Commitment to Equity (CEQ) Workshop: Taking Stock of Theory, Practice and Results

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Outline

- **What is CEQ**
- **Incidence Analysis in CEQ**

What is CEQ?

Led by Nora Lustig, the Commitment to Equity (CEQ) project was designed to analyze the impact of taxation and social spending on inequality and poverty in individual countries and to provide a roadmap for governments, multilateral institutions, and nongovernmental organizations in their efforts to build more equitable societies. Launched in 2008, the CEQ is a project of the Center for Inter-American Policy and the Department of Economics, Tulane University and its founding co-sponsor the Inter-American Dialogue. In April 2014, the Center for Global Development became a partner of CEQ.

Since its inception, the CEQ has received financial support from Tulane University's Center for Inter-American Policy and Research, the School of Liberal Arts and the Stone Center for Latin American Studies as well as the Bill & Melinda Gates Foundation, the Canadian International Development Agency (CIDA), the Development Bank of Latin America (CAF), the General Electric Foundation, the Inter-American Development Bank (IADB), the International Fund for Agricultural Development (IFAD), the Norwegian Ministry of Foreign Affairs, OECD, the United Nations Development Programme's Regional Bureau for Latin America and the Caribbean (UNDP/RBLAC), and the World Bank.

What is CEQ: Current Team

- Director: Nora Lustig
- Technical Coordinator: Sean Higgins
- Project Coordinator and Lead RA: Samantha Greenspun
- Research Assistants:
  - Graduate: Rodrigo Aranda and Yang Wang
  - Undergraduate: Jacob Edelson

What is CEQ: Partnerships

Partners

- Founding partners: Inter-American Dialogue and Tulane University (CIPR and Department of Economics)
- New partner: Center for Global Development

Joint Projects:

- CBGA (Subrat Das): India
- ERF (Hala Abou-Ali): Egypt
- ICEFI: Rural-Urban El Salvador, Guatemala and Honduras
- IDB (Judy Morrison): Bolivia, Brazil, Chile, Colombia, Ecuador, Guatemala, Mexico, Peru and Uruguay (by race and ethnicity)
- UNDP (George Grey-Molina) : Ecuador, Nicaragua and Venezuela
- REPOA (Flora Myamba): Tanzania
- University of Ghana (Eric Osei-Assibey): Ghana
- World Bank (Gabriela Inchauste): Armenia, Ethiopia, Indonesia, Jordan, South Africa and Sri Lanka
- World Bank (LCR; Louise Cord): Equity Lab (Carlos Rodriguez); Dominican Republic (Alan Fuchs)
- World Bank (ECA; Luis F. Lopez-Calva): Russia

What is CEQ: Gates Project

- Gates Grant to Tulane: US$587,000
- Objectives:
  - CEQ Assessments in Ghana and Tanzania
  - Adapt methodology to low-income countries settings
  - CEQ Manual
- Teams (in addition to N. Lustig and S. Higgins and Tulane Ras)
  - Ghana: Stephen Younger and Eric Osei-Assibey
  - Tanzania: Stephen Younger, Flora Myamba and Kenneth Mdadila

What is CEQ: Country Coverage

Total: 31 countries at different stages; Asia (4); CIS (2); Middle East/North Africa (3); Latin America (17); SSA (4); United States

Finished: Argentina (spending only), Bolivia, Brazil, Costa Rica, El Salvador, Guatemala, Mexico, Paraguay (first version), Peru, United States and Uruguay

