Session 1
Introduction to CEQ

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Learning Event on the Commitment to Equity Methodology
Tulane University and the World Bank
Washington, DC
February 18 -20, 2015
Workshop Structure

Day 1: morning

- **Session 1:** What is CEQ and examples of how CEQ Assessments can be used

- **Session 2:** The Analytics of Fiscal Redistribution: Estimating the Redistributive and Poverty-reduction Impact of Fiscal Interventions
Workshop Structure

Day 1: afternoon

- **Session 3** (lunch): Fiscal incidence analysis in practice: country experiences

- **Sessions 4 and 5**: Fiscal incidence analysis in practice: methodology
Workshop Structure

Days 2 and 3

Morning
- Describing the CEQ Master Workbook and CEQ ado files

Afternoon
- Stata training session
Outline

- What is CEQ

- How can CEQ Assessments be used
  - Cross-country analysis
  - Country-specific analysis: Brazil
Why do we need CEQ?

Three key indicators of a government’s commitment to reducing inequalities, poverty and social exclusion

- The share of total income devoted to social spending
- How equalizing and pro-poor this spending is
- Who pays for what the government spends
Specifically, suppose one wants to know...

- What is the impact of taxes and government transfers on inequality and poverty?
- Who are the net tax payers to the fiscal system?
- Are the poor impoverished by taxes net of cash transfers?
- How equitable is the use of government education and health services?
Suppose one wants to know...

- Is a specific fiscal intervention equalizing or unequalizing? What is its contribution?
- Is a specific intervention poverty-reducing or poverty-increasing? What is its contribution?
- How much of targeted benefits are leaked to the nonpoor?
- What is the coverage of benefits among the poor?
Suppose one wants to know...

- How do inequality and poverty change when you eliminate VAT exemptions?
- Who benefits from the elimination of user fees in primary education or the expansion of noncontributory pensions?
- Who loses from the elimination of energy subsidies?
What is CEQ: Description of Project

- The Commitment to Equity project (CEQ) was launched with the objective of answering questions like these.

- The CEQ project is an initiative of:
  - The Center for Inter-American Policy and Research (CIPR) and the Department of Economics, Tulane University, the Inter-American Dialogue and the Center for Global Development

- CEQ’s goals are to:
  - Foster evidence-based policy discussion
  - Assist governments, multilateral institutions, and nongovernmental organizations in their efforts to build more equitable societies
What is CEQ: the CEQ Assessment

The CEQ project developed the CEQ Assessment, a diagnostic instrument

• Comprehensive framework to analyze the effect of taxation and public spending on inequality and poverty
• Method: Fiscal Incidence analysis and qualitative diagnostic approach
• Application of a common methodology across countries makes cross-country comparisons more accurate
• Methodology is designed to be as comprehensive as possible without sacrificing detail in any particular component of the analysis
What is CEQ: Core Team

- Director: Nora Lustig
- Technical Coordinator: Sean Higgins
- Project Coordinator: Samantha Greenspun
- Team: Rodrigo Aranda, Ali Enami, and Yang Wang
- Advisory Board: list on CEQ homepage
- Consultants: Jim Alm, Francois Bourguignon, Jean-Yves Duclos, Peter Lambert, Anthony Shorrocks and Stephen Younger
- Country teams: listed at the end of presentation
What is CEQ: Partnerships and Collaborations

- **World Bank:** 11 countries, background papers, joint papers, policy briefs and LEL (Equity Lab)
- **IDB:** 10 countries in LAC, by ethnicity and race, overview papers for LA
- **ICEFI:** 4 countries in Central America, rural-urban
- **IFAD:** 4 countries, rural-urban
- **UNDP:** Ecuador (top incomes) and Venezuela
- **Economic Research Forum:** Egypt and Iran
- **AfDB:** Tunisia
- **CADEP:** Paraguay
- **CBGA:** India
- **FUSADES:** El Salvador
- **REPOA:** Tanzania
- **University of Ghana:** Ghana
- **OECD:** chapter for flagship publication and project on redistribution and the middle-class
- **IMF:** chapter for edited volume
- **CAF:** background paper
- **ADB:** box for flagship publication
- **CEPAL:** box for flagship publication
What is CEQ: Funding

