In Search of Peace: Assessing the Impact of Violence on Migration from Latin America to the United States

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Princeton University
Organization

- Regional focus
- Theoretical foundations
- Cross national crime data
- Data & description of sample
- Methods
- Results
- Discussion
- Limitations & next steps
Regional focus

- Mexico
Regional focus

- Mexico
- Guatemala
Regional focus

- Mexico
- Guatemala
- Nicaragua
Regional focus

- Mexico
- Guatemala
- Nicaragua
- Costa Rica
Theory says...

- International migration
  - World systems theory may be most applicable
    - Economic/socio-cultural integration
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- Theory on crime in and of itself (Neapolitan 1997)
  - Modernization theory, opportunity theory, dependency theory, culture/historic traditions, micro-level factors
Theory says...

- International migration
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    - Economic/socio-cultural integration
- Theory on crime in and of itself (Neapolitan 1997)
  - Modernization theory, opportunity theory, dependency theory, culture/historic traditions, micro-level factors
- U.S. migration more strongly predicted by violence than economic conditions (Lundquist and Massey 2005)
  - Violence as proxy for political motivations
Cross national crime data

- Quite touchy
  - (1) Definitions often vary (time and place)
Cross national crime data

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  - (2) Countries’ participation varies
Cross national crime data

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  - (1) Definitions often vary (time and place)
  - (2) Countries’ participation varies
  - (3) Inconsistent reporting in overlapping surveys
Research Question

- What is the impact of violence in Latin America on first migration to the U.S.?
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- What is the impact of violence in Latin America on first migration to the U.S.?
  - Household heads
Research Question

- What is the impact of violence in Latin America on first migration to the U.S.?
  - Household heads
  - Males only
    - First migration overwhelmingly male
Data

- Mexican Migration Project (MMP)
Data

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- Latin American Migration Project (LAMP)
Data

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- National-level homicide data
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Mexican Migration Project (MMP)

- Ethno-survey of social, demographic, and economic characteristics of household heads in 118 representative communities throughout Mexico
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- Retrospective year-by-year life histories of household heads’ migration experiences
Data

- Mexican Migration Project (MMP)
- Latin American Migration Project (LAMP)
- National-level homicide data
Latin American Migration Project (LAMP)

- Similar sampling frame as MMP
Latin American Migration Project (LAMP)

- Similar sampling frame as MMP
- Incorporates: Guatemala, Nicaragua, and Costa Rica ... among other countries in Caribbean, Central, and South America
  - Costa Rica - 7 communities
  - Guatemala - 11 communities
  - Nicaragua - 9 communities
Data

- Mexican Migration Project (MMP)
- Latin American Migration Project (LAMP)
- National-level homicide data
Homicide data

- Canvassed all possible data sources to compile year-by-year national level data on homicide rates
  - United Nations
    - Office of Drugs and Crime, Crime Trends Survey
  - World Health Organization
  - Pan American Health Organization (WHO affiliate)
  - INTERPOL
  - National Police
  - Demographic diversity and change in the Central American isthmus, Pebley & Rosero-Bixby (1997)
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Outcome

- First migration to U.S.
Outcome

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- Lagged so as to capture previous year’s characteristics’ impact on migrating to U.S.
Outcome

- First migration to U.S.
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- 1979 – 2003
  - Reliable homicide data halts at 2003
Methodology

- Discrete time survival analysis
Methodology

- Discrete time survival analysis
- Homicide series modifications
Methodology – homicide

- (1):
  - Linear interpolation to fill in gaps for homicide
    - Few holes for Guatemala and Nicaragua
Methodology – homicide

○ (1):
  ● Linear interpolation to fill in gaps for homicide
    ○ Few holes for Guatemala and Nicaragua

○ (2):
  ● Smoothed 3-year moving averages
Methodology – homicide

○ (1):
  - Linear interpolation to fill in gaps for homicide
    - Few holes for Guatemala and Nicaragua

○ (2):
  - Smoothed 3-year moving averages

○ (3):
  - Divided by maximum value for each country
    - Placed countries on same scale, 0 – 1.0
# Descriptive Stats