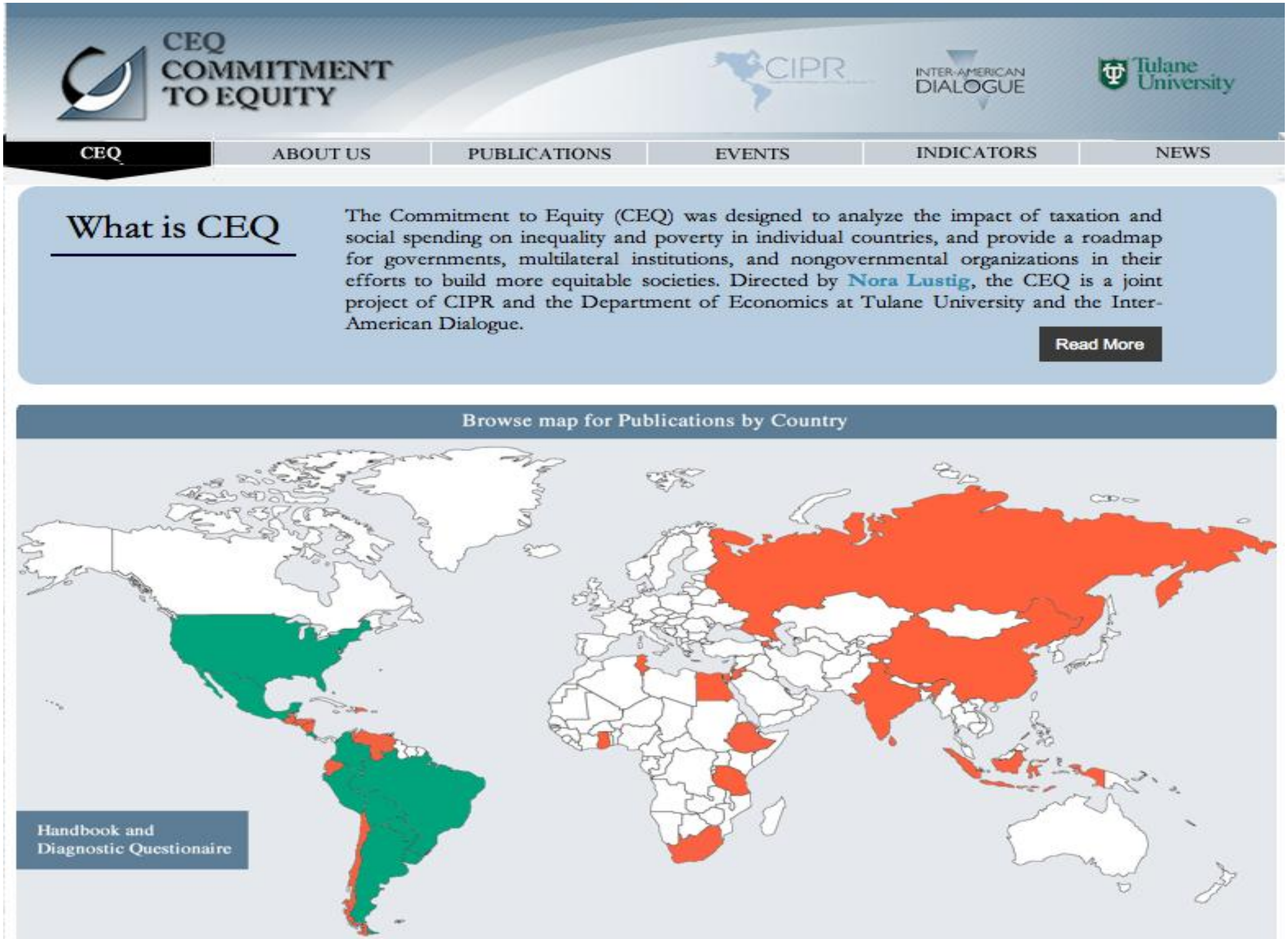
Almost finished: Armenia, Colombia, Ecuador, Ethiopia, Indonesia, Jordan, South Africa and Sri Lanka

What is CEQ: Country Coverage

In progress: Nicaragua, Paraguay (second version) and Venezuela

New countries: Argentina (taxes and spending), Chile, China, Dominican Republic, Egypt, Ghana, Honduras, India, Russia, Tanzania and Tunisia

What is CEQ: Website *www.commitmentoequity.org*



What is CEQ: CEQ Assessments

- What is the impact of taxes and transfers on inequality and poverty?
- How progressive are taxes and public spending?
- How effective are taxes and transfers?
- Who bears the burden of taxes and receives the benefits?
- How equitable is the use of education and health services?
- Identify areas of potential policy reform to enhance the capacity of the state to reduce inequality and poverty through taxes and transfers
  - Level of disaggregation: Population as a whole; by racial/ethnic groups; by gender; by location (rural-urban)

