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Factors that Influence Mexican Emigration to the United States:
The Role of Economics, Education Quality, Crime, and Violence

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Abstract

This study explores the factors that influence Mexican emigration to the United States. By determining the relationship between emigration and different economic, social, and demographic variables, this paper seeks to determine the relative importance of factors that drive Mexicans to leave their country. This paper looks at the following emigration push and pull factors: home-country economic conditions, employment opportunities, education quality, crime, drug-cartel related violence, social ties in the U.S., gender, age, and income. Using a nationwide survey opinion data from 2015, the perceptions of Mexican individuals supports the hypotheses that social ties, home-country education quality, gender, and age are all related to the propensity to migrate to the U.S.
Within the last decade, the number of illegal immigrants from Mexico has been declining for a number of reasons. While Mexican illegal immigration climbed during the 1990s and into the 2000s and peaked before the 2008 recession, the years following showed a sharp decline. In 2009, data from the Pew Research Center reported that the number of immigrants lacking legal status to be 6.9 million. Six years later in 2015, this number dropped to 5.6 million illegal immigrants (Taxin, 2017). However, despite the recent decline, Mexicans still comprise half of the 11.1 million unauthorized immigrants living in the United States, making up 52 percent in 2014 (Gonzalez-Barrera and Jens 2017).

According to the Pew Research Center, the slow economic recovering from the 2008 recession and stricter border enforcement have contributed to the declining trend in Mexican illegal migration, especially with President Donald Trump’s stance against immigration. Recently, the number of Mexicans in the country illegally has fallen, while the number of Central American immigrants has increased (Taxin, 2017). The main reason for this increase is the high instances of crime and violence escalating in these countries, which has decreased in Mexico over the years. Another key reason for the decline is the Mexico’s falling fertility rate, which changed from a peak of 6.8 children per woman in the 1960s to 2.2 by 2010. Because typical migrants are generally aged 18 to 35 years old, there has been a decline in the number of individuals in this age range, and thus, in a decrease in the age group likely to leave the country (Hisky, 2018).

Mexico’s economy has improved dramatically in the last decade, which has translated into new job opportunities within the country (Goldberg et al. 2015). Following the global recession Mexico’s economy had a fairly robust recovery, especially in the states of Guanajuato and Jalisco, which had growth rates of 6.4 percent and 4.7 percent in 2015 (Hisky, 2018).
Overall, The post-recession economic growth further slowed migration flows from this country (Hisky, 2018). In addition, it has created greater opportunities in Mexico for upward social mobility, access to higher education, and ease of getting financial credit (Goldberg et al. 2015).

Because these conditions drove the increase in illegal migration from Mexico to the U.S. in recent years, I want to analyze which factor is the strongest push-factor in the decision to migrate. In this research paper, quantitative analysis of 2015 public opinion survey data from the Pew Research Center will answer the following question: **What factors influence a Mexican citizen’s professed desire to emigrate to the United States?** To answer this question, I will analyze the likelihood to migrate based on the following variables in Mexico: perceptions of economic conditions and employment opportunities, crime and violence, and education quality, as well as individual-level demographic characteristics such as age, income, and gender.

Upon reaching a conclusion and establishing the main reasons for Mexicans to decide to migrate, I’d like to provide policy recommendations for what factors American politicians should focus on to deter migration. In order to address the issue of migration and deter people from desiring to leave their home countries, we must address the root causes and push factors that lead them to leave in the first place. As a case study, the recent decline in immigration from Mexico will provide evidence for areas of improvement to deter migration. This is especially relevant and serves as a key example for U.S. and Mexican policymakers addressing the recent increase in migration from countries in the Northern Triangle region of Central America: El Salvador, Guatemala, and Honduras (Linthicum, 2017). Overall, the results of this study will prove useful when analyzing other nations where internal and external displacement of people from their homes is an issue.
The Migration Decision: Origin Country Economic Conditions

Many researchers have linked the decline in Mexican migration since the mid-2000s to the contraction of the U.S. economy during the Financial Crisis. Empirical studies have generally supported the hypothesis that the desire to migrate is based on the economic opportunities, measured by employment and wage levels, available in their destination country relative to those in their home country. More generally, this concept can be perceived as immigrants perceiving that they would be “better off” in the new country (Villarreal 2014). Given its negative effects on employment and wage levels, it is reasonable to expect the U.S. recession and recovery efforts to have contributed to the decline in Mexico-U.S. migration.