- Tulane University (2008 -)
  - Center for Inter-American Policy and Research
  - School of Liberal Arts
  - Stone Center for Latin American Studies

- Bill & Melinda Gates Foundation (US $581,162)
  - CEQ Handbook (text, master workbook and ado files)
  - CEQ Assessments in Ghana and Tanzania

- Canadian International Development Agency (CIDA), the Norwegian Ministry of Foreign Affairs, and the General Electric Foundation (2008-2011)
What is CEQ: Country Coverage

- 33 countries at different stages of completion
  - Asia......................... 4
  - ECA..........................3
  - LAC..........................17
  - MENA.........................4
  - SSA..........................4
  - United States

- 17 CEQ Assessments have been completed
What is CEQ: Methodological Contributions

- Design of CEQ Assessments, including guidelines, Master Workbook and software
- Harmonization of concepts and methods
- Analytics of fiscal redistribution
- New measures: Fiscal Impoverishment and Fiscal Gains to the Poor
What is CEQ: Advice & Technical Support

- Adapting methodology to country’s idiosyncrasies
- Quality-control
- Interpretation of results
- Training
- Write-ups
What is CEQ: Outputs

- CEQ website [www.commitmenttoequity.org](http://www.commitmenttoequity.org)
  - Handbook
  - More than 20 Working Papers
  - Basic indicators (in editable excel)


- **New!**
CEQ Assessment
CEQ Assessment

Main diagnostic instrument of CEQ

- Comprehensive framework to analyze the effect of taxation and public spending on inequality and poverty
- Method: Fiscal Incidence analysis and qualitative diagnostic approach
- Application of a common methodology across countries makes cross-country comparisons more accurate
- Methodology is designed to be as comprehensive as possible without sacrificing detail in any particular component of the analysis
CEQ Assessment: Objectives

- What is the impact of taxes and transfers on inequality and poverty?
- How equalizing are taxes and public spending?
- How effective is the fiscal system in reducing inequality and poverty?
- Who bears the burden of taxes and receives the benefits?
- How equitable is the use of education and health services?
- Fiscal policy and rural/urban, gender and ethnic inequalities
- Identify areas of potential policy reform to enhance the capacity of the state to reduce inequality and poverty through taxes and transfers
CEQ Assessment: Method

- Relies on state-of-the-art tax and benefit incidence analysis
  - Ongoing consultation with experts to improve economic incidence estimates
- Uses conventional and newly developed indicators to assess progressivity, pro-poorness and effectiveness of taxes and transfers
- Allows to identify the contribution of individual fiscal interventions to equity and poverty reduction objectives
CEQ Assessment: Fiscal Incidence Analysis

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

- **Income after taxes and transfers**
- **Taxes**
- **Transfers**

- **Income before taxes and transfers**
- **Share of tax \( i \) paid by unit \( h \)**
- **Share of transfer \( j \) received by unit \( h \)**
CEQ Assessment: Fiscal Interventions

• Currently included:
  – Direct taxes
  – Direct cash transfers
  – Non-cash direct transfers such as school uniforms and breakfast
  – Contributions to pensions and social insurance systems
  – Indirect taxes on consumption
  – Indirect subsidies
  – In-kind transfers such as spending on education and health

• Working on:
  – Corporate taxes
  – Housing subsidies
CEQ Assessment: Income Concepts

1. **Market Income**
2. **Plus Direct Transfers Minus Direct Taxes**
3. **Disposable Income**
4. **Minus Net Indirect Taxes**
5. **Post-Fiscal or Consumable Income**
6. **Plus Monetized Value of Public Services: Education & Health**
7. **Final Income**
CEQ Assessment: Tools

- **Handbook**: Lustig and Higgins, current version Sept 2013; includes sample Stata code (available on CEQ website)

