

Fiscal Incidence Analysis in LA: Methodological Issues and Results

**Nora Lustig
Tulane University
CGD and IAD**

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Commitment to Equity (CEQ) Project

- Inter-American Dialogue and Tulane University's CIPR and Dept. of Economics.
- Currently: 12 countries
- 6 finished: Argentina (2009), Bolivia (2007), Brazil (2009), Mexico (2008), Peru (2009) and Uruguay (year of HH survey)
- 6 in progress: Chile, Colombia, Costa Rica, El Salvador, Guatemala, Paraguay

Fiscal Incidence: “Plain vanilla” case

- No modeling:
 - No behavioral responses (or almost none)
 - No inter-temporal dimensions
 - No general equilibrium effects
 - No fiscal sustainability analysis

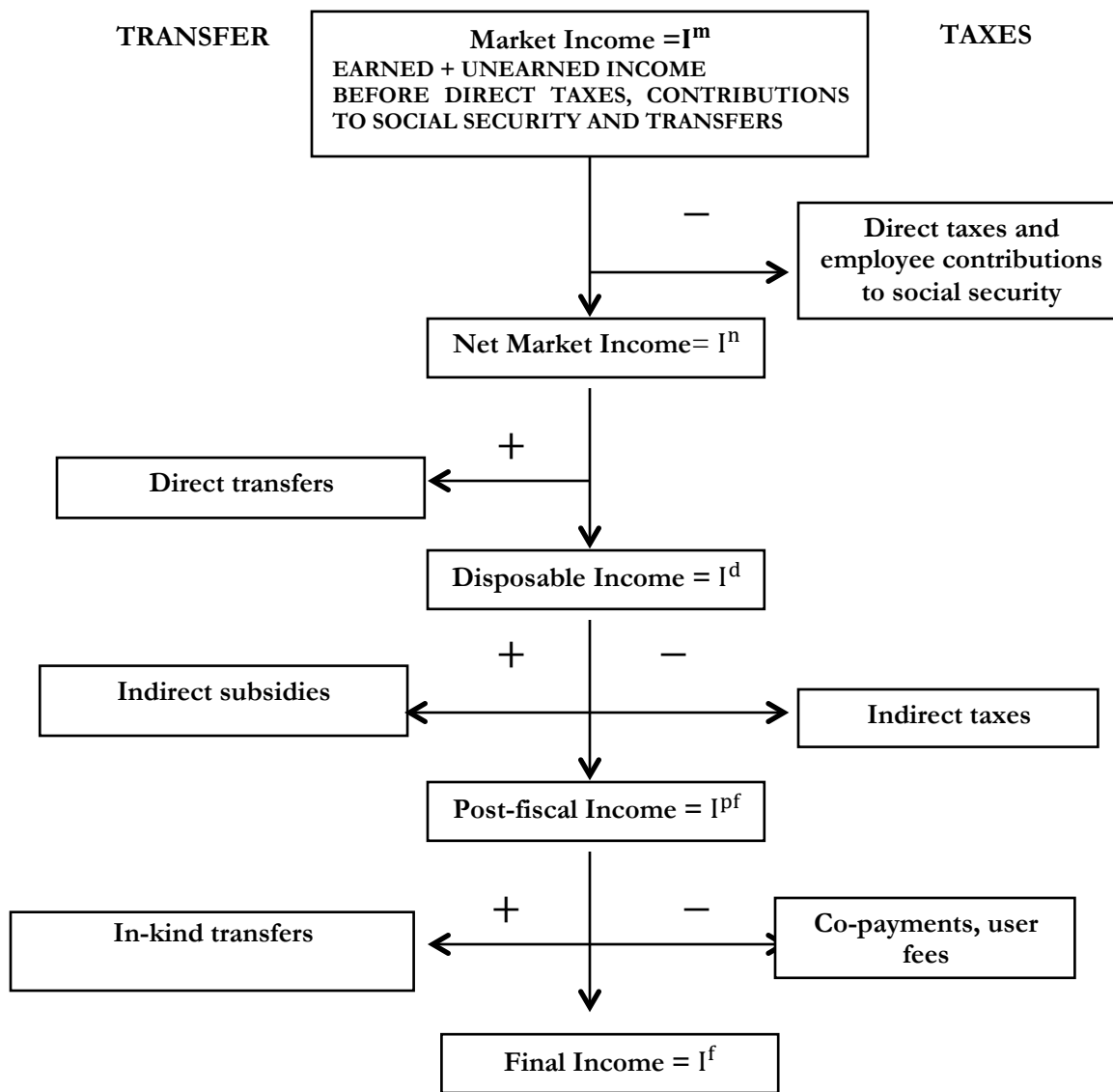
Welfare Indicator: Income per capita

- No adjustment for age, gender or economies of scale
- No adjustment for under-reporting
- Several household surveys in LA only have income data; so, if one wants to compare across countries, income data must be used in all, even in those in which there is data on consumption. But, for the latter, ideally one should do both.

Fiscal Incidence Analysis: Step by Step

- Definition of Income Concepts
- Construction of Income Concepts: calculating taxes & transfers for each household; decile/quintile
- Indicators:
 - Changes in inequality and poverty
 - Incidence by decile/quintile
 - Concentration shares by decile/quintile
 - Kakwani and Reynolds Smolensky
 - Leakages and Coverage
 - Per capita transfers
 - Probit of “excluded”
 - Fiscal mobility (transition) matrices

Diagram 1 – Definitions of Income Concepts



Methodological Issues

- Under-reporting especially at the top
- Households with zero incomes (follow SEDLAC)
- Defining Income Concepts: What is Market Income?
- Calculating taxes and transfers at the household level; deciles/ quintiles, ok to mix?
- Ranking issues; if only net market income available, should HH always be ranked by it?
- Scaling-up issues
- Imputing in-kind public spending

Adding the top; Greater Bs. As., Argentina (Alvaredo and Piketty en López-Calva y Lustig, 2010)

