Outline

• Commitment to Equity (CEQ) Institute: Brief Description
• Methodological Highlights of the CEQ Approach
• Taxes and Spending Combined:
  • Current Systems
  • Tax-based Income Floors in SSA
  • Budget-neutral UBI in MICs
CEQ Institute: brief description

**Mission:** The CEQ Institute works to reduce inequality and poverty through comprehensive and rigorous tax and benefit incidence analysis, and active engagement with the policy community

**Objective:** To measure the impact of fiscal policy on inequality and poverty across the world using a comparable framework

**Workstreams:**

- Research-based policy tools
- Data Center
- Advisory and training services
- Bridges to policy

- Grant from Bill & Melinda Gates Foundation $4.9 million for 5 years (2015 – 2020)
Fiscal redistribution assessments:

- 41 finished
- 25 in progress

Nearly 80% of world’s extreme poor

Bill & Melinda Gates Foundation:
$4.9 million for 5 years (2016-2020)
Total CEQ countries by region and year (2008-2019) – includes World Bank studies

Total countries by year by region

- Latin America & the Caribbean
- Middle East and North Africa
- East Asia and Pacific
- Europe and Central Asia
- South Asia
- Sub-Saharan Africa

Methodological Highlights

www.commitmentoequity.org

CEQ Assessment

- How much income redistribution and poverty reduction is being accomplished through fiscal policy?
- How equalizing and pro-poor are specific taxes and government spending?
- How effective are taxes and government spending in reducing inequality and poverty?
- What is the impact of fiscal reforms that change the size and/or progressivity of a particular tax or benefit?
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: income concepts

MARKET INCOME

PLUS DIRECT TRANSFERS MINUS DIRECT TAXES

DISPOSABLE INCOME

PLUS INDIRECT SUBSIDIES MINUS INDIRECT TAXES

CONSUMABLE INCOME

PLUS MONETIZED VALUE OF PUBLIC SERVICES: EDUCATION & HEALTH

FINAL INCOME
CEQ Assessment: data requirements

• A recent Household Survey (possible options: expenditure-income, expenditure, employment, LSMS, etc.) representative at the national level

• Detailed description of the characteristics of each tax and spending item to be included in the analysis

• Audited or confirmed budget and administrative data for year of the survey

• Input-output table, SAM (Social Accounting Matrix), or SUT (Supply and Use table)
CEQ Assessment: fiscal interventions

- Currently included:
  - Direct taxes (personal)
  - Direct cash non-cash transfers
  - Contributions to pensions and social insurance systems
  - Indirect taxes on consumption
  - Indirect subsidies
  - In-kind transfers such as spending on education and health (and housing) at average government costs
Fiscal incidence in CEQ assessments

• Comprehensive standard fiscal incidence analysis of current systems: direct personal taxes (no corporate taxes) and indirect 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
Fiscal incidence in CEQ assessments

- Accounting approach
  - no behavioral responses
  - no general equilibrium effects
  - no intertemporal effects

  - However, economic rather than statutory incidence

- Point-in-time

- Mainly average incidence; a few cases with marginal incidence
Economic Incidence (as opposed to statutory) - 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

- Consumption taxes
  - Place of purchase: informal markets are assumed not to charge them
  - Some country teams assumed small towns in rural areas do not to pay them
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?

- New methods under development
Treatment of contributory social insurance pensions in CEQ

Two extreme scenarios:

- Deferred income in actuarially fair systems: pensions included in *pre-fiscal income* and contributions treated as mandatory savings

- Government transfer: pensions included among direct transfers and contributions treated as a direct tax
Taxes and Spending Combined

Current Systems
Based on:


• Empirical results for 37 countries based on fiscal incidence studies from the Commitment to Equity Institute for around 2010

• **East & South Asia**: China, Indonesia and Sri Lanka

• **Europe and Central Asia**: Albania, Armenia, Croatia, Georgia, Poland, and Russia

• **Latin America**: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela

• **Middle East and North Africa**: Iran, Jordan, and Tunisia

• **Sub-Saharan Africa**: Burkina Faso, Ethiopia, Ghana, Morocco, South Africa, Tanzania, and Uganda
Key questions

• How much income redistribution and poverty reduction is being accomplished through fiscal policy?

