An Analysis of Mexican Remigration to the U.S.

David J. Molina
  University of North Texas • Denton, TX
R. Todd Jewell
  University of North Texas • Denton, TX

Abstract

This paper presents an analysis of Mexican migrants to the U.S. and their decisions to remigrate. We concentrate on the relative impacts of market and non-market factors such as income, remittances, and migration networks. We analyze the remigration decision of male, illegal migrants using data from the Mexican Migration Project. Current migration proposals are geared towards policy that would allow for some type of temporary workers. The empirical model presented here allows for a comparison of the relative impacts of market and non-market factors on the decision to choose among different remigration options. The results indicate that income, remittances, and migration networks have significant effects on the remigration decisions of male, undocumented migrants.

Introduction

The 2,000-mile border shared by Mexico and the U.S., as well as the extensive differences in per capita income and demographic characteristics between the two countries, has provided the setting for large migration flows throughout the past century. The migration flows from Mexico have been generally constant with the exception of the 1930s and the 1950s when there were considerable decreases in the numbers of both legal and illegal Mexican migrants to the U.S. (Briggs, 1975). U.S. policy with respect to migrants from Mexico has varied between policies that encourage temporary migration and those designed to impact the legal status of permanent migrants. For instance, the Bracero program, initiated during World War II, was based on providing rural, temporary employment for Mexican migrants. More recently, the Immigration Reform and Control Act of 1986 provided amnesty and legal status to immigrant workers who could prove they had been in the U.S. for an extended period. The current emphasis of U.S. policy appears to have shifted back toward temporary migration.[1]

Migration policy is obviously important to the Mexican government as well. An aspect of immigration that receives more attention in Mexico than in the U.S. is the impact that remittances from the U.S. have on the development of the Mexican

economy. Due to the fact that the remittances of migrants represent a huge inflow of money into the Mexican economy, migration policy is defacto development policy for the Mexican government. These remittances totaled $US 20 billion in 2005, equivalent to 118 percent of foreign direct investment or 71 percent of oil revenues (Mexico's largest export); in addition, remittances were equal to 25% of the wages in the formal sector that year (Bank of Mexico, 2006).[2]

The issue of Mexican migration to the U.S. has been studied extensively using a variety of models and data.[3] However, most of these studies evaluate the initial migration or treat each migration decision in the same way. We analyze the remigration decision separately from initial migration decisions. The focus of this paper is to analyze the remigration decision for individuals who have already made one migration from Mexico to the U.S., concentrating on the relative impacts of market and non-market factors. Cornelius (1990) and the Binational Study on Migration (Tovar et al., 1997) used the terms "sojourner" and "settler" that have become standard in describing migrants. To most readers, these terms would indicate someone who migrates frequently (sojourner) and one that is a more permanent migrant (settler). However, the Binational Study classifies migrants as "sojourners" if they consider Mexico to be their place of residence and a "settler" if they habitually reside in the U.S. (p. 14). Cornelius (1990, p. 30) indicates that some migrants consider themselves "sojourners" even though by the standard definition they are actually "settlers." We avoid this conflicting interpretation of migrant types by constructing the following categories: Those who choose to make repeated, temporary remigrations are termed "multiple-trip migrants," while those who make a more permanent remigration are labeled "stayers." We analyze the remigration decisions of male, illegal migrants (i.e., those without entrance visas) who reside in communities that have been traditionally a source of migrants from Mexico to the U.S. In our analysis, the remigration decision requires that the potential migrant choose between three outcomes: (1) do not remigrate; (2) be a multiple-trip migrant; or (3) be a stayer. The determinants of this three-outcome remigration decision will be evaluated empirically using a multinomial logit model.

We concentrate on undocumented migrants since the U.S. policy concentrates on this group and since U.S. policy makes documented immigration different in almost every aspect than undocumented immigration (Massey & Espinosa, 1997). For instance, undocumented migration is much more hazardous than documented migration (GAO, 2006). In addition, there are approximately 5.9 million undocumented, Mexican immigrants, accounting for 57% of the total undocumented population. Furthermore, approximately one-half of all Mexican immigrants are undocumented

(Passel, 2005). The majority of research on Mexican migration to the U.S. has concentrated on male migrants since most Mexican migrants have been male. Although this is still true today, the percentage of migrants that are female has been steadily increasing (Donato, 1993; Cerrutti & Massey, 2001). As is the case for undocumented and documented workers, we expect that the decision to migrate will be different for women and men. For instance, evidence suggests that women migrate for family reasons much more often than men (Cerrutti & Massey, 2001). Although it is important to study the migration behavior of both women and men to fully understand the impact of any policy, we concentrate on male migrants since men still comprise over two-thirds of Mexican undocumented migrants to the U.S.