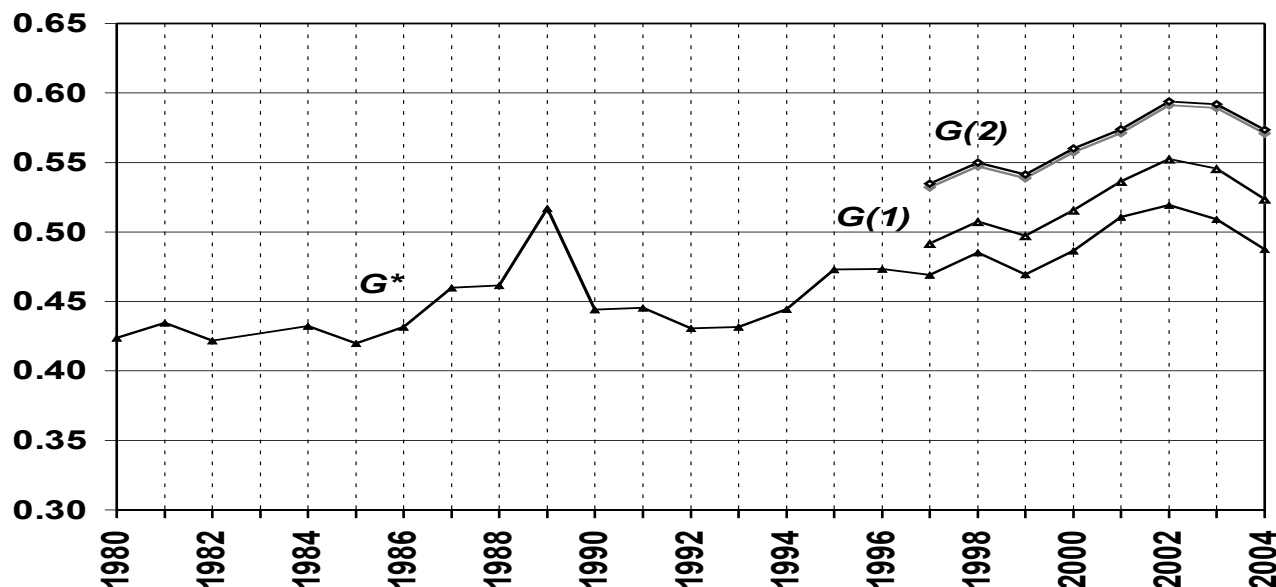


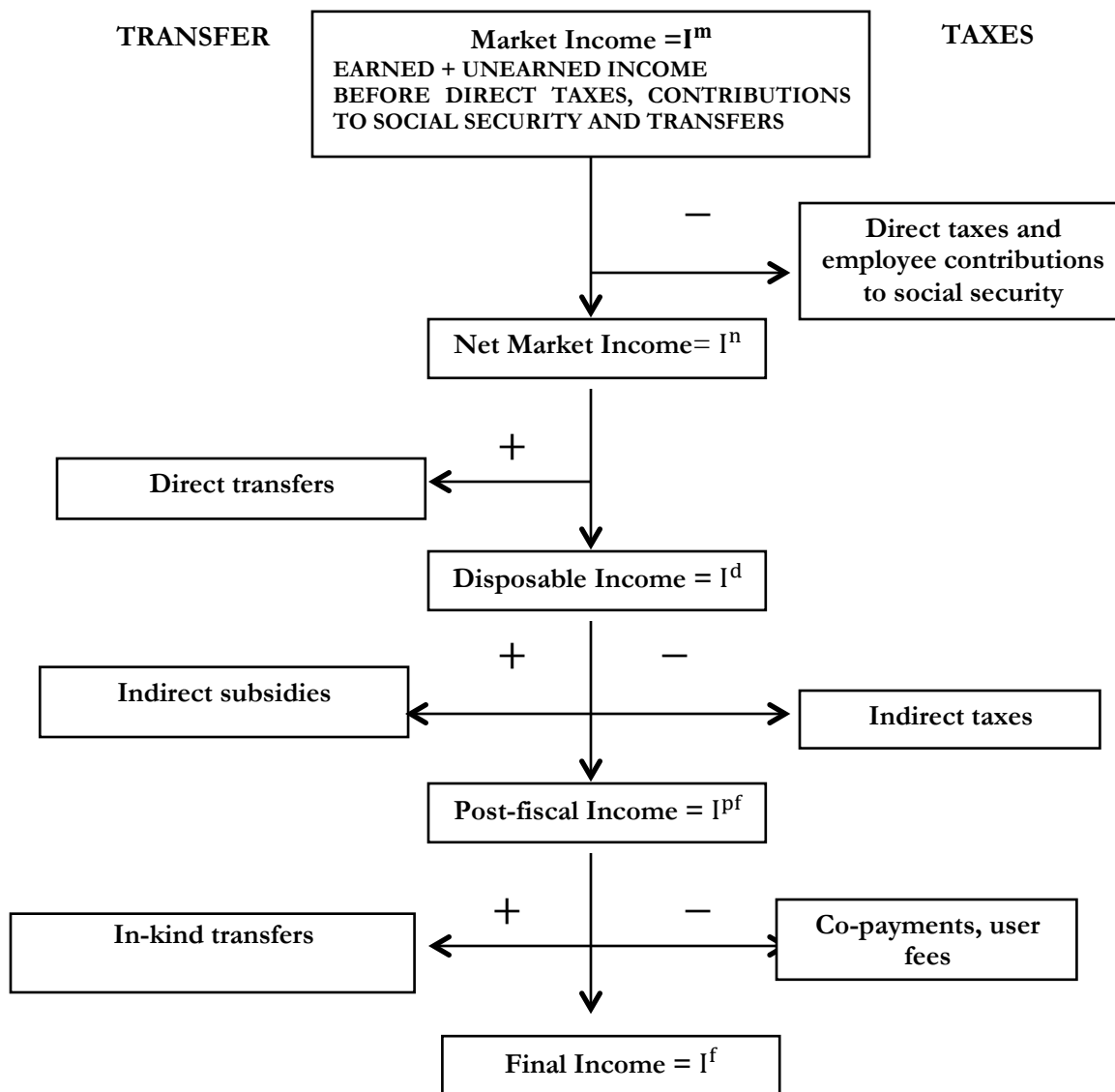
FIGURE 6
Gini coefficient in the Greater Buenos Aires 1980-2004

Notes: The black triangle denotes the Gini coefficient G^* of individual income based on the Greater Buenos Aires household survey, own calculations. Database for 1983 is missing. All results correspond to October surveys, except for 2003 (May). Only income earners with positive income were considered and no further adjustments were applied. The white triangle denotes the Gini coefficient $G(1)AS+(1-S)G^*$, where S is the estimate of the top 0.1% income share from Alvaredo (2010). The white diamond denotes the Gini coefficient $G(2)AS+(1-S)G^*$, where S is the estimate of the top 1% income share from Alvaredo (2010).

