UNDOCUMENTED MIGRATION UNVEILED:
THE DRIVING EFFECT OF VIOLENCE, INCOME, AND FREEDOM ON
MIGRATION FROM LATIN AMERICA TO THE UNITED STATES

by
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Abstract

Existing research on the effect of violence on undocumented migration from Central and South America to the United States is limited and generally broad in its findings. To fill this gap, this paper theorizes that high violence rates are associated with increased undocumented migration from the region. Using multivariate regression models and country-year data, the results show that high violence, lower income levels, and less freedom within the origin countries are associated with increased migration, while political and economic conditions within the United States are not. In light of these findings, the paper offers policy considerations that can more effectively address the causes of undocumented migration from these countries, which are also applicable to address the recent influx of unaccompanied children since 2011.
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1. Introduction

The causes of undocumented migration from Central and South America to the United States are once again up for debate, especially following the recent influx of unaccompanied alien children from the region. Since fiscal year 2011 and highlighting this influx, the number of unaccompanied children arriving from Central America—mostly from Guatemala, Honduras, and El Salvador—has drastically increased. In 2014, United States Customs and Border Protection (CBP) likewise apprehended 68,541 unaccompanied children along the Southwest Border, nearly twice the level of 38,759 children apprehended in fiscal year 2013. Similar increases in the numbers of families, to include at least one parent, have also occurred since 2011, suggesting that this development is not limited to children alone.

This sharp increase also highlights two competing political theories to explain the causes of undocumented migration from the region. Voiced mainly by senior Obama Administration officials and Democrat Members of Congress, one argument proposes that conditions within the countries of origin drive such increases, most notably high violence crime rates in Central America. In a hearing before the House Homeland Security Committee on June 24, 2014, for example, Department of Homeland Security (DHS) Secretary Jeh Johnson submitted an open letter to parents in Central America,
which reads in part, “This year, a record number of children will cross our Southern border illegally into the United States… the majority of these children come from Honduras, El Salvador and Guatemala, where gang and drug violence terrorize communities. To the parents of these children I have one simple message: Sending your child to travel illegally into the United States is not the solution.”

Conversely, the counter-argument proposes that violence has a negligible effect on undocumented migration, while U.S. politics and lax immigration enforcement policies instead drive migration flows. According to this view, the unaccompanied alien children increase is primarily driven by Deferred Action for Childhood Arrivals (DACA) policy that aims to delay the deportation of specific groups of undocumented migrants who previously arrived in the United States as children. Highlighting this counterargument, Representative John Carter (R-TX), who also chairs the House Appropriations Subcommittee on Homeland Security, states, “The President caused this self-inflicted crisis at our border when he decided to broadcast to the world in 2012 that our government will not deport children who have come to our country illegally.”

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In addition to these political debates, academic research has yet to agree on the definitive causes of such migration. While violence is generally found to affect migration, studies have not determined to what degree, especially when considering the influence of other likely economic and political factors. Given the lack of empirical studies and inconclusive findings, this quantitative research project therefore aims to fill a theoretical void by examining the effect of violence in Central and South America on all undocumented migration to the United States. It theorizes that, in a comparison of countries, those having higher violence rates will be more likely to source more undocumented migration than will those having lower violence. To test this theory, the research uses multivariate regression models that assess the effect of origin country violence on apprehension rates of undocumented migrants from that country over a ten-year period, with U.S. Border Patrol apprehensions serving as a key indicator of total migration flow. The research finds that high violence is in fact associated with increases in U.S. Border Patrol apprehension rates, but it is not the only factor. Higher levels of income and levels of freedom within the origin countries are also associated with decreased migration, while economic and political factors within the United States are not. Policies that improve the economic, political, and security conditions within the countries of origin could therefore have the most impact on reducing undocumented migrant flows from Central and South America to the United States. As child migrants

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are a subset of this group, these same policies can likewise be applied to help stem the influx of childhood arrivals by addressing the root causes of migration.

