

Commitment to Equity: A Primer

Nora Lustig

Tulane University, CGD, IAD



The World Bank

Washington, DC, February 1, 2016

Outline

- What is the Commitment to Equity Institute and what does it do?
- Methodological highlights
- Country coverage
- CEQ Assessments: A Quick Glance at Results
- Future work

WHAT IS THE COMMITMENT TO EQUITY INSTITUTE?

Commitment to Equity Institute (CEQI)

- Research-based policy tools
 - Data Center
 - Advisory and training services
 - Bridges to policy
- Grant from Bill & Melinda Gates Foundation
US\$4.9 million for 5 yrs

CEQ Assessment: Tools

- **Handbook:** Lustig and Higgins, current version Sept 2013, updated Feb 2016; includes sample Stata code
- **CEQ Handbook 2016 (forthcoming)**
Lustig, Nora, editor. *Commitment to Equity Handbook: Estimating the Redistributive Impact of Fiscal Policy*, Tulane University and the World Bank
- **Master Workbook:** Excel Spreadsheet to present background information, assumptions and results. (MWB 2016 Beta version)
- **Diagnostic Questionnaire:** = > available on website
- **Ado Stata Files:** (MWB 2016 Beta version)

Main messages

1. Analyzing the tax side without the spending side, or vice versa, is not very useful
 - Taxes can be unequalizing but spending so equalizing that the unequalizing effect of taxes is more than compensated
 - Taxes can be regressive but when combined with transfers make the system more equalizing than without the regressive taxes
 - Transfers can be equalizing but when combined with taxes, post-fisc poverty can be higher

Main messages

2. Analyzing the impact on inequality only can be misleading

- Fiscal systems can be equalizing but poverty increasing

Main messages

3. Analyzing the impact on traditional poverty indicators can be misleading

- Fiscal systems can show a reduction in poverty and yet a substantial share of the poor could have been impoverished by the combined effect of taxes and transfers

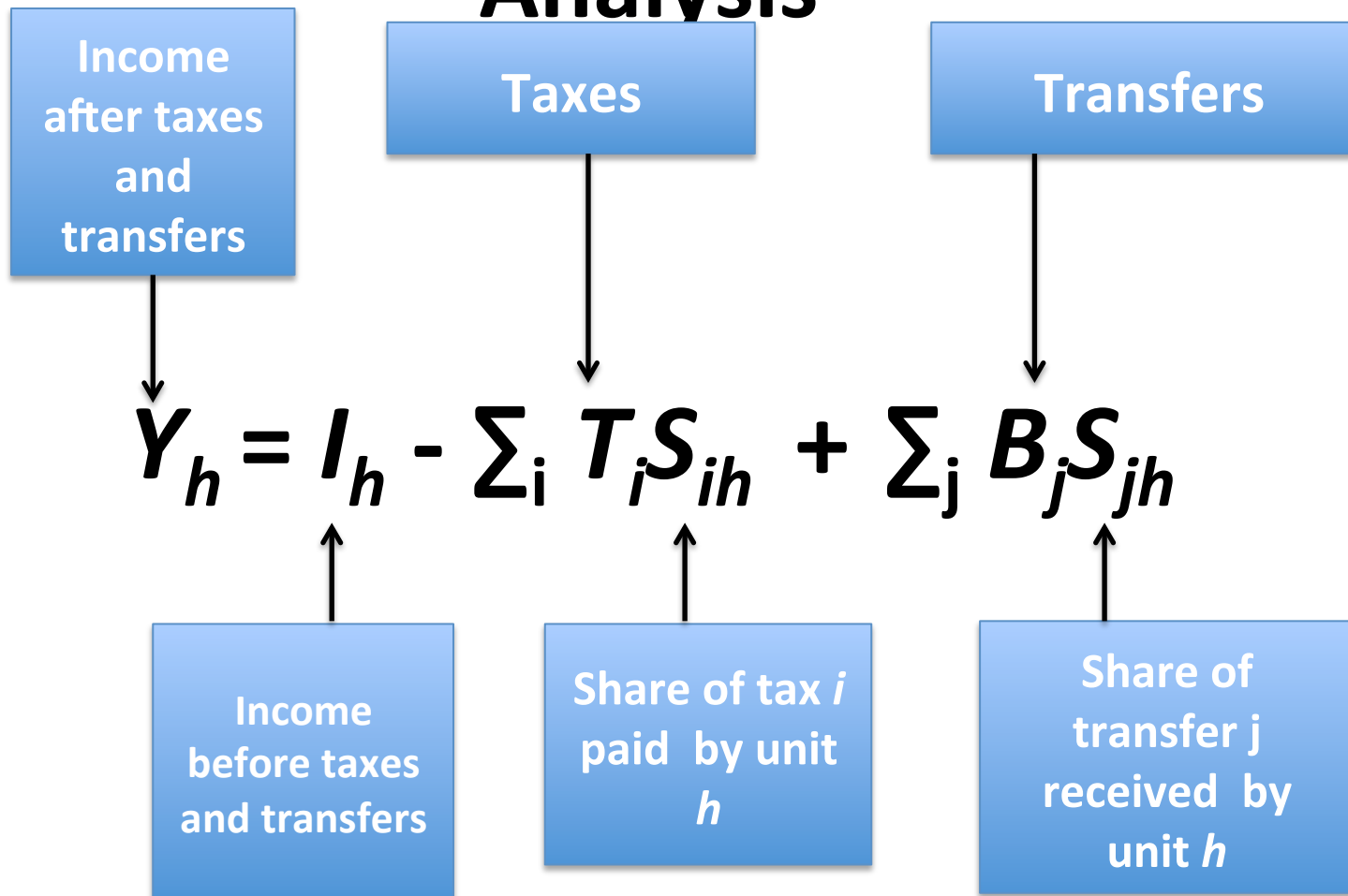
METHODOLOGICAL HIGHLIGHTS

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

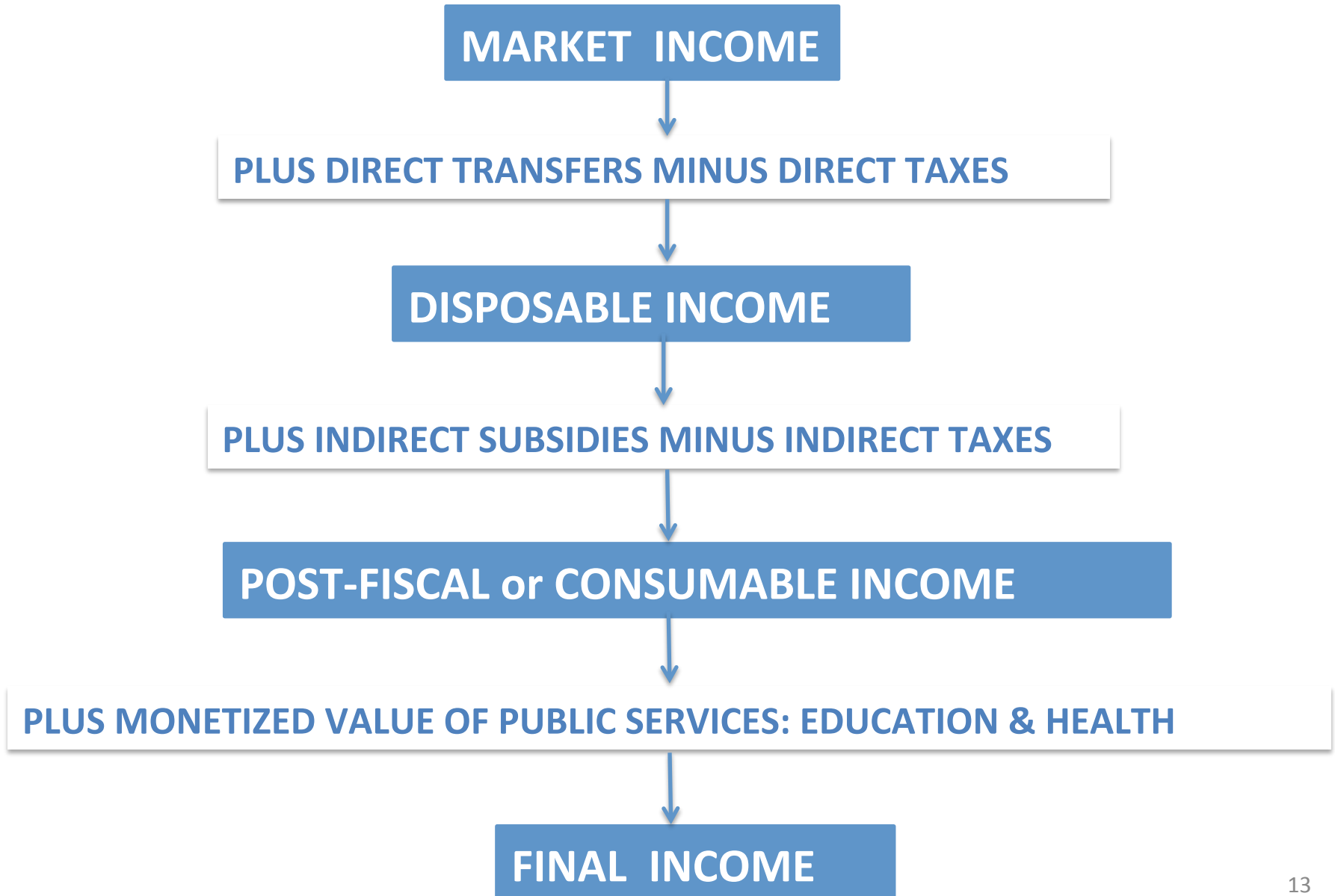
Analysis



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



Fiscal Incidence in CEQ Assessments

- Accounting approach
 - no behavioral responses
 - 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

Fiscal Incidence in CEQ Assessments

- 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

Allocation Methods

- Direct Identification in microdata
 - However, results must be checked: how realistic are they?
- If information not directly available in microdata, then:
 - Simulation
 - Imputation
 - Inference
 - Prediction
 - 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
- 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?