In addition, additional evidence supporting this correlation is because the recession reduced labor demand in the sectors that have traditionally employed Mexican immigrants. Prior to the recession, 32% of Mexican-born male workers in the United States were employed in construction, making up a greater share than in any other sector, including manufacturing (17%), leisure and hospitality (15%), and professional and business services (11%), which were the next largest industries employing Mexican-born men (Villarreal 2014). However, labor demand in certain sectors of the U.S. economy, such as the construction sector, began to decrease before the start of the recession (Goodman and Mance 2011; Hadi 2011). This evidence suggests that job demand decline in industries that employ a greater percentage of Mexican workers, could be a factor in the decline of migration, even before the recession began. The decline in job availability corresponds to the decline in immigration, which suggests that perceived job opportunities in America could have been an alternative factor.

Additional evidence to support this claim is the change in ranking of top states for Mexican migration between the 2003–2007 and 2008–2012. Three states moved down
significantly: Arizona fell from third place to sixth, Georgia fell from fifth to eighth, and Nevada dropped from the top ten entirely. All three of these states experienced declines of greater than 20% within the construction sector. In contrast, two states with marginally smaller decreases in construction sector jobs saw an increase in migration. Texas, with a drop in construction employment of 8%, replaced California as the largest destination for Mexican migrants in the 2008–2012 time period. In addition, New York, with a 5% decline, moved from seventh to third place (Sáenz 2015). Overall, declining economic conditions and the decrease in job sectors that typically employ Mexicans could have been perceived by potential migrants of reasons to not come to the U.S or a certain state.

One factor that could have contributed to the decline in migration in Mexico since the mid-2000s is an improvement in the economic conditions in Mexico. If more opportunities were available for Mexican workers within their own country, then they should be dissuaded from leaving to seek better opportunities in the U.S. Generally, in migration theory, researchers have found a strong correlation between the rate of international migration and economic situations in origin countries (Massey et al. 1994b). For Mexico in particular, research shows that migration from the country increased as a result of the economic crisis there in the mid-1980s. (Cerrutti and Massey 2004). Starting in the late 1990s, Mexico’s economy has experienced stability and modest growth, only disrupted by the 2008 global recession. Although the overall economy has remained stable from the growth of various sectors, the overall standard of living if most Mexicans has not substantially improved (Villarreal 2014). The poverty rate has fluctuated slightly, but has moderately improved overall from 52.1% in 2010 to 46.2% in 2014.

\[ H_1: \text{The more negatively an individual assesses the state of the Mexico’s economy, the more likely that individual is to want to emigrate.} \]
$H_2$: The more negatively an individual assesses the availability of employment opportunities in Mexico, the more likely that individual is to want to emigrate.

The Migration Decision: Crime & Drug Violence

The Mexican drug war began shortly after the newly-elected president Felipe Calderón started a federal assault on drug trafficking organizations in December 2006. Following this, annual homicides rose from 10,425 in 2006 to 27,213 in 2011 (Trans-border Institute, 2012). In total, drug violence has caused over 50,000 deaths, which are geographically concentrated; 3% of municipalities accounting for nearly 70% of homicides. In 2010, the top five most violent municipalities were Ciudad Juárez, Culiacán, Tijuana, Chihuahua, and Acapulco. (Rios and Shirk, 2011). However, even with a regional concentration, the fear of violence is reportedly widespread. In Mexico, representative victimized surveys demonstrate adults who feel their state of residence is unsafe rose from 49% in 2004 to 61% in 2009, an increase that occurred even in Mexican states where the violence was not concentrated (Becker and Rubinstein, 2011).

Hirschman, a researcher from Harvard, claims that citizens express discontent if the advantages of being in an organization (or in this case, their country of residence) decrease. One way of responding is migration to a more preferred location (1970). On an aggregate level, many political theorists have claimed that individuals leave locations when they perceive a threat of violence from governments or actors or a threat to their personal integrity (Moore and Shellman 2004; Davenport et al. 2003).