2. Literature Review and Theoretical Framework

The larger question as to why individuals migrate has been a topic of interest for many years, with earlier theoretical perspectives placing a high emphasis on economic reasons being the cause of international migration. According to the neoclassical economic theory developed by John Harris and Michael Todaro in 1970 and later reemphasized by Andrew R. Morrison and Rachel May, individuals model their migration decisions through the context of wage maximization. Individuals choose to migrate to another country upon the presumption that they would earn higher wages residing at that location than if they remained in their home country of origin. Nevertheless, efforts have been made to account for other variables that could affect this theory, to include other determinants of migration such as the influence of social networks and variables that attempt to conceptualize a migrant’s quest for a “better life” in more general terms. Other studies agree that the issue is complex and includes other non-economic reasons, to include feelings of insecurity and the distrust of governmental actors at home; perceptions of favorable social and political environments within the

8 Morrison and May, “Escape from Terror,”120.
9 Ibid.
country of destination; and the desire to reunify with other family members; among other reasons.\textsuperscript{11}

Despite these larger theoretical constructs, quantitative studies to examine the effect of various likely causes of international migration remain limited in scope and are otherwise scarce. Serious empirical research of the causes of migration greatly vary both in perspective and methodology, often utilizing research designs that do not include adequate controls; lack reliable data that is representative of the population set; rely on missing or inconsistent data; or are heavily biased towards particular political or social opinions towards migration issues.\textsuperscript{12} Despite these limitations, some valid empirical studies nevertheless exist. By including additional variables to the neo-classical economic model, for example, Andrew Morrison and Rachel May examine the effect of political violence in Guatemala in the late 1970’s and early 1980’s on general migration out of the country.\textsuperscript{13} According to the researchers, most models seek to explain migration flows by regressing the probability of international migration on economic variables, the conclusions of which generally support the Harris-Todaro theory that individuals migrate in search of expected-income maximization.\textsuperscript{14} Morrison and May nevertheless adjust the model for the effect of political violence, and conclude that violence likely impacts


\textsuperscript{13} Morrison and May, “Escape from Terror,” 120-122.

\textsuperscript{14} Ibid., 120.
migration flows once it reaches critical levels.\textsuperscript{15} This broader assessment suggests that, nearly 40 years later, violent crime in Guatemala, Honduras, and El Salvador could have a similar effect on migration to the United States, with increased violent crime likely having a positive effect on migration trends. However, as they focus exclusively on political violence, the larger effects of all types of violence were not assessed.

Other qualitative studies likewise have concluded that an association likely exists between violence and migration. Of note and consistent with the adjusted neoclassical theories that accounted for other nontraditional variables, studies have found high violence rates a significant reason why children have attempted to cross alone from this region to the United States over the past few years, though to varying degrees.\textsuperscript{16} Many of these assessments rely almost exclusively on survey designs. For example, the United Nations High Commissioner of Refugees (UNHCR) undertook an extensive study regarding the reasons behind the sharp increase of child migrants from Mexico, El Salvador, Guatemala, and Honduras to the United States since 2011.\textsuperscript{17} A total of 404 migrant children in U.S. Government were randomly-selected and interviewed.\textsuperscript{18} According to the study, at least 58\% of the children reported the threat of physical harm as a main reason why they decided to migrate.\textsuperscript{19} The survey respondents largely identified the threat of violence by organized criminal groups and violence at home as the

\textsuperscript{15} Ibid., 121-128.
\textsuperscript{17} UNHCR, “Children on the Run,” 5.
\textsuperscript{18} Ibid., 6.
\textsuperscript{19} Ibid., 6.
two leading reasons affecting their decision to leave, which supports similar conclusions that victimization as well as the threat of violence drive children to leave their home countries for the United States.\textsuperscript{20}

Relying exclusively on survey data, however, could increase the risk of bias as incentives could exist for respondents to answer in ways perceived to increase their chances of being denied humanitarian parole. Instead of relying on cross-section sample surveys or panel studies, choice-based sampling of a small sample size was conducted either pre-departure or post-arrival status, to include interviews of detained migrants in the custody of governmental entities.\textsuperscript{21} In one set of interviews, children explained that the effect of violence is often overstated, highlighting the potential challenges of these survey designs.\textsuperscript{22} Migrants in the custody of U.S. governmental authorities could have the incentive to overstate the impact of crime in order to claim credible fear asylum status. Finally, the surveys would almost exclusively rely on both governmental and international organization actors in all countries involved, resulting in incomplete data and potentially biased results given the many incentives and disadvantages of the actors.

