Fiscal Policy and Redistribution in Latin America: Challenging Conventional Wisdom

Nora Lustig
Tulane University, CGD, IAD

LACEA

Santiago, Chile

November 10, 2011

Commitment to Equity Project

"Fiscal Policy and Income Redistribution in Latin America: Challenging the Conventional Wisdom"

"Fiscal Policy, 'Fiscal Mobility,' the Poor, the Vulnerable and the Middle Class in Latin America."

Lustig, Nora (coord.). 2011. *Argentina (Carola Pessino), Bolivia (George Gray-Molina, Wilson Jimenez, Veronica Paz and Ernesto Yañez), Brazil (Claudiney Pereira and Sean Higgins), Mexico (John Scott) and Peru(Miguel Jaramillo)*

Outline

- Methodological Highlights
- Summary of Results
- Conclusions

Synthesis

- Analyze impact of fiscal policy (taxes and transfers) in Argentina, Bolivia, Brazil, Mexico and Peru.
- Papers introduce a distinction between "fiscal redistribution" and "fiscal mobility."
- Redistribution refers to the impact of fiscal policy on inequality and poverty: i.e., measures that re-rank households by "post-fisc" income.
- In contrast, we define "fiscal mobility" as the non-anonymous (upward and downward) movement in the socio-economic ladder of pre-defined income categories. (anonymous vs. non-anonymous effects of fiscal policy: Bourguignon, 2011)

Methodological Highlights

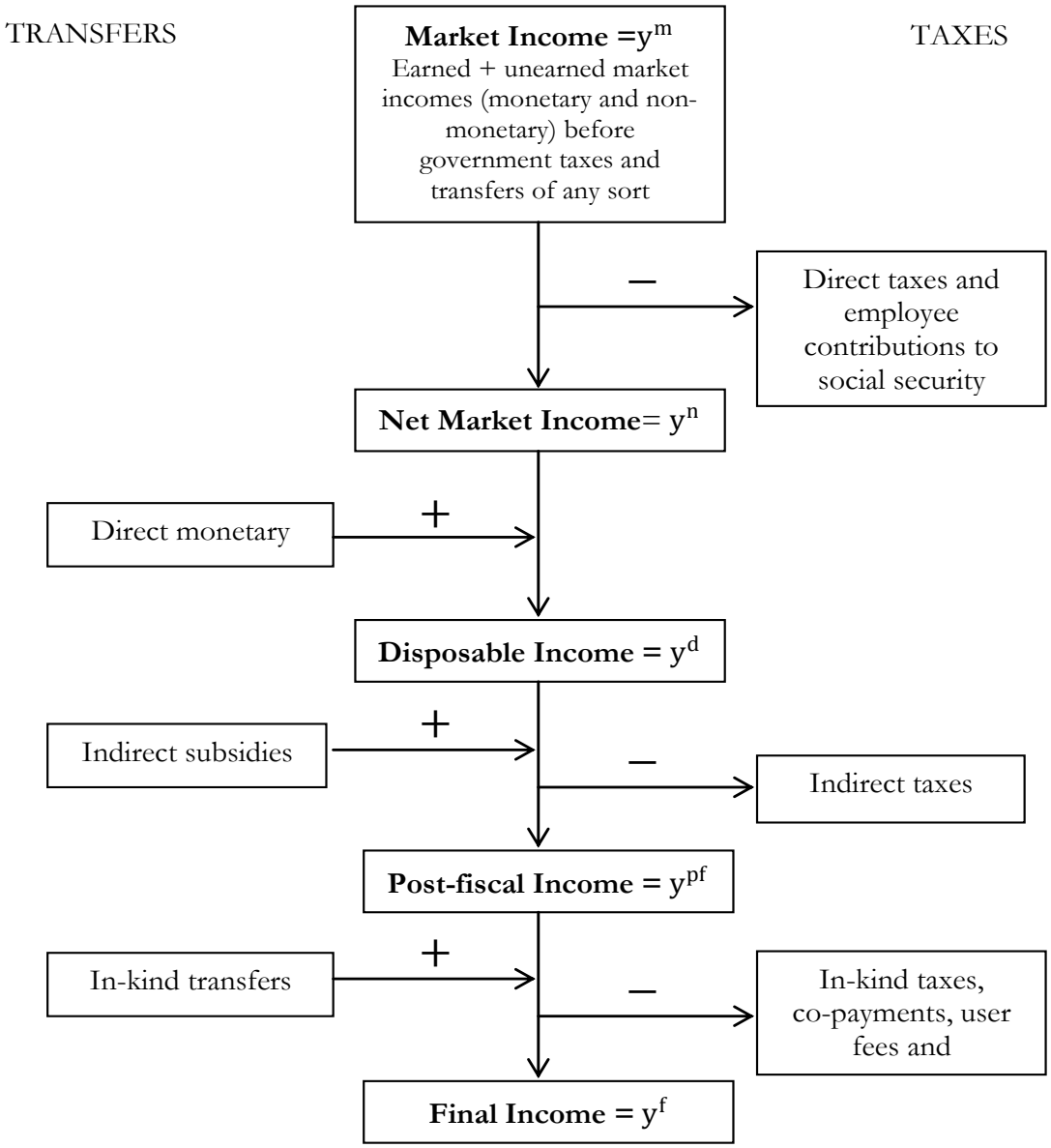
- Definitions of income concepts and how they are constructed
  - Methods
  - When to scale-up
- Static fiscal incidence analysis
- Definition of “Progressive” and “Regressive”

- Data: Household Surveys; See top rows of Appendix A

Fiscal Incidence Analysis: Definitions of Income Concepts

- We attempt to assess the distributive impact of the full range of fiscal interventions.
- Whenever possible from market or primary income and sequentially estimate the incidence of
  - direct taxes and contributions to the social security system,
  - direct cash transfers,
  - indirect taxes and subsidies, and
  - in-kind transfers in the form of free or quasi-free services such as education and health.