Migration researchers have analyzed the effects of both market and non-market factors. The introduction of market factors to models of migration began with the work of Todaro (1969) and Harris and Todaro (1970), where the concept of the opportunity cost of migration is introduced. The opportunity cost of migration is a function of available wages, since migration means giving up income in the home location for income in the destination location and not migrating means giving up income in the destination location. Non-market factors have increasingly been used to explain the decision to migrate. The most commonly used non-market factors are migration networks.[4] Migration networks are connections established between the home location and the destination location that facilitate migration. The results from this study indicate that income potential, networks, education, age, and other variables impact which of the remigration decision and that there are characteristic differences among remigrants who choose to become multiple-trip migrants and those who choose to be stayers.

Remigration Decision and Data

This paper attempts to shed light on the differences between Mexicans who make a single migration to the U.S. and those who are either multiple-trip migrants or stayers. Based on past literature, we expect that the choice of remigration type will be a function of home and destination wages (as in the Harris-Todaro model) and migration connections (as in the network model). With respect to wages, a higher wage in the U.S. relative to Mexico increases the benefit of migration and the benefit associated with longer migration durations, increasing the probability of remigration and leading to longer stays in the U.S. Migration network connections will affect the remigration decision by increasing the probability of obtaining a post-migration job and lowering migration costs. Therefore, increased network connections are pre-

dicted to increase the probability of remigration. In addition, migration networks may lead to longer stays due to increased familiarity with the U.S.

The data used in this study is from the Mexican Migration Project (MMP).[5] The MMP is a collaborative research project based at Princeton University and the University of Guadalajara. MMP data include information from surveys conducted in 93 communities in Mexican states that have shown to be a source of large numbers of migrants to the U.S. The surveys ask respondents to include retrospective information on a variety of economic, demographic, and migration issues, such as the number and timing of past migrations. Therefore, MMP data include individual longitudinal information for years up to the survey year, making it possible to obtain individual demographic information at the time of first migration for all those respondents who migrated at some point prior to the survey year. We analyze remigration decisions that occurred over the period 1965 to 1996 for undocumented male migrants.

Dependent Variable

We separate potential remigrants into three types: single-trip migrants, stayers, and multiple-trip migrants. Categorizing single-trip migrants necessitates a judgment of the appropriate time period to study. Analysis of the data reveals that 90% of all repeat migrations occur within five years of the initial migration. Thus, we choose a five-year window for the remigration decision.[6] Consequently, if five years has passed since the first migration without a return trip to the U.S., the migrant is categorized as a single-trip migrant. Alternatively, if five years had passed since the migrant first migrated and he has remained in the U.S., the migrant is categorized as a stayer. A migrant is categorized as a multiple-trip migrant if he has made multiple migration trips over the five-year window used in this study.

Independent Variables

The Harris-Todaro model utilizes the differential between income in the destination and home locations as a measure of the monetary benefit from migration. In the present study, we cannot use this variable since multiple-trip migrants make multiple migrations, which each may be impacted by different income differentials. Instead, we use an individual's *age* and level of *education* at the time of first migration to indicate income-earning potential. To further indicate potential income in Mexico, we include the variables *minwage* and *agriculture*, community-level variables that represent, respectively, the percentage of males earning less than the Mexican minimum wage in the year of first migration and the percentage of males working in the

agriculture sector in the year of first migration. We expect that these percentages will be negatively correlated with the average wage in the Mexican community. An additional piece of information concerning earning potential can be gathered from a comparison of the migrant's job in Mexico and his job in the U.S.[7] Specifically, a migrant may earn more if his U.S. job is similar to his Mexican job, since the skills should be easily transferred. We include a measure, *jobmatch*, equal to one if the job obtained in the initial migration is in the same category as the longest employment-type in Mexico. If *jobmatch* = 1, we assume the probability of remigration and the preferred duration will increase.

