CEQ INSTITUTE
COMMITMENT TO EQUITY
Tulane University

Fiscal policy and Income Redistribution in Latin America: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Peru and Uruguay

Nora Lustig
Tulane University
CGD and IAD

XXVIII SEMINARIO REGIONAL DE POLITICA FISCAL
CEPAL
Santiago, Chile, March 16-17, 2016

CEQ INSTITUTE
COMMITMENT TO EQUITY
Tulane University

Source:

Lustig, Nora. 2016. “El impacto del sistema tributario y el gasto social en la distribución del ingreso y la pobreza en América Latina: Argentina, Bolivia, Brasil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, México, Perú y Uruguay.” CEQ Working Paper No. 47, Commitment to Equity Institute, Tulane University, forthcoming. To be published in *El Trimestre Económico.*

Study prepared for the División de Administración Fiscal y Municipal of the Inter-American Development Bank

Commitment to Equity Institute (CEQI)

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

➢ Grant from Bill & Melinda Gates Foundation US4.9 million for 5 yrs

CEQ Institute: Core Staff

- Director: Nora Lustig
- Director of Policy Area: Ludovico Feoli
- Associate Directors: Maynor Cabrera, Jon Jellema, Estuardo Moran and Stephen Younger
- Technical Coordinator: Sandra Martinez
- Data Center Director: Sean Higgins
- Communications Director: Carlos Martin del Campo

Commitment to Equity Institute

- Working on close to 40 countries; covers around two thirds of the world population
- Over 100 collaborators
- Collaborative efforts and partnerships with multiple organizations: AfDB, CAF, IDB, IMF, ICEFI, OECD, Oxfam, UNDP, World Bank
- Utilized by governments
- Working Paper series and numerous scholarly publications

www.commitmentoequity.org

The image part with relationship ID rId2 was not found in the file.

The image part with relationship ID rId2 was not found in the file.

The image part with relationship ID rId2 was not found in the file.

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.
- **Diagnostic Questionnaire: = >** available on website
- **Ado Stata Files**

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

Lustig & Higgins (2013)

CEQ Assessment: Fiscal Incidence Analysis

Income after taxes and transfers

Taxes

Transfers

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

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

Lustig & Higgins (2013)

CEQ Assessment: Income Concepts

CEQ INSTITUTE
COMMITMENT TO EQUITY
Tulane University

MARKET INCOME

↓

PLUS DIRECT TRANSFERS MINUS DIRECT TAXES

↓

DISPOSABLE INCOME

↓

PLUS INDIRECT SUBSIDIES MINUS INDIRECT TAXES

↓

POST-FISCAL or CONSUMABLE INCOME

↓

PLUS MONETIZED VALUE OF PUBLIC SERVICES: EDUCATION & HEALTH

↓

FINAL INCOME

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

Lustig & Higgins (2013)

CEQ INSTITUTE
COMMITMENT TO EQUITY
Tulane University

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

Lustig & Higgins (2013)

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

Lustig & Higgins (2013)

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

Lustig & Higgins (2013)

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

Lustig & Higgins (2013)

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?

Lustig & Higgins (2013)

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

Lustig & Higgins (2013)

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

Lustig & Higgins (2013)

FISCAL POLICY, INEQUALITY AND POVERTY IN LATIN AMERICA: HIGHLIGHTS

CEQ INSTITUTE
COMMITMENT TO EQUITY
Tulane University

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

1. **Argentina (2012-13; I)** Rossignolo, Darío. 2016. CEQ Masterworkbook, CEQ Institute, Tulane University (February 28, 2016)
2. **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)
3. **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)
4. **Chile (2013, I):** Martínez-Aguilar, Sandra and Eduardo Ortiz-Juarez. 2015. CEQ Masterworkbook, CEQ Institute, Tulane University and the World Bank (December 9, 2015)
5. **Colombia (2010, I):** Melendez, Marcela, Nora Lustig and Valentina Martínez. 2015. CEQ Masterworkbook, Tulane University (December 17, 2015)
6. **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. **European Union (2011, I) :** EUROMOD statistics on Distribution and Decomposition of Disposable Income, accessed at http://www.iser.essex.ac.uk/euromod/statistics/ using EUROMOD version no. G2.0.
10. **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)
11. **Honduras (2011; I):** Castañeda, Ricardo e Ilya Espino . 2015. CEQ Masterworkbook, CEQ Institute, Tulane University (August 18, 2015)
12. **Indonesia (2012; C) :** Afkar, Rythia, Jon Jellema and Matthew Wai-Poi. 2014. CEQ Master Workbook, Tulane University and The World Bank (February 18, 2014)
13. **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)
14. **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)
15. **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)
16. **United States (2011, I):** Higgins, S., N. Lustig, W. Ruble and T. Smeeding (2015), "Comparing the Incidence of Taxes and Social Spending in Brazil and the United States", *Review of Income and Wealth*, forthcoming.
17. **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)