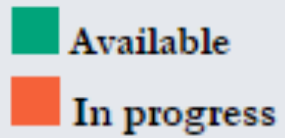
Treatment of Contributory Social Insurance Pensions

- Deferred income in actuarially fair systems: pensions included in *market income* and contributions treated as mandatory savings
- Government transfer: pensions included among direct transfers and contributions treated as a direct tax

Scenarios and Robustness Checks

- Benchmark scenario
- Sensitivity to:
 - Changing the original income by which hh are ranked: e.g., market income plus contributory pensions and disposable income
 - Using consumption vs. income
 - Per capita vs. equivalized income or consumption
 - Different assumptions on scaling-down or up
 - Different assumptions on take-up of transfers and tax shifting and evasion
 - Alternative valuations of in-kind services
 - Other sensitivity scenarios: country-specific

COUNTRY COVERAGE



CEQ Countries (47)				Color Key		
Argentina	Georgia	Nicaragua	Vietnam	Green: Finished		
Armenia	Ghana	Pakistan	Zambia	Orange: Finished within next 6 months		
Bolivia	Greece	Paraguay		White: Early stages		
Brazil	Guatemala	Peru		Grey: Possible		
Cambodia	Honduras	Poland				
Chile	India	Russia				
China	Indonesia	South Africa				
Colombia	Iran	Sri Lanka				
Comoros	Ivory Coast	Tanzania				
Costa Rica	Jordan	Togo				
Dom Rep	Kyrgyz Repu	Tunisia				
Ecuador	Mali	Uganda				
Egypt	Mexico	United States				
El Salvador	Mozambique	Uruguay				
Ethiopia	Namibia	Venezuela				

**FISCAL POLICY, INEQUALITY AND
POVERTY IN MIDDLE INCOME
COUNTRIES:
BRAZIL, CHILE, COLOMBIA, INDONESIA,
MEXICO, PERU AND SOUTH AFRICA**

Based on:

- Lustig, Nora. 2015b.
Inequality and Fiscal Redistribution in Middle Income Countries: Brazil, Chile, Colombia, Indonesia, Mexico, Peru and South Africa. Evidence from the Commitment to Equity Project (CEQ). CEQ Working Paper No. 31, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue.
- Indonesia and South Africa, part of collaborative project with Gabriela Inchauste, World Bank. Will be published in: Inchauste, Gabriela and Nora Lustig(Eds.), *The Distributional Impact of Fiscal Policy: Experience from Developing Countries*. World Bank, Washington, D.C

Teams and references by country: (in parenthesis: survey year; C=consumption & I=income)

1. **Bolivia (2009; I):** Paz Arauco, Verónica, George Gray Molina, Wilson Jiménez Pozo, and Ernesto Yáñez Aguilar. 2014. “Explaining Low Redistributive Impact in Bolivia.” In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3. (September 22, 2014)
2. **Brazil (2009; I):** Higgins, Sean and Claudiney Pereira. 2014. “The Effects of Brazil’s Taxation and Social Spending on the Distribution of Household Income.” In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3. (November 4, 2014)
3. **Chile (2009, I):** Ruiz-Tagle, Jaime and Dante Contreras. 2014. CEQ Masterworkbook, Tulane University (August 27, 2014)
4. **Colombia (2010, I):** Melendez, Marcela and Nora Lustig. 2014. CEQ Masterworkbook, Tulane University (November 21, 2014)
5. **Costa Rica (2010; I):** Sauma, Juan and Diego Trejos. 2014.
[Social Public Spending, Taxes, Redistribution of Income, and Poverty in Costa.](#) CEQ Working Paper No. 18, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, January. (February 2014)

7. **Ecuador:** Llerena Pinto, Freddy Paul, María Christina Llerena Pinto, Roberto Carlos Saá Daza, and María Andrea Llerena Pinto. 2015.
[*Social Spending, Taxes and Income Redistribution in Ecuador.*](#) CEQ Working Paper No. 28, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, February.
8. **El Salvador (2011; I):** Beneke, Margarita, Nora Lustig y José Andrés Oliva. 2015. *El impacto de los impuestos y el gasto social en la desigualdad y la pobreza en El Salvador.* CEQ Working Paper No. 26, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, February. (March 11, 2014)
9. **Guatemala (2011; I):** Cabrera, Maynor, Nora Lustig and Hilcías Morán. 2014.
[*Fiscal Policy, Inequality and the Ethnic Divide in Guatemala.*](#) CEQ Working Paper No. 20, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, October. (April 13, 2014)
10. **Indonesia (2012; C) :** Afkar, Rythia, Jon Jellema and Matthew Wai-Poi. 2014. CEQ Master Workbook, Tulane University and The World Bank (February 18, 2014)
11. **Mexico (2010; I):** Scott, John. 2014. “Redistributive Impact and Efficiency of Mexico’s Fiscal System.” In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3. (September 2013)

- 13. Peru (2009; I):** Jaramillo, Miguel. 2014. "The Incidence of Social Spending and Taxes in Peru." In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3. (May 1, 2013)
- 14. South Africa (2010; I):** Inchauste, Gabriela, Nora Lustig, Mashekwa Maboshe, Catriona Purfield and Ingrid Wollard. 2015. *The Distributional Impact of Fiscal Policy in South Africa*. Policy Research Working Paper 7194, The World Bank, February. (May 5, 2014)
- 15. United States (2011; I):** Higgins, Sean, Nora Lustig, Whitney Ruble and Timothy Smeeding (forthcoming) *Comparing the Incidence of Taxes and Social Spending in Brazil and the United States*, Review of Income and Wealth
- 16. Uruguay (2009; I):** Bucheli, Marisa, Nora Lustig, Máximo Rossi, and Florencia Amábile. 2014. "Social Spending, Taxes and Income Redistribution in Uruguay." In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3. (August 18, 2014)

Household Surveys Used in Country Studies

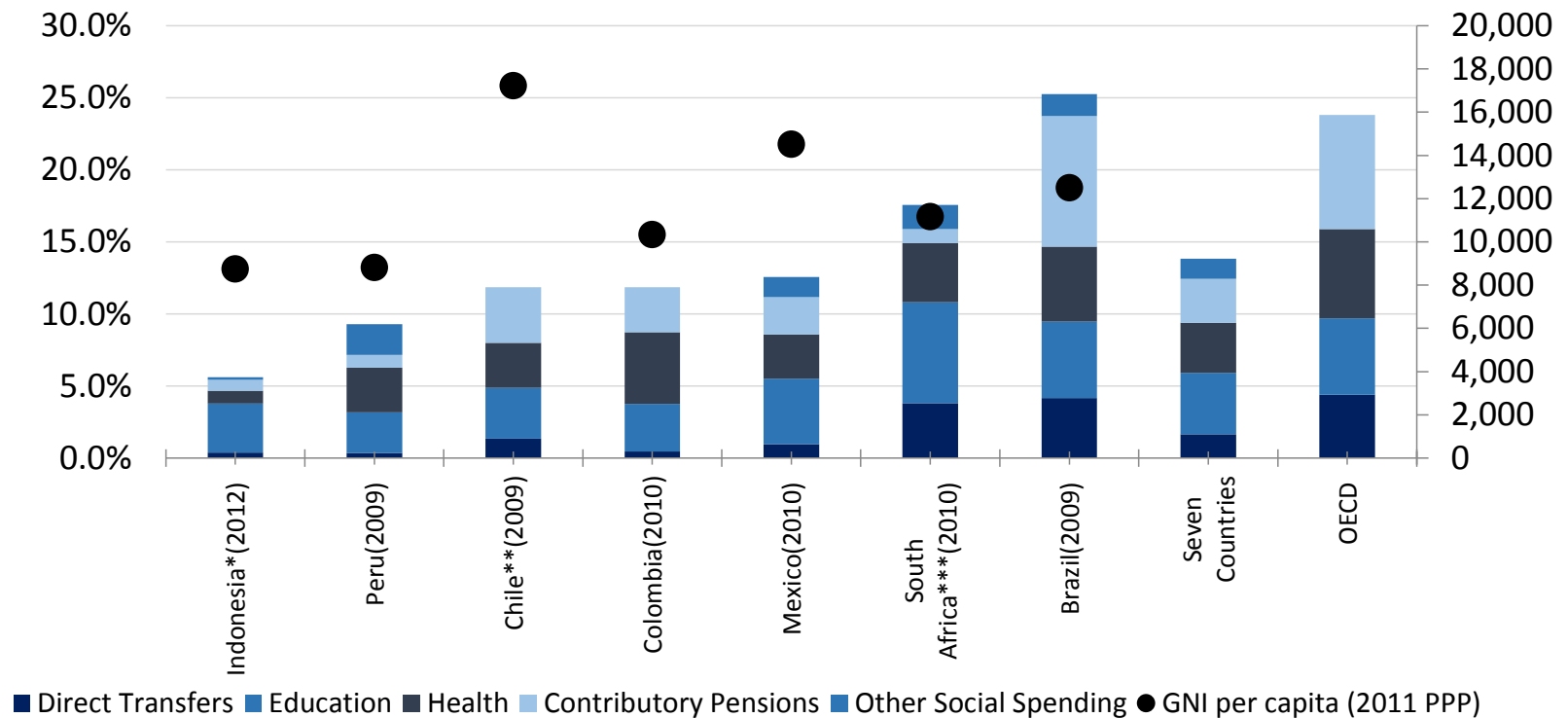
1. **Armenia:** Integrated Living Conditions Survey, 2011 (I)
2. **Bolivia:** Encuesta de Hogares, 2009 (I)
3. **Brazil:** Pesquisa de Orçamentos Familiares, 2009 (I)
4. **Chile:** Encuesta de Caracterización Social (CASEN), 2009 (I)
5. **Colombia:** Encuesta de Calidad de Vida, 2010 (I)
6. **Costa Rica:** 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 Propósitos Múltiples, 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.