As in previous studies, we use the migration history of an individual's family and his community as of his initial migration to measure migration network connections. The variable *sibmigrate* is a dummy variable equal to one if at least one of the individual's siblings has U.S. migration experience. *Commigrate* is a community-level measure indicating the percentage of residents in an individual's community that have U.S. migration experience. We include a measure of family risk diversification by including the number of living *siblings* (Taylor, 1986). In addition, *married* men will face higher costs of remigration, and we expect that the probability of remigration will be lower for this group. Finally, we include a dummy variable indicating whether a migrant remitted money to Mexico during at least one of his migrations (*remit*). A migrant's remittance of money to Mexico can be interpreted as evidence that he has strong connections to his Mexican community. We expect that those migrants who send money home to Mexico will have lower probabilities of being stayers, but they also may have higher probabilities of being multiple-trip migrants since the ability to supplement his family's Mexican income may be a strong incentive to remigrate.

We also consider the effect of country-level variables, which are designed to measure the impact of changes in the economies of Mexico and the U.S. at the year of initial migration These measures include the percentage difference in the U.S. and Mexican GDP growth rates, *gdpgrowth,* and the real level of foreign direct investment in Mexico, *forinvest.* A linear time trend (*year*) and its square (*year²*) are included to indicate any long-term trends in remigration not measured by other variables. For instance, U.S. policy has made it more costly over time to make multiple illegal migrations and has led to longer stays (Reyes, 2004). Summary statistics for all variables are included in Table 1. Note that some of the independent variables may be endogenous to the remigration decision and that it is not feasible to correct for endogeneity using the MMP data. Thus, our model must be viewed as a reduced form, and the empirical results cannot be interpreted as indicative of structural relationships.

Table 1
Descriptive Statistics
N = 2,538

Variable	Description	Mean	Standard Deviation
remigrate	1 = "single-trip migrant": no remigration last 5 years (n = 717)		
	2 = "multiple-trip migrant": remigration last 5 years (n = 1,715)	1.759	0.516
	3 = "stayer": no remigration last 5 years and still in U.S. (n = 106)		
age	age in years	25.08	7.948
education	education in years	5.435	3.528
minwage	adult males earning less than the Mexican minimum wage (%)	0.521	0.207
agriculture	adult males employed in agriculture (%)	0.569	0.234
jobmatch	1 = job in U.S. matches job in Mexico	0.467	0.499
sibmigrate	1 = sibling migrated to U.S. in the past	0.511	0.500
commigrate	adults in community with U.S. migration experience (%)	0.226	0.130
siblings	total number of siblings	2.039	2.016
married	1 = yes	0.498	0.500
remit	1 = migrant remitted to Mexico from U.S.	0.689	0.463
gdpgrowth	difference in U.S. and Mexican GDP growth rate	5.825	0.667
forinvest	amount of real foreign direct investment in Mexico (billions $US)	3.262	2.153
year	time trend (1965 = 1)	15.69	7.138

Results and Discussion

We estimate a multinomial logit model of the probability that a migrant belongs to one of the three remigration types.[8] Our results are listed in Table 2, where the base category is single-trip migrants; thus, the coefficients are relative to *remigrate* = 1.[9] We first consider the variables that indicate income potential, the signs and significance of which are consistent across remigration outcomes. Men who are older at their first migration are less likely to be multiple-trip migrants and stayers,

possibly due to lower potential income in the U.S. versus Mexico. However, it is more likely that *age* is picking up the effect of migration costs, i.e., older men who wait longer to have their first migration will have greater ties to the community and higher costs of repeated migration and a higher cost of settling in the U.S. Men who come from relatively poor Mexican communities (as measured by *minwage*) are also less likely to be stayers. Thus, only the probability of staying is affected by the distribution of income in the Mexican community. This result gives support to the Stark and Taylor (1989, 1991) "relative deprivation" hypothesis. As expected, men who come from Mexican communities with more *agriculture*-based job markets are more likely to be both multiple-trip migrants and stayers. This result matches the finding of Reyes and Mameesh (2002). It is interesting that *education* is consistently insignificant. However, based on the above results our findings in general would support the statement made by the Binational Study on Migration (p. 16) that "(s)ojourner migrants tend to be young males with little schooling who work in agriculture."