• How significant is the assumption made about contributory pensions?

• Can fiscal systems be poverty-increasing?
Inequality
Redistributive effect

(Change in Gini points: market income plus pensions and market income to disposable income, circa 2010)

Note: countries ranked by redistributive effect in the PDI scenario

Source: see bibliographical reference by country at the end of this presentation.
In sum...

• In **NO** country, inequality increases as a result of taxes, subsidies and social spending

  ➢ Fiscal policy is always equalizing

• Assumptions about contributory pensions can make a big difference in countries with large social security systems and a high proportion of retirees

  ➢ Pensions, however, can be equalizing or unequalizing
Poverty
CEQ Assessment: income concepts

PREFISCAL INCOME

PLUS DIRECT TRANSFERS MINUS DIRECT TAXES

DISPOSABLE INCOME

PLUS INDIRECT SUBSIDIES MINUS INDIRECT TAXES

CONSUMABLE INCOME

Source: Lustig (2018)
Fiscal policy and poverty reduction

Poverty line 1.25 dollars 2005 PPP/day; in %
Contributory pensions as deferred income

Note: information ranked by poverty reduction in %

Source: see bibliographical reference by country at the end of this presentation.
Fiscal policy and poverty reduction

Poverty line 2.5 dollars 2005 PPP/day; in %

Contributory pensions as deferred income

Note: information ranked by poverty reduction in %

Source: see bibliographical reference by country at the end of this presentation.
Fiscal policy and poverty reduction

Poverty line 4 dollars 2005 PPP/day; in %

Contributory pensions as deferred income

Note: information ranked by poverty reduction in %

Source: see bibliographical reference by country at the end of this presentation.
• Fiscal policy can be equalizing but poverty increasing (in terms of the poor’s ability to consume private goods and services):
  
  1.25 dollars/day line: Burkina Faso, Tanzania, Ghana, Ethiopia, Nicaragua, Guatemala and Uganda
  
  2.50 dollars/day line: Croatia, Poland, Armenia, Ghana, Tanzania, Albania, Burkina Faso, Guatemala, Nicaragua, Brazil, Bolivia, Dominican Republic and Honduras
  
  4 dollars/day line: Armenia, Guatemala, Honduras, Nicaragua, Burkina Faso, Bolivia, Dominican Republic and El Salvador

• This worrisome result stems mainly from consumption taxes

Note: Poverty lines in 2005 PPP
In conclusion...

• Fiscal systems are always equalizing but can often reduce the purchasing power of the poor

  Warning: unintended consequence of the domestic resource mobilization agenda can be making the poor worse off
Taxes and Spending Combined

Are Tax-funded Income Floors in SSA Feasible?
Reference:

# Change in Post Transfers Squared Poverty Gap

## Gross Income

<table>
<thead>
<tr>
<th>Country</th>
<th>Spending Neutral</th>
<th>Poverty Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfect targeting</td>
<td>Universal</td>
</tr>
<tr>
<td>Comoros</td>
<td>-79%</td>
<td>-19%</td>
</tr>
<tr>
<td>Ghana</td>
<td>-10%</td>
<td>-3%</td>
</tr>
<tr>
<td>Ivory Coast</td>
<td>-37%</td>
<td>-20%</td>
</tr>
<tr>
<td>Namibia</td>
<td>-76%</td>
<td>-40%</td>
</tr>
<tr>
<td>South Africa</td>
<td>-31%</td>
<td>-9%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>-9%</td>
<td>-1%</td>
</tr>
<tr>
<td>Togo</td>
<td>-16%</td>
<td>-3%</td>
</tr>
<tr>
<td>Zambia</td>
<td>-10%</td>
<td>-5%</td>
</tr>
</tbody>
</table>