Definitions of Income Concepts: A Stylized Presentation



Fiscal Incidence Analysis: How Income Concepts are Constructed

- *Direct Identification Method*

Household surveys do not always include information on direct taxes or transfers from specific programs (or, on expenditures needed to estimate indirect taxes):

- *Inference Method*
- *Simulation Method*
- *Imputation Method*
- *Alternate Survey*
- *Secondary Sources Method*

- Appendix A

Fiscal Incidence Analysis: Incidence Assumptions (Appendix A)

- Payroll taxes and social security contributions are borne fully by labor in the form of lower wages.
- Consumption taxes (VAT, excise taxes, consumption taxes) are borne by consumers of the taxed commodities; burdens are allocated in proportion to the shares of consumption of the taxed good.
- Cash transfers accrue to beneficiary households.

Fiscal Incidence Analysis: Incidence Assumptions

- Social Security/contributory pensions (and unemployment compensation of a contributory system) are included in Market Income.
- SS pensions are not considered part of government transfers because in an actuarially fair system, pensions—on average—correspond to life-time contributions. ("Micro-simulation" project of Paris School of Economics; see Bourguignon, various papers).
- What if there is a deficit in the year of analysis? Estimated the incidence of the "subsidy" separately.

Fiscal Incidence Analysis: Incidence Assumptions

- Education transfers: calculated as the average cost per student at each level multiplied by the number of children in school at each level in every household.
- Health transfers: depends on the system in the country.

Scaling-up:

- Because these transfers are imputed based on totals from national or public accounts, market incomes and direct cash transfers (and taxes) need to be scaled-up to avoid overestimating the contribution of education and health transfers in the incidence analysis

Definition of CEQ Social Spending

- CEQ Social Spending includes public spending on education, health and social assistance.
- It does not include spending on contributory pensions except for the "subsidized" portion.
- The "subsidy" is equal to the deficit of the pay-as-you-go pension system in the year of the survey.
- If the contributory pension system did not have a deficit, the subsidy was taken to be equal to zero.

Definition of Redistributive "Effectiveness"

- Effectiveness Indicator is defined as the redistributive effect (i.e., the relative decline in Gini or Headcount Ratio) of the taxes or transfers being analyzed divided by their relative size with respect to GDP.

Definition of Extreme and Moderate Poverty

- Extreme poverty is measured using the international PPP US$2.50 a day poverty line which for Latin America corresponds to roughly the median of national extreme poverty lines.
- Moderate poverty is measured using the international PPP US$4 a day poverty line which for Latin America corresponds to roughly the median of national moderate poverty lines.