CEQ INSTITUTE
COMMITMENT TO EQUITY
Tulane University

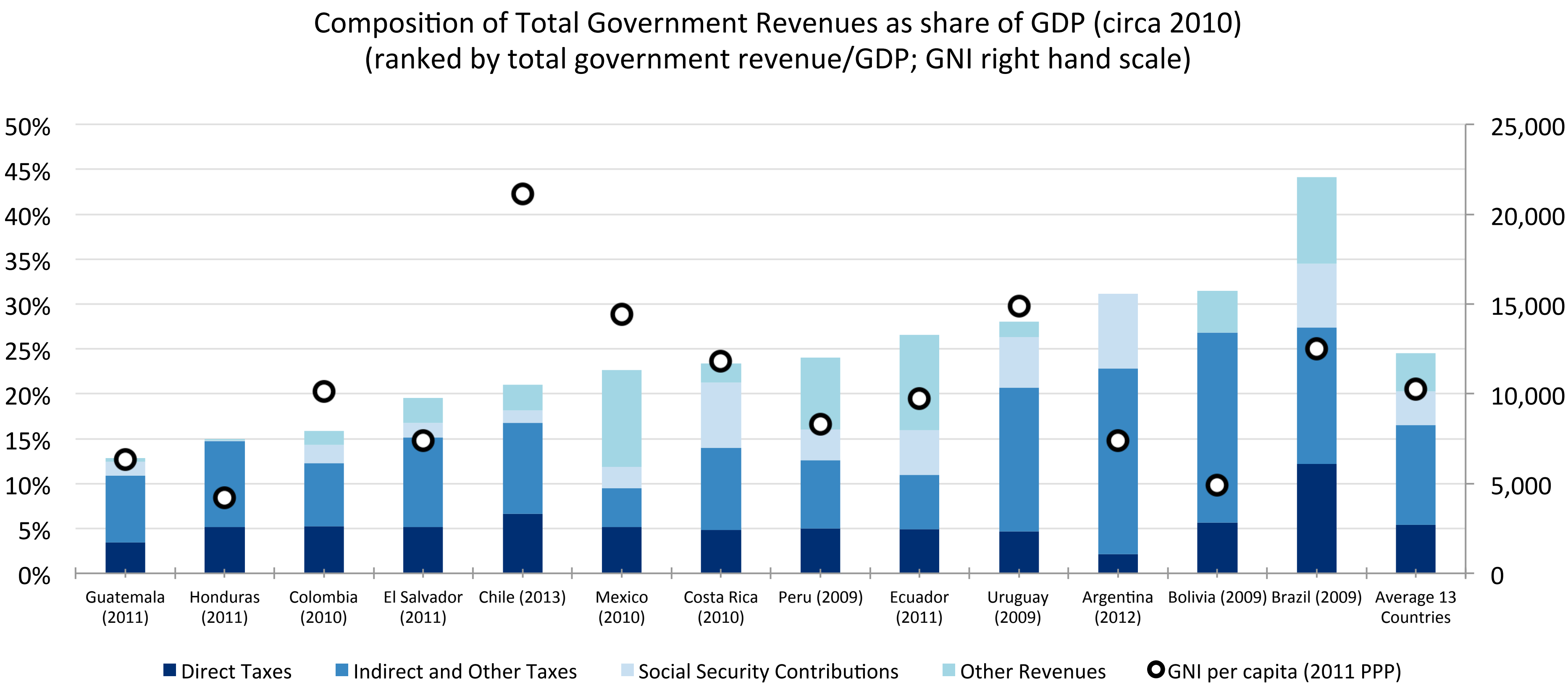
Household Surveys Used in Country Studies

