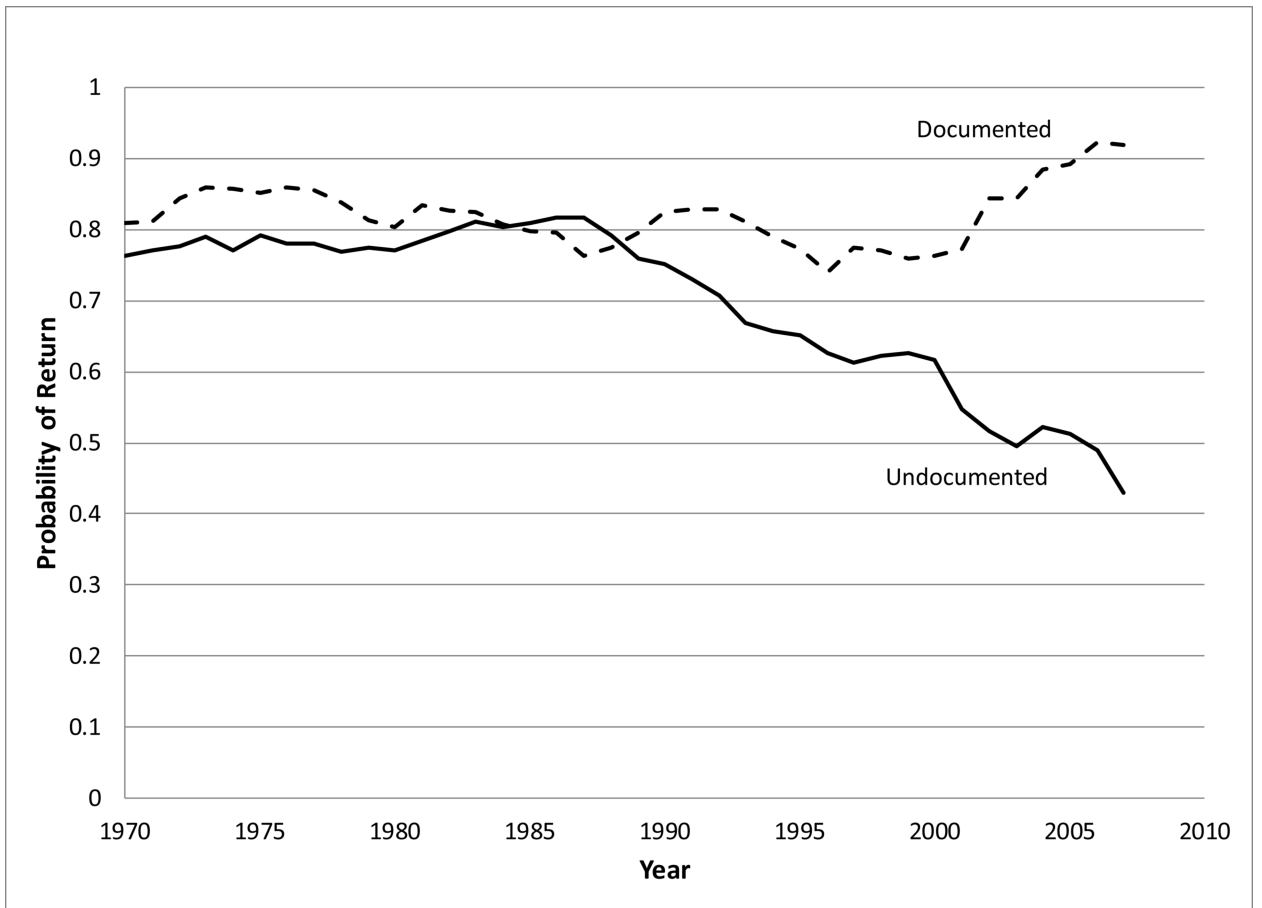Probability of taking an additional U.S. trip

Figure 5.
Probability of returning from an additional U.S. trip

Table 1

Definition of variables used in analysis of documented and undocumented migration from Mexico to the U.S.