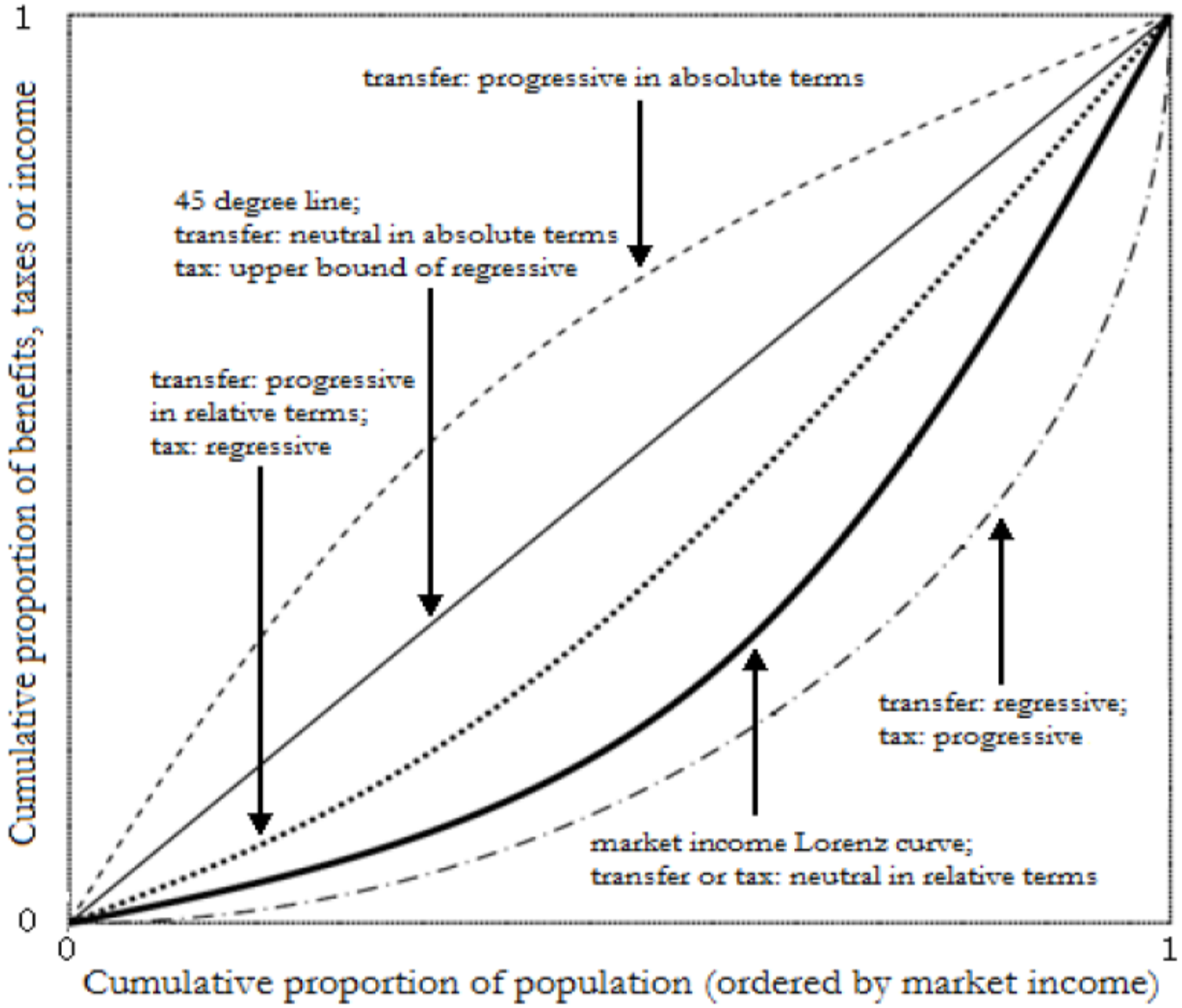
Fiscal Incidence Analysis: Caveats

- Does not incorporate potential systematic differences between average and marginal incidence effects.
- Does not include behavioral responses or general equilibrium effects.
- Does not analyze incidence or redistribution over the life-cycle.
- Does not take into account differences in the quality of public spending.
- Hence, this exercise should be viewed as a first-approximation of the impact of fiscal policy on inequality and poverty.

Definitions of Progressive and Regressive Taxes and Transfers

- No convention on how to call transfers whose concentration curves lie between the Lorenz curve and the perfect equality diagonal.
- Here we decided to call them progressive in relative terms (and not regressive in absolute terms as some authors do).
- Our choice is based on a simple rule: anything that makes the distribution of income more equal (unequal), should be called progressive (regressive).

Diagram 2 - Concentration Curves for Progressive and Regressive Transfers (Taxes)



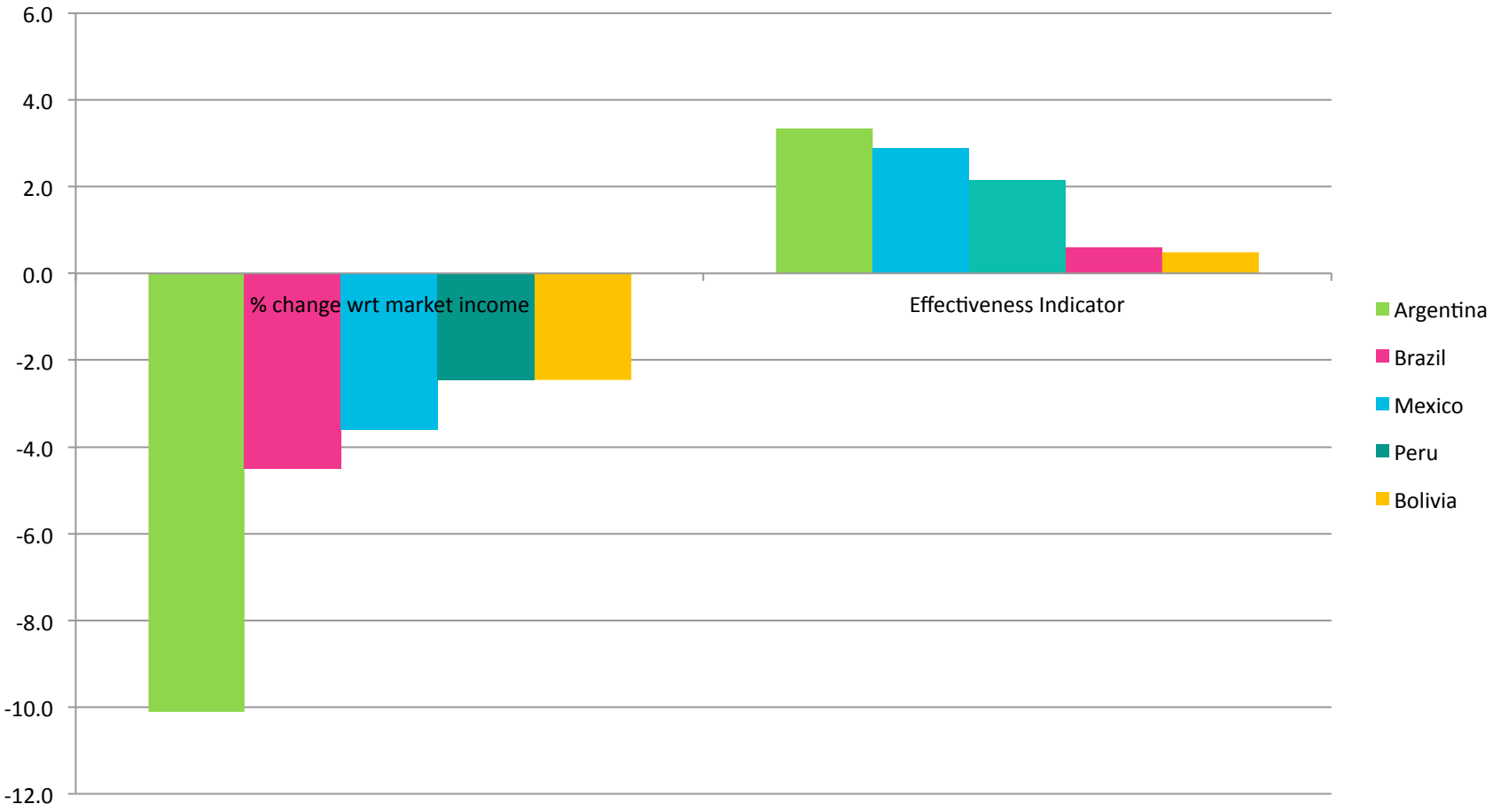
Fiscal Policy & Redistribution in LA

- Conventional wisdom states that fiscal policy redistributes little in Latin America. (Breceda et al., 2008; Goñi et al., 2011)
- Lower tax revenues and – above all – lower and less progressive transfers have been identified as the main cause.
- Through an in-depth fiscal incidence analysis applied to Argentina, Bolivia, Brazil, Mexico and Peru we argue that conventional wisdom may be wrong.

