Does Emigration Inhibit Reform? Evidence from the Mexican Agrarian Movement, 1910-1945

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Migration and Reform: Introduction

Does emigration inhibit reform?


Overview

Mexican Land Reform Program:
- Among the largest land reform programs in history: 1916-1980
- Began during a time of high emigration from Mexico

Research Design:
- Subnational data on migration and land reform petitions
- Examine reform before and after the shock of the Great Depression

Findings:
- Large and statistically significant acceleration in reform in high-migration states after the Depression
- Migration as “exit valve,” effect of repatriation
Historical Background

Migration:
- Mass migration to the US begins before 1900
- Major source areas: border and center-west regions
- Accelerates following Mexican Revolution

Land Reform:
- Land reform a central motivation for Revolution
- Official agrarian reform program begins in 1916
- Incomplete implementation: elite manipulation, anti-agrarian violence, reform priorities
- Official plans to end reform in late 1920s
The Great Depression and Cárdenas Rupture

Great Depression:

- Emigration ceases and 350,000+ Mexicans repatriated by 1935
- 80% of repatriates return to their village of origin

Aftermath:

- Upsurge in popular support and agitation for land reform
- Government reverses course and land reform accelerates during the 1930s
Model: Migration Options Reduce Reform

- Citizens choose to work, migrate, or participate in the presence of uncertainty (global games model)

- Model suggests two channels through which migration reduces reform:
  1. Migrants are less likely to participate since they have a profitable outside option.
  2. The availability of exit options lowers everyone’s estimation of participation, making cooperation riskier.
Data Sources

Land Reform:

- Sanderson Land Reform Dataset (1916-1976)
  - Yearly land reform petitions, beneficiaries, and land redistributed by state

Migration:

- State-level migration measures:
  - Money order destinations 1926 (Gamio 1930)
  - Migration 1926-30 (Taylor 1934)

Controls:

- FAO GAEZ potential agricultural productivity
- Mexican census data (1910, 1921, 1930)
  - Population, land area, land tenure
Empirical Strategies

1. Pooled regressions using state and year fixed effects
   (Bhattacharya et al. 2013)

\[ r_{iy} = \alpha + \sum_{t} \beta_t [(emigration_i \times year_{yt})] + \delta_i + \delta_y + \epsilon_{iy} \]

2. Pooled cross-sectional regressions on 1920s petitions
   and 1930s petitions:

\[ r_{it} = \alpha + \beta_1 emig_i + \beta_2 1930s + \beta_3 [emig_i \times 1930s] + x_{it} \gamma + \epsilon_{it} \]
Reform Petitions by Migration Level

Land Reform Petitions by Year, 1915-1945

- Low Migration
- Medium Migration
- High Migration

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### Fixed-Effect Model: Petitions Pre- and Post-1930

