Keynote Address
Why did Inequality Decline in Latin America?
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REDI 3X3 Workshop
Understanding Inequality in South Africa
Pretoria, South Africa, November 4, 2014
To cite material in this ppt please refer to:

• The facts
• Inequality, poverty reduction and the middle class
• Why has inequality declined?
  – Labor markets
• Zooming in: Brazil
• Zooming in: Mexico
• Transfers and Inequality decline
THE FACTS
Inequality in Latin America is high... ...but has been declining since around 2000

• Decline is pervasive and significant
• Larger than the rise in inequality in 1990s
• Important contribution to the decline in poverty
• Contributed to the rise of the middle-class
LATAM IS THE MOST UNEQUAL REGION IN THE WORLD

Gini Coefficient by Region (in %), 2004

Ferreira and Ravallion, 2008.
Declining Inequality in 2000’s

• The Gini coefficient for *household per capita income* fell from a weighted (unweighted) average of 0.550 (0.532) in the early 2000s to 0.496 (0.483) circa 2012.

• On average, the decline equaled .86%/year

• The decline occurred in 16 of the 18 countries.

• The rate of decline ranged from an annual average of -2.64 percent in Nicaragua to -0.28 percent in Venezuela.
Panel A: Weighted averages of the Gini coefficient; 18 countries
Panel B: Weighted averages of the Gini coefficient, excluding Mexico

HH per capita income

HH equivalized income
The decline of income inequality in the 2000s has been higher that the rise in the 1990s (Change in Gini points in %)
Inequality, Poverty and the Middle-Class
Decline in Poverty 1992-2012
(Ave. Headcount Ratio in %)

In 1992, the incidence of poverty, US$2.50 a day poverty line was 27.8% and the US$4 a day poverty line was 44.4%. In 2000, the incidence of poverty for both lines decreased to 25.0% and 42.0% respectively. By 2012, the incidence of poverty further declined to 12.3% and 25.3% respectively.

- Incidence of poverty, US$2.50 a day poverty line
- Incidence of poverty, US$ 4 a day poverty line
On average, 39 percent of the reduction in poverty was due to the decline in inequality c. 2001-2010.
Declining inequality has contributed to the expansion of the “middle-class”

Ferreira et al., 2012.
On average, 21 percent of the reduction in poverty was due to the decline in inequality c. 2001-2010.
WHY?
Inequality in Latin America is high…
…but has been declining since around 2000

- In countries with high growth & low growth
- In countries with left and nonleft governments
- In commodity exporters and commodity importers
- In high and low (for Latam standards) inequality countries
Determinants of the decline in inequality: candidates

• Declining inequality of hourly labor income
• Larger and more progressive transfers
• Lower dependency ratios
• Higher participation rates of adults
Proximate Determinants

Depending on the method (Yitzaki and Barros et al., respectively)

- On average 62 or 54 percent of the reduction in the Gini coefficient can be attributed to changes in hourly labor income,

- Changes in government transfers contributed, 17 or 21 percent on average

- Changes in pensions contributed 2 or 9 percent (includes noncontributory pensions)
Proximate Determinants

• Changes in demographic indicators, the equalizing effect of the share of adults accounted, on average, for 11 percent of the decline in inequality.

• Remarkably, the increase in the share of occupied adults in the household was unequalizing: its contribution in the inequality-increasing direction was 4 percent
  — => Increase in labor force participation of women (the “yuppie couple” effect?)
Decomposing Decline in Inequality
Labor (red); Transfers (Green); Demog (Blue) (Azevedo et al. 2012)
What explains the reduction in (hourly) labor income inequality? There are several not mutually exclusive candidates:

- human capital (years of schooling and experience)
- labor market institutions (minimum wages, unionization, informality)
- demographic composition of the labor force (age, gender, race)
- spatial segmentation (rural-urban, regional)
Standard labor economics separate out what can be attributed to:

- **composition or endowment effect**
  - changes in the distribution of the observable characteristics of workers (e.g., age, years of schooling, race, gender, working in formal or informal markets, earnings above/below minimum wages, and geographic location)

- **pay structure or returns effect**
  - changes in returns to those characteristics
• Estimates of the size of the endowment and pay structure effects for each factor help identify the orders of magnitude of the ‘proximate’ determinants of observed changes in labor income inequality

• The search for the ‘fundamental’ causes requires to assess the role of demand, supply and other factors (e.g., changes in the quality of education) in explaining the changes in returns to human capital

• One may want to push the causal inference process further by, for example, linking the changes to structural changes in the composition of output (led by, for example, a boom in international commodity prices) and changes in education policy
• Existing studies do not cover the entire range of potential candidates in each case
• However, available evidence suggests that a fall in the returns to human capital—in particular, in the returns to education—is a common factor to explain the decline in hourly labor income inequality
• In the majority of the sixteen countries where overall inequality declined, the return to primary, secondary and tertiary education versus no schooling or incomplete primary schooling declined.
• It should be noted that the endowment effect associated with changes in the distribution in education have tended to be unequalizing in spite of the fact that the distribution of educational attainment has become more equal.

• This means that, had the pay structure by education level remained unchanged, the more equal distribution of the education endowment would have resulted in an increase in labor income inequality.

• Because this sounds counter-intuitive, this finding is known as the “paradox of progress.” (Bourguignon et al. (2005))
Decline in returns to post-secondary education (aka. skill premium)

• Supply
• Demand
• Labor Market Institutions
• Declining “quality” in workers with tertiary degree
Table 2: Changes in the wage premium and the relative supply and demand for skilled/unskilled workers (Gasparini et al., 2011)

*Annual percent change*

<table>
<thead>
<tr>
<th></th>
<th>Wage premium</th>
<th>Relative supply</th>
<th>Relative demand (σ=2)</th>
<th>Relative demand (σ=3)</th>
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<td>-2.4</td>
<td>4.6</td>
<td>2.4</td>
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<tr>
<td>Bolivia</td>
<td>7.9</td>
<td>-4.6</td>
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<td>5.1</td>
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<td>Brazil</td>
<td>-0.4</td>
<td>-3.2</td>
<td>1.6</td>
<td>4.4</td>
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<td>Chile</td>
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<td>-1.9</td>
<td>3.1</td>
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<tr>
<td>Colombia</td>
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<td>6.4</td>
<td>6.0</td>
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<tr>
<td>Costa Rica</td>
<td>0.4</td>
<td>-0.2</td>
<td>4.0</td>
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<td>Ecuador</td>
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<td>-3.0</td>
<td>3.4</td>
<td>-3.0</td>
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<tr>
<td>El Salvador</td>
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<td>-0.1</td>
<td>5.5</td>
<td>-0.3</td>
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<tr>
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<td>2.6</td>
<td>2.3</td>
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<tr>
<td>Mexico</td>
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<td>-2.8</td>
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<td>Nicaragua</td>
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<td>-6.9</td>
<td>4.6</td>
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<td>2.4</td>
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<td>Paraguay</td>
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<td>5.3</td>
<td>6.1</td>
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<tr>
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<td>Mean</td>
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<td><strong>3.4</strong></td>
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</tr>
</tbody>
</table>
Zooming in

Brazil
Brazil: Decline in Inequality (Gini)

Fig. 1: Evolution of Household Per Capita Income Gini

Wang, Yang. 2013. “Decomposing the Changes in Male Wage Distribution in Brazil.” Tulane University, Ph.D. field paper
Figure 2: Household incomes and labour earnings in Brazil, 1995-2012: inequality.