Columbia, which like Mexico has experienced a conflict between the government, drug trafficking organizations, and other rebel groups, shows evidence of migration following violence. A study found that households with greater exposure to violence within the surrounding areas were more likely to relocate to safer municipalities. In addition, in major cities
with greater rebel group kidnapping risks, families were more likely to send members to another country (Engel and Ibáñez, 2007). However, unlike Columbia, the emergence of drug violence was abrupt and occurred all of a sudden. From 2006 to 2009, total homicides in the country increased by 90% (Rice, 2011). Although other factors could have contributed, this coincides with an increase in Mexican immigrants living in the U.S. from 34.9 million in 2005 to 37.7 in 2010 (Camarota and Zeigler, 2015). Several anecdotal reports of individuals and families leaving areas of high crime and violence exist, with most accounts claiming that migrants have moved to the United States (Basu and Pearlman 2017). One study by Rios (2014), discovers that drug-related homicides are highly correlated with noticeable population declines in municipalities. This evidence suggests that high rates of crime and violence in Mexico can lead to migration to the U.S. in search of a more security. This logic gives the hypotheses:

\[ H_3: \text{The more negatively an individual assesses the level of crime in Mexico, the more likely that individual is to want to emigrate.} \]

\[ H_4: \text{The more negatively an individual assesses problem of drug cartel related violence in Mexico, the more likely that individual is to want to emigrate.} \]

**The Migration Decision: Education Quality**

Education quality has always played a role in the places people choose to live, which in turn, could mean it plays an important role as a motivator or deterrent of migration. While previous studies investigate this relationship using measures of education attainment, the data suggests generally migrants come from areas on low education quality, measured as various factors (Martinez et al. 2013). Using data gathered from household field surveys in 5 states in western Mexico, Massey and Espinosa discovered that the likelihood of migrating to the U.S. decreases as years of schooling increases for an individual (1997). In the study, this trend is
attributed to the fact that the benefits of migrating are relatively lower for more educated individuals. One researcher notes that this trend can be explained with the small range job offerings available for undocumented workers regardless of their education level (Caponi, 2006). Other research by Miranda (2007) concluded that those with migrants within their family tend to migrate more frequently, and their children tend to drop out of earlier to evade the perceived opportunity cost of continuing. These findings suggest that individuals, who reside far away from common migrant areas, have a 17.4% greater chance of graduating from high school.

Having community schooling infrastructure was shown to decrease the likelihood of first-time migration, which is consistent with that better educated people gain less from migrating to the U.S. Demographics research has explored the likelihood of migrating among individuals with different education levels, finding that migrants generally come from both ends of the education quality spectrum; with the highest and lowest educated groups migrating at higher rates than the middle level educated (Borjas, 1994; Caponi, 2006). The study claims that additional education — up to the point of graduating from high school — not only discourages migration, but also that an immigrant status in the United States decreases the migrant’s educational opportunities in the new country. Furthermore, the researcher concludes that improving schooling opportunities in Mexico could deter migration from being an alternative (Caponi, 2006).

Other research form Martinez, Santibanez, and Servan-Mori (2008) provide further supports for these findings. Their research identified certain education indicators associated with a higher likelihood that students and young adults would consider migrating to the U.S. The following school characteristics associated with poor academic quality were associated with a higher probability of migration: being held back, working for pay while attending school, and
forceful interruption of studies by lack of school, closed schools, or absent teachers. Another study found that higher migration rates from municipalities (outside of communities of origin, and to the U.S. specifically) correlate negatively with educational quality measured as: school infrastructure, staffing, and access to educational materials, and with availability of extra-curricular activities and vocational workshops (Martinez 2013). This logic yields the following hypothesis:

\[ H_5: \text{The more negatively an individual assesses education quality in Mexico, the more likely that individual is to want to emigrate.} \]

**The Migration Decision: Connections in America**

Another relevant factor to explore surrounding the probability of emigration is the existence of social ties in the destination country. Different studies using data from the Mexican Migration Project have pointed to the following findings: possessing a social tie to a current or former U.S. migrant dramatically increases the likelihood of emigration (Massey et al. 1987), the magnitude of this trend varies with the strength of the tie and the closeness of the relationship (Espinosa et al. 1997), and that this effect differs by gender (Kanaiaupuni et al 2000).

Furthermore, additional research shows that the magnitude of the network ties encouraging migration is, in fact, a legitimate casual effect and not exogenous or attributable to other factors (Palloni, 2001). Another study shows that social connections between origin and destination countries and the social capital arising from them are essential to the overall causation of migration (Massey b, 1994). Researchers at Harvard used survey data from more than Mexicans to demonstrate that social tie network effects sustain migration and even play a greater role than economic and political factors. In addition, after interviewing 120 migrants and their household members in Mexico, this study found that over 90% of migrants received
information or help from other migrants in crossing the border or finding a job in the U.S (Garip and Asad 2013). This evidence produces the following hypothesis:

\[
H_0: \text{If the individual has a connection to a family or friend in the U.S., the more likely that individual is to want to emigrate.}
\]