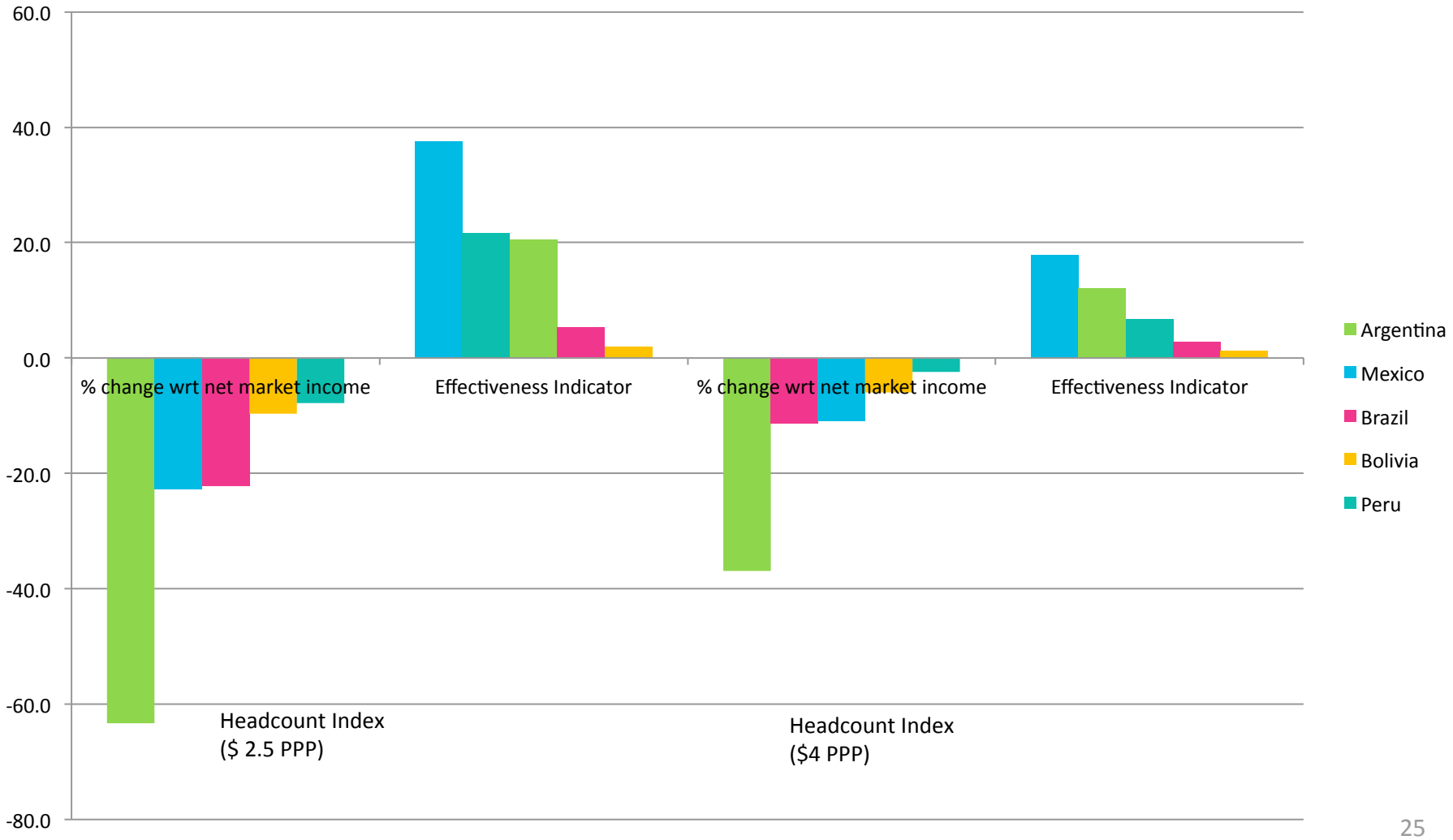
First, there is no "Latin-America"

- Extent and effectiveness of income redistribution and poverty reduction, revenue-collection, and spending patterns vary so significantly across countries that speaking of "Latin America" as a unit is misleading.
- The (after direct taxes and transfers) Gini, for example, declines by over 10 percent in Argentina but by only 2.4 percent in Bolivia.
- In Argentina, Brazil and Bolivia government revenues are close to 40 percent of GDP, whereas in Mexico and Peru they are around 20 percent.
- Social spending (excluding contributory pensions) as a share of GDP ranges from 17 percent in Brazil to 5.2 percent in Peru.

Change in Gini (in %)



