Fiscal Policy, Inequality and Poverty: Methodological Innovations & New Results

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CEQ Assessment: Tools

• CEQ Handbook


  o CEQ Methodology, Implementation and Applications
  o CEQ Master Workbook: Excel spreadsheet to present background information, assumptions and results
  o CEQ Checking Protocol
  o CEQ Stata Package
CEQ Assessment: Fiscal Incidence Analysis

\[ Y_h = I_h - \sum_i T_i S_{ih} + \sum_j B_j S_{jh} \]

- Income after taxes and transfers
- Taxes
- Transfers

Income before taxes and transfers
Share of tax \( i \) paid by unit \( h \)
Share of transfer \( j \) received by unit \( h \)
What do CEQ Assessments do Differently?

• Measure the impact on inequality AND poverty

• Measure the contribution of each fiscal intervention using the marginal contribution (rather than sequentially)

• Estimate the impact of fiscal policy with two scenarios for pensions: deferred income and pure government transfer

• Uses effectiveness indicators that can rank fiscal interventions properly
MARKET INCOME

PLUS DIRECT TRANSFERS MINUS DIRECT TAXES

DISPOSABLE INCOME

PLUS INDIRECT SUBSIDIES MINUS INDIRECT TAXES

CONSUMABLE INCOME

PLUS MONETIZED VALUE OF PUBLIC SERVICES: EDUCATION & HEALTH

FINAL INCOME

Source: Lustig (2018)
http://www.commitmenttoequity.org/
Change in Inequality (Gini)
(Change in %: market income plus pensions and market income to final income, circa 2010)

(rank by redistributive effect (left hand scale); Gini coefficients right hand scale)

Source: Lustig (2018)
Change in Poverty (Headcount Ratio)
Poverty line 1.25 dollars 2005 PPP/day; in % and for the scenario of contributory pensions as deferred income

(ranked by poverty reduction in %; poverty line 1.25 dollars 2005PPP/day)

Source: Lustig (2018)
Fiscal Impoverishment

New indicator to assess nonanonymous impact on the purchasing power of the poor:

- Fiscal systems can show a reduction in poverty with traditional anonymous indicators and yet a substantial share of the poor could have been impoverished by the combined effect of taxes and transfers [surprised?]
- Higgins and Lustig (2016) develop a new indicator to measure *Fiscal Impoverishment* (and *Fiscal Gains to the Poor*)

Source: Higgins and Lustig (2016)
Fiscal Impoverishment and Fiscal Gains to the Poor

Source: Higgins and Lustig (2016)
<table>
<thead>
<tr>
<th>Country (survey year)</th>
<th>Market income plus pensions Poverty headcount (%)</th>
<th>Change in poverty headcount (p.p.)</th>
<th>Market income plus pensions inequality ( Gini)</th>
<th>Reynolds-Smolensky Change in inequality (▲Gini)</th>
<th>Fiscally impoverished as % of population</th>
<th>Fiscally Impoverished as % of consumable income poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armenia (2011)</td>
<td>21.4</td>
<td>-9.6</td>
<td>47.4</td>
<td>12.9</td>
<td>-9.3</td>
<td>6.2</td>
</tr>
<tr>
<td>Bolivia (2009)</td>
<td>10.9</td>
<td>-0.5</td>
<td>50.3</td>
<td>0.6</td>
<td>-0.3</td>
<td>6.6</td>
</tr>
<tr>
<td>Dominican Republic (2013)</td>
<td>6.8</td>
<td>-0.9</td>
<td>50.2</td>
<td>2.2</td>
<td>-2.2</td>
<td>1.0</td>
</tr>
<tr>
<td>El Salvador (2011)</td>
<td>4.3</td>
<td>-0.7</td>
<td>44.0</td>
<td>2.2</td>
<td>-2.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Ethiopia (2011)</td>
<td>31.9</td>
<td>2.3</td>
<td>32.2</td>
<td>2.3</td>
<td>-2.0</td>
<td>28.5</td>
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<tr>
<td>Ghana (2013)</td>
<td>6.0</td>
<td>0.7</td>
<td>43.7</td>
<td>1.6</td>
<td>-1.4</td>
<td>5.1</td>
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<tr>
<td>Guatemala (2010)</td>
<td>12.0</td>
<td>-0.8</td>
<td>49.0</td>
<td>1.4</td>
<td>-1.2</td>
<td>7.0</td>
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<tr>
<td>Indonesia (2012)</td>
<td>12.0</td>
<td>-1.5</td>
<td>39.8</td>
<td>1.1</td>
<td>-0.8</td>
<td>4.1</td>
</tr>
<tr>
<td>Sri Lanka (2010)</td>
<td>5.0</td>
<td>-0.7</td>
<td>37.1</td>
<td>1.3</td>
<td>-1.1</td>
<td>1.6</td>
</tr>
<tr>
<td>Tanzania (2011)</td>
<td>43.7</td>
<td>7.9</td>
<td>38.2</td>
<td>4.1</td>
<td>-3.8</td>
<td>50.9</td>
</tr>
</tbody>
</table>