In addition to violent crime, other non-wage related determinants likely influence undocumented migration from the region, questioning the overall impact that violence has migrant flows when compared to other variables at play.\textsuperscript{23} Existing research has concluded that a number of factors other than violence likely drive migration from the

\textsuperscript{20} Hiskey, Malone, and Orces, “Migration in Central America,” 1; UNHCR, “Children on the Run,” 6.
\textsuperscript{22} Anastario et al., “Salvadoran Youth Migration,” 99.
region, to include perceived changes to U.S. immigration enforcement efforts; possibility of U.S. residence and work status under DACA; the child’s desire to reunify with other family members; perceived feelings of insecurity or lack of faith in the rule of law; or false information deliberately spread by migrant traffickers, among other economic or political factors not directly related to violent crime.²⁴ No consensus seems evident, however, regarding the more precise impact each of these other variables have on child migration trends, especially when considered along with violent crime.

Despite the limited empirical studies and broad qualitative assessments, the question regarding the impact of violence on migration while also considering other possible intervening variables remains open. This research therefore aims to fill this theoretical void by conducting a multivariate regression analysis of the effect of violence in Central and South America on undocumented migration from the region, while also controlling for other economic and political factors within both the origin countries and the United States. By doing so, the true effect of violence on undocumented migration is better understood, especially in light of other possible factors that influence such flows.

²⁴ Anastario et al., “Salvadoran Youth Migration,” 100; Chavez and Menjivar, “Children without Borders,” 84; Rempell, “Credible Fears,” 340-353.
3. Data and Methods

This project uses country-year data to examine the effect of one type of violent crime – intentional homicide rates – on undocumented migration over a ten-year period between 2003 and 2012. The dependent variable is the number of U.S. Border Patrol apprehensions made during the period along the Southwest Border (to include coastal areas) of undocumented migrants from all Central and South America countries and the Caribbean, excluding Mexico, (“Apprehensions”) as is reported annually by the DHS Office of Immigration Statistics.25 By definition, an apprehension is the arrest of a removable alien by DHS, with each apprehension of the same individual counted separately to account for multiple attempts by the same alien.”26 The variable likewise includes all apprehensions and regardless of age and to include minors.

For this study, apprehensions are assumed to be a key indicator of undocumented migrant population flows from the region to the United States, which is in accordance with current DHS analytical and reporting practices.27 At the time of research, however, DHS is developing a new “effectiveness rate” methodology in order to more accurately measure undocumented migration, to include accounting for “Turn Backs” (individuals deterred from a border crossing) and “Got Aways” (migrants who successfully crossed the border).28 Although an imperfect measure and until new metrics are available, the

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Congressional Research Service (CRS) nevertheless states that “apprehensions are widely understood to be correlated with unauthorized flows”. 29

Additionally, Mexico is not included in this study for two reasons. First, the inclusion of this particular country would introduce extreme outlier data that could significantly affect the model findings. According to the 2012 DHS Office of Immigration Statistics, the mean average for Mexico is 833,814 apprehensions, while the mean average for all other Central and South American countries is significantly lower at 4,296 apprehensions. 30 Additionally, as a contiguous country to the United States, undocumented migrants from the country could be motivated by different factors when compared to Central and South America. Laws that govern migrant admissibility and return procedures differ in regards to the treatment of undocumented migrants from contiguous vs. noncontiguous countries. Section 235 of the William Wilberforce Trafficking Victims Protection Reauthorization Act of 2008, for example, requires different procedures when dealing with children from “contiguous” countries (i.e. – Mexico and Canada) from all other countries (i.e. – Central and South America). 31 While children from noncontiguous countries are required to be transferred to the Department of Health and Human Services within 72-hours for further processing and screening for human trafficking or credible fear indicators, children from contiguous countries are not afforded the same protections and are often remediated to the U.S. Border Patrol. 32

32 Ibid., 572-575.
As mentioned above, the independent variable is the intentional homicide rate ("Homicide") per 100,000 individuals as is reported yearly by the United Nations Office of Drugs and Crime (UNODC).\textsuperscript{33} By definition, intentional homicide is an unlawful death inflicted upon an individual with the intent to cause death or serious injury.\textsuperscript{34} As such, the research includes this variable as one measure of violent crime in Central and South American countries during the period.