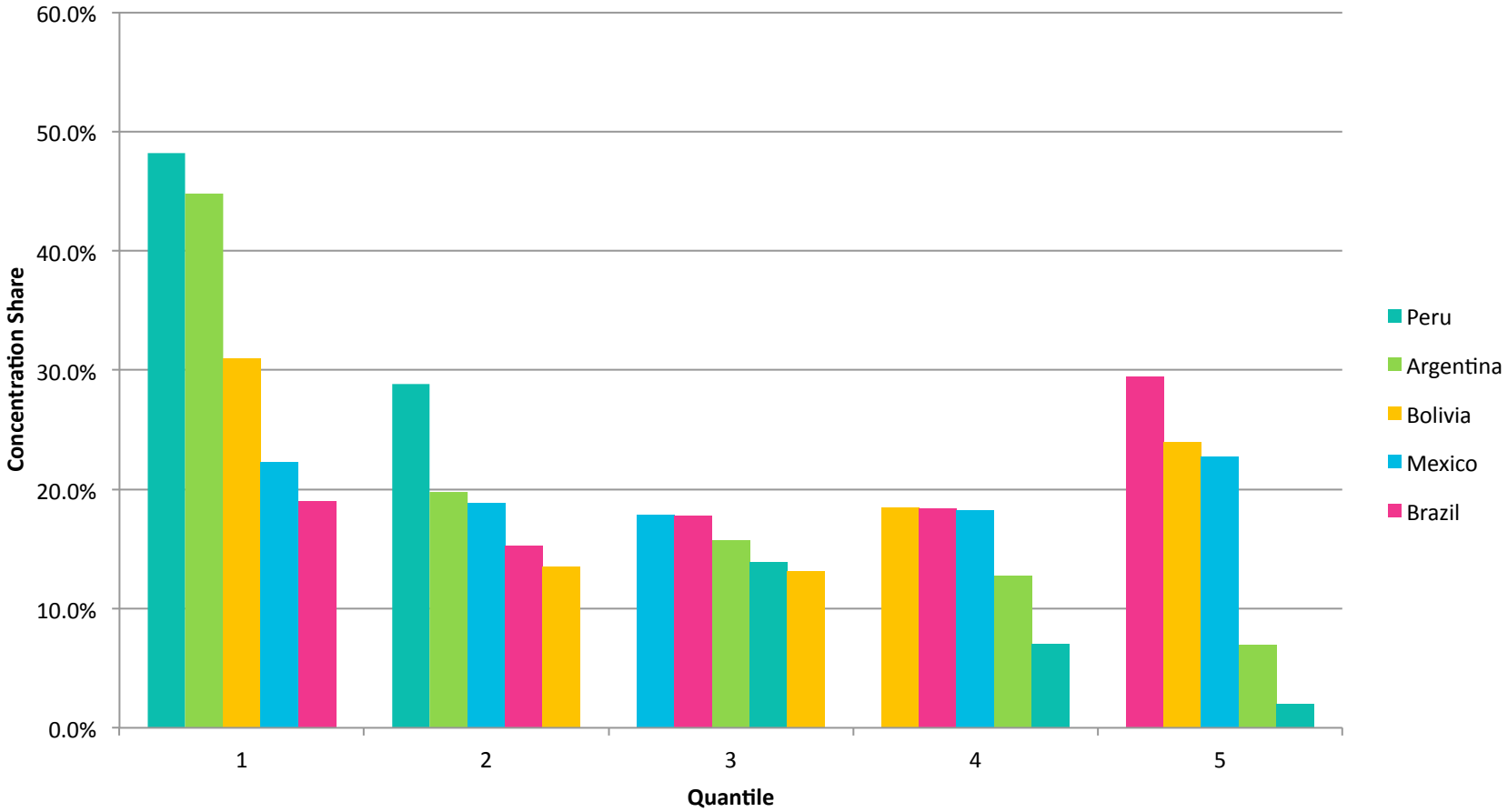
Change in Headcount Ratio (in %)



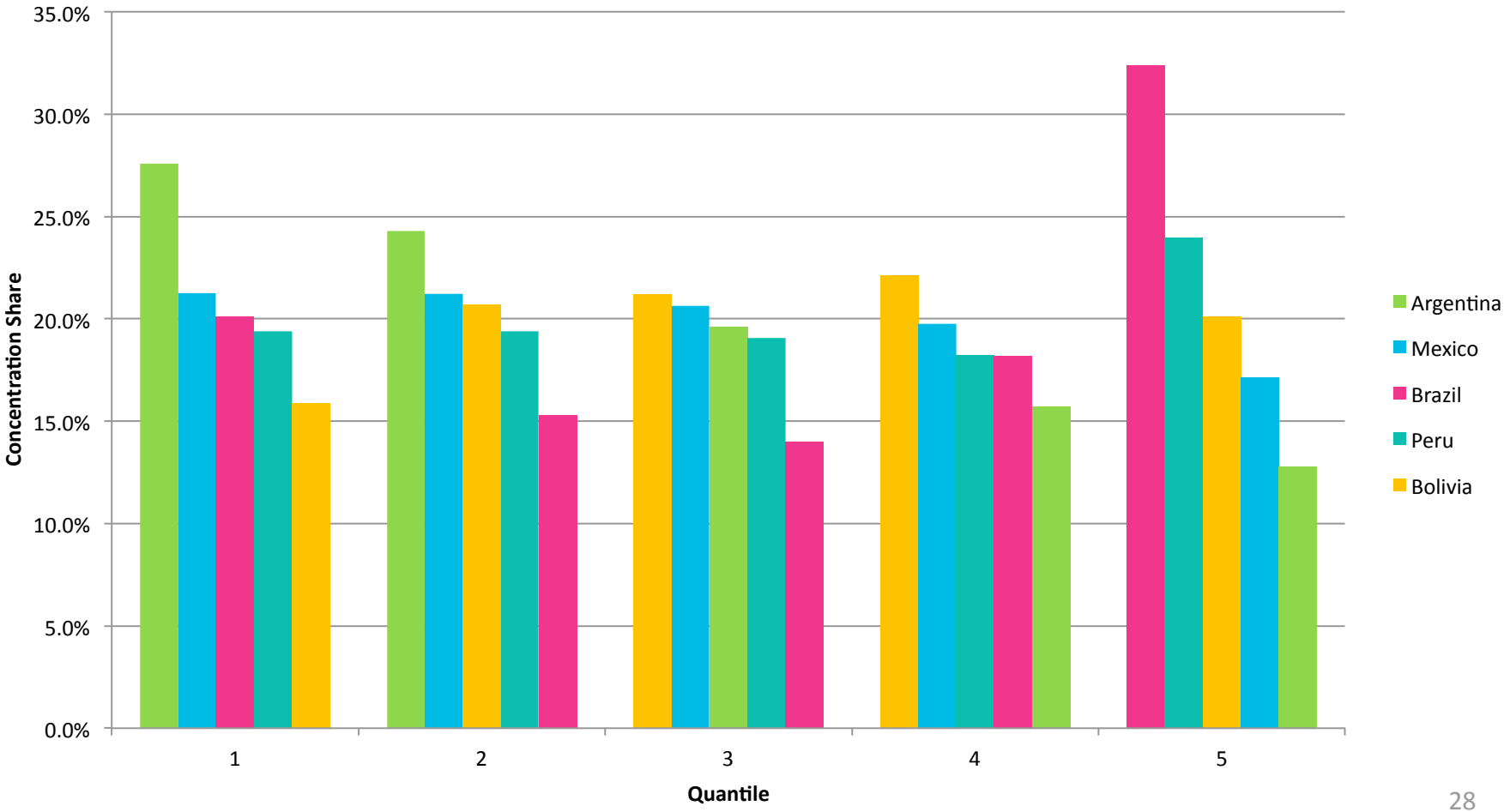
Second, social spending does not accrue to richest quintile.