What is CEQ: Method

- Relies on state-of-the art tax and benefit incidence analysis
  - Ongoing consultation with experts to improve economic incidence estimates
- Uses state-of-the-art indicators to assess progressivity, pro-poorness, effectiveness and efficiency of taxes and transfers
- Provides information to identify the contribution of individual interventions to equity and poverty reduction objectives

What is CEQ: Tools

- **Handbook** (Lustig and Higgins, current version Sept 2013; includes sample ‘do files’; available on website
- **Master Workbook**: Excel Spreadsheet to present background information; assumptions; and results (Lustig and Higgins, current version Feb 2014; available upon request
- **Diagnostic Questionnaire:** available on website
- **Ado Stata Files**: in progress

=>>>> CEQ Manual (in progress)

Online Draft: with all three items available at the end of August 2014 (online draft)

Final (book): 2015-2016

What is CEQ: Data Requirements

- Ideally an Income-Expenditure household survey as recent as possible; however, methodological adaptations exist for consumption-only and income-only surveys (for the latter, CEQ uses matching techniques to a survey with consumption data)
- Fiscal budget data for same year as survey by spending and revenue lines
- Macroeconomic and poverty data for context and checking
- Detailed information on individual direct and indirect taxes, cash transfers, pension system/s, public education and healthcare systems, and indirect subsidies

What is CEQ: Team Structure

- Econometrician/poverty analyst: works with HH survey and macro data to generate CEQ Assessment
- Institutional expert (in country): provides detailed information on tax and transfer system as well as macro and fiscal data
- RA to support preparation of MWB
- Team size: from 2 (1 senior and 1 RA) to 10 (World Bank projects)

What is CEQ: Advice & Technical Support

- Adapting methodology to country's idiosyncrasies
- Quality-control (thorough reviews of MWB)
- Interpretation of results
- Write-ups

What is CEQ: Software

- Incidence analysis using Household Survey: ideally, Stata 13 (includes command to send results directly to MWB); previous Stata versions will need to do it manually (unless we succeed in programming the exporting of results from Stata to MWB)
- Compilation of information: Excel for MWB

What is CEQ: Outputs

- CEQ website www.commitmentoequity.org
  - Handbook
  - More than 20 Working Papers available on CEQ website
  - Basic indicators (in editable excel) available on CEQ website
- *Public Finance Review. Special Issue: Argentina, Bolivia, Brazil, Mexico, Peru and Uruguay; May 2014*

What is CEQ: Methodological Contributions

- Clarification and harmonization of concepts and methodological approaches

- New axiomatically-derived measure to estimate impact of taxes and transfers on the poor **Fiscal Impoverishment indicator**: Higgins and Lustig (2014)

What is CEQ: Impact

Examples:

- Costa Rica
- Ecuador
- Indonesia
- South Africa

COMMITMENT TO EQUITY

Outline

- What is CEQ
- **Incidence Analysis in CEQ**

Commitment to Equity Assessments

- Accounting Approach to incidence analysis: no behavioral, no general equilibrium effects and no intertemporal effects but it incorporates assumptions to obtain economic incidence (not statutory)
- Point-in-time
- Mainly average incidence; a few cases with marginal incidence
- Comprehensive standard fiscal incidence analysis of current systems: direct personal and indirect taxes (no corporate taxes); cash and in-kind transfers (public services); indirect subsidies
- Harmonized definitions and methodological approaches to facilitate cross-country comparisons
- Uses income/consumption per capita as the welfare indicator
- Allocators vary => full transparency in the method used for each category, tax shifting assumptions, tax evasion
- Secondary sources are used to a minimum

