Growth, Inequality and Poverty in post-NAFTA Mexico

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Post-NAFTA Mexico

- Economic Growth

- Distribution of Household Income

- Incidence of Poverty
Figure 2.1 – Mexico’s degree of Openness

Degree of Openness

GATT | NAFTA NEG | NAFTA

(HE/GDP) vs. Tariff %

Openness - Tariff (Import weighted)
Since NAFTA came into effect...

- Macroeconomic stability: +
  - Controlling inflation
  - Ability to withstand external shocks
    - Except for 1995 peso crisis
- Economic growth: -
  - GDP growth has been lackluster
  - Productivity has not increased beyond the sectors integrated with the global economy
  - No signs of convergence with US; but correlation with US business-cycle rose
- Poverty and inequality reduction: +
  - Poverty has fallen
  - Income inequality has fallen
  - Regional disparities exacerbated (migration flows (internal)?)
NAFTA was expected to contribute to Mexican growth through its impact on:

- A more efficient allocation of resources
- Access to state-of-the-art technology
- Economies of scale (access to largest market)
- Competitiveness enhanced
- Boon to private investment
- Credibility of gov. policies enhanced
Export growth (average annual rate in percentage) and Share of international trade in GDP (percent)

<table>
<thead>
<tr>
<th></th>
<th>Before NAFTA</th>
<th>After NAFTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export Growth</td>
<td>5.8</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>1982-1984</td>
<td>2001-2005</td>
</tr>
<tr>
<td>Export Share</td>
<td>27.0</td>
<td>58.2</td>
</tr>
</tbody>
</table>

(Moreno Bid and Ros, 2009)
Results have been disappointing in terms of growth, however

- **GDP growth per year:**
  - 1960-79: 6.5%
  - 1980-2003: 2.6%
  - 1996-2003: 3.5%
Mexico: Real Income Per Capita, 1950-2006
(in logs of constant dollars)
Total Factor Productivity

- Declined at a rate of 0.5% a year between 1980-2003, when GDP grew at 2.6 per year
- Since NAFTA, TFP growth improved, but little:
  - Grew at 0.7% between 1996 and 2003
  - Contribution to overall growth 20%
Mexico: Growth Accounting 1950-2006

Source: García-Verdú (2007)
US and Mexico: correlation of business-cycles, manufacturing sector (Feliz, 2009)
Convergence

- No evidence of convergence with US

- Differences in productivity between US and Mexico explain more than 80% of divergence in income per capita

(Easterly, Fiess and Lederman, 2003)
Real GDP per capita in relation to leading regional economy

Inequality and Poverty in post-NAFTA Mexico

- Between 1998 and 2006 household income inequality fell, reversing a previous trend. Gini coefficient dropped by 4.5-5 percentage points, a significant decline.

- Between 1994 and 2006, “food” or extreme poverty fell. The headcount ratio declined from 21.2% to 13.8%.
Inequality in Mexico

Panel A. Inequality in Latin America

Panel B. Latin America in the global context
## Latin America: Changes in Inequality mid-1990s-mid-2000s (Cruces et al., 2009) Note: Gini Coefficients

<table>
<thead>
<tr>
<th>Países</th>
<th>Mediados 1990</th>
<th>Inicio 2000</th>
<th>Mediados 2000</th>
<th>Med. ´90 - Inicio ´00</th>
<th>Inicio ´00 - Med. ´00</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Variación (1)</td>
<td>Cambio % (2)</td>
</tr>
<tr>
<td>Argentina</td>
<td>47.7</td>
<td>50.0</td>
<td>47.1</td>
<td>2.3</td>
<td>4.8</td>
</tr>
<tr>
<td>Bolivia</td>
<td>58.0</td>
<td>61.6</td>
<td>58.1</td>
<td>3.7</td>
<td>6.3</td>
</tr>
<tr>
<td>Brasil</td>
<td>59.0</td>
<td>58.5</td>
<td>55.6</td>
<td>-0.4</td>
<td>-0.8</td>
</tr>
<tr>
<td>Chile</td>
<td>55.5</td>
<td>55.9</td>
<td>52.4</td>
<td>0.4</td>
<td>0.6</td>
</tr>
<tr>
<td>México</td>
<td>54.3</td>
<td>52.9</td>
<td>49.8</td>
<td>-1.4</td>
<td>-2.6</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>55.9</td>
<td>49.5</td>
<td>52.2</td>
<td>-6.4</td>
<td>-11.4</td>
</tr>
<tr>
<td>Rep. Dom</td>
<td>47.2</td>
<td>52.3</td>
<td>52.7</td>
<td>5.0</td>
<td>10.7</td>
</tr>
<tr>
<td>Venezuela</td>
<td>46.5</td>
<td>44.1</td>
<td>45.2</td>
<td>-2.4</td>
<td>-5.2</td>
</tr>
</tbody>
</table>
Changes in poverty in Latin America (Paes de Barros et al., 2009)

Figure 3.2: Annual variation in extreme poverty - Latin American countries

Note: 1. For most countries the information refers to the period 1997-2002.
What explains the reduction in household income inequality?