Source: Lustig, Jellena and Martinez Pabon (2019).
## Change in Postfiscal Squared Poverty Gap Consumable Income

<table>
<thead>
<tr>
<th>Country</th>
<th>Spending Neutral</th>
<th>Poverty Gap</th>
<th>Poverty Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfect targeting</td>
<td>Universal</td>
<td>Perfect targeting</td>
</tr>
<tr>
<td>Comoros</td>
<td>3%</td>
<td>3%</td>
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</tr>
<tr>
<td>Ghana</td>
<td>-67%</td>
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<tr>
<td>Ivory Coast</td>
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<td>5%</td>
<td>NF</td>
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<tr>
<td>Namibia</td>
<td>-28%</td>
<td>NF</td>
<td>NF</td>
</tr>
<tr>
<td>South Africa</td>
<td>-61%</td>
<td>-24%</td>
<td>NF</td>
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<td>Tanzania</td>
<td>-16%</td>
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<td>NF</td>
</tr>
<tr>
<td>Togo</td>
<td>17%</td>
<td>24%</td>
<td>NF</td>
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<tr>
<td>Uganda</td>
<td>-12%</td>
<td>1%</td>
<td>-98%</td>
</tr>
<tr>
<td>Zambia</td>
<td>-6%</td>
<td>-1%</td>
<td>NF</td>
</tr>
</tbody>
</table>

Financed with a proportional increase in **direct taxes**

Financed with a proportional increase in **indirect taxes**

Source: Lustig, Jellena and Martínez Pabon (2019).
Incidence of Total Taxes (Direct and Indirect) by Decile for the Baseline and Targeted Poverty Gap Scenario Financed by Indirect Taxes (%)

<table>
<thead>
<tr>
<th>Decile</th>
<th>Comoros Baseline Poverty Gap (Targeted)</th>
<th>Ghana Baseline Poverty Gap (Targeted)</th>
<th>Ivory Coast Baseline Poverty Gap (Targeted)</th>
<th>Namibia Baseline Poverty Gap (Targeted)</th>
<th>South Africa Baseline Poverty Gap (Targeted)</th>
<th>Tanzania Baseline Poverty Gap (Targeted)</th>
<th>Togo Baseline Poverty Gap (Targeted)</th>
<th>Uganda Baseline Poverty Gap (Targeted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1%</td>
<td>7%</td>
<td>3%</td>
<td>21%</td>
<td>502%</td>
<td>5%</td>
<td>10%</td>
<td>32%</td>
</tr>
<tr>
<td>2</td>
<td>1%</td>
<td>7%</td>
<td>3%</td>
<td>17%</td>
<td>10%</td>
<td>68%</td>
<td>5%</td>
<td>16%</td>
</tr>
<tr>
<td>3</td>
<td>2%</td>
<td>7%</td>
<td>3%</td>
<td>10%</td>
<td>26%</td>
<td>71%</td>
<td>5%</td>
<td>15%</td>
</tr>
<tr>
<td>4</td>
<td>2%</td>
<td>7%</td>
<td>3%</td>
<td>9%</td>
<td>23%</td>
<td>50%</td>
<td>5%</td>
<td>14%</td>
</tr>
<tr>
<td>5</td>
<td>2%</td>
<td>8%</td>
<td>4%</td>
<td>16%</td>
<td>21%</td>
<td>37%</td>
<td>6%</td>
<td>14%</td>
</tr>
<tr>
<td>6</td>
<td>2%</td>
<td>8%</td>
<td>4%</td>
<td>15%</td>
<td>21%</td>
<td>28%</td>
<td>6%</td>
<td>14%</td>
</tr>
<tr>
<td>7</td>
<td>3%</td>
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<td>5%</td>
<td>16%</td>
<td>22%</td>
<td>27%</td>
<td>7%</td>
<td>16%</td>
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<tr>
<td>8</td>
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<td>10%</td>
<td>5%</td>
<td>17%</td>
<td>24%</td>
<td>30%</td>
<td>8%</td>
<td>18%</td>
</tr>
<tr>
<td>9</td>
<td>3%</td>
<td>11%</td>
<td>6%</td>
<td>18%</td>
<td>29%</td>
<td>35%</td>
<td>9%</td>
<td>20%</td>
</tr>
<tr>
<td>10</td>
<td>5%</td>
<td>15%</td>
<td>7%</td>
<td>23%</td>
<td>38%</td>
<td>43%</td>
<td>20%</td>
<td>31%</td>
</tr>
<tr>
<td>Total</td>
<td>3%</td>
<td>11%</td>
<td>5%</td>
<td>19%</td>
<td>33%</td>
<td>41%</td>
<td>11%</td>
<td>21%</td>
</tr>
</tbody>
</table>