A migrant whose job in the initial U.S. migration was in the same category as his Mexican job is more likely to make repeated migrations and more likely to stay in the U.S. The estimated sign of *jobmatch* indicates that U.S. policymakers must carefully consider the type of workers who will qualify for a temporary migration program. Specifically, if the migration program is designed to match the job skills of potential migrants with available jobs in the U.S., then our results indicate that a policy that is successful in matching skills to jobs will have the unintended side effect of encouraging more (illegal) remigration from these Mexican workers who are allowed to legally enter the U.S.

In terms of the migration network variables, *commigrate* is consistently significant and positive as expected, while *sibmigrate* is significant for multiple-trip migrants but insignificant for stayers, although the coefficient is positive for both and *sibmigrate* is jointly significant in the entire model. This result supports the notion that household risk diversification plays a role in the migration decision. Taylor (1986, p. 159) argues that "the relatively low opportunity cost of migration for large families — and the consumption strain that large household size can place on household resources — have similar predicted (positive) effects on migration decisions." *Married* men have a lower propensity to stay in the U.S.; although the coefficient in the multiple-trip migrant category is insignificant, *married* is jointly significant in the model. As expected, *remit* is a significant determinant of the remigration decision, with remitters being more likely to be multiple-trip migrants and less like to be stayers.[10] This result is interesting for several reasons. First, it indicates that if a temporary migrant policy is enacted, then the end result could be an increase of the already high

Table 2
Mlogit Results: Dependent Variable = *remigrate*
N = 2,538

remigrate = 2 (Multiple-trip migrant)		
Variable	**Coefficient**	**Standard Error**
constant	0.703	0.925
age	-0.036***	0.007
education	-0.009	0.017
minwage	-0.784	0.494
agriculture	1.579***	0.422
jobmatch	0.300***	0.111
sibmigrate	0.310**	0.137
commigrate	1.268**	0.581
siblings	0.188***	0.033
married	-0.177	0.118
remit	0.438***	0.115
gdpgrowth	-0.001	0.013
forinvest	0.019	0.041
year	-0.063*	0.033
year^2	0.175*	0.106
remigrate = 3 (Stayer)		
constant	-0.730	1.806
age	-0.043**	0.021
education	0.017	0.036
minwage	-2.390*	1.267
agriculture	3.081***	1.058
jobmatch	1.036***	0.299
sibmigrate	0.350	0.313
commigrate	2.924**	1.465
siblings	0.086	0.071
married	-0.802***	0.289
remit	-0.823***	0.252
gdpgrowth	0.028	0.028
forinvest	-0.211*	0.128
year	-0.007	0.084
year^2	0.238	0.259
pseudo R^2	0.1684	

*   Significant at 10% level
**   Significant at 5% level
***   Significant at 1% level

levels of remittances entering Mexico. Second, it provides evidence that the definitions used here of multiple-trip migrants and stayers is different from the standard terms of "sojourners" and "settlers." For instance, Lozano (2005) finds that nearly 60% of the household receiving remittances would have been from "settlers."

There is only one country-level indicator that is a (marginally) significant determinant of the remigration decision: real foreign direct investment (FDI). Our results suggest that the larger the value of FDI in Mexico, the lower the probability that a migrant will choose to be a stayer. The effect of *forinvest* is insignificant for multiple-trip migrants and the model as a whole. This result would suggest that greater economic integration between Mexico and the U.S. will tend to reduce permanent migration. Interestingly, FDI has no significant effect on the probability of being a multiple-trip migrant, and FDI is not significant in the model as a whole. The coefficients on *year* and *year²* show that there has been a general trend of decreasing the probability of staying and making multiple trips over the sample period; the time trend for stayers is insignificant, but *year* and *year²* are jointly significant in the entire model.

Simulated Marginal Effects

The coefficients reported in Table 2 can inform us as to the direction of the effect of independent variables, but they can tell us little about the magnitude of the effects, as is the case in any nonlinear estimation. To measure marginal effects, we could evaluate the impact of changes in the independent variables at the sample means. Alternatively, we could simulate changes in these variables for each person and then compute the aggregate effect on the entire sample. Simulating marginal effects is more appealing than measuring the effects at sample means, because a simulation incorporates information on the entire distribution of outcomes instead of just the mean. Therefore, we choose to analyze the magnitudes of the marginal effects via simulations. Table 3 reports the marginal effects and the simulated changes, concentrating on variables that are either individually or jointly significant in Table 2. Note that the marginal effects are interpreted as changes in the probabilities of being in each category associated with the simulated change.