The Migration Decision: Gender, Age, & Income

Just as the number of Mexicans arriving to the U.S. has shifted in recent years, there has also been a change in the characteristics of the average migrant. From 2008 to 2012, Mexicans migrating tended to be older than those coming. However, the median age for Mexican migrants to the U.S. was 27 in 2008 to 2012 compared to 25 in 2003 to 2007. While the average migrant tends to be older than the past on average, the majority of migrants are still younger individuals (Sáenz 2015). Although males continue to be the majority among Mexicans migrating to the United States, the amount of females rose following 2018. The gender ratio, measured as the number of males per 100 females, of Mexican migrants fell from 146 in 2003–2007 to 125 in 2008–2012 (Sáenz 2015).

According to the rational choice framework in migration theory, individuals with higher education skills, labor experience, and a higher income are more likely to migrate because of their enhanced ability to fully take advantage of its rewards. The poor are assumed to be “selected out” of migration, because they are unable to afford it. In addition, individuals with lower incomes are do not have access to migration opportunities, because they have a lower risk-taking capacity and lack the social capital (low ability to form social ties) that facilitate migration (Haan and Yaqub 2008). Following the trend rendered in empirical evidence, the poorest and richest tend to have lower probability of emigration. The common perception is that the extremely poor are unable to migrate, or migrate under terrible and dangerous terms such that
migration does not improve their well-being. Overall, general trends show those with higher incomes — up to a point of utility where migration is a less-preferred outcome — are more likely to emigrate (Mosse et al. 2002).

H7: Men are more likely to want to emigrate than women.

H8: Younger adults are more likely to want to emigrate than older adults.

H9: Individuals with higher incomes are more likely to want to emigrate.

Data, Model, & Methods

In order to test the aforementioned hypotheses, data from the Pew Research Center’s “Global Attitudes & Trends” questionnaire in the spring of 2015 was subjected to analysis. The surveys were conducted as face-to-face interviews in Spanish with Mexican adults 18 and older from April 7th - 19th 2015. The sampling technique used in the surveys was a multi-stage, area probability design sampling strategy. The sample size was large enough to produce meaningfully statistically significant results for the predictive variables (Mitchell, 2005). After removing the data from missing cases and don’t know/no answer cases, the sample size used in this analysis was 795.

The analytical technique used is an ordered logit, because of the dichotomous nature of the dependent variable. In order to identify the relative predictive power of the explanatory variables, the marginal effect of those variables was calculated by finding the first differences. This first difference is the change in the probability of a respondent saying they would take advantage of the opportunity to emigrate to the U.S. when the variable of interest is changed from its minimum to its maximum value, while the other independent variables are held constant at their means. This was repeated for each of the independent variables within the model.
Calculating the marginal effects in this manner results in the determination of the magnitude of the impacts of the predictive variables upon the dependent variables.

The dependent variable, willingness to emigrate, was operationalized by using the question: *If at this moment, you had the means and opportunity to go to live in the United States, would you go?* The response categories were “yes” and “no” and are coded as such.

The independent variables included in the model are operationalized using different questions as follows. Gender of the respondent was coded by the individual survey by perceived physical appearance. The age of the respondent was assessed by asking the question: *How old were you at your last birthday?* Responses were recorded by number given. Income was measured by the question: *On this card are letters and quantities in pesos. Adding together the incomes of all the people who work in your household, which letter corresponds with the monthly income of this household?* Response choices are on a ranking system from 0 to 10, with income bracket “0 – 1” signifying $0 – 995 per month up to “10” signifying $19,936 -59,805 per month.

The general question for an individual's economic assessment was: *Now thinking about our economic situation, how would you describe the current economic situation in Mexico – is it very good (1), somewhat good (2), somewhat bad (3), or very bad (4)?* The responses were codified using the corresponding numbers, which is a common practice throughout the survey data. Unemployment was used as another measure of the perceived economic situation with the question.

Employment, education quality, crime, and drug cartel violence were all employed into the analysis with the following question: *Now I am going to read you a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem or not a problem at all.* This question was asked for
each of these independent variables, which were termed as “lack of employment opportunities,” “poor quality schools,” “crime,” and “drug cartel-related violence.” Responses to each variable were codified based on magnitude of opinion: very big problem (1), moderately big problem (2), small problem (3), and not a problem at all (4).