Variables	Definition
Demographic Background	
Age	Age in years since birth
Age Squared	Age Squared
Female	1 if yes, 0 otherwise
Married	1 if yes, 0 otherwise
No. of minors in household	No. of children <18 years
Human Capital	
Labor force experience	Years since labor force entry
Education	Years of schooling completed
Agricultural job	Reference category
Unskilled job	1 if yes, 0 otherwise
Skilled job	1 if yes, 0 otherwise
Cumulative U.S. experience	Total months spent in United States
No of previous U.S. trips	No. of prior trips to the U.S.
Social Capital	
Parent a U.S. Migrant	1 if yes, 0 otherwise
No of U.S. migrant siblings	No.of siblings with U.S. Experience
Spouse a U.S. migrant	1 if yes, 0 otherwise
No. of U.S. migrant children	No. of children with U. S. Experience
No. of U.S. born children	No. of children born in United States
Prop U.S. Migrants in Community	Proportion ever in the United States
Physical Capital	
Land	1 if owned, 0 otherwise
Home	1 if owned, 0 otherwise
Business	1 if owned, 0 otherwise
Documentation	
Documented: Temporary visa	1 if documented migrant traveled on temporary visa, 0 otherwise
Documented: Legalized under IRCA	1 if documented migrant legalized under IRCA, 0 otherwise
Undocumented: Violated tourist visa	1 if undocumented migant overstayed or worked on tourist visa, 0 otherwise
U.S. Context	
Border Patrol budget (Millions of $2013)	Annual Budget in 2013 US Dollars
Rate of employment growth	Percentage change since previous year
Residence and work visas per capita	Legal entries for work or residence divided by Mexican population
Mexican Context	
Lagged crude birth rate	CBR 15 years before year in qustion
Rate of GDP Growth ($2005)	Annual Growth in GDP per Capita
Homicide Rate	Homicides per 100,000 persons
Community size	
>100,000	Reference category

Variables	Definition
10,000-99,999	1 if yes, 0 otherwise
2501-9,999	1 if yes, 0 otherwise
<=2500	1 if yes, 0 otherwise

Table 2

Discrete time event history model predicting likelihood of first departure for the United States 1970-2012

	Departed on First Trip without Documents		Departed on First Trip with Documents	
	β	SE	β	SE
Demographic Background				
Age	0.1926 ***	0.00785	0.0721 ***	0.0175
Age-squared	−0.0038 ***	0.00013	−0.0010 ***	0.00023
Female	−0.8467 ***	0.0726	0.7394 ***	0.1362
Married	−0.1815 ***	0.0438	−0.2380 **	0.1148
No. of minors in household	−0.0369 ***	0.0109	−0.0805 **	0.0299
Human Capital				
Labor force experience	0.0017	0.0039	−0.0148 *	0.00793
Education	−0.0165 ***	0.00459	0.1283 ***	0.0113
Agricultural job		---		---
Unskilled job	0.0421	0.0352	−0.2619 **	0.0978
Skilled job	−0.3435 ***	0.0584	0.0231	0.1358
Social Capital				
Parent a U.S. Migrant	0.3998 ***	0.0456	0.0256	0.1149
No of U. S. migrant siblings	0.0227 *	0.0129	−0.0476	0.0312
Spouse a U.S. migrant	−0.5196 ***	0.1154	−0.7714 **	0.2418
No. of U.S. migrant children	0.1796 ***	0.037	0.1569 ***	0.0434
No. of U.S. born children	−2.1732 ***	0.2764	−1.8225 ***	0.4666
Prop U.S. Migrants in Community	0.0236 ***	0.00114	0.0198 ***	0.00347
Physical Capital				
Land	−0.1641 **	0.0595	−0.1750	0.1627
Home	−0.3094 ***	0.0400	−0.2514 **	0.1043
Business	−0.4019 ***	0.0644	−0.1985	0.1529
Documentation				
Documented: Temporary visa		---	4.6272 ***	0.1229
Documented: Legalized under IRCA		---	−0.6433 ***	0.1699
Undocumented: Violated tourist visa	3.3664 ***	0.0794		---
U.S. Context				
Border Patrol Budget (millions of $2013)	−0.0756	0.0654	−0.2765 *	0.1628
Rate of employment growth	0.0628 ***	0.0118	0.0623 *	0.0338
Residence and work visas per capita	−0.0002 *	0.0001	0.0002	0.00026