Consider the marginal change in remigration probabilities associated with a 10% increase in *age*. This change is predicted to bring about an increase in the probability that any individual will choose to be a single-trip migrant, while decreasing the probabilities of both being a multiple-trip migrant and a stayer. Note that the marginal changes must offset, so that any increase in one category necessitates an

equal-sized decrease in other categories. In this case, we observe a 0.016 increase in the probability of being a single-trip migrant, offset by a 0.015 decrease and a 0.001 decrease in the probability of being a multiple-trip migrant and a stayer respectively. Note that the marginal impacts on category 2 and 3 correlate with the signs presented in Table 2, but the relative magnitudes do not. Specifically, the majority of the impact of increasing *age* at first migration should be seen in a shift from multiple-trip migrant to single-trip migrant status, leaving the probability of being a stayer relatively constant.

Table 3
Simulated Marginal Effects

Variable	Simulated Change	Marginal Effects		
		Pr(1)	Pr(2)	Pr(3)
*age***	+ 10%	0.016	-0.015	-0.001
*minwage**	+ 10%	0.007	-0.004	-0.003
*agriculture***	+ 10%	-0.014	0.011	0.003
*jobmatch****	all observations assigned jobmatch = 1	-0.032	0.017	0.015
*sibmigrate**	all observations assigned sibmigrate = 1	-0.030	0.028	0.002
*commigrate***	+ 10%	-0.004	0.003	0.001
*siblings****	+ 10%	-0.005	0.005	0.000
*married***	all observations assigned married = 1	0.017	-0.004	-0.013
*remit****	all observations assigned remit = 1	-0.017	0.032	-0.015
forinvest	+ 10%	0.002	0.000	-0.002
*year***	+ 10%	-0.004	-0.001	0.005

*	Jointly significant at 10% level using chi-square test
**	Jointly significant at 5% level using chi-square test
***	Jointly significant at 1% level using chi-square test

Next, consider the impact of changing *jobmatch*.[11] Assigning every individual in the sample *jobmatch* = 1 shows that there will be a reduction in the probability of being a single-trip migrant, offset by increases in the probability of being a multiple-

trip migrant and the probability of being a stayer that are essentially equal. Consequently, any policy that provides legal entry to those that can match their skills with jobs available in this country is likely to increase the number of Mexicans seeking either permanent residence status or who will be involved in repeat migration. An increase in the percentage of men who work in *agriculture* in a Mexican community is predicted to reduce the probability of being a single-trip migrant, with most of the offsetting positive impact seen in the probability of being a multiple-trip migrant. While there is a difference of opinion on the impact that NAFTA has had on agriculture employment in Mexico, it is clear that many of these jobs have been lost; thus, our model suggests that NAFTA may have lead to an increase in illegal multiple-trip migrants.[12]

Simulating changes in the network connection variables, *sibmigrate* and *commigrate* appear to indicate that increases in network connections have larger impacts on multiple-trip migrant probabilities than on stayer probabilities. This suggests that any policy that fosters the development of migration networks may lead to more repeat migration without having much effect on the probability that any Mexican migrant or remigrant will settle in the U.S. The marginal impact of being *married* also has an interesting policy-related implication: The simulated marginal effect of *married* clearly suggests that any migrant policy that encourages married individuals to apply is likely to decrease the number of migrants that will want to become stayers but should not have a large impact on the number of multiple-trip migrants.

There is evidence that some migrants choose to migrate based on the ability to earn money in the U.S. and send it back to Mexico. Our simulations suggest that any increase in the number of migrants who remit money to Mexico, possibly due to a decrease in the institutional barriers to sending money from the U.S. to Mexico, will lead to a relatively large increase in multiple-trip migrants and a smaller decrease in stayers.[13] Increasing the amount of foreign direct investment is predicted to decrease the probability of settling with no effect on the probability of being a multiple-trip migrant.

Conclusion

As the U.S. reevaluates its migration policy vis-à-vis Mexico, understanding the natural flows of migration will continue to be an important issue for U.S. and Mexican policymakers. The study of migration, as a multidisciplinary study, utilizes a variety of theories in an attempt to understand and explain the migration decision. Our study, based on the behavior of undocumented male migrants, is a reduced-form

attempt to compare and contrast the relative importance of several factors within the context of the remigration decision. The majority of the literature on migration from Mexico to the U.S. has shown that absolute and relative income and migration networks are important determinants of the initial migration decision. The results presented here indicate that these factors are also significantly correlated with the remigration decision. In addition, our results give evidence that both income and networks have important impacts on the decision of choosing between remigration options.