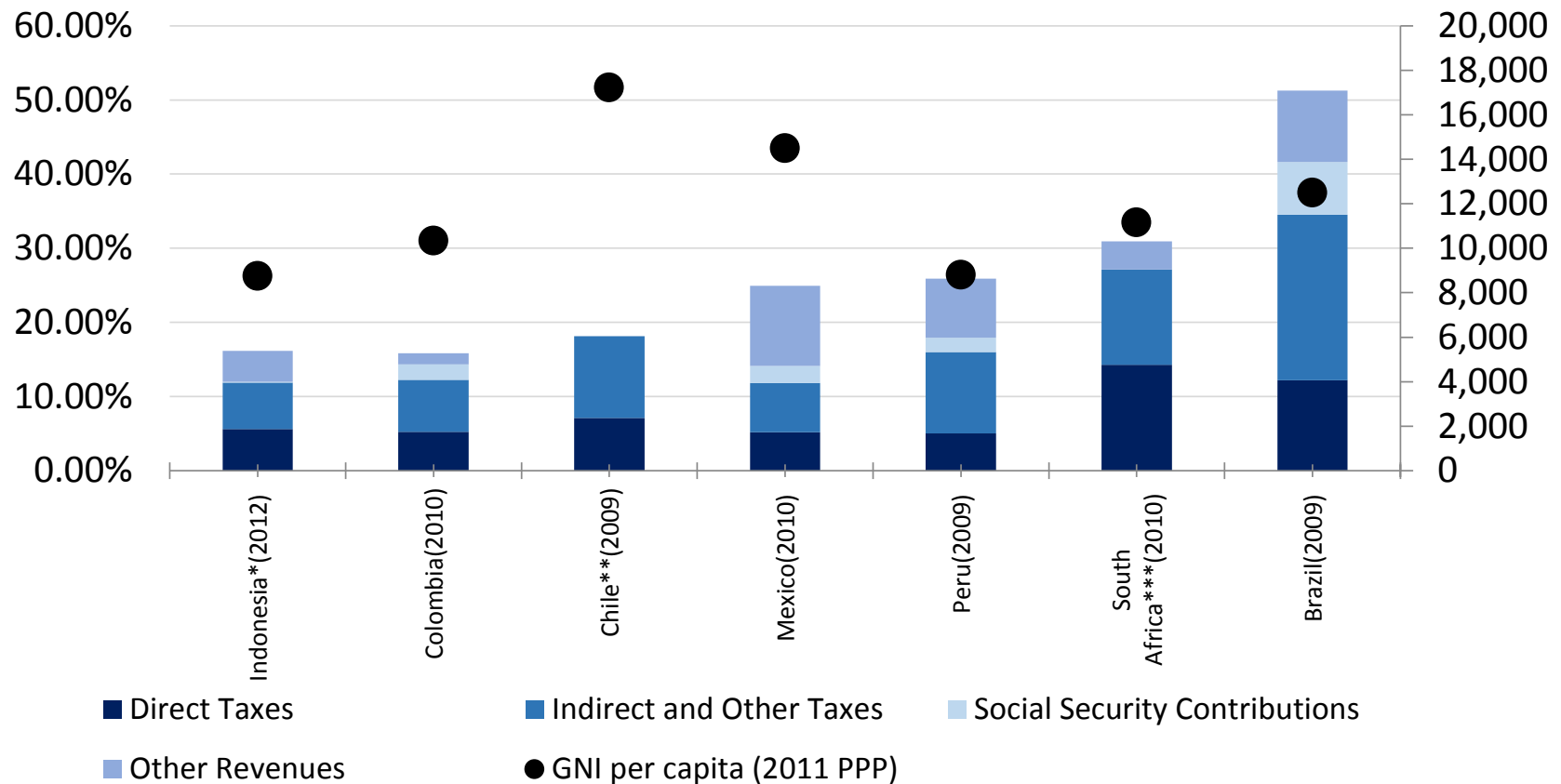
SIZE AND COMPOSITION OF GOVERNMENT SOCIAL SPENDING AND REVENUES

Figure 1: Size and composition of government budgets (circa 2010)

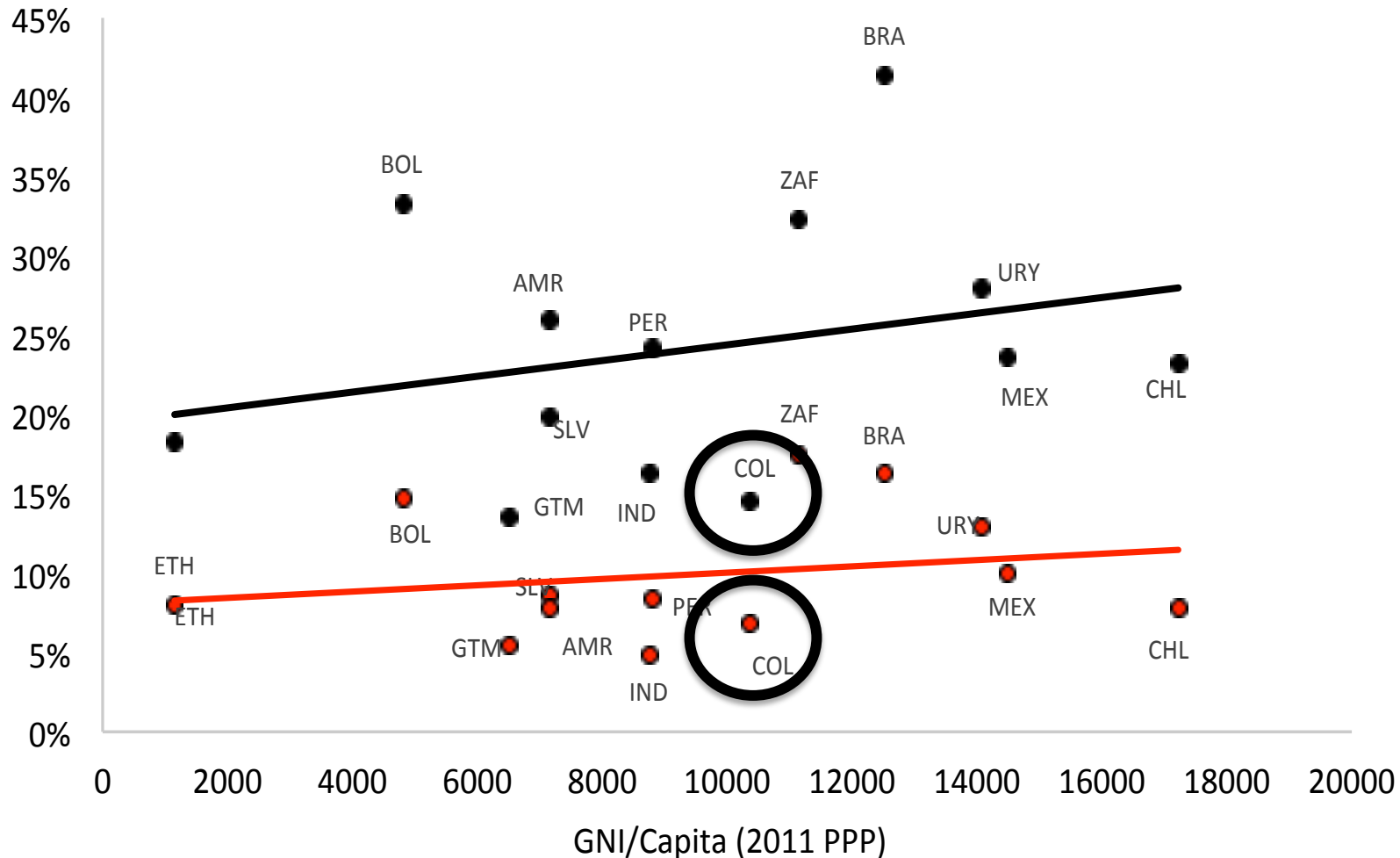
Panel a: Composition of Social Spending as a Share of GDP
(ranked by social spending/GDP)



Panel b: Composition of Total Government Revenues as a Share of GDP (ranked by total government revenue/GDP)



Primary and Social Spending/GDP vs GNI/capita

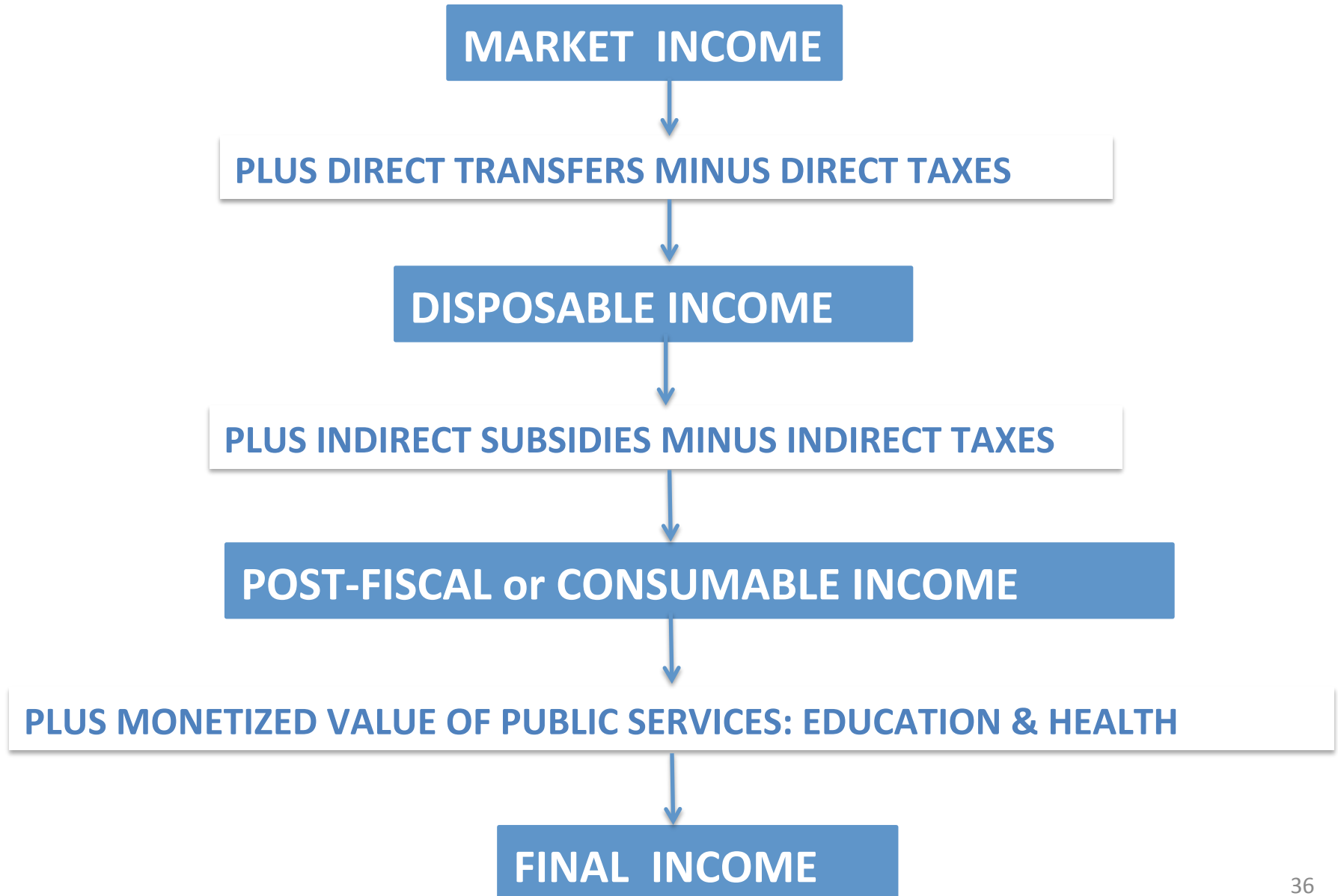


Source: Lustig (2015a)