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

To generate the after or post taxes and transfers income…

Basic elements of standard fiscal incidence

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

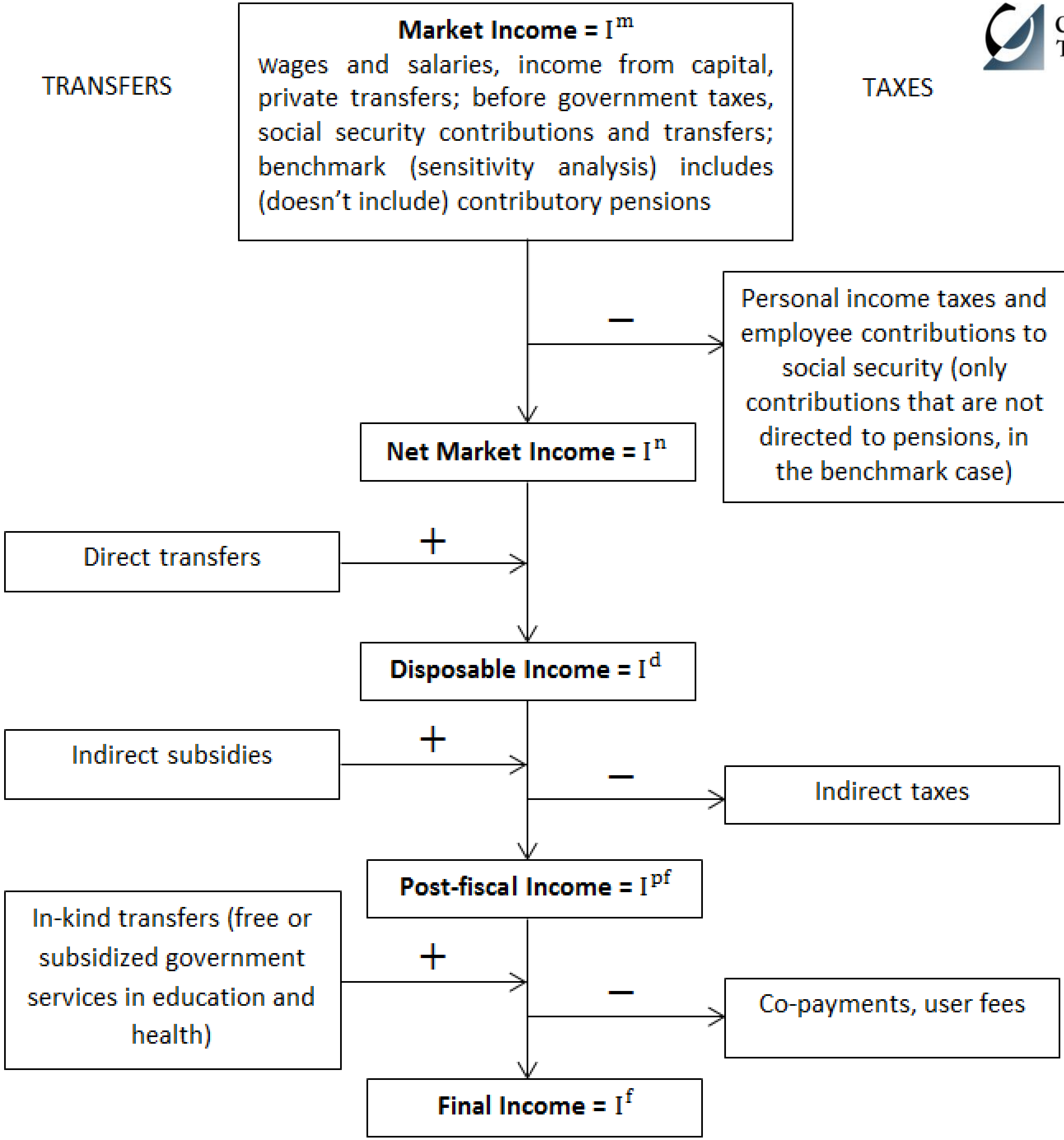
Taxes & Transfers

$$Y_h = I_h - \sum_i T_i S_{ih} + \sum_j R_j S_{jh}$$

Post-fisc Income

Pre-fisc Income

Incidence of Taxes & Transfers


TRANSFERS
TAXES
Market Income = I^m
Wages and salaries, income from capital, private transfers; before government taxes, social security contributions and transfers; benchmark (sensitivity analysis) includes (doesn't include) contributory pensions
−
Personal income taxes and employee contributions to social security (only contributions that are not directed to pensions, in the benchmark case)
Net Market Income = I^n
Direct transfers
+
Disposable Income = I^d
Indirect subsidies
+
−
Indirect taxes
Post-fiscal Income = I^{pf}
In-kind transfers (free or subsidized government services in education and health)
+
−
Co-payments, user fees
Final Income = I^f