In U.S. policy terms, the most important result in this study is the estimated relationship between remigration outcomes and having a U.S. job that matches the Mexican job. Specifically, male, illegal, Mexican migrants with job skills that are matched in the U.S. are more likely to be repeat migrants and are also more likely to stay in the U.S. Consequently, policies (like the Bush Administration's 2004 proposal) designed to match temporary migrants with U.S. jobs based on skills, might lead to more illegal immigration rather than less. From the Mexican perspective, U.S. policies that encourage temporary, repeat migrations by those males with migration experience should be correlated with more remittance behavior; thus, Mexico may find that repeat migration, whether illegal or legal, leads to greater foreign capital inflows in terms of remittances. Therefore, it may be in the best interest of both the U.S. and Mexico to establish polices designed to reduce repeat migration behavior that leads to U.S. settlement, an implication which defines common ground for bilateral immigration policy.

Notes

1. Interestingly, the reason that policy makers are concerned about migration issues appears to be changing. Prior to the terrorist attacks of 9/11/2001, reducing undocumented migration was seen as mainly an economic issue. However, after the attacks, migration policy has been driven by national security issues (Meyers & Papademetriou, 2002; Loven, 2003). Furthermore, recent attempts by the U.S. Congress to formulate a temporary worker program have stalled due to border security issues (AP, 2006).

2. Only India and China receive more remittances than Mexico. As a percentage of GDP, remittances to Mexico are the largest in the world at 2.61% (Bank of Mexico, 2006).

3. Massey et al. (1993) provide an extensive list of the various approaches taken by economists and other social scientists, attempting to reconcile seemingly disparate methodologies. See Massey and Espinosa (1997) for a complete survey of this litera-

ture, especially as it relates to Mexican migration.

4. There is an interesting debate in the literature on whether migration networks are truly non-market factors. For instance, Munshi (2003) argues that "economists have taken a very favorable view of non-market institutions" in their use of migration networks to explain migration. On the other hand, Davis and Winters (2001) argue that networks are a form of "social capital" in which potential migrants make an economic decision to invest. Winters, de Janvry, and Sadoulet (2001), Curran and Rivero-Fuentes (2003), and Davis, Stecklov, and Winters (2002) are among the recent studies that analyze the effect of migration networks on Mexican migration. See Taylor (1986), Massey (1990), Gurak and Caces (1992), Davis and Winters (2001), Winters, de Janvry, and Sadoulet (2001), Munshi (2003), and Curran and Rivero-Fuentes (2003) for more complete discussions of the impact of migration networks on immigration.

5. The MMP web site (mmp.opr.princeton.edu) contains a more-detailed description of the data. As Orrenius and Zavodny (2000) point out, a disadvantage of MMP data is that it tends not to include household heads who do not migrate permanently to the U.S., and it contains a high concentration of lower-educated individuals than those that applied for the amnesty program of the 1986 IRCA. On the other hand, the MMP data has a longitudinal component not found in any other data currently available. Even though one might expect there to be some error in the reporting on this retrospective information, Massey (1985) has shown that the data is remarkably accurate.

6. Reyes and Mameesh (2002) find an 80% probability of Mexican migrants returning to Mexico within five years. While we use the same data and a similar sample, they restrict their study to ranges around census years. A five-year threshold is also used by Lozano (2005). Our own sensitivity tests showed little variation between timeframes of three and seven years.

7. The job categories are professional, administrative, agriculture, manufacturing, sales, and domestic service. An alternative measure of earning potential is the wage earned in the previous trip to the U.S. However, this information is not consistently recorded in the MMP data.

8. The estimation also includes dummies for Mexican job type, U.S. job type, Mexican state of residence, and Mexican city of residence type (rural, suburban, urban, capital city); these coefficients are excluded for parsimony but are available upon request.