- Concentration coefficients for social spending are highly negative (progressive in absolute terms) for Argentina and slightly so for Bolivia and Mexico.
- In Brazil and Peru social spending is progressive in relative terms only.

Share of Direct Transfers Going to Each Quintile (Poorest to Richest)



Share of In-kind Transfers (Education, Health, Urban&Housing) Going to Each Quintile



No apparent correlation between size of government and impact

- Primary spending/GDP is similar for Argentina and Bolivia but they are on opposite sides in terms of the extent of redistribution.

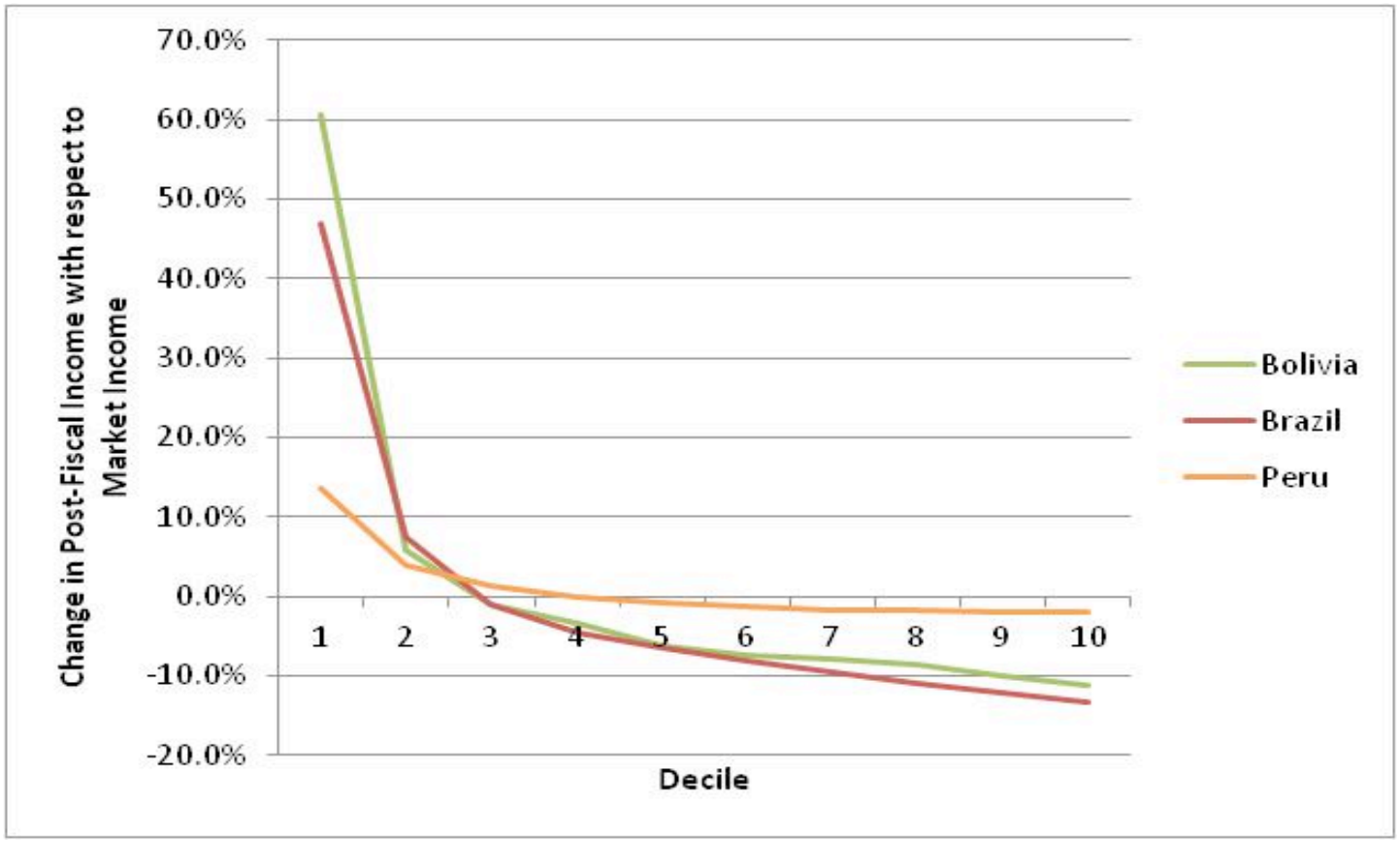
- Although Mexico spends 1/7th of Brazil in transfers/GDP, the Gini declines by more in the former.