Methodological Issues

- Under-reporting especially at the top
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- Defining Income Concepts: What is Market Income?
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Diagram 1 – Definitions of Income Concepts



What is “market income”?

- In addition to the uncontroversial wages and salaries, income from capital and private transfers (e.g., remittances), what about these:
 - Incomes from sales of durables
 - Auto-consumption
 - Imputed rent for owner’s occupied housing
 - Contributory pensions from individualized accounts
 - Contributory pensions from social security

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- Incomes from sales of durables/NO
- Capital Gains/NO
- Auto-consumption/YES
- Imputed rent for owner's occupied housing/YES
- Alimony, Inheritance and Gifts ???
- Contributory pensions from individualized accounts/YES
- Contributory pensions from social security:
 - Benchmark: YES
 - Sensitivity Analysis: NO

What is “Net Market Income”?

- Market Income minus Direct Taxes and Contributions to Social Security (Payroll Taxes)
- But, contributions to social security:
 - Benchmark: contributions going to pension, are NOT subtracted; all the other contributions are
 - Sensitivity Analysis: all contributions to social security are subtracted

Methodological Issues

- Under-reporting especially at the top
- Households with zero incomes (follow SEDLAC)
- Defining Income Concepts: What is Market Income?
- Construction of income concepts/Calculating taxes and transfers at the household level; deciles/ quintiles, ok to mix?
 - Ranking issues; if only net market income available, should HH always be ranked by it?
 - Scaling-up issues; totals from public accounts by tax category/program; only for inequality and incidence
 - Imputing in-kind public spending: education, health; public goods (e.g., infrastructure)?

Construction of Income Concepts/ Calculating Taxes & Transfers

- Unfortunately, it is not possible to construct income concepts directly from household surveys
- Household Surveys in LA are quite heterogeneous:
 - Some report income and not consumption
 - Some do not report autoconsumption
 - Some do not report owner's occupied housing rent; they do not have the information to run hedonic regressions

Construction of Income Concepts/ Calculating Taxes & Transfers

- Even more importantly:
 - Not clear if reported income is before or after taxes. SEDLAC database assumes that employees' income is net of taxes and contributions to social security and self-employment and capital incomes are before taxes and transfers
 - Not always clear if people include government transfers in the income they report (which we usually take as “market” income)

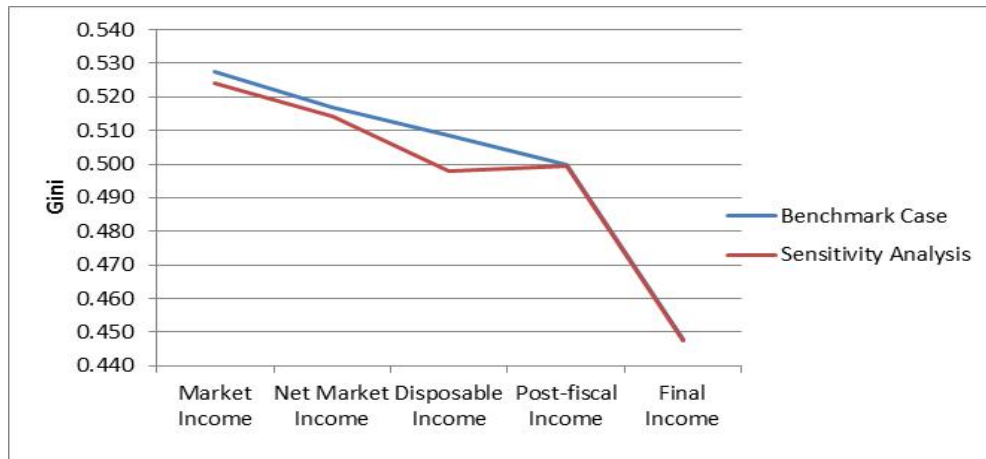
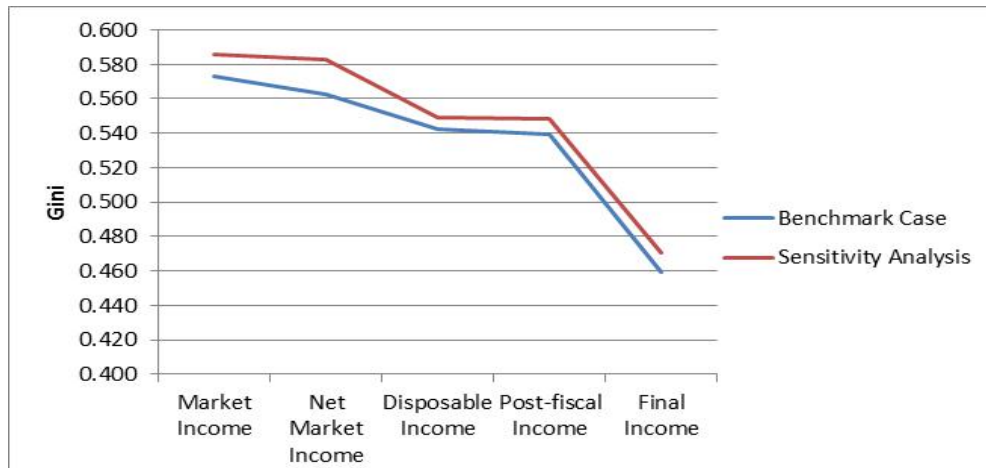
Construction of Income Concepts/ Calculating Taxes & Transfers