9. One must exercise caution when interpreting the significance of independent variables in an mlogit model. The levels of significance reported in Table 2 are for the effect of changes in the independent variables on the probability of being in each category relative to the base category. However, these levels of significance do not directly indicate whether the independent variable is significant in the entire model. To establish overall significance, it is necessary to test the joint significance of each dependent variable for both multiple-trip migrants (relative to single-trip migrants) and stayers (relative to single-trip migrants). For any independent variable, if it is significant for both multiple-trip migrants and stayers, then it will be jointly significant. However, lack of individual significance does not imply lack of joint significance. The joint significance levels are reported in Table 3.

10. A model was also estimated without *remit*, with no substantive changes to the results presented here. Models were also estimated with squares for *age* and *education*, as well as education categories and interactions between *education* and other independent variables. In all cases, no substantive changes in the model were found. All results are available upon request.

11. Presenting marginal effects of changing dummy variables in non-linear models presents challenges since, by definition, "marginal" implies a small change and dummy variables take on only discrete values. A common solution is to present the "marginal" effects of assigning everyone in the sample a value of one. Although not a perfect solution, it does allow for investigation of the changes in probabilities among the remigration options. Note that the size of the marginal effects of dummy variables cannot be compared to the size of the marginal effects of continuous variables.

12. A World Bank report (Lederman et al., 2003) indicates that agriculture has decreased in Mexico since NAFTA but attributes the decrease to other factors. On the other hand, Fujii (2001) estimates that in staples such as corn, the number of agricultural labor hours lost due to NAFTA imports was greater than the increase due to local demand.

13. One such decrease in institutional barriers is the following: banks with branches in both countries (such as BANAMEX, a subsidiary of Citigroup) now allow deposits in the U.S. to be used by debit cards in Mexico.

References

Associated Press. (2006). *Congress debates immigration bill.* Retrieved September 20, 2006, from www.nytimes.com/aponline.

Bank of Mexico. (2006). *Informe Annual.*

Briggs, V. M., Jr. (1975). *Mexican migration and the U.S. labor market: A mounting issue for the Seventies.* Austin, TX: University of Texas.

Cerrutti, M., & Massey, D. S. (2001). On the auspices of female migration from Mexico to the United States. *Demography, 38*, 187-200.

Cornelius, W. (1990). California immigrants today. Keynote presentation to the Conference on California Immigrants in World Perspective sponsored by the Immigration Research Program. *UCLA*, April, 26-27.

Curran, S. R., & Rivero-Fuentes, E. (2003). Engendering migrant networks: The case of Mexican migration. *Demography, 40*, 289-307.

Davis, B., Stecklov, G., & Winters, P. (2002). Domestic and international migration from rural Mexico: Disaggregating the effects of network structure and composition. *Population Studies, 56*, 291-309.

Davis, B., & Winters, P. (2001). Gender, networks, and Mexico-US migration. *Journal of Development Studies, 38*, 1-26.

Donato, K. M. (1993). Current trends and patterns of female migration: Evidence from Mexico. *International Migration Review, 27*, 748-771.

Fujii, G. (2001). Apertura comercial y empleo agricola en Mexico, 1993-1998. *Momento Economico, 115*, 45-56.

GAO. (2006). Illegal immigration: Border-crossing deaths have doubled since 1995; Border Patrol's efforts to prevent deaths have been not fully evaluated. *GAO, 06*, 770.

Gurak, D. T., & Caces, F. (1992). Migration networks and the shaping of migration systems. In M. Kritz, L. L. Lim, & H. Zlotnik (Eds.), *International Migration Systems: A Global Approach.* Oxford, UK: Clarendon Press.

Harris, J. R., & Todaro, M. P. (1970). Migration, unemployment, and development: A two-sector analysis. *American Economic Review, 60*, 126-142.

Lederman, D., Maloney, W. F., & Serven, L. (2003). Lessons from NAFTA for Latin America and the Caribbean countries: A summary of research findings. *Office of the Chief Economist for LAC*, World Bank.

Loven, J. (2004). *Bush calls for immigration overhaul.* Associated Press. Retrieved January 7, 2004, from customwire.ap.org.

Lozano, F. (2005). *Hogares receptors de remesas en Mexico: Limites y possibili-dades para el desarrollo local y regional.* Working Paper # 05-02n, Center for Migration and Development, Princeton University.

Massey, D. S. (1985). The settlement process among Mexican migrants to the United States: New methods and findings. In D. B. Levine, K. Hill, & R. Warren (Eds.), *Immigration Statistics: A Story of Neglect.* Washington, DC: National Academy Press.

