

How can fiscal policy be better aligned with scaling up service delivery?

Nora Lustig

**Tulane University
CGD and IAD**

Making Services Work for Poor People

World Bank

Washington, DC – March 1, 2014

Scaling Up Service Delivery
Innovations and Income Poverty
Reduction:

Is there a Trade-off?

Based on Higgins & Lustig (2014)...

- Trade-off is likely to exist whenever you need to mobilize domestic resources through, for example, consumption taxes
- Standard poverty measures might fail to capture that poor are made poorer by the tax system
- Propose a measure of fiscal impoverishment that is axiomatically derived which can tell you how much you really need to compensate the poor
- Dominance criteria to compare among alternative forms of mobilizing domestic resources (no time to show today)

Commitment to Equity Framework

(Joint project Inter-American Dialogue & Tulane U.)

- Impact of taxes and transfers on income inequality and poverty
- Fiscal Incidence (accounting approach)
- Services = In-kind Transfers on Education and Health valued at government cost

<http://www.commitmenttoequity.org>

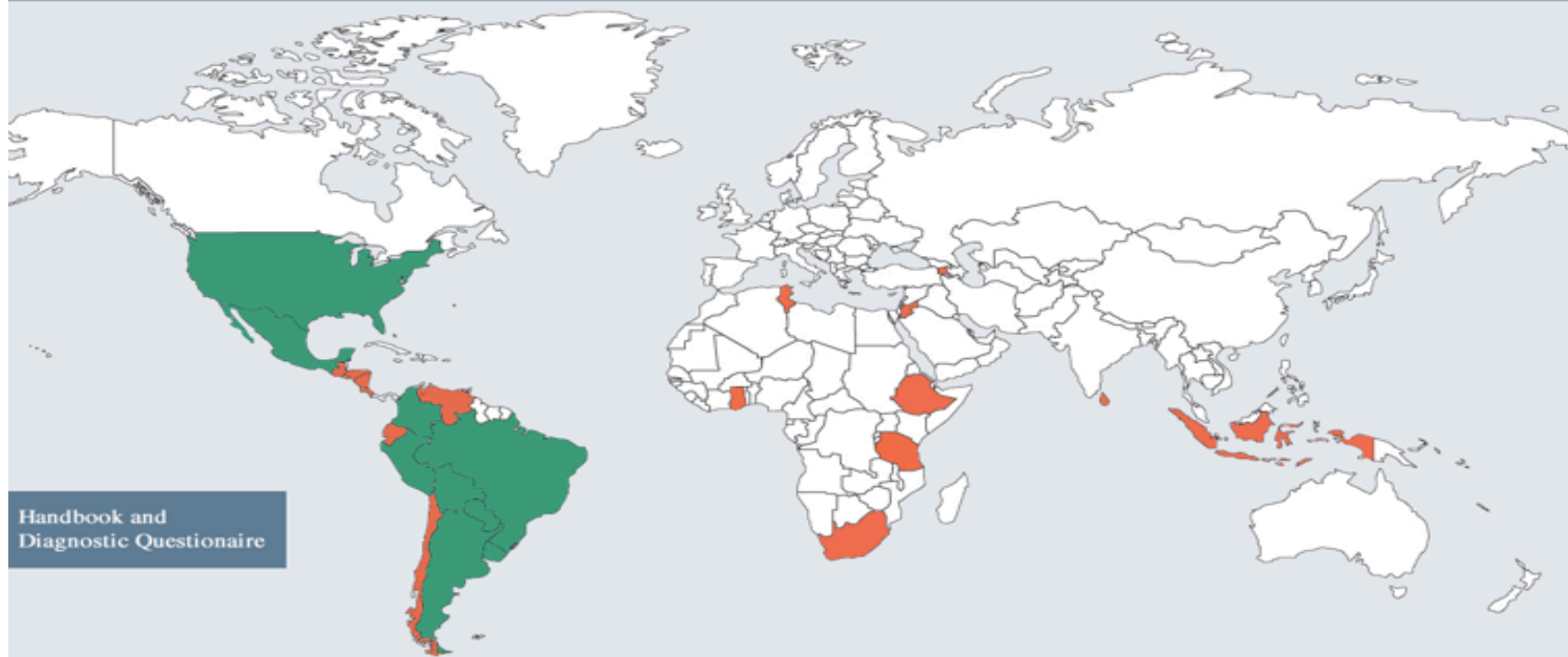


What is CEQ

The Commitment to Equity (CEQ) is a joint project of CIPR and the Department of Economics at Tulane University and the Inter-American Dialogue. Directed by **Nora Lustig**, the CEQ was designed to analyze the impact of taxation and social spending on inequality and poverty in individual countries, and provide a roadmap for governments, multilateral institutions, and nongovernmental organizations in their efforts to build more equitable societies.