- Data on direct taxes, contributions to social security, government transfers, consumption (for indirect taxes and subsidies), use of government health services may be imperfectly captured or not captured at all

Options to Construct Income Concepts

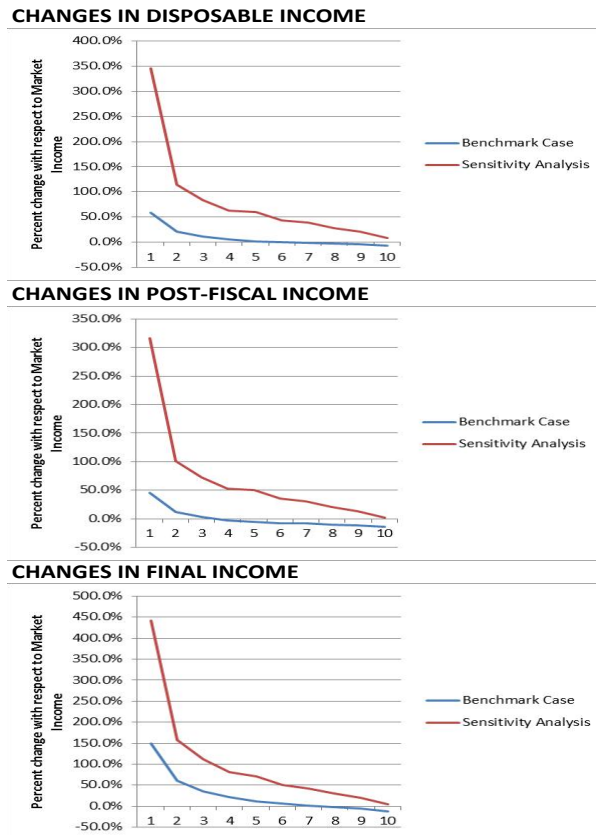
- Direct Identification Method
- Inference Method
- Simulation Method
- Imputation Method
- Alternate Survey
- Secondary Sources Method

How sensitive are results to the placement of contributory pensions? Brazil vs. Mexico



How sensitive to placement of contributory pensions: Uruguay incidence

Figure 4 - Changes in Income by Decile



Source: authors' calculations based on Encuesta Continua de Hogares (2009) and Nat. Accts.