	Departed on First Trip without Documents		Departed on First Trip with Documents	
	β	SE	β	SE
Mexican Context				
Lagged crude birth rate	−0.0270 ***	0.007	−0.0326 *	0.0176
Rate of GDP growth ($2005)	0.0036	0.00451	−0.0295 **	0.0119
Homicide rate	−0.0064	0.00707	0.0053	0.0195
Community size				
>100,000		---		---
10,000-99,999	0.6437 ***	0.0538	−1.0666 ***	0.1183
2501-9,999	0.5970 ***	0.0526	−1.3150 ***	0.1215
<=2500	0.7744 ***	0.0573	−1.3807 ***	0.1472
Intercept	−6.0653 ***	0.3690	−5.1997 ***	0.9265
Likelihood Ratio	5984.0199 ***		1700.6557 ***	
Wald	4922.5672 ***		2115.5368 ***	
Total number of person-years		641,586		193,012

+p<.10

*
 p<.05

**
  p<.01

***
   p<.001

Table 3

Logistic regression model predicting likelihood return from first U.S. trip within 12 months of entry 1970-2012

	Returned from First Undocumented Trip		Returned from First Documented Trip	
	β	SE	β	SE
Demographic Background				
Age	0.0786 ***	0.0195	−0.0024	0.0370
Age-squared	−0.0010 ***	0.0003	0.0005	0.0004
Female	−0.2541 *	0.1530	0.3922	0.2620
Married	0.5192 ***	0.0837	0.3041	0.1931
No. of minors in household	−0.0236	0.0207	−0.1128 **	0.0524
Human Capital				
Labor force experience	−0.0062	0.0067	0.0051	0.0134
Education	−0.0352 ***	0.0096	0.1320 ***	0.0194
Agricultural job		---		---
Unskilled job	−0.2280 ***	0.0657	−0.7249 ***	0.1545
Skilled job	−0.5788 **	0.2201	−1.3127 **	0.4588
Social Capital				
Parent a U. S. Migrant	−0.1464 *	0.0853	0.2094	0.2040
No of U.S. migrant siblings	−0.0766 **	0.0251	−0.0327	0.0560
Spouse a U.S. migrant	−1.0960 ***	0.1513	−0.4713	0.3136
No. of U. S. migrant children	−0.0331	0.0564	0.1270	0.0774
No. of U. S. born children				
Prop U.S. Migrants in Community	0.0013	0.0026	0.0161 **	0.0062
Physical Capital				
Land	−0.2061 *	0.1129	−0.0771	0.2560
Home	0.2045 **	0.0758	0.2700	0.1734
Business	0.1991 *	0.1145	0.3802 *	0.2220
Documentation				
Documented: Temporary visa		---	4.0763 ***	0.2276
Documented: Legalized under IRCA		---	−1.7149 ***	0.4757
Undocumented: Violated tourist visa	0.2962 **	0.1449		---
U.S. Context				
Border Patrol Budget (millions of $2013)	−0.5771 ***	0.1640	−0.2939	0.2918
Rate of employment growth	−0.0395 *	0.0230	0.0787	0.0646
Residence and work visas per capita	−0.0003	0.0002	0.0002	0.0004