Understanding that other factors could likewise impact migration flows, the research includes other independent variables in order to assess the effect of economic, political, social, and enforcement influences in both the origin countries and the United States. For the countries of origin, for example, the project accounts for the effect of freedom by using the Freedom House Freedom of the World Index ("Freedom"), an average index rating of civil liberties and political rights.\textsuperscript{35} Through this methodology, each country is assigned a rating from one to seven, with a score of one representing the freest and seven the least-free countries.\textsuperscript{36} Additionally, three economic variables are likewise included: Gross National Income (GNI) per capita ("Income"); unemployment rates ("Unemployment"); and inflation rates ("Inflation") in the origin countries as are reported annually by the World Bank’s DataBank database.\textsuperscript{37}

For the United States, the research includes other independent variables to assess other economic and political factors that could be expected to attract undocumented

\textsuperscript{34} Ibid.
\textsuperscript{36} Ibid.
migration. The project includes the same three economic factors as are compiled by the World Bank – “Income”, “Unemployment”, and “Inflation”. As economic conditions in the countries could be expected to push migration out, economic factors within the United States could be expected to pull migration in through the attraction of better opportunities. As U.S. politics could also affect migration in many different ways, the project also controls for the political party identification of U.S. President (“PID of U.S. President”), which is coded as a binary variable, “0” for Democrat and “1” for Republican for the given year. Similarly, the effects of border enforcement are also included as is measured by U.S. Border Patrol staffing levels (“Border Patrol Staff”) as they existed during this time period along the Southwest Border and reported by the U.S. Border Patrol.

Finally, given that this project relies on incomplete and inconsistent global datasets, a slight discrepancy exists regarding the definition of “years”. Apprehensions and U.S. Border Patrol staffing are collected and reported by fiscal year, while all other variables are collected and reported by annual year. Given that the discrepancy is limited to a three-month period (fiscal years begin in October vs. in January for annual years), and that the calculations remain constant throughout all of the models, the impact of this discrepancy to the overall findings is estimated to be minimum. The years 2003 through 2012 were likewise selected as this time frame offers the most thorough datasets and

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38 “World DataBank.”
variability. While UNODC homicide rates are available for 2013, for instance, they are incomplete and only available for approximately half of the countries of interest.\textsuperscript{40}

4. Results

To test the hypothesis that violent crime drives undocumented migration from the region, this project estimates three multivariate regression models, the results of which are displayed in Table 2. All explanations below are likewise made according to the results of regression Model 3 as is included in the table.

In sum, violence and economic factors within Central and South America likely affect undocumented migration flows from the region, with some variables being more impactful than others. Higher income levels within the region, for example, are associated with fewer apprehensions, while increased inflation and unemployment rates interestingly are likewise not associated with similar effects. Conversely, the same economic factors within the United States are not associated with apprehension rate changes. The same can also be said about the party of identification for the U.S. president and numbers of Border Patrol Agents assigned to the Southwest Border.

Table 1 includes the summary statistics for all variables. For the dependent variable, the mean apprehension rate is nearly 4,296 apprehensions, which include 278 country-year observations ranging from 57,486 apprehensions of migrants from three migrant apprehensions from the Bahamas in 2007 to 57,486 migrant apprehension from Guatemala in 2012. For the independent variable, the mean intentional homicide rate is

\textsuperscript{40}“Homicide Rates.”
23.3 murders per 100,000 individuals, ranging from 1.5 in Bermuda in 2004 to 91.8 in Honduras in 2011.