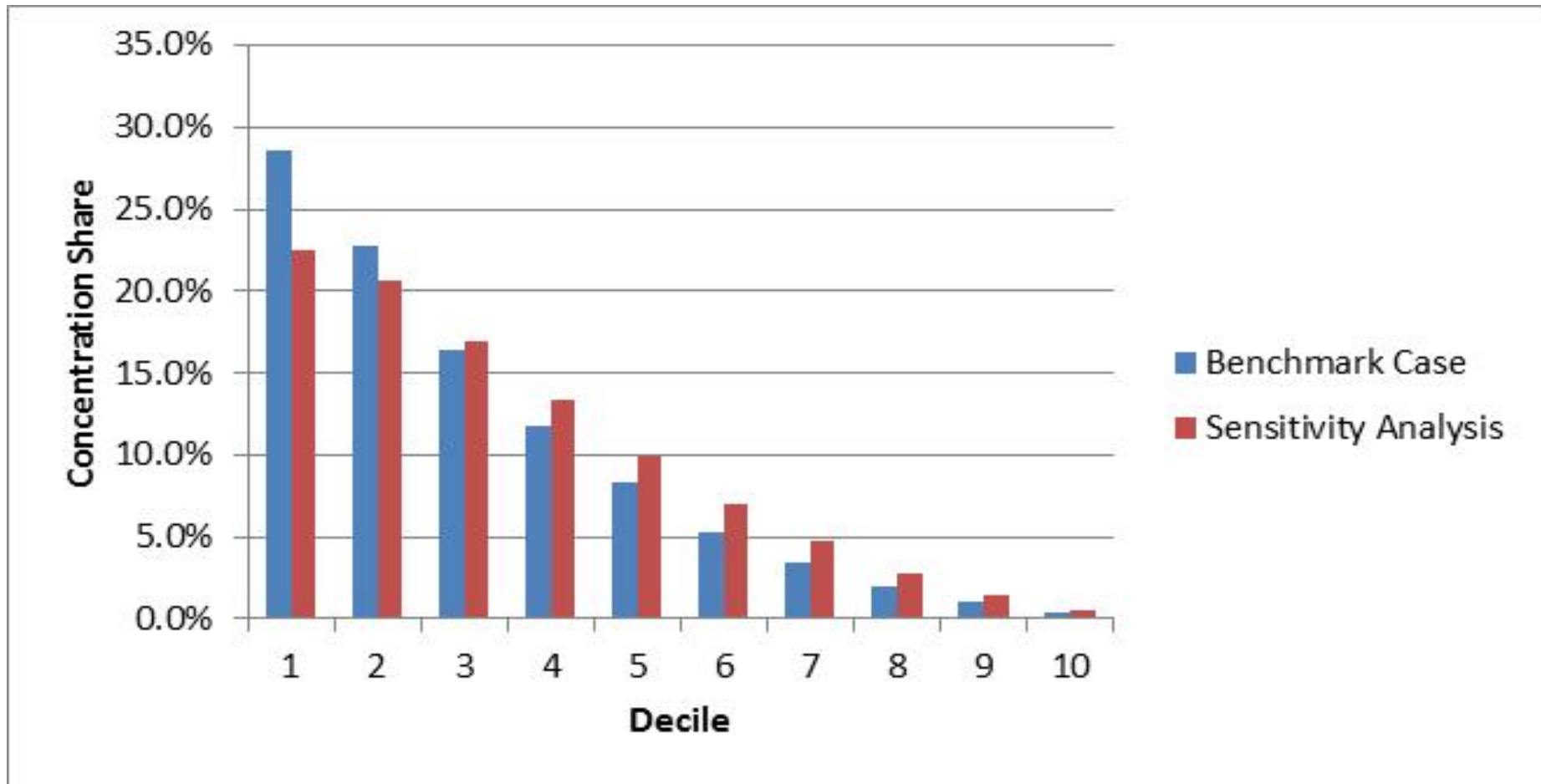
Notes:

For definition of income concepts see text.

Benchmark: contributory pensions are included in market income.

Sensitivity: contributory pensions are treated as government transfers.

How sensitive to placement of contributory pensions: Uruguay concentration shares CCTs



Main Questions

- Income vs. Consumption; “either or”, or “both”?
- How to deal with under-reporting at the top? Use tax returns data (Alvaredo for Colombia)
- What should be included under market income?
- How should owner’s occupied imputed rent be estimated? (we used 10% of mket. Income)
- Contributory pensions; “with” and “without”, other alternatives?