	Returned from First Undocumented Trip		Returned from First Documented Trip	
	β	SE	β	SE
Mexican Context				
Lagged crude birth rate	−0.0106	0.0146	−0.0524 *	0.0298
Rate of GDP growth ($2005)	0.0089	0.0091	−0.0084	0.0219
Homicide rate	0.0361 *	0.017	0.0207	0.0377
Community size				
>100,000		---		---
10,000-99,999	0.2430 **	0.1077	−0.8475 ***	0.2222
2501-9,999	0.0342	0.1064	−0.8528 ***	0.2150
<=2500	0.1382	0.1145	−1.4056 ***	0.2666
Intercept	−1.4657 *	0.8351	−2.0891	1.6134
Likelihood Ratio	386.207 ***		693.9355 ***	
Wald	341.6675 ***		527.5618 ***	
Total number of person-years		5,159		5,150

+p<.10

*
 p<.05

**
  p<.01

***
  p<.001

Table 4

Discrete time event history model predicting likelihood of additional departure for the United States 1970-2012

	Took Additional Trip Without Documents		Took Additional Trip with Documents	
	β	SE	β	SE
Demographic Background				
Age	0.0668 ***	0.0122	0.0227 *	0.0136
Age-squared	−0.0011 ***	0.0002	−0.0003 **	0.0002
Female	−0.3956 **	0.1302	0.0580	0.1279
Married	0.1341 **	0.0547	0.1953 **	0.0649
No. of minors in household	0.0479 ***	0.0105	−0.0690 ***	0.0125
Human Capital				
Labor force experience	−0.0100 **	0.0047	−0.0036	0.0047
Education	−0.0484 ***	0.0066	0.0651 ***	0.0068
Agricultural job		---		---
Unskilled job	−0.2373 ***	0.0396	−0.6075 ***	0.0459
Skilled job	−0.7992 ***	0.1589	−0.8572 ***	0.1304
Cumulative U.S. experience	−0.0158 ***	0.0006	−0.0045 ***	0.0004
No of previous U. S. trips	0.1772 ***	0.0057	0.1786 ***	0.0048
Social Capital				
Parent a U.S. Migrant	0.0500	0.0430	0.4162 ***	0.0463
No of U. S. migrant siblings	−0.0190 *	0.0113	0.0915 ***	0.0107
Spouse a U.S. migrant	−0.8525 ***	0.0708	−0.2224 ***	0.0581
No. of U.S. migrant children	−0.2319 ***	0.0248	−0.0752 ***	0.0176
No. of U.S. born children	−0.4398 ***	0.0649	−0.1007 **	0.0364
Prop U.S. Migrants in Community	0.0113 ***	0.0015	0.0244 ***	0.0018
Physical Capital				
Land	−0.0649	0.0559	0.2735 ***	0.0544
Home	−0.0956 **	0.0433	0.4206 ***	0.0489
Business	0.0862	0.0696	0.0732	0.0674
Documentation				
Documented: Temporary visa		---	2.2919 ***	0.1355
Documented: Legalized under IRCA		---	0.5606 ***	0.0433
Undocumented: Violated tourist visa	1.4008 ***	0.1047		---
U.S. Context				

	Took Additional Trip Without Documents		Took Additional Trip with Documents	
	β	SE	β	SE
Border Patrol Budget (millions of $2013)	−2.2199 ***	0.1637	0.5335 ***	0.0769
Rate of employment growth	−0.0015	0.0130	0.1065 ***	0.0173
Residence and work visas per capita	−0.0014 ***	0.0001	0.0015 ***	0.0001
Mexican Context				
Lagged crude birth rate	−0.0314 **	0.0109	0.0840 ***	0.0092
Rate of GDP growth ($2005)	−0.0063	0.0052	−0.0231 ***	0.0062
Homicide rate	−0.0570 ***	0.0106	0.0954 ***	0.0105
Community size				
>100,000		---		---
10,000-99,999	0.8240 ***	0.0947	0.6248 ***	0.1058
2501-9,999	0.8253 ***	0.0968	−0.1266	0.1128
<=2500	0.7761 ***	0.1007	0.4676 ***	0.1136
Intercept	0.2758	0.6202	−10.9758 ***	0.5107
Likelihood Ratio	7136.4133 ***		8271.8459 ***	
Wald	3623.1317 ***		5450.1343 ***	
Total numbe r of person-years		43,103		42,878