<table>
<thead>
<tr>
<th>Statistic</th>
<th>N</th>
<th>Mean</th>
<th>St. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apprehensions</td>
<td>278</td>
<td>4295.9</td>
<td>10258.1</td>
<td>3</td>
<td>57486</td>
</tr>
<tr>
<td>Origin Country</td>
<td>---</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homicide</td>
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<td>23.3</td>
<td>17.78</td>
<td>1.5</td>
<td>91.8</td>
</tr>
<tr>
<td>Freedom</td>
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<td>1.36</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Income</td>
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<td>16282.3</td>
<td>550</td>
<td>120490</td>
</tr>
<tr>
<td>Unemployment</td>
<td>211</td>
<td>7.9</td>
<td>3.6</td>
<td>1.6</td>
<td>18.4</td>
</tr>
<tr>
<td>Inflation</td>
<td>278</td>
<td>6.2</td>
<td>7.3</td>
<td>-27.6</td>
<td>45.9</td>
</tr>
<tr>
<td>United States</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>278</td>
<td>47648.7</td>
<td>3334.9</td>
<td>39950</td>
<td>52530</td>
</tr>
<tr>
<td>Inflation</td>
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<td>2.2</td>
<td>0.75</td>
<td>0.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Unemployment</td>
<td>278</td>
<td>6.9</td>
<td>1.9</td>
<td>4.7</td>
<td>9.7</td>
</tr>
<tr>
<td>Border Patrol Staff</td>
<td>278</td>
<td>14347.4</td>
<td>3617.7</td>
<td>9666</td>
<td>18740</td>
</tr>
</tbody>
</table>

*Excludes PID of President as a binary variable.

4.1 Effect of Violence, Income, and Freedom

Of the core findings, changes in homicide rates are associated with considerable changes in undocumented migration. On average, an increase of ten homicides per 100,000 persons is associated with an increase of 3,660 U.S. Border Patrol apprehensions annually ($p < .001$), holding all other variables constant. As murder rates increase, residents within these countries could perceive that their law enforcement or government entities are unable to provide for the most basic security protections. As a result, these individuals likely decide that the only viable option to maximize their chances of living safer lives is to migrate, especially if violence reaches critical levels as is theorized by
Table 2: Effect of Violence on Apprehensions (OLS Regression Models)

<table>
<thead>
<tr>
<th>Country</th>
<th>Homicide</th>
<th>Income</th>
<th>Inflation</th>
<th>Unemployment</th>
<th>Freedom</th>
<th>United States</th>
<th>Income</th>
<th>Inflation</th>
<th>Unemployment</th>
<th>PID of U.S. President</th>
<th>Border Patrol Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origin Country</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
<td>(8)</td>
<td>(9)</td>
<td>(10)</td>
<td>(11)</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homicide</td>
<td>333.50***</td>
<td>367.93***</td>
<td>366.05***</td>
<td>(43.27)</td>
<td>(35.14)</td>
<td>(35.08)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td>-0.04*</td>
<td>-0.42***</td>
<td>-0.42***</td>
<td>(0.02)</td>
<td>(0.09)</td>
<td>(0.10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflation</td>
<td></td>
<td></td>
<td>-135.36*</td>
<td>(76.12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td></td>
<td></td>
<td>-1163.45***</td>
<td>(181.04)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Freedom</td>
<td></td>
<td></td>
<td>-614.09</td>
<td>(296.79)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.44</td>
<td>(0.52)</td>
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<tr>
<td>Income</td>
<td></td>
<td></td>
<td>-301.26</td>
<td>(1942.68)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Inflation</td>
<td></td>
<td></td>
<td>347.10</td>
<td>(1934.63)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td></td>
<td></td>
<td>-2423.03</td>
<td>(6716.01)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>PID of U.S. President</td>
<td></td>
<td></td>
<td>-0.77</td>
<td>(0.73)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Constant</td>
<td>-3145.86</td>
<td>10774.33</td>
<td>552.19</td>
<td>(700.66)</td>
<td>(2114.82)</td>
<td>(29565.15)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Observations</td>
<td>273</td>
<td>210</td>
<td>210</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.34</td>
<td>0.54</td>
<td>0.55</td>
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<td></td>
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</tr>
</tbody>
</table>

*Note:* *p<0.1; **p<0.05; ***p<0.01; Robust standard errors in parenthesis.
Similarly, these findings support the 2014 UNHCR findings that children were largely fleeing high-levels of violence within their countries of origin.\(^\text{42}\)