Main Questions

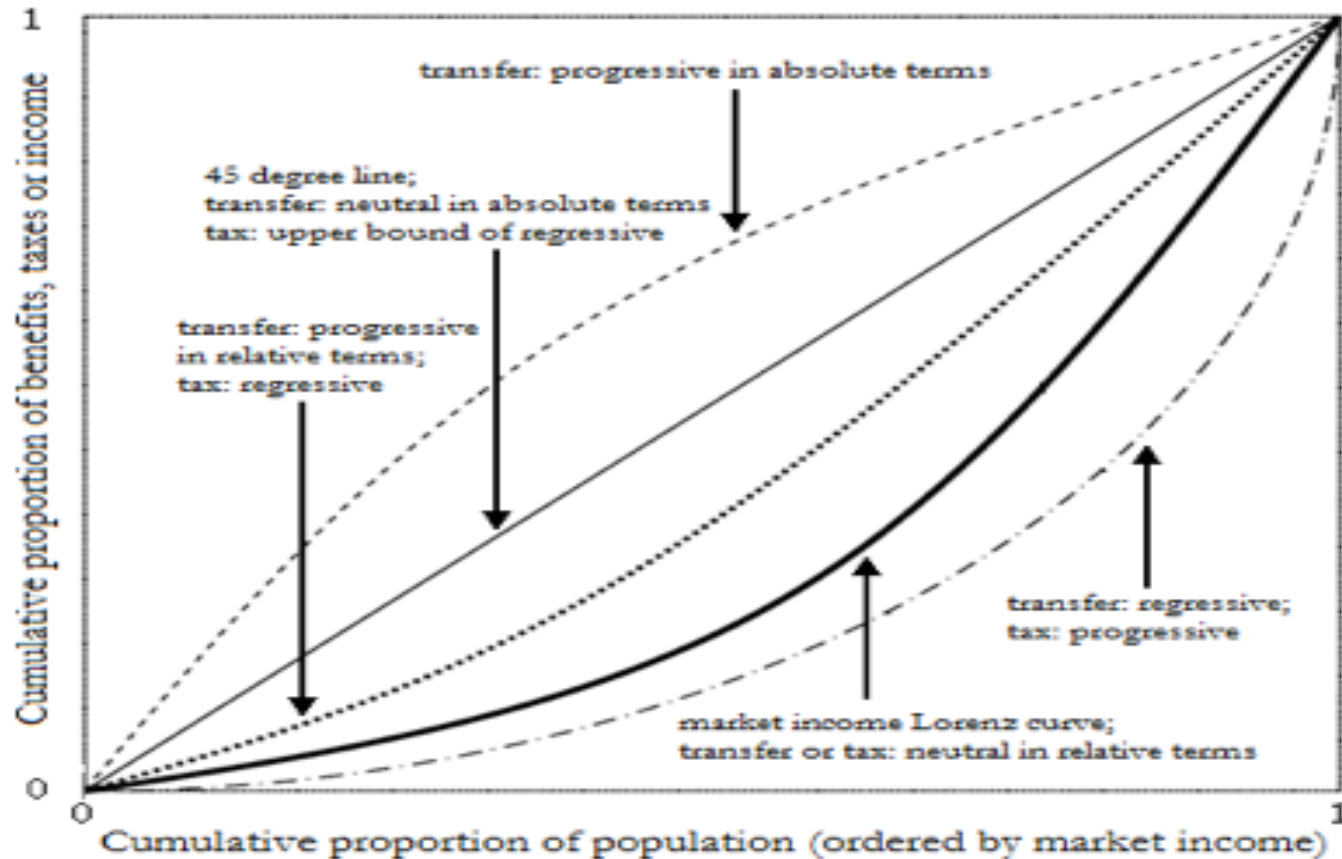
- Mixing methods to estimate taxes and transfers; e.g., at household level with decile info; acceptable?
- Ranking by which income concept? problem of heterogeneous surveys
- Scaling-up: category by category? Full amounts in public accounts?
- How to take into account tax evasion? direct taxes; indirect taxes

Main Questions

- How should in-kind government transfers be calculated?
 - Education
 - Health
 - Public goods: e.g., roads; sewage and sanitation; etc.

Main Questions

- Absence of Conventions on Progressiveness/
Regressiveness



Main Questions

Modeling:

- Behavioral responses: consumption and labor supply
- Inter-temporal effects
- General Equilibrium Effects
- Fiscal Sustainability

Main Questions

Costing “Opportunities for All”:

- Plain Vanilla case: CEQ calculates gaps straightforwardly (without scaling-up for income poverty measures)
- Will apply Cuesta’s approach

References

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