Scenarios and Robustness Checks

- Benchmark scenario: contributory old-age pensions in market income/contributions as force saving
- Sensitivity 1 scenario: contributory old-age pensions as government transfer/contributions as a direct tax
- Other sensitivity scenarios: country-specific

Allocation Methods

- Direct Identification in microdata
  - However, results are checked: how realistic are they?
- If not in microdata, then:
  - Simulation
  - Imputation
  - Inference
  - Alternate Survey
  - Secondary Sources

Tax Shifting Assumptions

- Economic burden of direct personal income taxes is borne by the recipient of income
- Burden of payroll and social security taxes is assumed to fall entirely on workers
- Consumption taxes are assumed to be shifted forward to consumers.
- These assumptions are strong because they imply that labor supply is perfectly inelastic and that consumers have perfectly inelastic demand
- In practice, they provide a reasonable approximation (with important exceptions such as when examining effect of VAT reforms), and they are commonly used

Tax Evasion Assumptions: Case Specific

- Income taxes and contributions to SS:
  - Individuals who do not participate in the contributory social security system are assumed not to pay them; Brazil's survey includes a question on tax payments so tax evasion is assumed to be as reported in the survey.
- Consumption taxes:
  - Bolivia, Mexico, and Peru, assumed purchases in informal markets evaded taxes.
  - Mexico and Peru, that assumption was extended to purchases in rural areas and small villages, respectively.
  - Brazil, the indirect tax rate for each type of good or service was obtained from a secondary source that estimated the effective rates taking into account evasion
  - Uruguay, the legal rate of the VAT was applied to every purchase regardless of place of purchase or region (rural versus urban).

Monetizing in-kind transfers

- Incidence of public spending on education and health followed so-called "benefit or expenditure incidence" or the "government cost" approach.
- In essence, we use per beneficiary input costs obtained from administrative data as the measure of average benefits.
- This approach amounts to asking the following question:
  - How much would the income of a household have to be increased if it had to pay for the free or subsidized public service at the full cost to the government?