- **Master Workbook**: Excel Spreadsheet to present background information, assumptions and results. Lustig and Higgins, version Feb 2015 (available with permission)

- **Diagnostic Questionnaire**: available on website

- **Ado Stata Files**: Completed: disaggregated tables of results and sheets D1 and D11 of Master Workbook (available with permission)

- **CEQ Handbook (forthcoming)**

  Lustig and Higgins, editors. *Commitment to Equity Handbook: Estimating the Redistributive Impact of Fiscal Policy*
Outline

- What is CEQ

- How can CEQ Assessments be used
  - Cross-country analysis
  - Country-specific analysis: Brazil
Change in Gini: Disposable vs. Market (in GINI points)

Fiscal redistribution: developing countries compared to advanced countries

Sources:
blue EUROMOD 2013 Gini series: https://www.iser.essex.ac.uk/euromod/statistics
red Lustig (2015a)
Cross-country Analysis: CEQ 13

- Do more unequal countries spend more on social programs?
  - Yes

Source: Lustig (2015a)
Cross-country Analysis: CEQ 13

- Do more unequal countries redistribute more?
  - Yes

Percentage Change in Gini: Final vs. Market Income Gini

Source: Lustig (2015a)
Cross-country Analysis: CEQ 13

Are (net) indirect taxes unequalizing? Do they increase poverty?

- In 6 countries their marginal contribution is unequalizing
- In 5 countries they increase poverty over and above market income poverty

Source: Lustig (2015a)
## Cross-country Analysis: CEQ 13

**How pro-poor is spending on education and health?**

<table>
<thead>
<tr>
<th>Country</th>
<th>Educ Total</th>
<th>Pre-school</th>
<th>Primary</th>
<th>Secondary</th>
<th>Tertiary</th>
<th>Health</th>
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<tr>
<td>Armenia (2011)</td>
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*CC is almost equal to market income Gini coefficient

Source: Lustig (2015b)
BRAZIL

Source: Higgins and Pereira (2014) and Lustig (2015a, b, c)
Primary and Social Spending/GDP vs GNI/capita

Source: Lustig (2015a)
Suppose you want to know...

- What is the impact of taxes and government transfers on inequality and poverty?
- What is the contribution of direct taxes and direct transfers to the change in inequality?
- Who (which income category) are the net tax payers to the fiscal system?
- Are the poor impoverished by taxes net of cash transfers?
Fiscal Redistribution: Brazil, Chile, Colombia, Indonesia, Mexico and South Africa

Gini Coefficient, circa 2010

Source: Lustig (2015a)
Suppose you want to know...

- Is a specific intervention equalizing or unequalizing? What is its contribution?

- Next table shows marginal contributions of direct taxes and direct transfers
## Marginal Contribution of Direct Taxes and Transfers

**Brazil**  
(2009)

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<thead>
<tr>
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<tbody>
<tr>
<td><strong>Market Income Gini</strong></td>
<td>0.5788</td>
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<tr>
<td><strong>RE</strong></td>
<td>0.0350</td>
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<tr>
<td><strong>Direct Taxes</strong></td>
<td>0.0172</td>
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<td><strong>Direct Transfers</strong></td>
<td>0.0210</td>
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</tbody>
</table>

**Note:**  
RE = Gini for market income less Gini for disposable income

Source: Lustig (2015a)
Suppose you want to know…

- Who are the net tax payers to the fiscal system?
- Are the poor impoverished by taxes net of cash transfers?
- What is the impact of taxes and government transfers on poverty?
Net Receivers and Net Payers to the Fiscal System by Income Category (circa 2010)

- Brazil: Net payers to the fisc start in the moderate poverty income group

Source: Lustig (2015a)
Are the poor impoverished by taxes net of cash transfers?

Yes

- 36.8% of post-fisc poor are fiscally impoverished
- Total fiscal impoverishment over USD $700 million
- Impoverished pay $0.19 per person per day (10% of their incomes) in net taxes on average

Source: Higgins and Lustig (2014)
Fiscal Poverty Reduction: Brazil, Chile, Colombia, Indonesia, Mexico and South Africa

Headcount Ratio ($2.50/day ppp poverty line), circa 2010

Source: Lustig (2015a)
Suppose you want to know...