- **Equalizing Factors:**
  - Labor income per worker
  - Remittances
  - Government transfers (excluding pensions)

- **Unequalizing Factors:**
  - Income from property
  - Income from own-businesses
  - Pensions
Mexico: Income Inequality Sources

Marginal Effect on Gini Coefficient by Income Source

- Labor Income
- Own Businesses
- Property Rents
- Pensions
- Transfers
- Remittances

Colors:
- Red: 1994
- Blue: 2000
- Yellow: 2006
What explains the reduction in household income inequality?

- Decomposition exercises reveal that the contribution of the reduction in labor income inequality explains more than 70 percent of the reduction of overall inequality.

- In turn, the latter is accounted for a reduction in the inequality of average remuneration per worker (i.e., wages) and, to a much lesser extent, to a “better” distribution of employment (i.e., the ratio of employed adults rose relatively more at the bottom of the distribution).
Conclusion:

- The significant reduction in household income inequality can be attributed to a reduction in wage inequality in the post-NAFTA period. This is observed using other measures of wage inequality as well (see next graph).
- This result together with the evolution of average productivity means that a lot of the job creation occurred at the bottom of the distribution, in low-productivity low-wage employment but that the “low-wages” increased => “pro-poor or grassroots growth”
Skilled/Unskilled Wage Ratio
(Esquivel, 2009)
Mexico: Growth Incidence Curve, 1994-2006 (Esquivel, 2009)
Caveat

- Household surveys are not accurate when it comes to measure incomes from capital at the very top
- => underestimation of concentration of income at the top (Carlos Slim’s income is not counted)
- => if top incomes from capital were included, the growth incidence curve might have risen sharply in the extreme right
What explains the inverted-U pattern followed by the skilled-unskilled wage gap?

- From standard trade theory, analysts expected that trade liberalization in mid-1980s would have resulted in higher demand/higher wages for unskilled workers

- As we saw, the results were the opposite

- Why?
Was the rise in wage inequality caused by the mid-1980s trade liberalization (before NAFTA)?

Two views:

1. Factors affecting wages at the top: relative demand/wages for skilled workers increased because of

   - Larger presence of foreign investment (Feenstra and Hanson, 1997);
   - skill-biased technical change (Cragg and Eppelbaum, 1996; Esquivel and Rodriguez-Lopez, 2003);
   - quality-upgrading induced by exports (Verhoogen, 2008)
Was the rise in wage inequality caused by the mid-1980s trade liberalization (before NAFTA)?

- Two views:
  - 2. Factors affecting wages at the bottom:
    - mid-1980s reductions in tariffs disproportionately affected unskilled intensive industries (Hanson and Harrison, 1999)
  - Reductions in the minimum wage (Farris, Popli and Zepeda, 2008)
Was the fall in wage inequality in post mid-90s caused by NAFTA? (Esquivel, 2009)

- No: relative supply of skilled and unskilled workers (Campos, 2008)
- Yes: workers in US and Mexico have become complements rather than substitutes (“maquiladoras”) (Robertson, 2007). Also,
- Delayed effect of mid-1980s trade lib. (Canonero and Werner, 2002)
Was the fall in wage inequality caused by NAFTA? (Esquivel, 2009)

- There clearly has been a change in the composition of the workforce by education levels:
  - The share of less-skilled workers (those with less than secondary education) went from 55% in 1989 to 32% in 2006
  - The share of skilled workers rose (not nearly as dramatically)
Was the fall in wage inequality caused by NAFTA? (Esquivel, 2009)

- Changes in the distribution of the stock of education coupled with demand for labor by skill patterns, both may explain the reduction in wage inequality.

- Relative weight of each, remains to be answered, but next graph shows how wages rose (fell) for workers whose share declined (increased) suggesting supply-side of the story may be the most important.
Mexico: Change in Share of Total Workers by Education and Experience vs Change in Log Wage by Gender, 1996-2006
THANK YOU