Fiscal Policy, Inequality and the Poor in the Developing World
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Fiscal Policy and Redistribution in an Unequal Society
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www.commitmenttoequity.org
CEQ Teams
(Year of Survey; C=consumption & I=income)(MWB Version)

2. **Armenia (2011; I):** Stephen Younger and Artsvi Khachatryan (May 31, 2014; paper)
5. **Chile (2009, I):** Jaime Ruiz-Tagle and Dante Contreras (Oct. 25, 2014)
6. **Colombia (2010, I):** Marcela Melendez, Nora Lustig and Valentina Martinez (May 2014)
7. **Costa Rica (2010; I):** Pablo Sauma and Juan Diego Trejos (February 2014; paper)
11. **Indonesia (2012; C):** Jon Jellema and Matthew Wai-Poi (Sept. 9, 2014)
15. **South Africa (2010; I):** Ingrid Woolard, Precious Zikhali, Mashekwa Maboshe, Jon Jellema (Aug. 25, 2014)
16. **Sri Lanka (2009/10; C):** Nisha Arunatilake, Gabriela Inchauste and Nora Lustig (April 8, 2014; paper)
Handbook

Commitment to Equity Assessments (CEQ)

- Accounting Approach: no behavioral, no general equilibrium effects and no intertemporal effects
- Point-in-time
- Mainly average incidence; a few cases with marginal incidence
- Comprehensive standard fiscal incidence analysis of current systems
- Harmonized definitions and methodological approaches to facilitate cross-country comparisons
- Uses income/consumption per capita as the welfare indicator
- Tax shifting assumptions are the standard ones
- Allocators vary => full transparency in the method used for each category, tax shifting assumptions, tax evasion
- Secondary sources are used to a minimum
- Handbook (Lustig and Higgins, 2013)
Basic elements of standard fiscal incidence

• Before taxes and transfers income of unit $h$, or $I_h$

• Taxes $T_i$
  – personal income taxes; contributions to social security
  – consumption and production taxes and subsidies

• Transfers $R_i$
  – social spending: cash & near-cash transfers; in-kind transfers (education and health)
  – consumption and production (agriculture) subsidies

• “Allocators” of tax $i$ and transfer $j$ to unit $h$, or $S_{ih}$, $S_{jh}$ (the share of tax $i$ borne or transfer $j$ received by unit $h$) => Incidence

• Post-taxes and transfers income of unit $h$ ($Y_h$)
• Post-taxes and transfers income of unit \( h \) (\( Y_h \)) is:

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

PLUS DIRECT TRANSFERS

GROSS INCOME

MINUS DIRECT TAXES

DISPOSABLE INCOME

MINUS NET INDIRECT TAXES

POST-FISCAL INCOME

PLUS MONETIZED VALUE OF PUBLIC SERVICES: EDUCATION & HEALTH

FINAL INCOME

Construction of Income Concepts
Methods to Construct Income Concepts

• Direct Identification Method

• Imputation Method
  – Direct (Education and Health)
  – Simulation (Direct and Indirect Taxes)

• Inference Method

• Alternate Survey

• Secondary Sources Method
Reconciling the Two Economies: Survey Data vs. Administrative Accts.

- What to do when totals in Survey do not match administrative accounts?

- Should imputed values be scaled-down or the rest of the concepts scaled up?
Contributory Pensions

• Are they a government transfer or deferred consumption and hence part of market income?
  – No consensus
  – Results, especially for poverty, are extremely sensitive

=> Do it both ways
Importance of Comprehensive Analysis

• Obvious reason: to capture the full effect of the net fiscal system

• More subtle reason: partial assessments of progressivity and regressivity can be misleading

  => a regressive tax can be equalizing and re-inforce the equalizing impact of transfers
# Lambert’s Conundrum

<table>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
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<tbody>
<tr>
<td>Original income x</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>100</td>
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<tr>
<td>Tax Liability t(x)</td>
<td>6</td>
<td>9</td>
<td>12</td>
<td>15</td>
<td>42</td>
</tr>
<tr>
<td>Benefit level b(x)</td>
<td>21</td>
<td>14</td>
<td>7</td>
<td>0</td>
<td>42</td>
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<tr>
<td>Post-benefit income</td>
<td>31</td>
<td>34</td>
<td>37</td>
<td>40</td>
<td>142</td>
</tr>
<tr>
<td>Final income</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Lambert, 2001, Table 11.1, P. 278
Lambert’s Conundrum

• The Reynolds-Smolensky (R-S) index for taxes in this example is equal to -0.0517, highlighting their regressivity.

• Yet, the R-S for the net fiscal system is 0.25, higher than the R-S for benefits equal to 0.1972.

• If taxes are regressive vis-à-vis the original income but progressive with respect to the less unequally distributed post-transfers (and subsidies) income,
  => regressive taxes exert an equalizing effect over an above the effect of progressive transfers.

• Two renowned studies found this type of result in the US and the UK.
Results

Redistribution and Inequality Reduction
Redistribution in the rich and developing countries

Sources: EUROMOD for EU, Higgins et al. (2014) for US and for CEQ countries see Lustig (2014) and references at the end. Note: in these calculations contributory pensions are part of market income and NOT treated as a government transfer.
Redistribution in Middle and Low Income Countries: CEQ 16

Change in Gini: Disposable vs. Market (in GINI points)
The impact of direct taxes and transfers on inequality (Gini coefficient): CEQ 16

Changes in Gini: Disposable VS Market Income


- Gini of Disposable Income
- Gini of Market Income
- GNI per capita (2005 PPP)
The impact of net indirect taxes on inequality (Gini coefficient): CEQ 16

Changes in Gini Coefficients

- Gini of Market Income
- Gini of Disposable Income
- Gini of Post-fiscal
- GNI per capita (2005 PPP)
Lindert’s (2006) historical result is also found in cross section: Higher GDP/capita, more redistribution
However, no Robin Hood Paradox
And results do not depend on South Africa
Results

Redistribution and Poverty Reduction
Direct Transfers (net of direct taxes) reduce poverty (except in Ethiopia): CEQ 16

Change in Headcount Ratio ($2.5 PPP/Day):
Disposable vs. Market Income
(in percentage points)
Indirect Taxes increase poverty over and above market income poverty in six out of the CEQ 16 countries.
Changes in Headcount Ratio: Post-fiscal vs. Market Income
(Poverty Line: US$2.50 ppp/day)

South Africa

Brazil

Headcount of Market Income  Headcount of Disposable Income  Headcount of Post-fiscal  GNI per capita (2005 PPP)
Note that Net Indirect Taxes can be equalizing and yet poverty increasing: Ethiopia
Thank you!