Third, no obvious correlation between size of government and redistribution (Table 1)

	GNI/cap. in PPP - yr of survey (US$)	Primary spending as a % of GDP	Reduction in Gini (wrt net mkt inc)	Government Size
Bolivia	4069	41%	-2.4%	large
Argentina	14030	38%	-10.3%	large
Brazil	10140	37%	-2.5%	large
Mexico	14530	22%	-3.6%	small
Peru	8349	19%	-2.5%	small

	Direct Transfers as a % of GDP	Reduction in Gini (wrt net mkt inc)
Bolivia	5.1%	-2.4%
Brazil	4.1%	-2.5%
Argentina	3.1%	-10.3%
Mexico	0.6%	-3.6%
Peru	0.4%	-2.5%

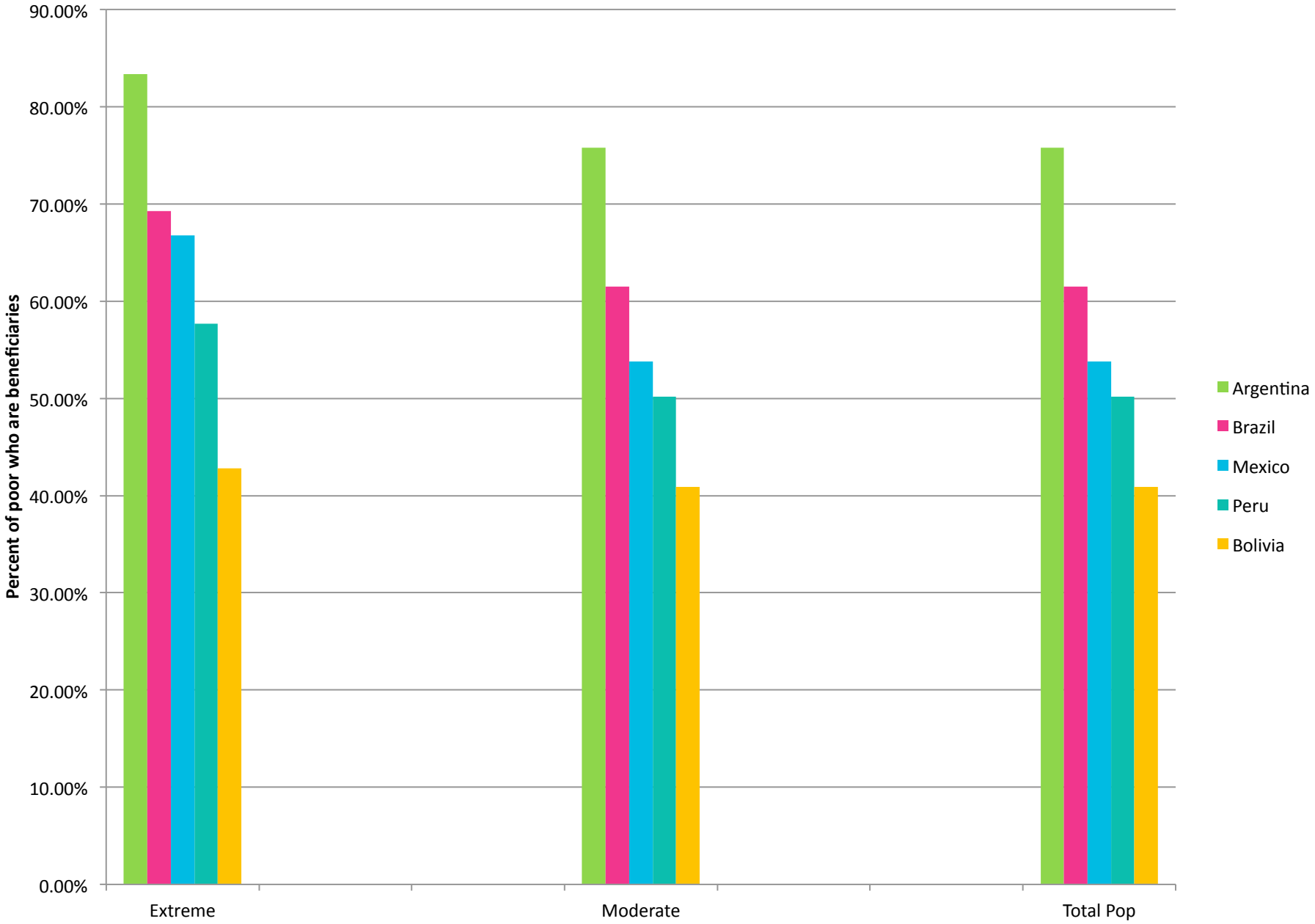
Fourth, due to indirect taxes households are net payers to the "fisc" beginning in the third decile in Bolivia and Brazil; for Peru this happens in the fifth decile.



Fifth, safety net system's coverage excludes a substantial proportion of the extreme poor by design

- In Brazil and Mexico, more than 30% of people living below US$2.50 ppp/day are not covered by any of the direct transfer programs.
- In Peru, more than 40 % are excluded.
- In Bolivia, around 60 % are excluded.

- In Argentina, coverage is 80%, the largest of all five: pension moratorium and AUH (Asignacion Universal por Hijo)


90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
Percent of poor who are beneficiaries
Extreme
Moderate
Total Pop
Argentina
Brazil
Mexico
Peru
Bolivia

"Fiscal Mobility"

- Economists tend to think of mobility "in terms of the transformation of an income vector in an initial period into another income vector in a second period" (Fields, 2000) for the same households (or individuals) and/or their descendants.
- But the concept of mobility can be applied to any "before-after" or "situation A and situation B vs. status quo" comparison where the actual trajectory of individuals or households matters.

“Fiscal Mobility”

- Can be used to identify the winners and losers of fiscal policy, trade reform or food price increases.
- Fiscal mobility, thus, refers to the transformation of a “pre-fisc” income vector into another “post-fisc” income vector for the same households (ranked by “pre-fisc” income or consumption per capita).