● Primary Spending/GDP ● Social Spending/GDP

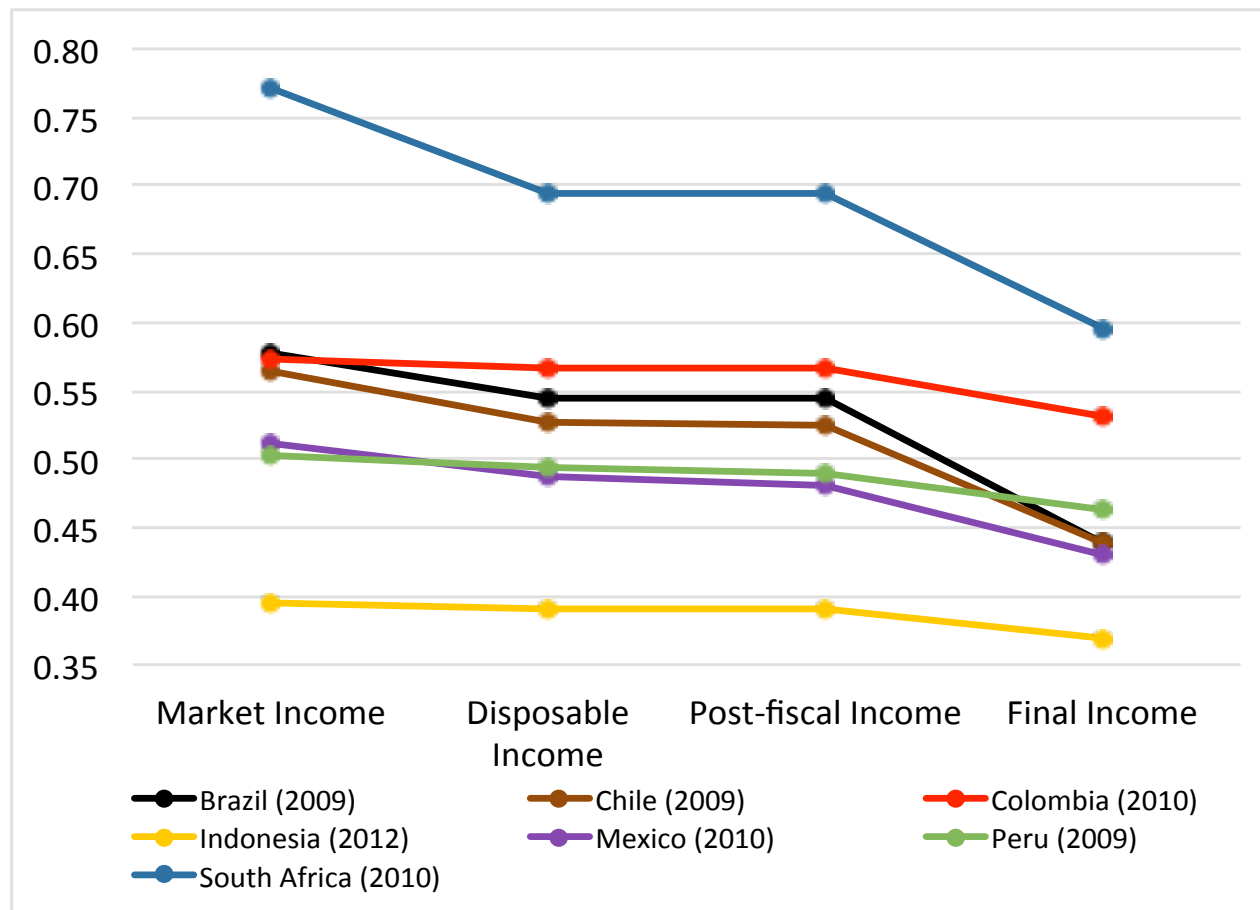
FISCAL POLICY AND INEQUALITY

CEQ Assessment: Income Concepts



Fiscal Redistribution: Brazil, Chile, Colombia, Indonesia, Mexico and South Africa

Gini Coefficient, circa 2010



Source: Lustig (2015a)

Redistributive Effect: Brazil, Chile, Colombia, Indonesia, Mexico, Peru, South Africa EU and the United States

(Change in Gini Points: Market to Disposable Income; circa 2010)

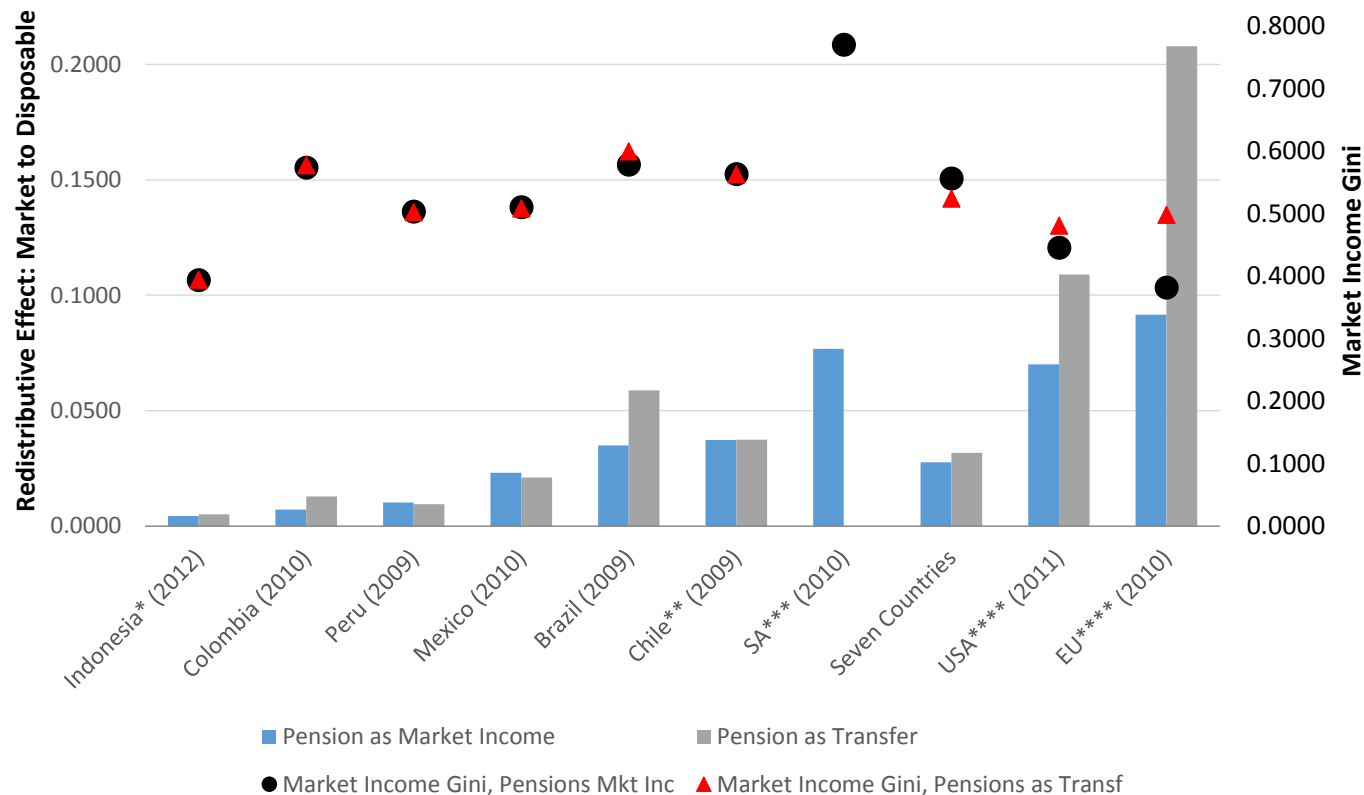
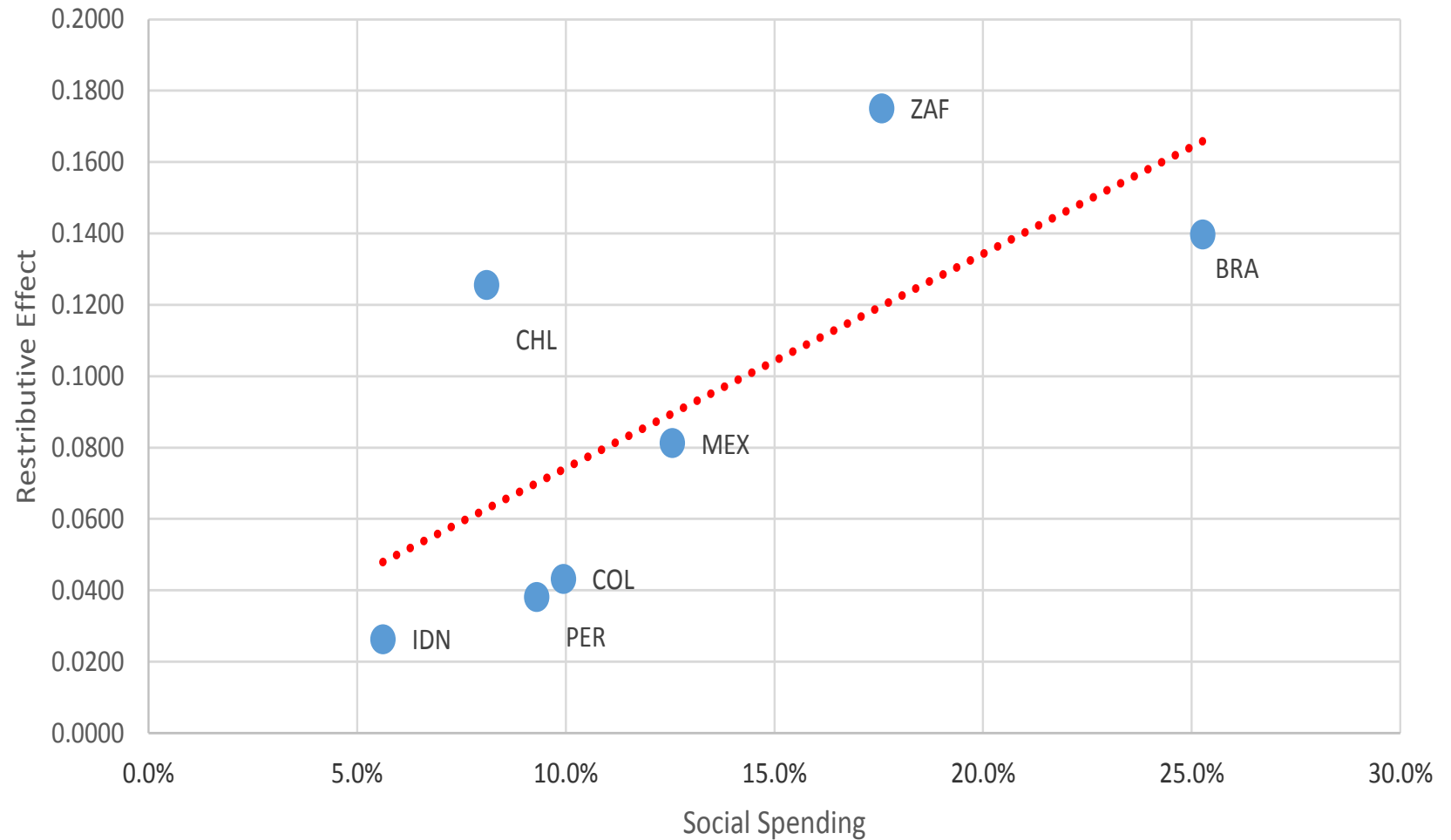