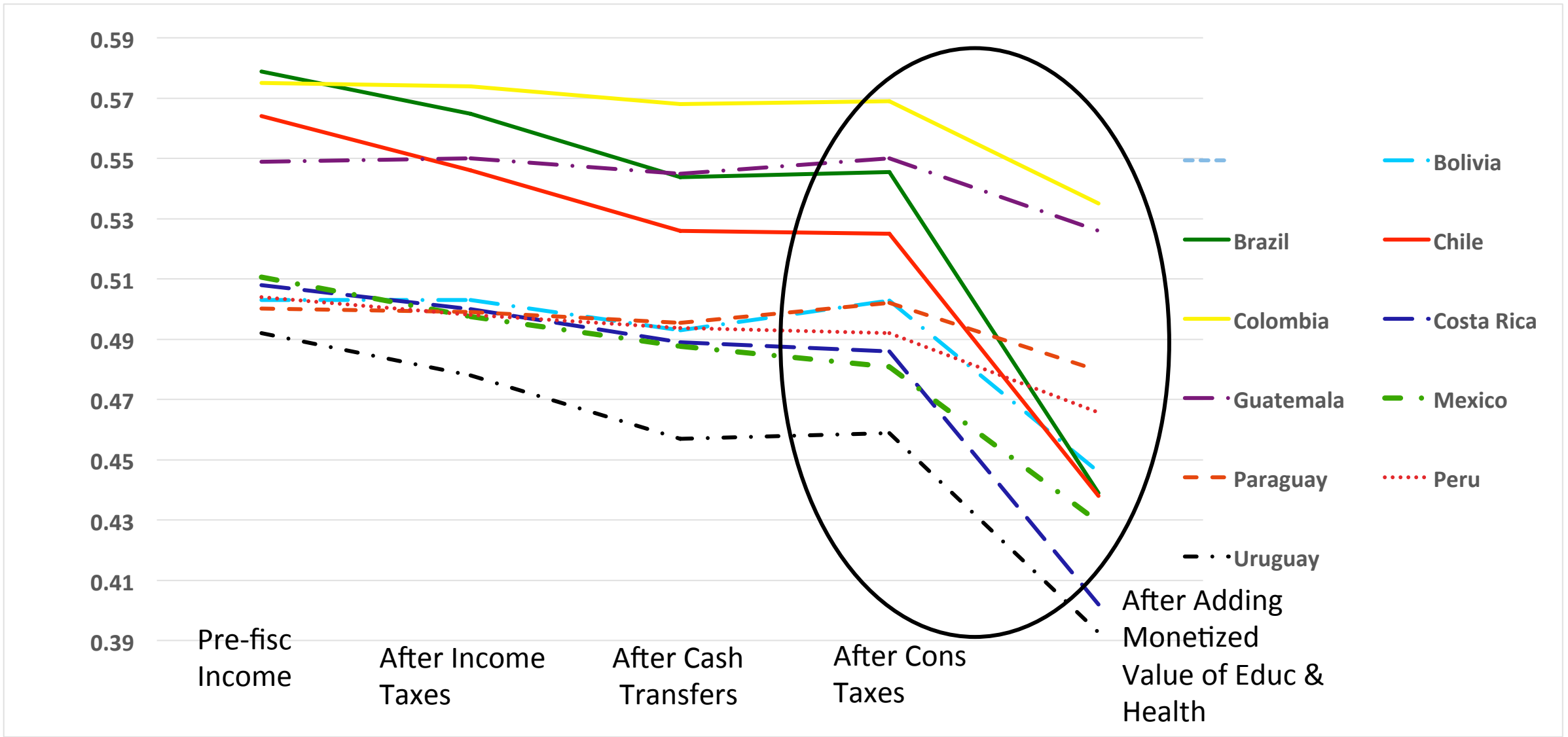
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