Additionally, changes in origin country income levels are associated with apprehension rate changes in ways that we might expect. On average, an increase of $1,000 in GNI is associated with a decrease of 420 apprehensions annually \((p < .001)\) holding all other variables constant. This finding suggests that as GNI increases, individuals have more disposable wealth. As a result, they could feel more secure in their ability to provide for basic needs, leading to overall higher feelings of economic security and stronger levels of confidence in the ability of their country’s economy to provide for their most basic needs. As such, they would be less likely to migrate away from the region. These findings support the theory that individuals tend to model their migration decisions on expected wage maximization; a new country of residence is chosen once it is deemed to provide the most income possible when considered among all other realistic options.\(^\text{43}\) By doing so, they also support the conclusions proposed by Bauer and Zimmerman that individuals tend to migrate in search of better economic conditions.\(^\text{44}\)

Interestingly, however, not all changes in economic indicators are associated with apprehension rate changes in ways that we might expect. On average, an increase of one percentage point in the unemployment rate is associated with a decrease of approximately 1,180 apprehensions \((p < .001)\), which is not an intuitive finding as higher unemployment rates would indicate fewer jobs and lower income. One explanation could be that South and Central American economies are linked to larger, global trends. If global

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\(^{41}\) May and Morrison, “Escape from Terror,” 121-128.
\(^{42}\) UNHCR, “Children on the Run,” 6.
\(^{43}\) Morrison and May, “Escape from Terror,” 17.
unemployment rates are high and world economies weaker, then individuals might have
less of an incentive to migrate to another country. Given these conditions, in other
words, individuals might not have a realistic expectation that migration could lead to
higher income levels, again supporting the neoclassical economic theory that real or
perceived opportunities to achieve higher income levels affect migration decisions. 45

Finally, changes in freedom are associated with apprehension rate changes, again
in ways that we might expect. On average, an increase of one rating point in the Freedom
House Freedom of the World Index, signifying increased levels of civil liberties and
political freedom, is associated with a decrease of approximately 652 apprehensions
\( (p < .05) \), holding all other political and economic variables constant. This finding
suggests that civil liberties and political freedom are likely drivers of migration. As
freedom levels decrease and individuals believe that their governments do not adequately
represent their interests, they could decide to migrate in search of life in a different
country that offers more chances for electoral participation. With the general perception
of the United States as a democratic country, as well as its geographic proximity to
Central and South America, it could be the likely destination of choice.

Given the above findings, U.S. policies that focus on security, economic growth,
and political rights within Central and South America could potentially have the most
effect in reducing undocumented migration from the region to the United States. If
applied specifically to Guatemala, Honduras, and El Salvador, they could likewise
present a viable option for reducing the flow of unaccompanied alien children. Policies
that aim to reduce violent crime would likely have the most effect, which could include

45 Morrison and May, “Escape from Terror,” 120-122.
initiatives that strengthen the rule of law, offer international law enforcement training opportunities, or support judicial reform. Similarly, policy initiatives that aim to stimulate higher levels of income within Central and South America could be considered, either as standalone programs or combined with pro-democratization efforts aimed to promote freedom.

**4.2 Effect of U.S. Economy and Politics**

Conversely, changes in U.S. economic and political variables were not found to be associated with apprehension rate changes, suggesting that such factors could have less impact on undocumented migration than violence. While three main economic indicators of GNI per capita, unemployment, and inflation within the origin countries are all associated with apprehension rate changes, for example, none of these same factors as were present within the United States during this period are associated with similar changes. This finding could contradict what we might otherwise expect to see. If migrants are influenced to migrate by economic reasons at home, then it is reasonable to assume that economic factors could likewise attract them to the United States. The reason for this finding is likely complex and could indicate that economic factors by themselves are not standalone measures that affect an individual’s decision to migrate. As economic conditions improve in the United States, income levels increase and unemployment rates decrease, but perhaps the same trends occur globally or, more locally, within Central and South America. If the case, then the cost-benefit decision would not favor migration if both the origin country and the United States are
experiencing favorable economic conditions as the decision would not necessarily offer better economic opportunities.\textsuperscript{46}

Similarly, U.S. political influences do not seem to affect undocumented migration from the region as the party of identification for the U.S. president is not associated with changes in apprehensions. This finding is significant in that one major political argument claims that policies like DACA primarily drive the current increase in unaccompanied children arrivals. According to this theory, real or perceived benefits associated with lax immigration enforcement policies attract migrants to the United States under the belief that once they have successfully arrived in the U.S., the chances are high that they could remain without credible fear of deportation. The findings of this research project, however, do not support this claim, to include the theory that such policies, and not violence, primarily drive such migration.\textsuperscript{47}