The question used to measure if an individual had social ties to a family member or friend in the United States was: *Do any of the friends or relatives you write to, telephone or visit regularly live in the U.S.?* The answers were codified as yes and no. This question was asked as a follow up question to: *Do you have friends or relatives who live in another country that you write to, telephone or visit regularly?*

Education level was not included among the dependent variables, because there was not a question in the survey that acknowledged it.

**Results**

*Ordered probit model estimates*

<p>| Dependent Variable - Willingness to Migrate | Coef. | SE  | P &gt; |z| | First Differences/ Mean |
|-------------------------------------------|-------|-----|-----|-----|------------------------|
| Independent Variables                     |       |     |     |     |                        |
| National Economy                          | 0.033 | 0.144 |     |     |                        |
| Employment Opportunities                  | 0.295 | 0.211 |     |     |                        |
| Crime                                     | 0.079 | 0.277 |     |     |                        |
| Cartel Related Violence                   | 0.286 | 0.231 |     |     |                        |</p>
<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>p Value 1</th>
<th>p Value 2</th>
<th>p Value 3</th>
<th>p Value 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education Quality</td>
<td>-0.336</td>
<td>0.185*</td>
<td>0.070</td>
<td>0.226</td>
<td></td>
</tr>
<tr>
<td>Connection in the US</td>
<td>-1.12</td>
<td>0.347**</td>
<td>0.001</td>
<td>0.600</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0.489</td>
<td>0.233**</td>
<td>0.036</td>
<td>0.120</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.0187</td>
<td>0.008**</td>
<td>0.015</td>
<td>0.288</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>-0.057</td>
<td>0.043</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(constant)</td>
<td>1.507</td>
<td>0.829</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wald chi2(9) test</td>
<td>34.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total observations (N)</td>
<td>795</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.1, **p<.05, ***p<.01

The ordered logit analysis for the data indicates that age, gender, education quality perception, and having a connection in the U.S. are all significant predictors of the desire to emigrate given the opportunity. The p value for the respondent’s opinion of the education quality in Mexico showed that the results were at a low level of significance. Gender and age demonstrated a moderate level of significance. Finally, the predictive variable of having a social tie with an individual in the U.S. showed was highly significant. All of these variables have coefficients with signs in the predicted direction, and thus, support the corresponding hypotheses:
**H5:** The more negatively an individual assesses education quality in Mexico, the more likely that individual is to want to emigrate.

**H6:** If the individual has a connection to a family or friend in the U.S., the more likely that individual is to want to emigrate.

**H7:** Men are more likely to want to emigrate than women.

**H8:** Younger adults are more likely to want to emigrate than older adults.

By analyzing the first differences, from strongest to weakest, the predictive power of the willingness to emigrate to the U.S. for these significant variables is as follows: having a social tie in the U.S., being a younger adult, perceiving poor education quality in Mexico, and being male. Having a social tie in the United States was the strongest indicator of willingness to migrate.

Perceptions of crime, drug cartel related violence, the national economy, and lack of employment opportunities were not statistically significant predictors of willingness to emigrate. In addition, income level was not a significant factor.

**Conclusions**

Aside from reaffirming the commonly accepted notions that likely Mexican immigrants are generally younger, males adults, this study demonstrated that having a social tie — in the United States drastically increases the likelihood of migration. Social networks of connections between family members or friend between home countries and destination countries drive migration. Those who are already in the U.S. can provide information, access to jobs, places to live, and thus, mitigate some of the risk associated with migration and relocating in a new country.

Another indicator of willingness to migrate is how negatively an individual's assesses education quality in Mexico. This study finds that, generally, individuals who perceive that
Mexico has a poor education system are more likely to migrate. This rationale makes sense, not only because poor education fuels a desire to leave, but also, because potential migrants do not place value on education. International trends commonly show that educational attainments and years of schooling generally decrease as the likelihood of migration increases.

The importance of social ties and education quality can help with addressing migration problems not only in Mexico, but also in the countries in the Northern Triangle — Guatemala, Honduras, and El Salvador — where many migrants have been increasingly coming to the United States. Mexico, with a similar culture, geography, and socio-political atmosphere, is an important case study for recognizing the motivations for migration in these Central American countries. Understanding the reasons that drive migration presented in this study can help legislators address the root of the illegal immigration problem by implementing policies that address the primary motivations for leaving. To deter illegal immigration from Mexico, Guatemala, El Salvador, and Honduras, this study shows policymakers should focus on policies that (1) increase home-country education quality through international development programs (2) weaken the power of social networks between countries, and (3) gear deterrent initiatives toward younger, adult men.
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