Massey, D. S. (1990). The social and economic origins of immigration. *Annals of the American Academy of Political and Social Science, 510,* 60-72.

Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Taylor, J. E. (1993). Theories of international migration: A review and appraisal. *Population and Development Review, 19,* 431-466.

Massey, D. S., & Espinosa, K. E. (1997). What's driving Mexico-US migration? A theoretical, empirical, and policy analysis. *American Journal of Sociology, 102,* 939-999.

Meyers, D. W., & Papademetriou, D. G. (2002). The U.S.-Mexico immigration rela-tionship: Operating in a new context. *Migration Policy Institute.* Retrieved July 23, 2003, from www.migrationpolicy.org.

Munshi, K. (2003). Networks in the modern economy: Mexican migrants in the U.S. labor market. *Quarterly Journal of Economics, 118,* 549-599.

Orrenius, P. (2001). Illegal immigration and enforcement along the U.S.-Mexico border: An overview. *Federal Reserve Bank of Dallas Economic and Financial Review,* Winter, 2-11.

Orrenius, P., & Zavodny, M. (2000). *Self-selection among undocumented immigrants from Mexico.* Federal Reserve Bank of Dallas Working Paper, 00-05.

Orrenius, P., & Zavodny, M. (2003). Do amnesty programs reduce undocumented immigration? Evidence from IRCA. *Demography, 40,* 437-50.

Passel, J. S. (2005). Estimate of the size and characteristics of the undocumented population. *PEW Hispanic Center.*

Reyes, B. (2004). Changes in trip duration for Mexican immigrants to the United States. *Population Research and Policy Review, 23,* 235-257.

Reyes, B., & Mameesh, L. (2002). Why does immigrant trip duration vary across U.S. destinations? *Social Science Quarterly, 83,* 580-593.

Stark, O., & Taylor, J. E. (1989). Relative deprivation and international migration. *Demography, 26,* 1-14.

Stark, O., & Taylor, J. E. (1991). Migration incentives, migration types: The role of relative deprivation. *Economic Journal, 101,* 1163-1178.

Sze, M., Goss, S., & de Leon, J. G. (1998). Effect of aging population with declining mortality on Social Security of NAFTA countries. *North-American Actuarial Journal, 2*, 83-107.

Taylor, J. E. (1986). Differential migration, networks, information, and risk. In O. Stark (Ed.), *Research in Human Capital and Development, Vol. 4, Migration, Human Capital, and Development*. Greenwich, CN: JAI Press.

Todaro, M. P. (1969). A model of labor migration and urban unemployment in less developed countries. *American Economic Review, 49*, 138-148.

Tovar, E. M. L., Martin, S., et al. (2002). Migration between Mexico and the United States. *The Mexico/United States Binational Study on Migration*. Washington, DC.

Winters, P., de Janvry, A., & Sadoulet, E. (2001). Family and community networks in Mexico-US migration. *Journal of Human Resources, 36*, 159-84.

Zabin, C. (1997). U.S.-Mexico economic integration: Labor relations and the organization of work in California and Baja California agriculture. *Economic Geography, 73*, 337-355.

Biographical Sketch of Authors

David J. Molina received a Ph.D. in economics from Texas A&M University 1983, and he is currently an associate professor at the University of North Texas. He has also taught at New Mexico State University in Las Cruces, NM. He has also been a researcher at Louisiana State University and at Colegio de La Frontera in Monterrey. He has is a past president of the Association of Borderland Scholars. In addition to immigration from Mexico to the U.S., his research interests include Mexican micro-enterprises and remittances, income distribution in Mexico, Consumer behavior in Mexico and of Hispanics, wages of Hispanics in the U.S., U.S. Mexico Border Economic Issues and the economics of sports.

Todd Jewell received a Ph.D. in economics from the University of California at Santa Barbara in 1992, and he is currently an associate professor at the University of North Texas. He has also taught at UC-Santa Barbara, Clarion University of Pennsylvania, and the University of Texas at Dallas. During the fall semesters of 2004 and 2007, he was a visiting researcher at the Universidad de la República in Montevideo, Uruguay (2007 funded by Fulbright Senior Specialists Program). In addition to immigration from Mexico to the U.S., his research interests include Mexican micro-enterprises and remittances, the economics of sports, economics of education, and health economic issues in Latin America.