Indicators

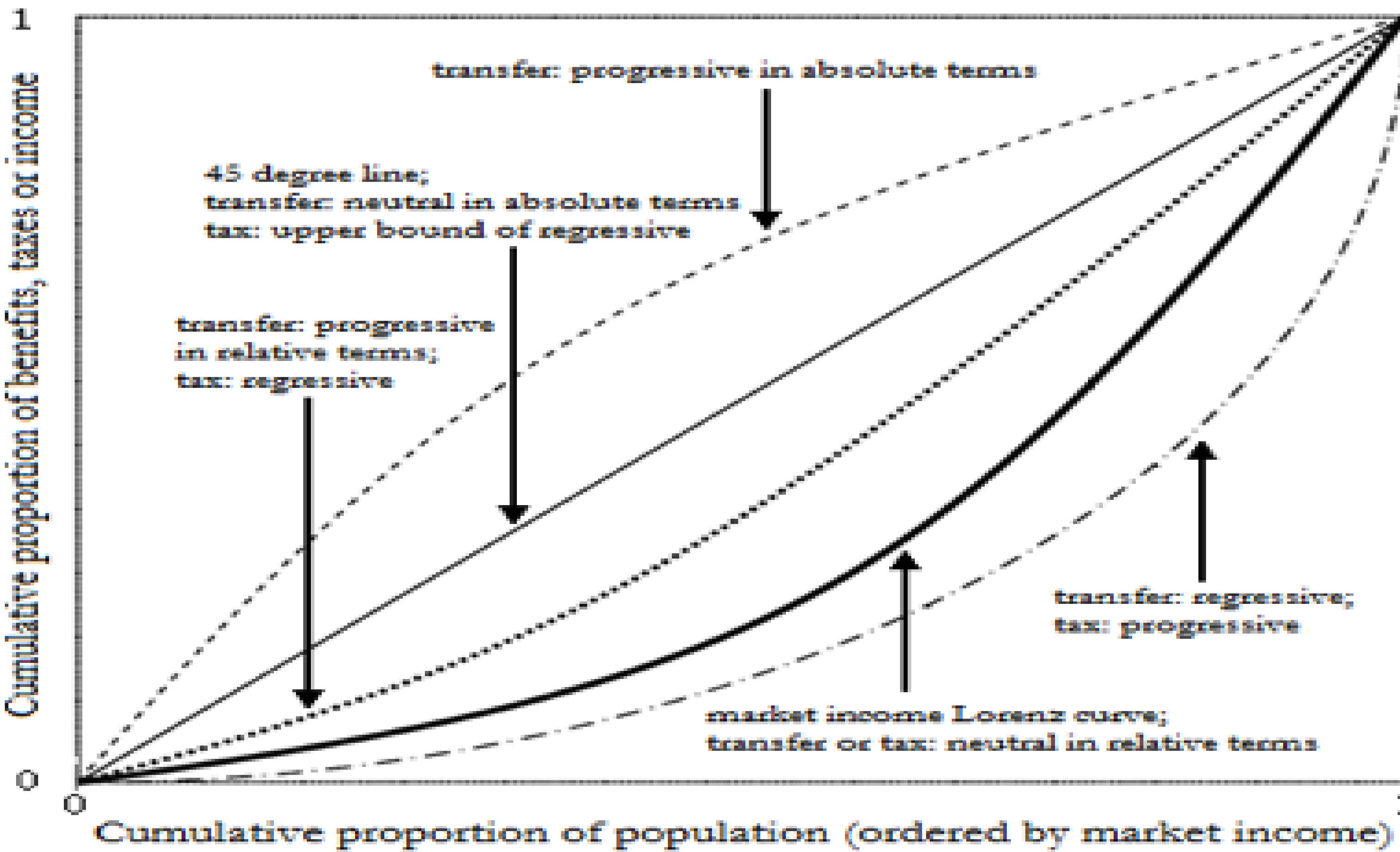
- Inequality and poverty:
  - Gini, Theil, Kuznetz ratios, ineq of opportunity
  - Headcount, poverty gap, squared poverty gap (international and national poverty lines)
  - Impoverishment and fiscal mobility
- Effectiveness and Efficiency
  - Change indicator by amount collected/spent
  - Beckerman and others
  - Actual vs. maximum redistribution

Indicators

- Progressivity:
  - Incidence by quantile or income group
  - Concentration Shares
  - Concentration Curves
  - Tax and Income-Redistribution Sense

  - Concentration Coefficients, Kakwani, Reynolds-Smolensky, etc.
  - Vertical Equity, Reranking and Classical Horizontal Inequity

Definitions of Progressive and Regressive



Progressive and Regressive Spending and Taxes

- Concentration Coefficients for Spending (in-class diagram): Triangle minus area under the concentration curve
  - Negative => progressive in absolute terms (transfer/person declines with income)
    - Equalizing and pro-poor
  - Positive but lower than Market Income Gini => progressive in relative terms (transfer as a share of income declines with income)
    - Equalizing but not pro-poor
  - Positive but higher than Market Income Gini => regressive (transfer as a share of income rises with income)
    - Unequalizing

Indicators

- Progressivity Scalar Indeces and Decompositions:
  - Concentration Coefficients
  - Kakwani
  - Reynolds-Smolensky
  - Decomposition of change in inequality into: Vertical, Reranking and Classical Horizontal Inequality
  - Contributions to inequality and poverty reduction by intervention:
    - Bibi and Duclos decomposition (in progress)
    - Engel et al.

Progressive vs. Pro-poor

- Note a net tax system can be distributionally neutral (or even progressive)and yet increase poverty
- Even if it does not increase poverty, a net tax system can make some of the pre-fisc poor (nonpoor) poorer (poor):
  - Fiscal Impoverishment FI indicator (Lustig and Higgins, 2014)

Thank you!