Source: Lustig, Jellena and Martinez Pabon (2019).
Taxes and Spending Combined

Are Budget-neutral UBI Programs in Middle-Income Countries Feasible?
Reference:

## Poverty in Baseline and UBI Scenarios with Transfers Equal to Average Poverty Gap

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Country</th>
<th>Baseline Consumable Income</th>
<th>UBI SCENARIOS</th>
<th>UBI SCENARIOS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Poverty Gap</td>
<td>Poverty Gap</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Financed by</td>
<td>Financed by</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Direct Tax $^5$</td>
<td>Indirect Tax $^5$</td>
</tr>
<tr>
<td>Squared Pov Gap</td>
<td>Brazil</td>
<td>5.3</td>
<td>2.1</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>Chile</td>
<td>6.8</td>
<td>2.1</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>India</td>
<td>8.7</td>
<td>1.8</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>Indonesia</td>
<td>3.9</td>
<td>N/A</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Russia</td>
<td>1.0</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>South Africa</td>
<td>21.3</td>
<td>9.1</td>
<td>11.3</td>
</tr>
</tbody>
</table>

Source: Lustig, Rigolini, Gentilini, Monsalve and Quan (forthcoming)
Budget-neutral UBI Generosity vs. Direct Tax Burden

Source: Lustig, Rigolini, Gentilini, Monsalve and Quan (forthcoming)
Budget-neutral UBI Generosity vs. Indirect Tax Burden

Source: Lustig, Rigolini, Gentilini, Monsalve and Quan (forthcoming)
Merci!

For all Data Center inquiries and data requests: datacenter@ceqinstitute.org
**Teams and references by country**  
(the year for which the analysis was conducted in parentheses);  
C=consumption & I=income)


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20. **Guatemala (2011; I):** Icefi. 2017a. “*Incidencia de la politica fiscal en la desigualdad y la pobreza en Guatemala.*” CEQ Working Paper 50 (CEQ Institute, Tulane University, IFAD and Instituto Centroamericano de Estudios Fiscales), May

Cabrera, Maynor and Hilcias E. Moran. 2015. “*CEQ Master Workbook: Guatemala (2011),”* CEQ Data Center on Fiscal Redistribution (CEQ Institute, Tulane University, Instituto Centroamericano de Estudios Fiscales (ICEFI) and International Fund for Agricultural Development (IFAD)). October 4, 2016.

21. **Honduras (2011; I):** Icefi. 2017b. “*Incidencia de la politica fiscal en la desigualdad y la pobreza en Honduras.*” CEQ Working Paper 51 (CEQ Institute, Tulane University, IFAD and Instituto Centroamericano de Estudios Fiscales), April

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• __________. 2017. “El impacto del sistema tributario y el gasto social en la distribucion del ingreso y la pobreza en America Latina.” El Trimestre Economico, no. 335, pp.493-568