Table 4: Marginal Contribution of Taxes and Transfers (circa 2010)
(Pensions as Market Income)

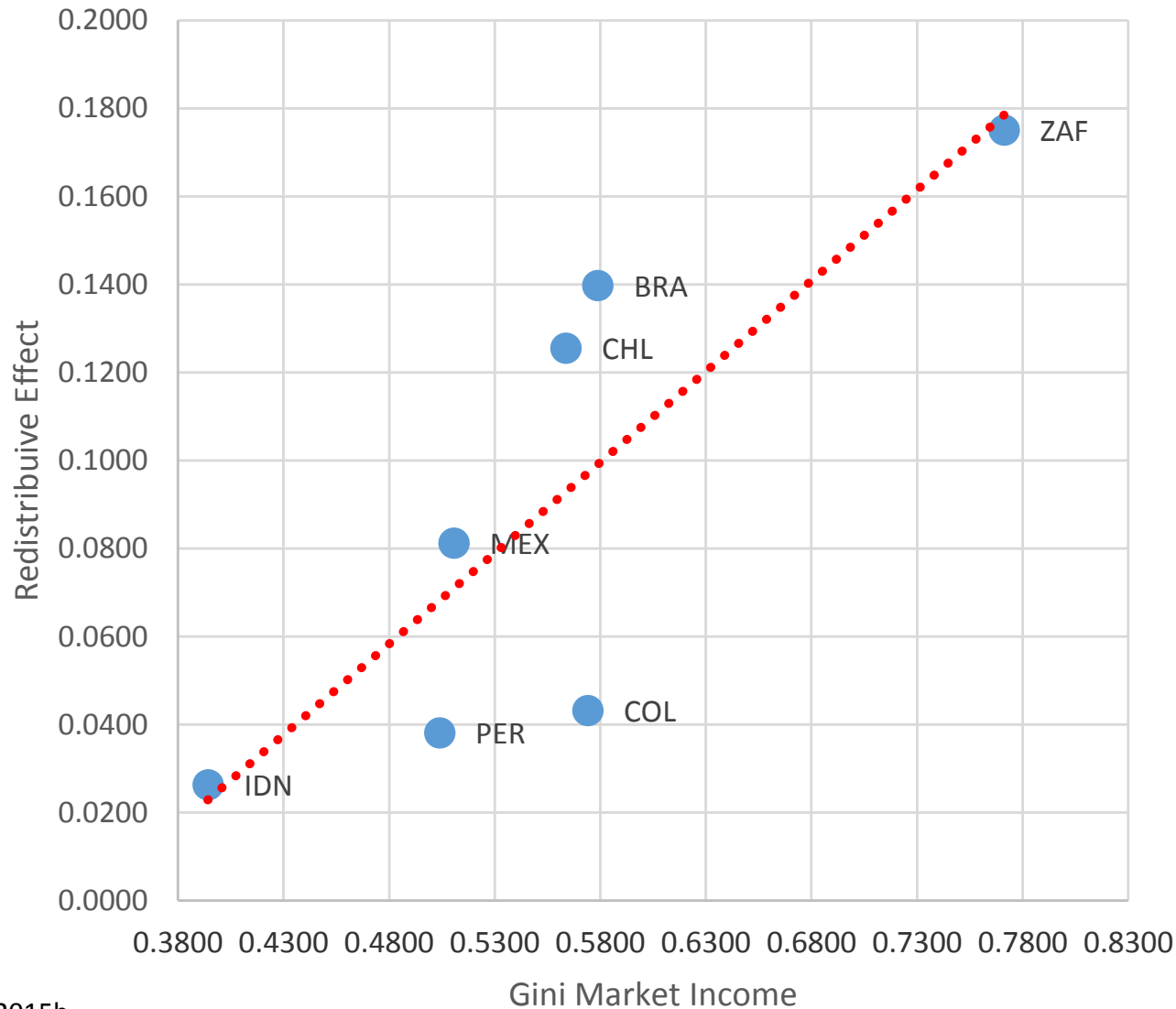
	Brazil	Chile*	Colombia	Indonesia**	Mexico	Peru	SA***	Average
Marginal Contributions								
From Market to Disposable Income								
Redistributive Effect	0.0453	0.0340	0.0075	0.0044	0.0236	0.0099	0.0788	0.0291
Direct taxes	0.0148	0.0154	0.0018	-	0.0131	0.0055	0.0269	0.0129
Direct transfers	0.0320	0.0190	0.0057	0.0044	0.0109	0.0045	0.0593	0.0194
From Market to Post-fiscal Income								
Redistributive Effect	0.0446	0.0370	0.0073	0.0061	0.0308	0.0151	0.0789	0.0314
Direct taxes	0.0171	0.0179	0.0019	-	0.0140	0.0060	0.0311	0.0147
Direct transfers	0.0382	0.0220	0.0057	0.0043	0.0113	0.0048	0.0711	0.0225
Indirect taxes	-0.0014	0.0027	-0.0017	-0.0028	0.0027	0.0052	0.0000	0.0007
Indirect subsidies	0.0008	0.0004	0.0015	0.0052	0.0047	-	-	0.0025
Kakwani								
Direct taxes	0.1738	0.3481	0.1373	0.0000	0.2411	0.3853	0.1109	0.1995
Direct transfers	0.5310	0.9064	0.9233	0.6248	0.7931	0.9612	1.0165	0.8223
Indirect taxes	-0.0536	-0.0172	-0.1986	-0.0513	0.0129	0.0527	-0.0788	-0.0477
Indirect subsidies	0.8295	0.7978	0.5034	0.0645	0.2457	0.0000	0.0000	0.3487

Figure 4. Redistribution and social spending, 2010



Source: Lustig (2015b)

A. Redistribution and market income inequality

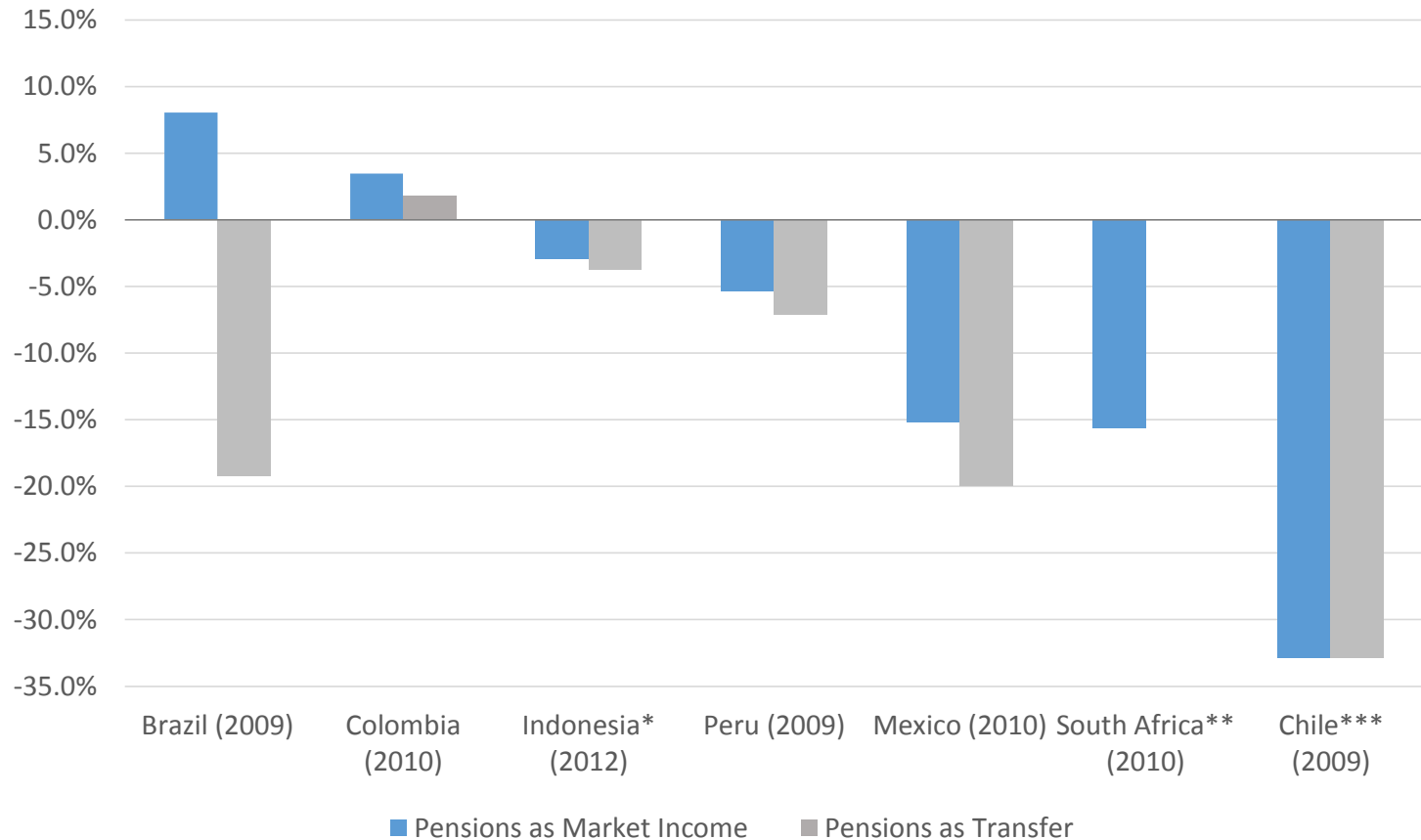


Source: Lustig (2015b)

FISCAL POLICY AND POVERTY REDUCTION

Fiscal Policy and Poverty Reduction (circa 2010)