<table>
<thead>
<tr>
<th></th>
<th>Migration</th>
<th>Homicide</th>
<th>Smoothed Homicide</th>
<th>Fractional Homicide</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td><strong>Pooled Sample</strong></td>
<td>.0025</td>
<td>.05</td>
<td>33.75</td>
<td>15.14</td>
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<tr>
<td><strong>Mexico</strong></td>
<td>.0025</td>
<td>.05</td>
<td>34.14</td>
<td>4.21</td>
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<tr>
<td><strong>Costa Rica</strong></td>
<td>.001</td>
<td>.03</td>
<td>10.04</td>
<td>1.43</td>
</tr>
<tr>
<td><strong>Guatemala</strong></td>
<td>.001</td>
<td>.04</td>
<td>54.48</td>
<td>45.09</td>
</tr>
<tr>
<td><strong>Nicaragua</strong></td>
<td>.0008</td>
<td>.03</td>
<td>44.05</td>
<td>22.81</td>
</tr>
</tbody>
</table>
Results

- Pooled sample
Results

- Pooled sample
- Country specific samples
Results

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## Results – pooled sample

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<th>Fractional Homicide</th>
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<tr>
<td>Violence Indicator</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>S.H. rate</td>
<td>-0.012†</td>
<td>-0.802*</td>
</tr>
<tr>
<td>Fractional Hom. Rate</td>
<td>~</td>
<td>~</td>
</tr>
</tbody>
</table>

### Controls:
- Age, Age², Minors in household, own farmland, own real estate, own business, years of schooling, spouse’s schooling, family in U.S., unskilled manual worker, skilled manual worker, unemployed, spouse employment status, GDP relative to U.S., U.S. Contra involvement, Costa Rica, Guatemala, Nicaragua

† p<.10, *p<.05, **p<.01, ***p<.001
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<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>S.H. rate*Costa Rica</td>
<td>-.0325</td>
</tr>
<tr>
<td>S.H. rate*Guatemala</td>
<td>.0125</td>
</tr>
<tr>
<td>S.H. rate*Nicaragua</td>
<td>.0169</td>
</tr>
</tbody>
</table>

**Controls:** Age, Age\(^2\), Minors in household, own farmland, own real estate, own business, years of schooling, spouse’s schooling, family in U.S., unskilled manual worker, skilled manual worker, unemployed, spouse employment status, GDP relative to U.S., U.S. Contra involvement, Costa Rica, Guatemala, Nicaragua

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<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>F.H. rate*Costa Rica</td>
<td>.2557</td>
</tr>
<tr>
<td>F.H. rate*Guatemala</td>
<td>-.6623</td>
</tr>
<tr>
<td>F.H. rate*Nicaragua</td>
<td>.3632</td>
</tr>
</tbody>
</table>

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# Results – Mexico and Costa Rica

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<tr>
<th>Violence Indicator</th>
<th>Mexico</th>
<th>Costa Rica</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>S.E.</td>
<td>B, S.E.</td>
</tr>
<tr>
<td>Fractional Hom. Rate</td>
<td>-1.091 †</td>
<td>.599</td>
</tr>
</tbody>
</table>

**Controls:** Age, Age², Minors in household, own farmland, own real estate, own business, years of schooling, spouse’s schooling, family in U.S., unskilled manual worker, skilled manual worker, unemployed, spouse employment status, GDP relative to U.S.

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## Results – Guatemala and Nicaragua

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<th>Guatemala</th>
<th></th>
<th>Nicaragua</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Violence Indicator</td>
<td>B</td>
<td>S.E.</td>
<td>B</td>
<td>S.E.</td>
</tr>
<tr>
<td>Fractional Hom. Rate</td>
<td>-1.145</td>
<td>.847</td>
<td>4.238**</td>
<td>1.419</td>
</tr>
<tr>
<td>U.S. Contra Involvement</td>
<td>~~~</td>
<td>~~~</td>
<td>.008***</td>
<td>.001</td>
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Predicted Probabilities of Migration to U.S. by Fractional Homicide Rate
Predicted Probabilities of Migration to U.S. by Fractional Homicide Rate

![Graph showing predicted probabilities of migration to U.S. by fractional homicide rate for Costa Rica and Nicaragua. The x-axis represents the fractional homicide level, ranging from 0 to 1, and the y-axis represents the predicted probability, ranging from 0.000 to 0.007. The graph includes data points for both countries, with lines indicating the trend for each.](image)
Discussion

- Nicaraguan U.S. out-migration may be mediated by refugee status
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- Costa Rican out-migration may be to someplace else
Discussion

- Nicaraguan U.S. out-migration may be mediated by refugee status
- Costa Rican out-migration may be to someplace else
- Homicide rate per 100K much smaller in Costa Rica than other countries
  - Change in rate may not be big enough to cause migration to U.S.
Limitations & next steps

- Adjust for population structure
  - (e.g. proportion age 15-25)
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- Include El Salvador
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- Multilevel survival analysis