Source: Higgins and Lustig (2016)
What do CEQ Assessments do Differently?

Two scenarios for contributory pensions:

• Deferred income in actuarially fair systems: pensions included in *pre-fiscal income* and contributions treated as mandatory savings

• Government transfer: pensions included among direct transfers and contributions treated as a direct tax
Change in Gini under the Two Scenarios for Pensions
(market income plus pensions and market income to disposable income, circa 2010)

(ranked by redistributive effect (left hand scale); Gini coefficients right hand scale)

Source: Lustig (2018)
More Unequal, More Social Spending/GDP

Source: Lustig (2018)
More Unequal, More Redistribution

Redistributive effect = Gini market income plus pensions less Gini final income (ppts)

\[ y = 0.2754x^{***} - 0.0635^* \]

(3.79)  (-1.82)

\[ R^2 = 0.3391 \]

Source: Lustig (2018)
In sum...

• In **no** country, inequality increases as a result of taxes, subsidies and social spending
  ➢ Fiscal policy is always equalizing

• However, fiscal policy **can lower** the purchasing power of the poor

• Assumptions about contributory pensions can make a significant difference on the size of redistributive impact in countries with large social security systems and a high proportion of retirees
  ➢ Pensions, however, can be equalizing or unequalizing

• Cross section: more pre-fiscal inequality, **higher share** of social spending to GDP and a **larger** reduction in inequality
  ➢ No ”Robin Hood Paradox:” different from Lindert’s results from history (Lindert, 2004)
In sum...

• Direct taxes are equalizing
• Direct transfers are always equalizing
• Indirect taxes can be equalizing *(surprised?)*,
• Indirect subsidies are often equalizing *(surprised?)*
• Education spending is generally equalizing
• Health spending is generally equalizing
CEQ Handbook & Data Center

www.commitmenttoequity.org
Thank you!


Teams and References by Country
(the year for which the analysis was conducted in parentheses); C=consumption & I=income)


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Cabrera, Maynor and Hilcias E. Moran. 2015a. “CEQ Master Workbook: Guatemala. Version: May 6, 2015." CEQ Data Center on Fiscal Redistribution (CEQ Institute, Tulane University, Instituto Centroamericano de Estudios Fiscales (ICEFI) and International Fund for Agricultural Development (IFAD))


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Cabrera, Maynor and Hilcias E. Moran. 2015b. “CEQ Master Workbook: Nicaragua. Version: October 14, 2015” CEQ Data Center on Fiscal Redistribution on Fiscal Redistribution (CEQ Institute, Tulane University, Instituto Centroamericano de Estudios Fiscales (Icefi) and International Fund for Agricultural Development (IFAD))

Teams and References by Country
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Jaramillo, Miguel. 2015. CEQ Master Workbook: Peru, August 7. CEQ Institute, Tulane University


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- __________. 2016. “Inequality and Fiscal Redistribution in Middle Income Countries: Brazil, Chile, Colombia, Indonesia, Mexico, Peru and South Africa.” Journal of Globalization and Development 7, no. 1, pp. 17-60. DOI: 10.1515/jgd-2016-0015