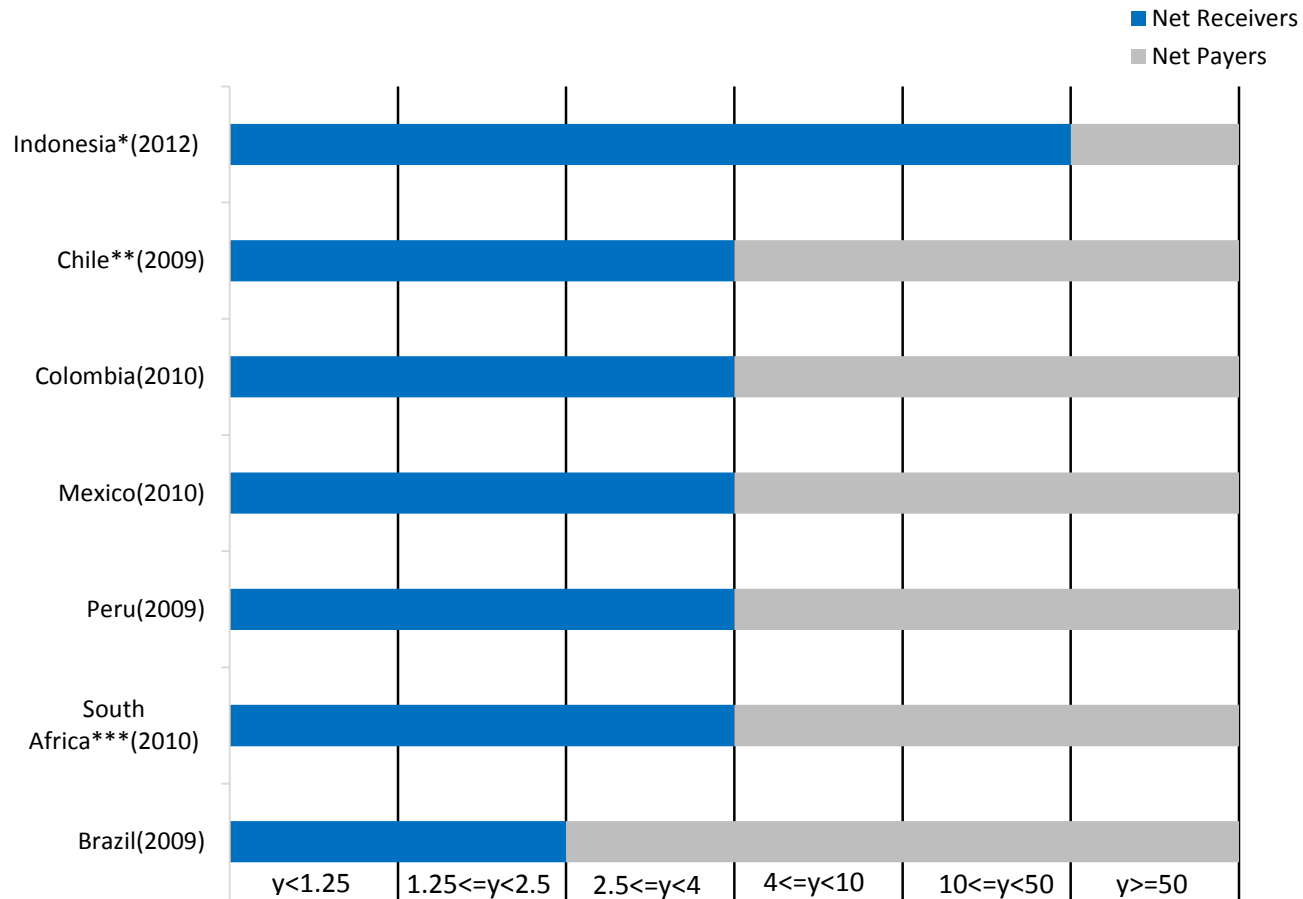
(Change in Headcount Ratio from Market to Post-fiscal Income for Pensions in Market Income and Pensions in Transfers; in %) ^a



WHO PAYS FOR WHAT THE GOVERNMENT SPENDS?

Net Payers to the Fiscal System (circa 2010)

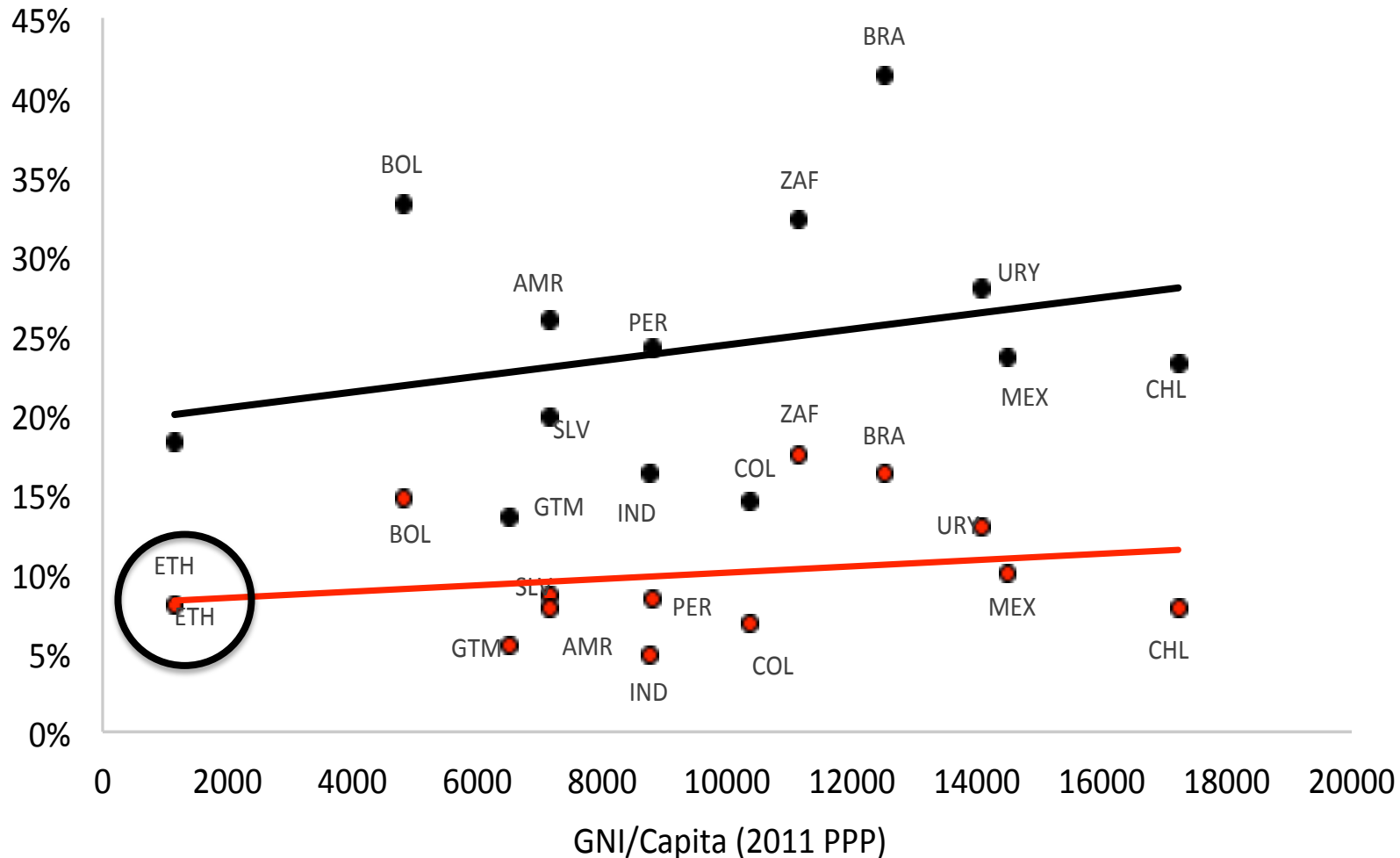
Panel a: Pensions as Market Income



Source: Lustig (2015b)

FISCAL POLICY, INEQUALITY AND POVERTY IN AFRICAN COUNTRIES: ETHIOPIA, GHANA AND TANZANIA

Primary and Social Spending/GDP vs GNI/capita



Source: Lustig (2015a)

● Primary Spending/GDP ● Social Spending/GDP

CEQ Assessment for Ethiopia

(World Bank, 2014, Ch. 5)

TABLE 5.5: Poverty and inequality indicators before and after taxes and spending

	Market Income	Disposable Income	Post-fiscal Income
National Poverty Line			
Incidence	31.2%	30.2%	32.4%
Gap	9.0%	7.9%	8.7%
Severity	4.3%	3.1%	3.4%
US \$1.25 a day			
Incidence	31.9%	30.9%	33.2%
Gap	9.2%	8.2%	8.9%
Severity	3.9%	3.2%	3.5%
Gini coefficient	0.322	0.305	0.302

Pro-poorness of Education Spending

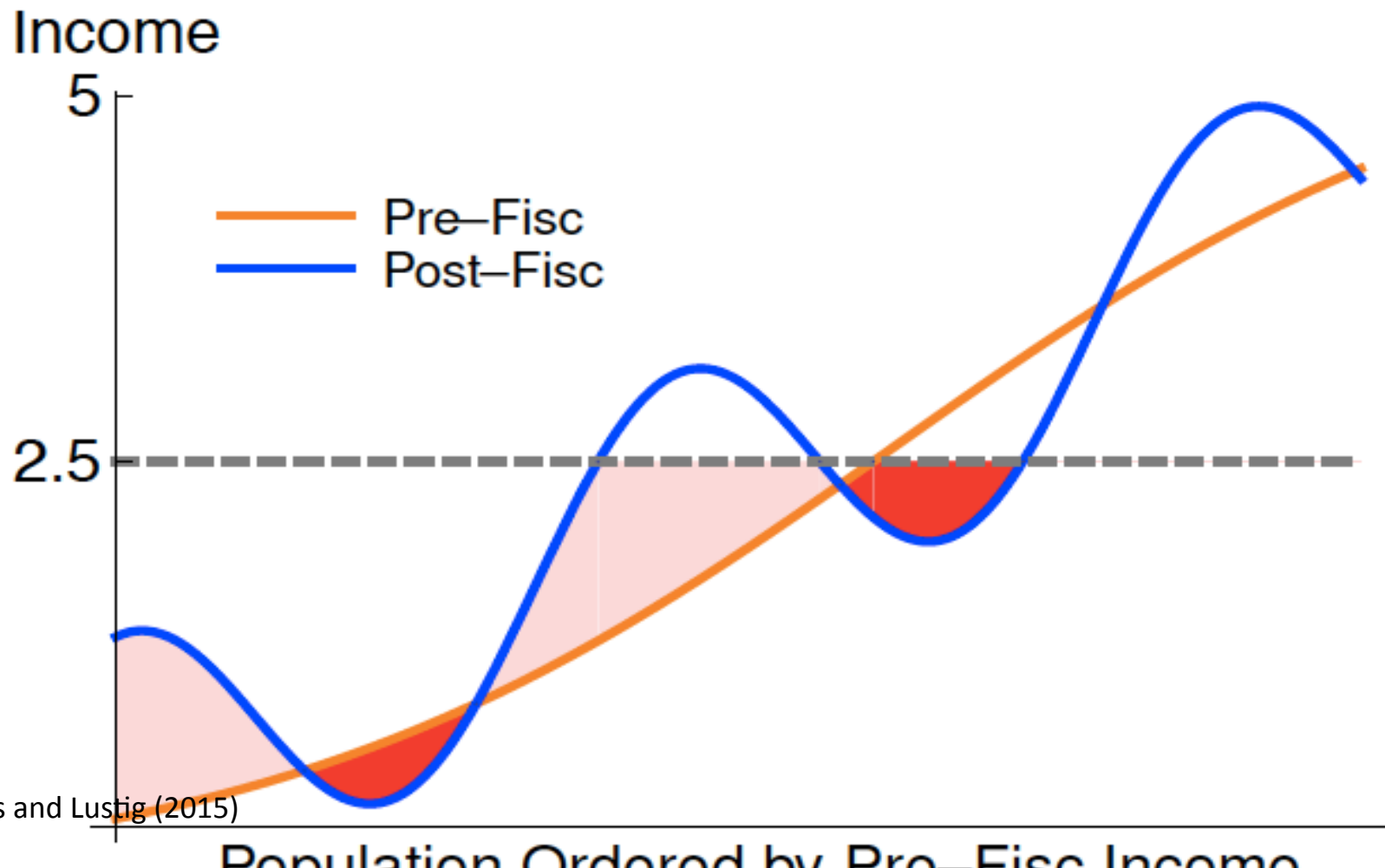
	Primary			Secondary			Tertiary			
	Pro-poor CC is negative	Same per capita for all; CC =0	Progressive CC positive but lower than market income Gini	Pro-poor CC is negative	Same per capita for all; CC =0	Progressive CC positive but lower than market income Gini	Pro-poor CC is negative	Same per capita for all; CC =0	Progressive CC positive but lower than market income Gini	Regressive CC positive AND higher than market income Gini
Armenia (2011)	+			+					+	
Bolivia (2009)	+			+					+	
Brazil (2009)	+			+					+	
Chile (2009)	+			+					+	
Colombia (2010)	+			+					+	
El Salvador (2011)	+				+				+	
Ethiopia (2011)		+				+				+
Guatemala (2010)	+				+					+
Indonesia (2012)	+				+					+
Mexico (2010)	+			+					+	
Peru (2009)	+			+					+	
South Africa (2010)	+			+					+	
Uruguay (2009)	+			+					+	