+p<.10

*
 p<.05

**
 p<.01

***
 p<.001

Table 5

Logistic regression model predicting likelihood return from additional U.S. trip within 12 months of entry 1970-2012

	Returned from Additional Undocumented Trip		Returned from Additional Documented Trip	
	β	SE	β	SE
Demographic Background				
Age	0.0768 ***	0.0177	0.0591 **	0.0241
Age-squared	−0.0009 ***	0.0002	−0.0003	0.0003
Female	−0.5232 **	0.1814	1.0192 ***	0.1999
Married	0.3486 ***	0.0817	0.6084 ***	0.1488
No. of minors in household	−0.0024	0.0142	−0.0637 **	0.0234
Human Capital				
Labor force experience	0.0179 **	0.0064	−0.0020	0.0087
Education	−0.0375 ***	0.0090	0.1333 ***	0.0131
Agricultural job		---		---
Unskilled job	0.2637 ***	0.0544	−0.9291 ***	0.0947
Skilled job	−0.3357	0.2124	−1.2574 ***	0.3276
Cumulative U.S. experience	−0.0132 ***	0.0009	0.0021 **	0.0008
No of previous U.S. trips	−0.1165 ***	0.0113	−0.0626 ***	0.0103
Social Capital				
Parent a U.S. Migrant	−0.2379 ***	0.0639	−0.4877 ***	0.1113
No of U.S. migrant siblings	−0.0525 **	0.0169	−0.0002	0.026
Spouse a U.S. migrant	−0.9191 ***	0.1197	−0.4897 **	0.1538
No. of U.S. migrant children	−0.0091	0.0302	0.1001 **	0.0319
No. of U.S. born children	−0.4792 ***	0.1288	0.2525 **	0.0851
Prop U.S. Migrants in Community	−0.0092 ***	0.0022	−0.0040	0.0035
Physical Capital				
Land	−0.0809	0.0706	0.6973 ***	0.0973
Home	−0.0939	0.0582	−0.0680	0.1007
Business	0.0712	0.0863	0.1513	0.1191
Documentation				
Documented: Temporary visa		---	2.5648 ***	0.1563
Documented: Legalized under IRCA		---	0.5687 ***	0.0937
Undocumented: Violated tourist visa	0.4272 **	0.1334		---
U.S. Context				

	Returned from Additional Undocumented Trip		Returned from Additional Documented Trip	
	β	SE	β	SE
Border Patrol Budget (millions of $2013)	−0.2749**	0.1090	0.1514	0.1181
Rate of employment growth	−0.0570**	0.0199	−0.0328	0.0375
Residence and work visas per capita	−0.0010***	0.0002	−0.0001	0.0002
Mexican Context				
Lagged crude birth rate	−0.0289*	0.0114	−0.0476**	0.0163
Rate of GDP growth ($2005)	0.0118	0.0076	0.0030	0.0130
Homicide rate	0.0011	0.0126	−0.0265*	0.0159
Community size				
>100,000		---		---
10,000-99,999	0.0655	0.1184	−0.6134***	0.1883
2501-9,999	0.1669	0.1202	−0.0165	0.1841
<=2500	−0.0758	0.1264	−0.6077***	0.1973
Intercept	0.0032	0.6582	−2.4758**	0.9024
Likelihood Ratio	2195.4401***		1403.7323***	
Wald	1283.0589***		1120.2678***	
Total number of person-years		12,402		12,392

+p<.10

*
 p<.05

**
 p<.01

***
 p<.001