- Is spending on education and health pro-poor? Pro-poor is defined as the case in which per capita spending tends to fall with income.

- Yes, for the most part
  - Except for tertiary education, spending on education is pro-poor
  - Spending on health is pro-poor
  - *Pro-poor* or the middle-classes opting out of poor quality services
### Progressivity and Pro-poorness of Education and Health Spending, circa 2010
(Brazil highlighted in yellow)

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**Notes:**
- Pro-poor CC is negative: Same per capita for all; CC = 0
- Progressive CC is positive but lower than market income Gini:
- Progressive CC is positive but lower than market income Gini
- Pro-poor CC is negative: Same per capita for all; CC = 0
- Progressive CC is positive but lower than market income Gini
- Pro-poor CC is positive but lower than market income Gini
- Regressive CC positive AND higher than market income Gini
- Pro-poor CC is negative: Same per capita for all; CC = 0
- Regressive CC positive AND higher than market income Gini
- Progressive CC positive but lower than market income Gini

*Health spending data available for selected countries.*
Brazil: Summing-up

Inequality
- The net fiscal system is quite equalizing in Brazil, especially when compared with countries that start at similar levels of inequality like Colombia
- Direct taxes, direct transfers and in-kind transfers are equalizing
- Net Indirect taxes are unequalizing but slightly

Poverty
- Net indirect taxes are quite devastating for poverty
  - Poverty is higher than market income poverty
  - Net payers to the fiscal system start as low as the third decile
  - More than a third of the poor are made poorer through the effect of indirect taxes

Use of services
- Mostly pro-poor
- Opting-out of middle-classes due to poor quality
When using data, graphs or tables from this presentation please cite as:


- Lustig, Nora. 2015c. *Fiscal Redistribution in Middle-income Countries: Brazil, Chile, Colombia, Indonesia, Mexico, Peru and South Africa*. CEQ Working Paper No. 31, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, Forthcoming.
Also, please cite: CEQ Country Master Workbooks and Papers  
(Year of Survey; C=consumption & I=income)  
(Master Workbook, MWB, Version)


10. **Indonesia (2012; C):** Jon Jellema and Matthew Wai-Poi. 2014. CEQ Master Workbook, Tulane University and The World Bank (February 18, 2014)


Household Surveys Used in Country Studies

1. **Armenia**: Integrated Living Conditions Survey, 2011 (I)
2. **Bolivia**: Encuesta de Hogares, 2009 (I)
3. **Brazil**: Pesquisa de Orçamentos Familiares, 2009 (I)
4. **Chile**: Encuesta de Caracterización Social (CASEN), 2009 (I)
5. **Colombia**: Encuesta de Calidad de Vida, 2010 (I)
6. **Costa Rica**: Encuesta Nacional de Hogares, 2010 (I)
7. **Ecuador**: Encuesta Nacional de Ingresos y Gastos de los Hogares Urbano y Rural, 2011-2012 (I)
8. **El Salvador**: Encuesta De Hogares De Propositos Multiples, 2011 (I)
9. **Ethiopia**: Ethiopia Household Consumption Expenditure Survey and Ethiopia Welfare Monitoring survey, 2011 (C)
10. **Guatemala**: Encuesta Nacional de Ingresos y Gastos Familiares, 2010 (I)
11. **Indonesia**: Survei Sosial-Ekonomi Nasional, 2012 (C)
12. **Mexico**: Encuesta Nacional de Ingreso y Gasto de los Hogares, 2010 (I)
13. **Peru**: Encuesta Nacional de Hogares, 2009 (I)
14. **South Africa**: Income and Expenditure Survey and National Income Dynamics Study, 2010-2011 (I)
15. **Uruguay**: Encuesta Continua de Hogares, 2009 (I)

Note: The letters "I" and "C" indicate that the study used income or consumption data, respectively.
Thank you!