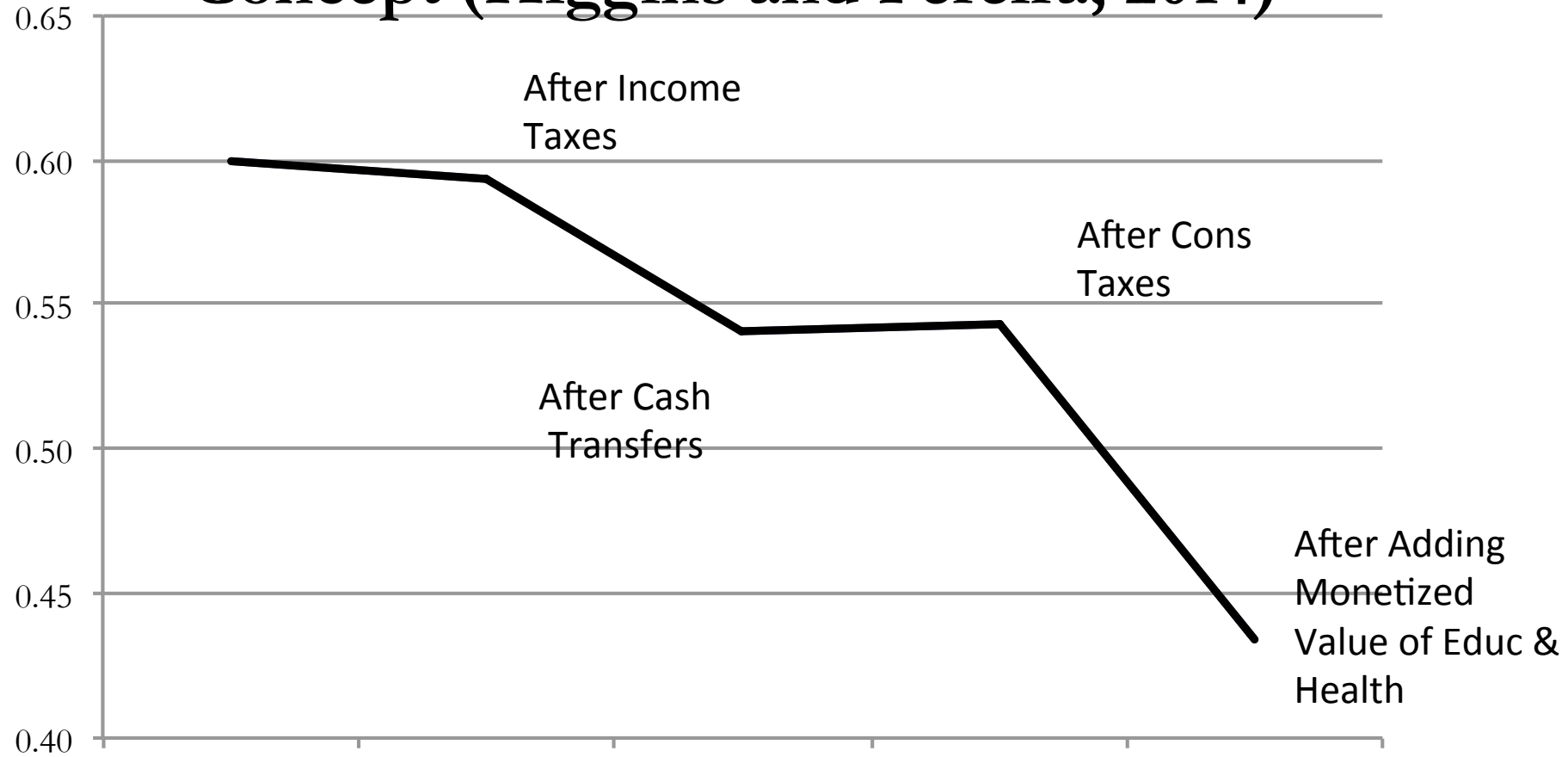