“Fiscal Mobility”

- Usefulness of the concept is that it allows us to identify actual winners and losers (in absolute terms or relative to others) of tax policy and transfers, something that standard (anonymous) redistribution analysis does not.

"Fiscal Mobility"

- Identifying winners and losers of fiscal interventions highlights (intended or unintended) horizontal inequities and can help us identify which groups might potentially favor or oppose particular policies or fiscal reforms.
- In the literature the two concepts—anonymous vs. nonanonymous changes--are often mixed-up or the difference (or its importance) is not sufficiently or explicitly acknowledged.
- Bourguignon (2011).

“Fiscal Mobility”

- Typical programs that generate high fiscal upward mobility for some groups are noncontributory pensions for the elderly poor or conditional cash transfers to poor families with children.
- Examples of intended “horizontal inequity” in the sense that equally poor individuals are treated differently depending on their age and the age of their descendants, for example.
- Indirect taxes can generate fiscal downward mobility for large portions of the poor.

“Fiscal Mobility”

- Fiscal mobility is quite heterogeneous: it can range from very significant to almost nonexistent.
- Fiscal redistribution and fiscal mobility can give us very different insights.

- Illustrate with Fiscal Mobility Matrices by Socioeconomic Group

Socioeconomic Groups in Paper: Cut-offs

SOCIOECONOMIC GROUPS USED IN THIS PAPER

Absolute Lines	
Extreme Poor	1.25 to 2.5
Moderate Poor	2.5 to 4
Vulnerable	4 to 10
Middle Class	10 to 50
"Rich"	> 50

Fiscal Mobility Matrices by Socioeconomic Group

ARGENTINA

	Disposable Income groups					
Net Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Total
y < 2.5	37%	39%	25%	0%	0%	100%
2.5 < y < 4	0%	46%	54%	0%	0%	100%
4 < y < 10	0%	0%	95%	5%	0%	100%
10 < y < 50	0%	0%	0%	100%	0%	100%
y > 50	0%	0%	0%	0%	100%	100%

not available

BOLIVIA

	Disposable Income groups							Post-fiscal Income groups					
Net Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal sum	Net Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal sum
y < 2.5	91%	7%	1%	0%	0%	100%	y < 2.5	95%	4%	2%	0%	0%	100%
2.5 < y < 4	0%	87%	12%	0%	0%	100%	2.5 < y < 4	9%	87%	4%	0%	0%	100%
4 < y < 10	0%	0%	96%	4%	0%	100%	4 < y < 10	0%	8%	91%	1%	0%	100%
10 < y < 50	0%	0%	0%	100%	0%	100%	10 < y < 50	0%	0%	15%	85%	0%	100%
y > 50	0%	0%	0%	0%	100%	100%	y > 50	0%	0%	0%	32%	68%	100%

BRAZIL													
	Disposable Income groups							Post-fiscal Income groups					
Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal	Market Inc	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal sum
y < 2.5	79%	16%	5%	1%	0%	100%	y < 2.5	88%	8%	4%	0%	0%	100%
2.5 < y < 4	2%	80%	17%	1%	0%	100%	2.5 < y < 4	18%	72%	9%	1%	0%	100%
4 < y < 10	0%	2%	93%	6%	0%	100%	4 < y < 10	0%	13%	84%	3%	0%	100%
10 < y < 50	0%	0%	3%	96%	1%	100%	10 < y < 50	0%	0%	18%	82%	0%	100%
y > 50	0%	0%	0%	12%	88%	100%	y > 50	0%	0%	0%	35%	65%	100%
PERU													
	Disposable Income groups							Post-fiscal Income groups					
Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal sum	Market Income groups	y < 2.5	2.5 < y < 4	4 < y < 10	10 < y < 50	y > 50	Horizontal sum
y < 2.5	92%	8%	0%	0%	0%	100%	y < 2.5	92%	8%	0%	0%	0%	100%
2.5 < y < 4	0%	94%	5%	0%	0%	100%	2.5 < y < 4	1%	94%	5%	0%	0%	100%
4 < y < 10	0%	1%	99%	0%	0%	100%	4 < y < 10	0%	2%	98%	0%	0%	100%
10 < y < 50	0%	0%	6%	94%	0%	100%	10 < y < 50	0%	0%	8%	92%	0%	100%
y > 50	0%	0%	0%	13%	87%	100%	y > 50	0%	0%	0%	16%	84%	100%

“Fiscal Mobility”: Results

- In Argentina, for example, non-contributory pensions and conditional cash transfers move 25 percent of the extreme poor and 54 percent of the moderate poor into the (higher) “vulnerable” socioeconomic group.
- In contrast, in the case of Peru, the corresponding figures are zero and 5 percent, respectively.

“Fiscal Mobility”: Results

- in Brazil the “pre-fisc” Gini coefficient equals .572 and the “post-fisc” (after direct and indirect taxes and cash transfers) equals .545, indicating an equalizing change.

Underneath this “equalization” there is significant downward fiscal mobility (caused primarily by the burden of indirect taxes):

- 18 percent of individuals move from being “pre-fisc” moderate poor to “post-fisc” extreme poor and 16.4 percent move from being “pre-fisc” vulnerable to “post-fisc” moderate poor.

Main Questions

- How much redistribution (inequality and poverty reduction) do the countries accomplish through fiscal policy?

- Is the extent of redistribution directly correlated with the size of government, social spending and spending on direct transfers?

- Does fiscal redistribution and fiscal mobility differ?

Conclusions

- Redistribution is still small when compared to advanced countries, particularly in Western Europe but this study finds somewhat higher levels of redistribution than previous ones.
- More importantly, the extent of redistribution and redistributive effectiveness vary substantially across countries.
- No obvious correlation between extent of redistribution and size of government.
- Fiscal redistribution and fiscal mobility patterns differ, particularly for the poorest: upward and downward fiscal mobility can be significant.