<table>
<thead>
<tr>
<th>Dependent Variable:</th>
<th>Petitions</th>
<th>Petitions</th>
<th>Petitions</th>
<th>Petitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migration Measure:</td>
<td>Money Orders</td>
<td>Emigrants</td>
<td>Highest Quartile</td>
<td>Money Orders</td>
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<td>Pre-Depression:</td>
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<td>1927*Migration</td>
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<td>0.05</td>
<td>7.06</td>
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<td>1929*Migration</td>
<td>0.08</td>
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<td>1.53</td>
<td>0.18</td>
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<td>Post-Depression:</td>
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<td></td>
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<tr>
<td>1930*Migration</td>
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<td>-0.17</td>
<td>-1.06</td>
<td>0.27</td>
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<tr>
<td>1931*Migration</td>
<td>0.30</td>
<td>0.19</td>
<td>9.74</td>
<td>0.35</td>
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<tr>
<td>1932*Migration</td>
<td>0.04</td>
<td>0.04</td>
<td>2.77</td>
<td>0.06</td>
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<tr>
<td>1933*Migration</td>
<td>0.12</td>
<td>0.19</td>
<td>4.42</td>
<td>0.32</td>
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<td>1934*Migration</td>
<td>0.35</td>
<td>-0.36</td>
<td>-1.70</td>
<td>0.79</td>
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<tr>
<td>1935*Migration</td>
<td>1.93***</td>
<td>0.99**</td>
<td>25.25**</td>
<td>2.45***</td>
</tr>
<tr>
<td>1936*Migration</td>
<td>4.06***</td>
<td>2.50***</td>
<td>58.35***</td>
<td>5.07***</td>
</tr>
<tr>
<td>1937*Migration</td>
<td>2.84***</td>
<td>2.61***</td>
<td>54.06***</td>
<td>2.85***</td>
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<tr>
<td>1938*Migration</td>
<td>0.86**</td>
<td>0.81*</td>
<td>16.13</td>
<td>0.76</td>
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<tr>
<td>1939*Migration</td>
<td>1.19***</td>
<td>0.85*</td>
<td>14.27</td>
<td>1.13**</td>
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<tr>
<td>1940*Migration</td>
<td>0.82**</td>
<td>1.35***</td>
<td>20.08*</td>
<td>1.19**</td>
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<td>1941*Migration</td>
<td>0.44</td>
<td>0.41</td>
<td>14.13</td>
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<td>1942*Migration</td>
<td>0.38</td>
<td>0.43</td>
<td>6.63</td>
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<td>1943*Migration</td>
<td>0.16</td>
<td>0.10</td>
<td>-0.16</td>
<td>0.18</td>
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</tbody>
</table>

Groups: 31 31 31 29
Observations: 930 930 930 870
State FEs: Yes Yes Yes Yes
Year FEs: Yes Yes Yes Yes
Hacienda Interactions: No No No Yes
Agr. Interactions: No No No Yes

* p<0.1; ** p< 0.05; *** p<0.01
Year Effects on Petitions by Migration Quartile

Year Effects by Migration Intensity

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Pooled Models: 1920s and 1930s Petitions

<table>
<thead>
<tr>
<th>Dependent Variable:</th>
<th>Petitions</th>
<th>Petitions</th>
<th>Beneficiaries</th>
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<tr>
<td>Migration Measure:</td>
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<tr>
<td>Migration</td>
<td>-4.83**</td>
<td>-6.83***</td>
<td>-2.10</td>
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<tr>
<td></td>
<td>(1.53)</td>
<td>(1.96)</td>
<td>(1.78)</td>
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<tr>
<td>Migration*1930s</td>
<td><strong>15.67</strong>*</td>
<td><strong>13.03</strong>*</td>
<td><strong>8.49</strong>*</td>
</tr>
<tr>
<td></td>
<td>(2.60)</td>
<td>(4.49)</td>
<td>(2.22)</td>
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<tr>
<td>1930s</td>
<td>214.31***</td>
<td>224.51***</td>
<td>69.75*</td>
</tr>
<tr>
<td></td>
<td>(56.52)</td>
<td>(59.84)</td>
<td>(42.07)</td>
</tr>
<tr>
<td>Log Density</td>
<td>138.50***</td>
<td>154.02***</td>
<td>108.52***</td>
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<tr>
<td></td>
<td>(37.01)</td>
<td>(35.38)</td>
<td>(25.31)</td>
</tr>
<tr>
<td>Log Area</td>
<td>171.74***</td>
<td>190.89***</td>
<td>129.95***</td>
</tr>
<tr>
<td></td>
<td>(40.58)</td>
<td>(42.95)</td>
<td>(24.74)</td>
</tr>
<tr>
<td>N</td>
<td>62</td>
<td>62</td>
<td>62</td>
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<tr>
<td>$R^2$</td>
<td>0.67</td>
<td>0.64</td>
<td>0.60</td>
</tr>
</tbody>
</table>

* p<0.1; ** p< 0.05; *** p<0.01
Discussion and Conclusion

Does emigration reduce reform?
- Migration as a substitute for reform during the 1920s
- Role of repatriates in Mexican politics after the Depression

Implications for future work:
- Migration reduces reform in short-run, but Mexico does not control the escape valve
- Distributional effects of migration: availability of reform to migrants and non-migrants
- Implications for Great Recession and current repatriation
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