Source: Lustig (2015a)

Pro-poorness of Health Spending

	Health		
	Pro-poor CC is negative	Same per capita for all; CC =0	Progressive CC positive but lower than market income Gini
Armenia (2011)		+	
Bolivia (2009)		+	
Brazil (2009)	+		
Chile (2009)	+		
Colombia (2010)	+		
El Salvador (2011)			+
Ethiopia (2011)			+
Guatemala (2010)			+
Indonesia (2012)			+
Mexico (2010)		+	
Peru (2009)			+
South Africa (2010)	+		
Uruguay (2009)	+		

Fiscal Impoverishment and Fiscal Gains to the Poor



Fiscal Impoverishment

(\$1.25 ppp 2005, from market to consumable income)

	Market Income Headcount	change in poverty	Market Income Gini	Reynolds - Smolensky	change in inequality	FI headcount (among whole population)	FI headcount among post fisc poor	FI per impoverished as prop'n of income	Poverty went up or down?	Unambiguously progressive?	Inequality went up or down?
Brazil	0.066	-0.022	0.575	0.045	-0.035	0.007	0.160	0.088	DOWN	YES	DOWN
Ethiopia	0.319	0.023	0.322	0.023	-0.020	0.729	0.832	0.054	UP	YES	DOWN
Ghana	0.060	0.007	0.437	0.016	-0.014	0.051	0.766	0.053	UP	YES	DOWN
Indonesia	0.120	-0.015	0.398	0.011	-0.008	0.041	0.392	0.037	DOWN	YES	DOWN
Mexico	0.049	-0.016	0.544	0.038	-0.025	0.008	0.237	0.148	DOWN	YES	DOWN
Peru	0.044	-0.007	0.459	0.009	-0.008	0.008	0.218	0.185	DOWN	YES	DOWN
South Africa	0.370	-0.158	0.771	0.083	-0.077	0.059	0.088	0.274	DOWN	YES	DOWN
Tanzania	0.437	0.079	0.382	0.041	-0.038	0.509	0.986	0.085	UP	YES	DOWN

Fiscal Impoverishment

(\$1.25 ppp 2005, from market to final income)

	Market Income Headcou nt	change in poverty	Market income + pension s Gini	Reynolds - Smolens ky	change in inequali ty	FI headcou nt (among whole populati on)	FI headcou nt among post fisc poor	FI per impoveri sed as prop'n of income	Porvert y went up or down?	Unambi guously progres sive?	Inequali ty went up or down?
Ethiopia	0.319	-0.020	0.322	0.031	-0.023	0.445	0.403	0.037	DOWN	YES	DOWN
Ghana	0.060	-0.030	0.437	0.045	-0.035	0.010	0.333	0.055	DOWN	YES	DOWN
Tanzania	0.437	-0.019	0.382	0.063	-0.051	0.175	0.418	0.064	DOWN	YES	DOWN

POLICY SIMULATIONS: GHANA AND TANZANIA

Based on:

- Younger, Stephen, Eric Osei-Assibey, and Felix Oppong. 2015. Fiscal Incidence in Ghana. CEQ Working Paper No. 35, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, December. **[In non-pecuniary collaboration with World Bank]**
- Younger, Stephen, Flora Myamba, and Kenneth Mdadila. 2016. Fiscal Incidence in Tanzania. CEQ Working Paper No. 36, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, Forthcoming.

Ghana: Simulation Results for Eliminating Electricity Subsidies

		Simulation			
Change in:		(1)	(2)	(3)	(4)
Extreme Poverty Headcount	Disposable Income			-0.013	-0.007
	Consumable Income	0.004	0.003	-0.011	-0.003
	Final Income	0.001	0.001	-0.007	-0.003
Poverty Headcount	Disposable Income			-0.022	-0.009
	Consumable Income	0.009	0.005	-0.013	0.000
	Final Income	0.008	0.005	-0.014	-0.003
Poverty Gap	Disposable Income			-0.010	-0.005
	Consumable Income	0.003	0.002	-0.008	-0.002
	Final Income	0.002	0.001	-0.006	-0.002
Gini	Disposable Income			-0.009	-0.004
	Consumable Income	-0.001	0.000	-0.010	-0.005
	Final Income	-0.001	0.000	-0.009	-0.005
Budgetary savings (share of GDP):		0.014	0.007	0.000	0.008

Source: GLSS-6 and authors' calculations.

Simulation descriptions:

- (1) Eliminates the electricity subsidy with no compensation.
- (2) Eliminates subsidy except for lifeline tariff for the first 50kwh, which is held constant.
- (3) Eliminates electricity subsidy and uses all the funds to expand LEAP, in both coverage and payments.
- (4) Eliminates electricity subsidy and uses enough funds for LEAP to leave poverty roughly unchanged.

Ghana: Simulation Results for Eliminating Fuel Subsidies

		Simulation		
Change in:		(1)	(2)	(3)
Extreme Poverty Headcount	Disposable Income		-0.008	-0.003
	Consumable Income	0.003	-0.005	-0.001
	Final Income	0.001	-0.004	-0.001
Poverty Headcount	Disposable Income		-0.011	-0.004
	Consumable Income	0.003	-0.006	0.000
	Final Income	0.003	-0.008	-0.001
Poverty Gap	Disposable Income		-0.005	-0.002
	Consumable Income	0.001	-0.004	-0.001
	Final Income	0.001	-0.003	-0.001
Gini	Disposable Income		-0.004	-0.002
	Consumable Income	-0.001	-0.005	-0.002
	Final Income	-0.001	-0.005	-0.002
Budgetary savings (share of GDP):		0.006	0.000	0.004

Source: GLSS-6 and authors' calculations.

Simulation descriptions:

- (1) Eliminates the fuel subsidy with no compensation.
- (2) Eliminates fuel subsidy and uses all the funds to expand LEAP, both coverage and payments.
- (3) Eliminates fuel subsidy and uses enough funds for LEAP to leave poverty roughly unchanged.

Tanzania: Simulation Results for Eliminating Electricity Subsidies

Change in:		(1)	(2)	(3)	(4)
Extreme Poverty Headcount	Disposable Income			-0.0164	-0.0058
	Consumable Income	0.0006	0.0004	-0.0190	-0.0053
	Final Income	0.0001	0.0001	-0.0118	-0.0017
Poverty Headcount	Disposable Income			-0.0140	-0.0022
	Consumable Income	0.0028	0.0025	-0.0154	-0.0009
	Final Income	0.0018	0.0012	-0.0156	-0.0027
Poverty Gap	Disposable Income			-0.0080	-0.0023
	Consumable Income	0.0006	0.0005	-0.0090	-0.0019
	Final Income	0.0003	0.0002	-0.0064	-0.0017
Gini	Disposable Income			-0.0068	-0.0018
	Consumable Income	-0.0036	-0.0020	-0.0109	-0.0055
	Final Income	-0.0034	-0.0019	-0.0094	-0.0050
Budgetary savings (% of GDP):		0.43%	0.27%	0.00%	0.34%

Simulation Descriptions:

- (1) Eliminates the Electricity Subsidy with no compensation.
- (2) Eliminates subsidy except for lifeline tariff for first 50kwh, which is held constant.
- (3) Eliminates electricity subsidy and uses all the funds to expand CCT coverage by raising proxy-means threshold.
- (4) Eliminates electricity subsidy and uses enough funds to expand CCT to leave poverty roughly unchanged.

Tanzania: Simulated Effects of Increasing CCT Coverage

		Simulation		
Change in:		(1)	(2)	(3)
Extreme Poverty Headcount	Disposable Income	-0.011	-0.017	-0.021
	Consumable Income	-0.010	-0.018	-0.023
	Final Income	-0.008	-0.012	-0.017
Poverty Headcount	Disposable Income	-0.015	-0.016	-0.024
	Consumable Income	-0.010	-0.014	-0.014
	Final Income	-0.012	-0.016	-0.019
Poverty Gap	Disposable Income	-0.006	-0.009	-0.011
	Consumable Income	-0.006	-0.009	-0.011
	Final Income	-0.004	-0.006	-0.009
Gini	Disposable Income	-0.004	-0.007	-0.009
	Consumable Income	-0.006	-0.009	-0.011
	Final Income	-0.005	-0.008	-0.010

Simulation Descriptions:

- (1) Expands CCT to all eligible persons, then scales benefits down so the total CCT expenditure is 0.5% of GDP.
- (2) Expands CCT at current benefit rates to the poorest eligible people according to the proxy means test until total CCT payments are 0.5% of GDP.
- (3) Expands CCT at current benefit rates to the poorest people regardless of VC/elderly according to the proxy means test until total CCT payments are 0.5% of GDP.

Note: All simulations increase VAT to pay for the additional benefits.