Public spending on education and health and inequality

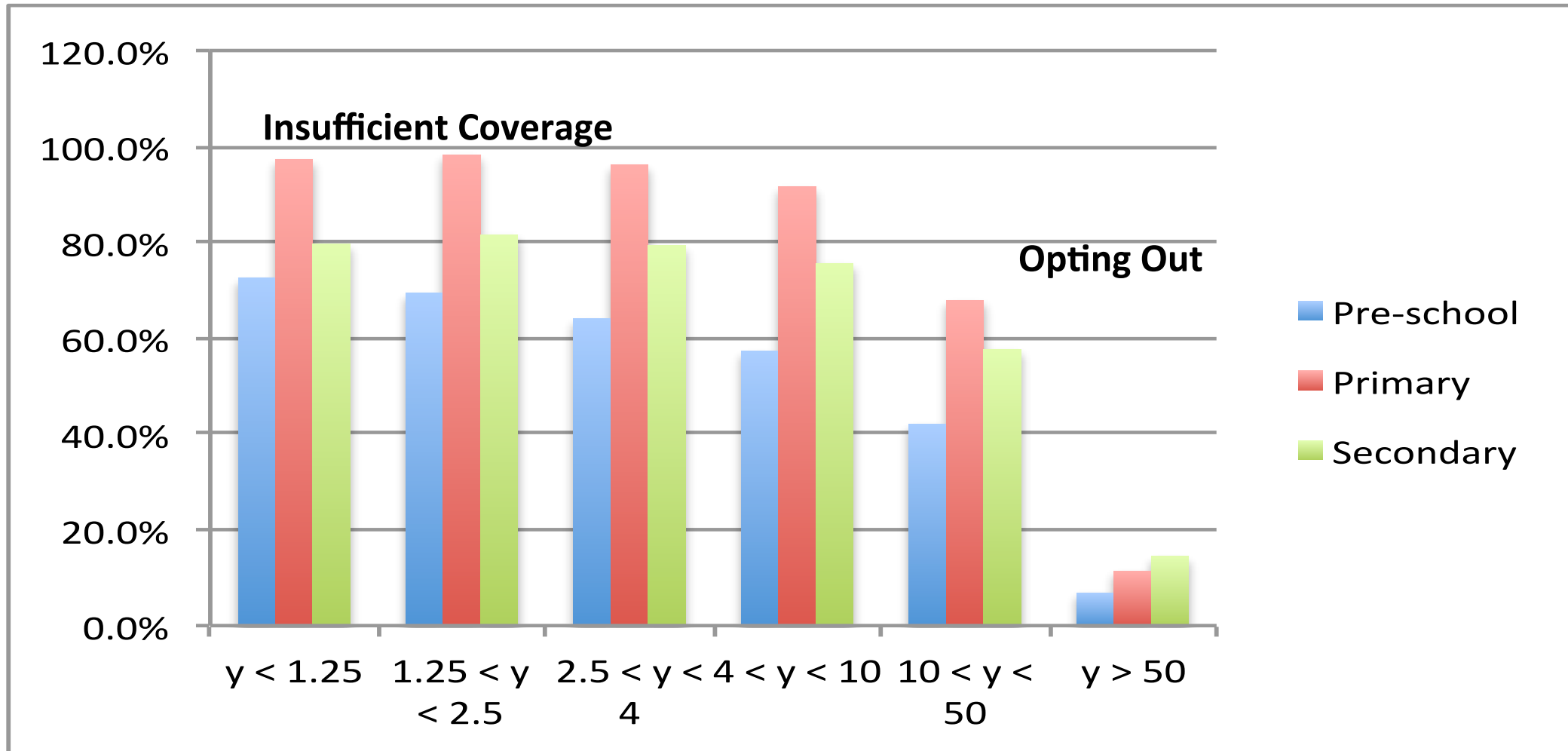
(Gini coefficient by income concept. Source: CEQ 2013; authors listed at the end)



Brazil: Gini Coefficient for Each Income Concept (Higgins and Pereira, 2014)