Source: Ferreira et al. (2014)
Brazil: Decline in Wage Inequality

Table 1: Dispersion of Real Wages: 2002-2011, Male aged 16-65

<table>
<thead>
<tr>
<th></th>
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<td>Mean</td>
<td>4.63</td>
<td>4.38</td>
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<td>Median</td>
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<td>2.41</td>
<td>2.42</td>
<td>2.39</td>
<td>2.55</td>
<td>2.66</td>
<td>2.79</td>
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<td>0.51</td>
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<td>0.49</td>
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<td>90-10</td>
<td>7.79</td>
<td>7.27</td>
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<td>50-10</td>
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<td>2.01</td>
<td>2.00</td>
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<td>1.85</td>
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<td>90-50</td>
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<td>3.53</td>
<td>3.60</td>
<td>3.60</td>
<td>3.33</td>
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<td>3.30</td>
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<td>49734</td>
<td>51479</td>
<td>51519</td>
<td>53825</td>
<td>55138</td>
<td>49419</td>
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</tbody>
</table>

Wang, Yang. 2013. “Decomposing the Changes in Male Wage Distribution in Brazil.” Tulane University, Ph.D. field paper
Figure 1: Household incomes and labour earnings in Brazil, 1995-2012: levels.

Source: Ferreira et al. (2014)
Brazil: Expansion of Education

Source: Ferreira et al. (2014)
Brazil: Rising minimum wage

Figure 5: Minimum wages and the evolution of earnings: 1995-2012.

Source: Ferreira et al. (2014)
Brazil: Formalization

Figure 7: Formalization and the minimum wage, 1995-2012.

Source: Ferreira et al. (2014)
Brazil: Race and Gender

Figure 8: Demographic changes in the working-age population, 1995-2012.

Source: Ferreira et al. (2014)
Brazil: decomposing just for human capital

• Decomposition of change in wage inequality:
  • Pay Structure Effect: Change in Relative Wages => Equalizing
  • Endowment Effect: Change in Composition for Education and Experience => Slightly Unequalizing ("paradox of progress")
Brazil (2002-2011):

- Relative Wages => Equalizing
- Composition Education & Experience => Slightly Unequalizing

Wang, Yang. 2013. “Decomposing the Changes in Male Wage Distribution in Brazil.” Tulane University, Ph.D. field paper
Brazil: Decomposing: human capital, gender/race, urban/rural, minimum wage, informality

Source: Ferreira et al. (2014)
Zooming in: Brazil

• Relative Wages effect:
  • Increase in relative supply of skilled workers (educational expansion)
  • Increase in relative demand of low-skilled workers (agricultural commodity boom)
  • Rising minimum wages
  • Declining absolute real wages for workers with tertiary => degraded tertiary or skills obsolescence?
Brazil: Decline in relative returns to education

Fig. 8: Relative Return to Education

Wang, Yang. 2013. “Decomposing the Changes in Male Wage Distribution in Brazil.” Tulane University, Ph.D. field paper
Brazil: Decline in skill premium coincides with the expansion of the relative supply of workers with post secondary education.
Brazil: Decline in real wages for workers with tertiary education

Fig. 6: Average Hourly Wage of Tertiary Group: 2002-2011 Male

Wang, Yang. 2013. “Decomposing the Changes in Male Wage Distribution in Brazil.” Tulane University, Ph.D. field paper
Zooming in
Mexico
Mexico: Decline in Inequality (Gini)

Figure 1

Mexico: Wages by Education Level
Difference in Log Hourly Wage. Base Period 2008:1

Campos, Lopez-Calva and Lustig “Declining wages for college-educated workers in Mexico: disentangling the age, cohort and education effects,” to be presented at Latin American Inequality in the Long-run, Buenos Aires, December 5, 2014
Zooming in: Mexico

- Decomposition of change in wage inequality:
  - Pay Structure Effect: Change in Relative Wages $\Rightarrow$ Equalizing
  - Endowment Effect: Change in Composition for Education and Experience $\Rightarrow$ Slightly Unequalizing ("paradox of progress")
Mexico (1996-2010):

- Relative Wages => Equalizing
- Composition Education & Experience => Slightly Unequalizing

Zooming in: Mexico

Change in Returns

- Minimum wages and unionization no effect
- Increase in relative supply of skilled workers
- Degraded tertiary?
- Skills obsolescence?