PARTNERSHIPS & COLLABORATION

Terms of Engagement

CEQ Assessments & World Bank

- Fiscal incidence analysis in Poverty Assessments, PERs, SCD, and so on allow the Bank to assess how much the fiscal system in specific countries is helping achieve its twin goals, and identify areas for policy action that could enhance the potential of fiscal policy as an instrument to achieve the equity goals.
 - For example, if basic goods are heavily taxed, we can anticipate that the poor and the bottom 40 percent might get hurt in a nontrivial way.
- In the context of lending programs that involve austerity measures or reforms to the tax and/or transfers systems, fiscal incidence analysis could help minimize the negative effects on the poor and the bottom 40 percent.
 - How does the WB address this challenge currently in the absence of fiscal incidence results?
 - Fiscal incidence analysis could help the WB operationalize the shared prosperity talk

CEQI can offer:

Collaborative Efforts in Research & Development (CEQ Handbook 2020)

- Education and health benefits
- Incorporating top incomes
- Gender-sensitive incidence analysis
- Corporate and capital income taxes
- Behavioral responses
- Policy simulation tools

In exchange, the partnering Government, Multilateral Organization or Researcher would:

- Supply the administrative data (unless specified otherwise).
- Permission to include results in CEQI's Data Center after all clearances at partner organization have been completed.
- Permission to cite results in papers with appropriate citation of original authors and acknowledgment of partner organization.
- Acknowledge the contribution of the CEQI following agreed upon protocol/s.

COUNTRY TEAMS & REFERENCES

Teams and references by country:

(in parenthesis: survey year; C=consumption & I=income)

1. **Bolivia (2009; I):** Paz Arauco, Verónica, George Gray Molina, Wilson Jiménez Pozo, and Ernesto Yáñez Aguilar. 2014. “Explaining Low Redistributive Impact in Bolivia.” In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3. (September 22, 2014)
2. **Brazil (2009; I):** Higgins, Sean and Claudiney Pereira. 2014. “The Effects of Brazil’s Taxation and Social Spending on the Distribution of Household Income.” In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3. (November 4, 2014)
3. **Chile (2009, I):** Ruiz-Tagle, Jaime and Dante Contreras. 2014. CEQ Masterworkbook, Tulane University (August 27, 2014)
4. **Colombia (2010, I):** Melendez, Marcela and Nora Lustig. 2014. CEQ Masterworkbook, Tulane University (November 21, 2014)
5. **Costa Rica (2010; I):** Sauma, Juan and Diego Trejos. 2014.
[Social Public Spending, Taxes, Redistribution of Income, and Poverty in Costa.](#) CEQ Working Paper No. 18, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, January. (February 2014)

7. **Ecuador:** Llerena Pinto, Freddy Paul, María Christina Llerena Pinto, Roberto Carlos Saá Daza, and María Andrea Llerena Pinto. 2015.
[*Social Spending, Taxes and Income Redistribution in Ecuador.*](#) CEQ Working Paper No. 28, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, February.
8. **El Salvador (2011; I):** Beneke, Margarita, Nora Lustig y José Andrés Oliva. 2015. *El impacto de los impuestos y el gasto social en la desigualdad y la pobreza en El Salvador.* CEQ Working Paper No. 26, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, February. (March 11, 2014)
9. **Guatemala (2011; I):** Cabrera, Maynor, Nora Lustig and Hilcías Morán. 2014.
[*Fiscal Policy, Inequality and the Ethnic Divide in Guatemala.*](#) CEQ Working Paper No. 20, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, October. (April 13, 2014)
10. **Indonesia (2012; C) :** Afkar, Rythia, Jon Jellema and Matthew Wai-Poi. 2014. CEQ Master Workbook, Tulane University and The World Bank (February 18, 2014)
11. **Mexico (2010; I):** Scott, John. 2014. "Redistributive Impact and Efficiency of Mexico's Fiscal System." In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3. (September 2013)

- 13. Peru (2009; I):** Jaramillo, Miguel. 2014. "The Incidence of Social Spending and Taxes in Peru." In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3. (May 1, 2013)
- 14. South Africa (2010; I):** Inchauste, Gabriela, Nora Lustig, Mashekwa Maboshe, Catriona Purfield and Ingrid Wollard. 2015. *The Distributional Impact of Fiscal Policy in South Africa*. Policy Research Working Paper 7194, The World Bank, February. (May 5, 2014)
- 15. United States (2011; I):** Higgins, Sean, Nora Lustig, Whitney Ruble and Timothy Smeeding (forthcoming) *Comparing the Incidence of Taxes and Social Spending in Brazil and the United States*, Review of Income and Wealth
- 16. Uruguay (2009; I):** Bucheli, Marisa, Nora Lustig, Máximo Rossi, and Florencia Amábile. 2014. "Social Spending, Taxes and Income Redistribution in Uruguay." In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3. (August 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 Propósitos Múltiples, 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.

References

- Afkar, R., Jellema, J., Wai-Poi, M., forthcoming. “The Distributional Impact of Fiscal Policy in Indonesia,” in: [Inchauste, Gabriela and Nora Lustig\(Eds.\), The Distributional Impact of Fiscal Policy: Experience from Developing Countries. World Bank, Washington, D.C](#)
- Aristy-Escuder, Jaime, Maynor Cabrera, and Miguel Eduardo Sánchez-Martín (forthcoming) “An analysis of fiscal policy and income redistribution in the Dominican Republic.” CEQ Working Paper No. 37, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue
- Beneke, Margarita, Nora Lustig y José Andrés Oliva. 2015. *El impacto de los impuestos y el gasto social en la desigualdad y la pobreza en El Salvador*. CEQ Working Paper No. 26, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, February.
- Bucheli, Marisa, Nora Lustig, Máximo Rossi, and Florencia Amábile. 2014. “Social Spending, Taxes and Income Redistribution in Uruguay.” In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3.
- Cabrera, Maynor, Nora Lustig and Hilcías Morán. 2014. [Fiscal Policy, Inequality and the Ethnic Divide in Guatemala](#). CEQ Working Paper No. 20, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, October. (April 13, 2014)
- Duclos, Jean-Yves and Abdelkrim Araar. 2007. *Poverty and Equity: Measurement, Policy and Estimation with DAD* (Vol. 2). Springer. Chapters 7 and 8. (available online)
- Higgins, Sean and Nora Lustig. 2015. [Can a poverty-reducing and progressive tax and transfer system hurt the poor?](#) ECINEQ Working Paper No. 363. April

References

- Higgins, Sean and Claudiney Pereira. 2014. “The Effects of Brazil’s Taxation and Social Spending on the Distribution of Household Income.” In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3.
- Higgins, Sean, Nora Lustig, Whitney Ruble and Timothy Smeeding (forthcoming) *Comparing the Incidence of Taxes and Social Spending in Brazil and the United States*, Review of Income and Wealth.
- Inchauste, Gabriela, Nora Lustig, Mashekwa Maboshe, Catriona Purfield and Ingrid Wollard. forthcoming. “The Distributional Impact of Fiscal Policy in South Africa,” in: Inchauste, G., Lustig, N. (Eds.), *The Distributional Impact of Fiscal Policy: Experience from Developing Countries*. World Bank, Washington, D.C
- Jaramillo, Miguel. 2014. “The Incidence of Social Spending and Taxes in Peru.” In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3.
- Lambert, Peter J. (2001). *The Distribution and Redistribution of Income: A Mathematical Analysis*. Manchester University Press. Third Edition. Chapter 11. (not available online)
- Lindert, Peter (2004). *Growing Public*, Cambridge University Press.
- Llerena Pinto, Freddy Paul, María Christina Llerena Pinto, Roberto Carlos Saá Daza, and María Andrea Llerena Pinto. 2015. [Social Spending, Taxes and Income Redistribution in Ecuador.](#) CEQ Working Paper No. 28, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, February.

References

- Lopez-Calva, Luis F., Nora Lustig, Mikhail Matytsin and Daria Popova (forthcoming) “Who Benefits from Fiscal Redistribution in Russia?” in: Inchauste, Gabriela and Nora Lustig(Eds.), *The Distributional Impact of Fiscal Policy: Experience from Developing Countries*. World Bank, Washington, D.C
- Lustig, Nora, Ali Enami and Rodrigo Aranda. “The Analytics of Fiscal Redistribution.” Chapter in Lustig, Nora, editor, Commitment to Equity Handbook: Estimating the Redistributive Impact of Fiscal Policy. , Tulane University and the World Bank (Forthcoming)
- Lustig, Nora. 2015a. “The Redistributive Impact of Government Spending on Education and Health: Evidence from 13 Developing Countries in the Commitment to Equity Project” Chapter 17 in Gupta, Sanjeev, Michael Keen, Benedict Clements and Ruud de Mooij, editors, *Inequality and Fiscal Policy*, Washington: International Monetary Fund.
- Lustig, Nora. 2015b. Lustig, Nora. 2015b. [Inequality and Fiscal Redistribution in Middle Income Countries: Brazil, Chile, Colombia, Indonesia, Mexico, Peru and South Africa. Evidence from the Commitment to Equity Project \(CEQ\)](#). CEQ Working Paper No. 31, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue.
- Lustig, Nora, editor. 2016. Commitment to Equity Handbook: Estimating the Redistributive Impact of Fiscal Policy. (Forthcoming)
- Melendez, Marcela. 2014. CEQ Masterworkbook, Tulane University (November 21, 2014)

References

- Paz Arauco, Verónica, George Gray Molina, Wilson Jiménez Pozo, and Ernesto Yáñez Aguilar. 2014. “Explaining Low Redistributive Impact in Bolivia.” In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3. (September 22, 2014)
- Ruiz-Tagle, Jaime and Dante Contreras. 2014. CEQ Masterworkbook, Tulane University (August 27, 2014)
- Sauma, Juan and Diego Trejos. 2014.
[*Social Public Spending, Taxes, Redistribution of Income, and Poverty in Costa.*](#) CEQ Working Paper No. 18, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, January.
- Scott, John. 2014. “Redistributive Impact and Efficiency of Mexico’s Fiscal System.” In Lustig, Nora, Carola Pessino and John Scott. 2014. Editors. *The Redistributive Impact of Taxes and Social Spending in Latin America. Special Issue. Public Finance Review*, May, Volume 42, Issue 3.
- Shimeles, Abebe, Ahmed Moumami, Nizar Jouini and Nora Lustig (forthcoming) “Fiscal Incidence and Poverty Reduction: Evidence from Tunisia,” CEQ Working Paper No. 38, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue.
- World Bank. 2014. [*Ethiopia. Poverty Assessment*](#), Chapter 5. (Based on CEQ Assessment for Ethiopia)

References

- Younger, Stephen, Eric Osei-Assibey, and Felix Oppong. 2015. Fiscal Incidence in Ghana. CEQ Working Paper No. 35, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, December.
- Younger, Stephen, Flora Myamba, and Kenneth Mdadila. 2016. Fiscal Incidence in Tanzania. CEQ Working Paper No. 36, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue, Forthcoming.
- Younger Stephen and Artsvi Khachatryan (forthcoming) “Fiscal Incidence in Armenia,” in: Inchauste, Gabriela and Nora Lustig(Eds.), The Distributional Impact of Fiscal Policy: Experience from Developing Countries. World Bank, Washington, D.C

Thank you!