Interestingly, changes in U.S. Border Patrol staffing levels along the Southwest Border are not associated with statistically significant changes in apprehension rates. While not a pull factor, Border Patrol staffing could be a likely variable to affect apprehensions, and its exclusion could introduce omitted variable bias to the model. However, as the research focuses only on Central and South American countries and not Mexico – which account for the highest level of all Southwest Border apprehensions – these findings are limited only to the population of interest for this study. Nevertheless and when considered as a whole, policies that focus solely on enforcement and void of international engagements designed to increase political and economic opportunities

\textsuperscript{46} Ibid., 120-122.
\textsuperscript{47} Rempell, “Credible Fears,” 373.
might have less of an impact on reducing undocumented migration from Central and South America.

5. Conclusions

With the numbers of unaccompanied children arriving from Central America to the United States continuing to rise, the causes of undocumented migration from the region are once again on the political front burner. One argument proposes that violence and poor economic conditions primarily drive such migration from the region to the United States, while a counter-argument claims that lax immigration policies attract migration into the country from Central and South America. Given the general lack of empirical studies and broad range of qualitative theories on this topic, this research fills a critical void by using multivariate regression models to examine the effect of violence on migration trends. By doing so, it also controls for the effects of other factors that could affect migration, to include economic and political influences as they exist both within the Central American countries of origin and the United States.

The findings of this research support the claim that high violence rates are in fact positively associated with changes in U.S. Border Patrol apprehensions of undocumented Central and South American migrants, which is one measure of overall undocumented migration flows. In sum, higher violent crime rates appear likely to drive migration away from the region and towards the United States. However, violence is not the only factor at play. Other economic and political variables likely drive undocumented migration from the region, to include levels of income, political freedoms, and civil liberties. As
income, political rights, and civil liberties increase, apprehensions decrease. While this appears to be true in Central and South America, however, none of the U.S. economic or political factors included in this research were found to affect apprehension rates, suggesting that such influences have less impact on attracting undocumented migration to the country.

These findings likewise offer policy considerations for current and future policymakers who aim to address undocumented migration from the region, and as a subset of this population, the rising number of unaccompanied children arriving primarily from Guatemala, Honduras, and El Salvador. Policies that aim to promote rule of law initiatives, to include the offering of law enforcement training and judicial reform, and as such designed to reduce crime and increase citizen’s confidence in the government’s ability to provide the most basic of individual needs, could have the most impact. Such initiatives could also be strengthened by incorporating measures that promote economic growth and opportunities, especially policies designed to increase income levels for the benefit of its residents, while simultaneously promoting democratic ideals and increasing levels of political freedom and civil liberties. Conversely, policies that focus solely on enforcement efforts without any of the above initiatives could have less of an impact in reducing undocumented migrant flows from the region to the United States.

In reality, any comprehensive policy response would almost certainly include economic, political, and security initiatives for the region, plus adequate U.S. border enforcement strategies designed to deter, identify, and interdict unlawful entries into the country. Border security, after all, extends well beyond the interdiction of undocumented migrants. Finding the right balance of all policy measures, however, will likely
determine its effect on addressing the causes of undocumented migration from the region, and as a result, reduce such migrant flows to the country.

6. References


7. **Curriculum Vita**

Prior to his studies at Johns Hopkins University, Joseph Croce graduated cum laude in 1998 from Georgetown University’s School of Foreign Service with a Bachelor of Science in Foreign Service (BSFS). During his final year of studies, he likewise completed a graduate-level junior research fellowship program at the university’s Institute for the Study of Foreign Diplomacy, where he wrote a case study on war crimes in the Balkans. He also completed Georgetown’s Certificate in Project Management program in 2013.

Joseph has approximately ten years of experience working in both the Executive and Legislative Branches on homeland security, law enforcement, legislative relations and appropriations issues. He has also served on two deployments with the United States Marine Corps, first as a peacekeeper in Kosovo (2001) and later to Iraq (2003).