Brazil: Usage of School Services by Level and Income Concept (Higgins&Pereira, 2014)



The Trade-off

- Let's say you want to expand coverage of pre-school and secondary school for the poor and entice the middle-classes to use public schools
- If this requires more financial resources, most likely governments will have to resort to additional revenues
- The usual advice is to increase VATs and/or eliminate exemptions

=>>>>> Trade-off between scaling-up educational services and income poverty reduction emerges

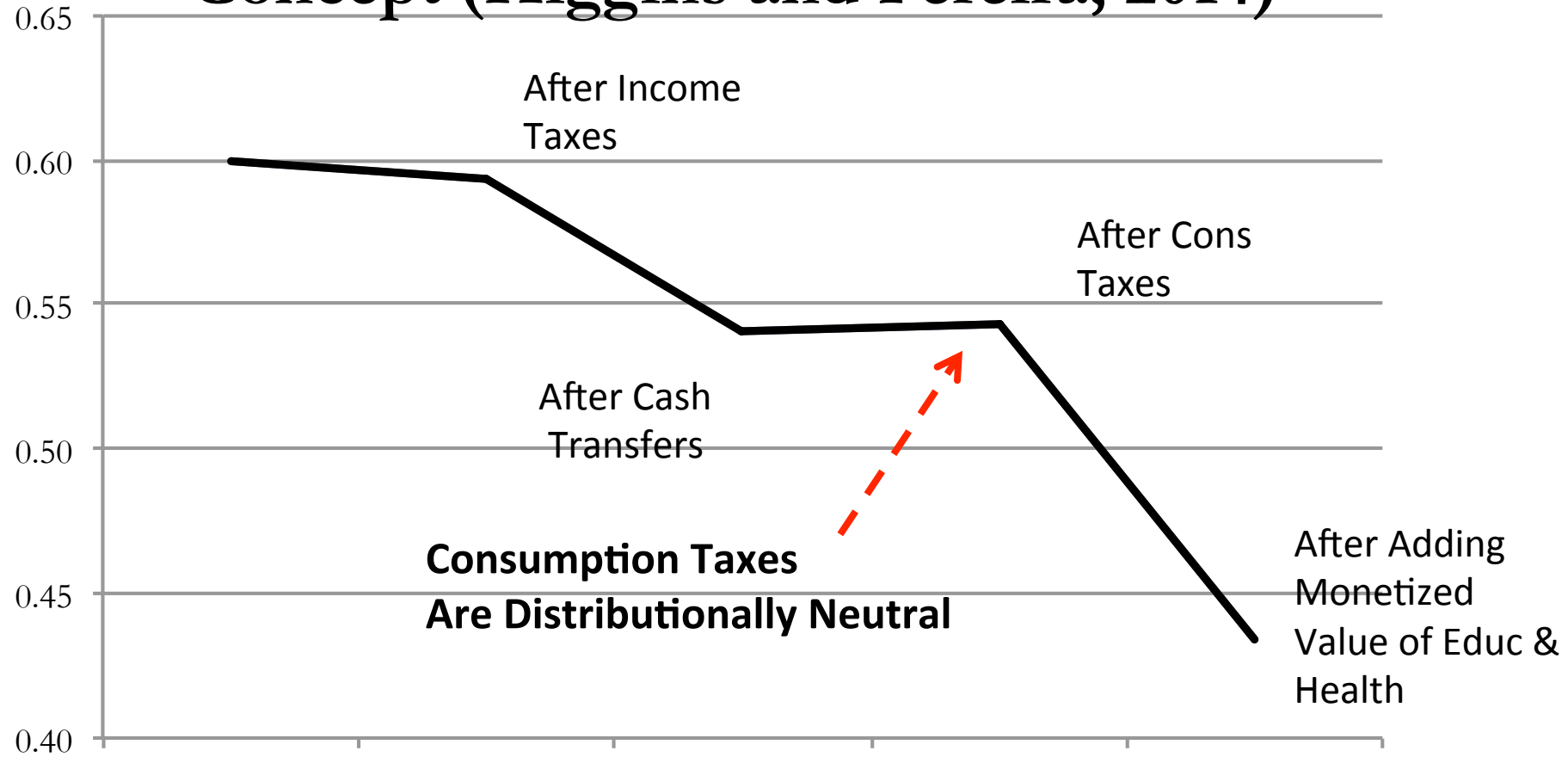
Regressivity vs. Poverty Increasing

- Usually, concern is whether a tax or a proposed tax reform is regressive: i.e., increases inequality
- However, a tax or a tax reform can be neutral or even progressive and yet:

=>>>> it can cause poverty to increase

=>>>> it can make some of the poor poorer (and some of the nonpoor poor)

Brazil: Gini Coefficient for Each Income Concept (Higgins and Pereira, 2014)



How can we tell if the trade-off exists?

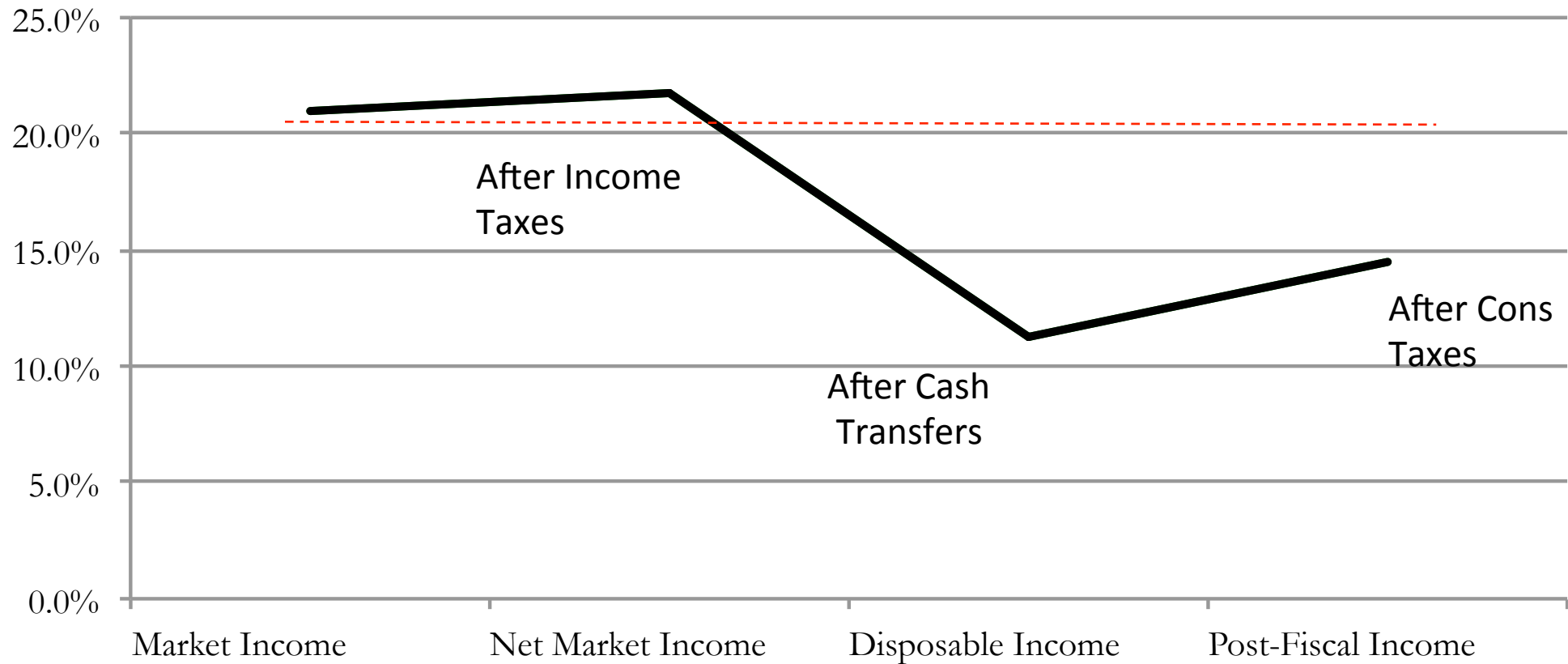
Higgins and Lustig (2014) show:

- standard poverty comparisons
- stochastic dominance tests
- measures of progressivity and horizontal inequity

=>>>>fail to measure whether transfers to the poor are large enough to compensate them for what they pay in taxes.