Campos, Lopez-Calva and Lustig (in progress)
In contrast to Brazil, in Mexico minimum wages did not increase at all...

Real Minimum Wage and Unionization: 1988-2010

A. Real Minimum Wage Index (December 2010=100)

B. Unionization Rate

Mexico: Decline in skill premium coincides with the expansion of the relative supply of workers with post secondary education.
Mexico: Average Monthly Earnings for College-Educated Workers

Campos, Lopez-Calva and Lustig “Declining wages for college-educated workers in Mexico: disentangling the age, cohort and education effects,” to be presented at Latin American Inequality in the Long-run, Buenos Aires, December 5, 2014
Mexico: Employment Structure of College-Educated Workers

Figure 10: Change in Relative Employment by age group. Restricted to workers with college. 

1. Age 23-44  
2. Age 45-65

Campos, Lopez-Calva and Lustig “Declining wages for college-educated workers in Mexico: disentangling the age, cohort and education effects,” to be presented at *Latin American Inequality in the Long-run*, Buenos Aires, December 5, 2014
Campos, Lopez-Calva and Lustig “Declining wages for college-educated workers in Mexico: disentangling the age, cohort and education effects,” to be presented at *Latin American Inequality in the Long-run*, Buenos Aires, December 5, 2014
Transfers and Declining Inequality
How redistributive are Latin American governments?

- Decomposition of changes in inequality by income source show that transfers is, on average, the second most important proximate determinant of decline in overall inequality – 17 or 21 percent on average

www.commitmenttoequity.org
Argentina: Rising role of transfers

Argentina-Reduction in Inequality: Market (blue) vs. Redistribution (red)

Lustig, N. and C. Pessino. 2014.
Argentine-Reduction in Poverty: Market (blue) vs. Redistribution (red)

2003-06:
- Market: 110%
- Redistribution: -10%

2006-09:
- Market: 12%
- Redistribution: 88%

Lustig, N. and C. Pessino. 2014.
### Mexico: Rising role of transfers

Mexico: The impact of cash transfers on inequality and poverty, 1996, 2000 and 2010

<table>
<thead>
<tr>
<th></th>
<th>Net market income</th>
<th>Disposable income</th>
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<tbody>
<tr>
<td><strong>1996</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gini</td>
<td>0.522</td>
<td>0.520</td>
</tr>
<tr>
<td>% change with respect to net market income</td>
<td>—</td>
<td>-0.4%</td>
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<tr>
<td>Headcount index ($2.5 PPP)</td>
<td>30.2%</td>
<td>29.9%</td>
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<tr>
<td>% change wrt net market income</td>
<td>—</td>
<td>-1.0%</td>
</tr>
<tr>
<td><strong>2000</strong></td>
<td></td>
<td></td>
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<tr>
<td>Gini</td>
<td>0.544</td>
<td>0.539</td>
</tr>
<tr>
<td>% change wrt net market income</td>
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<td>-0.9%</td>
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<tr>
<td>Headcount index ($2.5 PPP)</td>
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<td>21.6%</td>
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<tr>
<td>% change with respect to net market income</td>
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<td>-2.3%</td>
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<tr>
<td><strong>2010</strong></td>
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<td></td>
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<tr>
<td>Gini</td>
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<td>0.495</td>
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<td>% change wrt net market income</td>
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<td>-1.7%</td>
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<td>11%</td>
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<td>% change with respect to net market income</td>
<td>—</td>
<td>20.1%</td>
</tr>
</tbody>
</table>

Thank you!
References


- Campos, Lopez-Calva and Lustig “Declining wages for college-educated workers in Mexico: disentangling the age, cohort and education effects,” to be presented at Latin American Inequality in the Long-run, Buenos Aires, December 5, 2014


- Lopez-Calva, L.F., N. Lustig, E. Ortiz-Juarez. 2014. “Inequality, Mobility and Middle Classes in Latin America.”