Brazil: Poverty Rate at \$2.5 PPP/day for Each Income Concept

Higgins and Pereira, 2014)



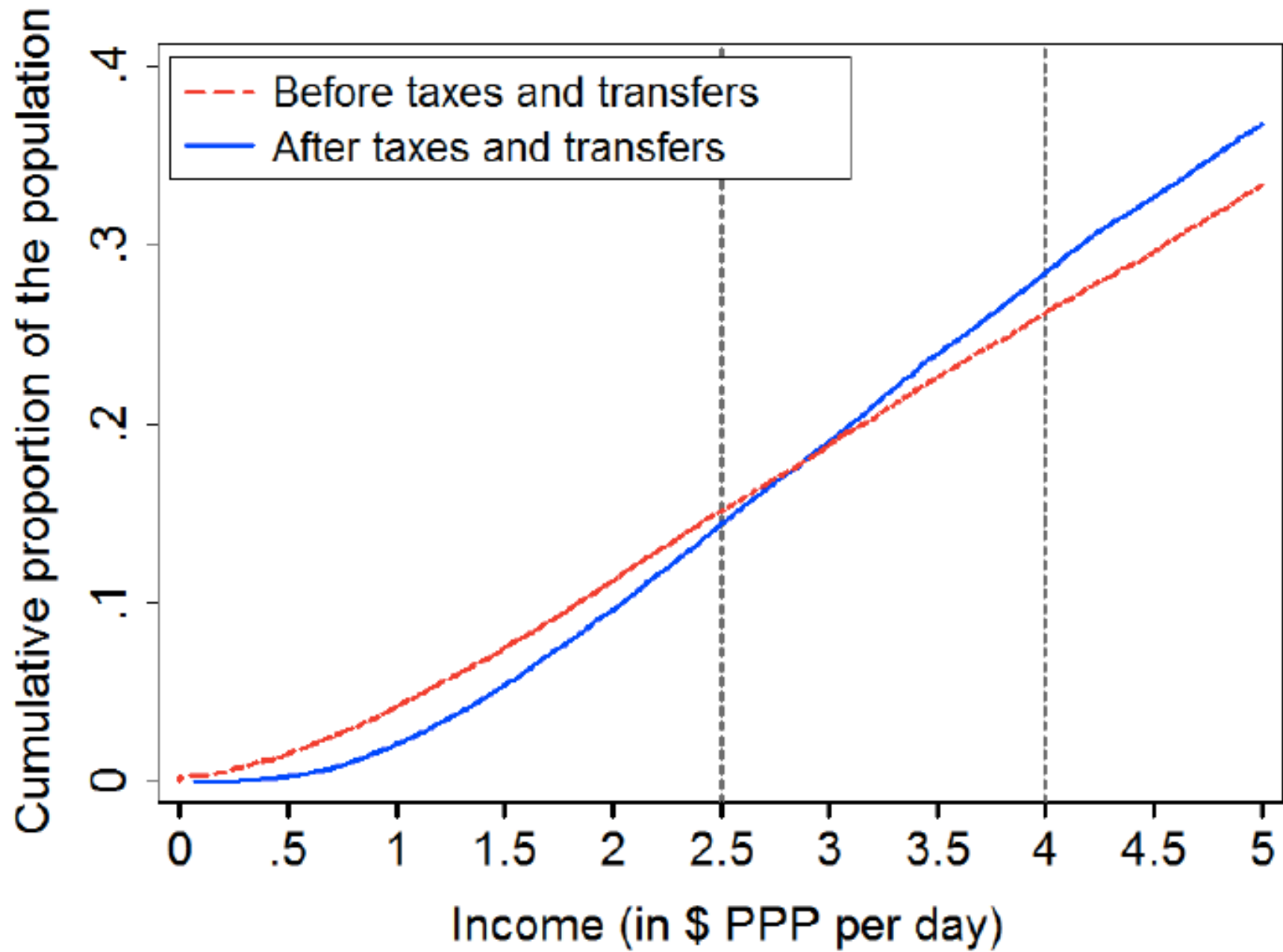


Figure 3: Cumulative distribution functions in Brazil.

Yet, there is impoverishment

Fiscal Mobility Matrix: Brazil

(Higgins and Lustig, 2014)

Post-tax and transfer income groups

		Post-tax and transfer income groups				% of Pop.
		< \$2.50	\$2.50 -4.00	\$4.00 -10.00	> \$10.00	
Pre-tax and transfer income groups	< \$2.50	85%	10%	4%	1%	15%
	\$2.50 -4.00	14%	75%	10%	1%	11%
	\$4.00 -10.00	0%	13%	84%	3%	33%
	> \$10.00	0%	0%	16%	84%	40%
	% of Pop.	14%	14%	36%	36%	100%

Fiscal Impoverishment (Higgins & Lustig, 2014)

- Fiscal impoverishment (FI) occurs if some poor are made poorer—or some non-poor made poor—by the tax and transfer system
- In other words, it occurs if the post-fisc incomes of some (post-fisc) poor are lower than their pre-fisc incomes

Fiscal Impoverishment

(Higgins & Lustig, 2014)

- Measuring FI will tell us:
 - Whether trade-off exists
 - The order of magnitude of the trade-off
 - How much is needed in cash transfers to compensate the losing poor
 - Which reforms may be less impoverishing (dominance criteria)

Fiscal Impoverishment

(Higgins & Lustig, 2014)

- If the post-fisc distribution **does *not* first order stochastically dominate** the pre-fisc distribution on the domain of poverty lines, **FI has occurred**.
- A **sufficient** condition to be sure that **FI has *not* occurred** is the simultaneous observance of **no reranking** among the poor and **first order stochastic dominance** of the post-fisc over the pre-fisc distribution on the domain of poverty lines

Measuring Fiscal Impoverishment

(Higgins & Lustig, 2014)

- Fiscal Mobility Matrix
- Fiscal Impoverishment Headcount
 - wrt Total Population
 - wrt Total Post-Fisc Poor

Both have limitations

- Fiscal Impoverishment Gaps => Axiomatically Derived

Fiscal Mobility Matrix: Brazil

(Higgins and Lustig, 2014)

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FI Headcount (Higgins & Lustig, 2014)

$$h(\mathbf{y}^0, \mathbf{y}^1; z) = |A|^{-1} \sum_{i \in S} \mathbb{1}(y_i^1 < y_i^0) \mathbb{1}(y_i^1 < z)$$

- where $A=S$ gives the proportion of the total population that is impoverished, while

$$A = \{i \in S \mid y_i^1 < z\}$$

gives the proportion of the post-fisc poor that are impoverished. $\mathbb{1}(\cdot)$ is the indicator function which has a value of 1 if its argument is true and 0 otherwise.

FI Headcount in Brazil (Higgins & Lustig, 2014)

- 5 percent of the total population
- 30 (!) percent of the post-fisc poor

were made poorer by the fiscal system

FI Gap (Higgins & Lustig, 2014)

- Axiomatically derived measure:

$$f(\mathbf{y}^0, \mathbf{y}^1; z) = k \sum_{i \in S} (\min\{y_i^0, z\} - \min\{y_i^0, y_i^1, z\})$$

- The total impoverishment gaps multiplied by a factor of proportionality = k
- k can be chosen by practitioner. For ex,
 - k = 1 is the sum total of impoverishment gaps
 - k = number of post-fisc impoverished, per capita gap

FI Gap (Higgins & Lustig, 2014)

In Brazil, the FI Gap per capita for the post-fisc poor (with \$2.50 poverty line) equals \$0.19 per day or roughly 10 % of the income of the post-fisc poor

Conclusions

- Trade-off between scaling up service delivery if financed with consumption taxes (e.g., VAT) and income poverty-reduction is likely to exist
- Standard measures of poverty, dominance, progressivity and horizontal inequity can fail to capture that tax reforms may increase the number of impoverished
- We propose several measures of fiscal impoverishment, one axiomatically derived that gives us:
 - The order of magnitude of the trade-off
 - How much is needed in cash transfers at the minimum to compensate the losing poor
 - Which tax reforms may be less impoverishing (dominance criteria)

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