1. **Argentina:** National Household Survey on Incomes and Expenditures 2012-13 (ENGHo) (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. **European Union:** see EUROMOD statistics on Distribution and Decomposition of Disposable Income, http://www.iser.essex.ac.uk/euromod/statistics
10. **Guatemala:** Encuesta Nacional de Ingresos y Gastos Familiares, 2010 (I)
11. **Honduras:** Encuesta Permanente de Hogares de Propósitos Múltiples (EPHPEM), 2011 (I)
12. **Indonesia:** Survei Sosial-Ekonomi Nasional, 2012 (C)
13. **Mexico:** Encuesta Nacional de Ingreso y Gasto de los Hogares, 2010 (I)
14. **Peru:** Encuesta Nacional de Hogares, 2009 (I)
15. **South Africa:** Income and Expenditure Survey and National Income Dynamics Study, 2010-2011 (I)
16. **United States:** Current Population Survey, 2011 (I)
17. **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 REVENUES AND SPENDING

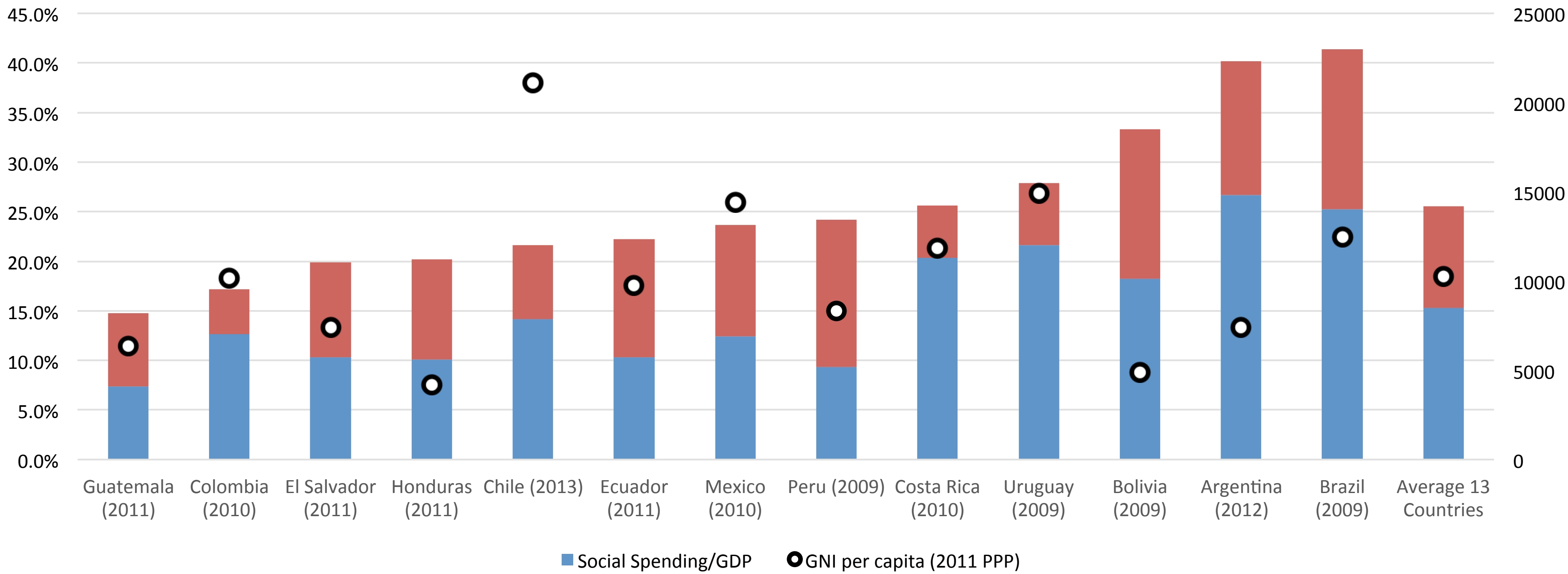
Government Revenues



GNI per capita for Argentina in 2005 PPP
Source: Lustig (2015b)

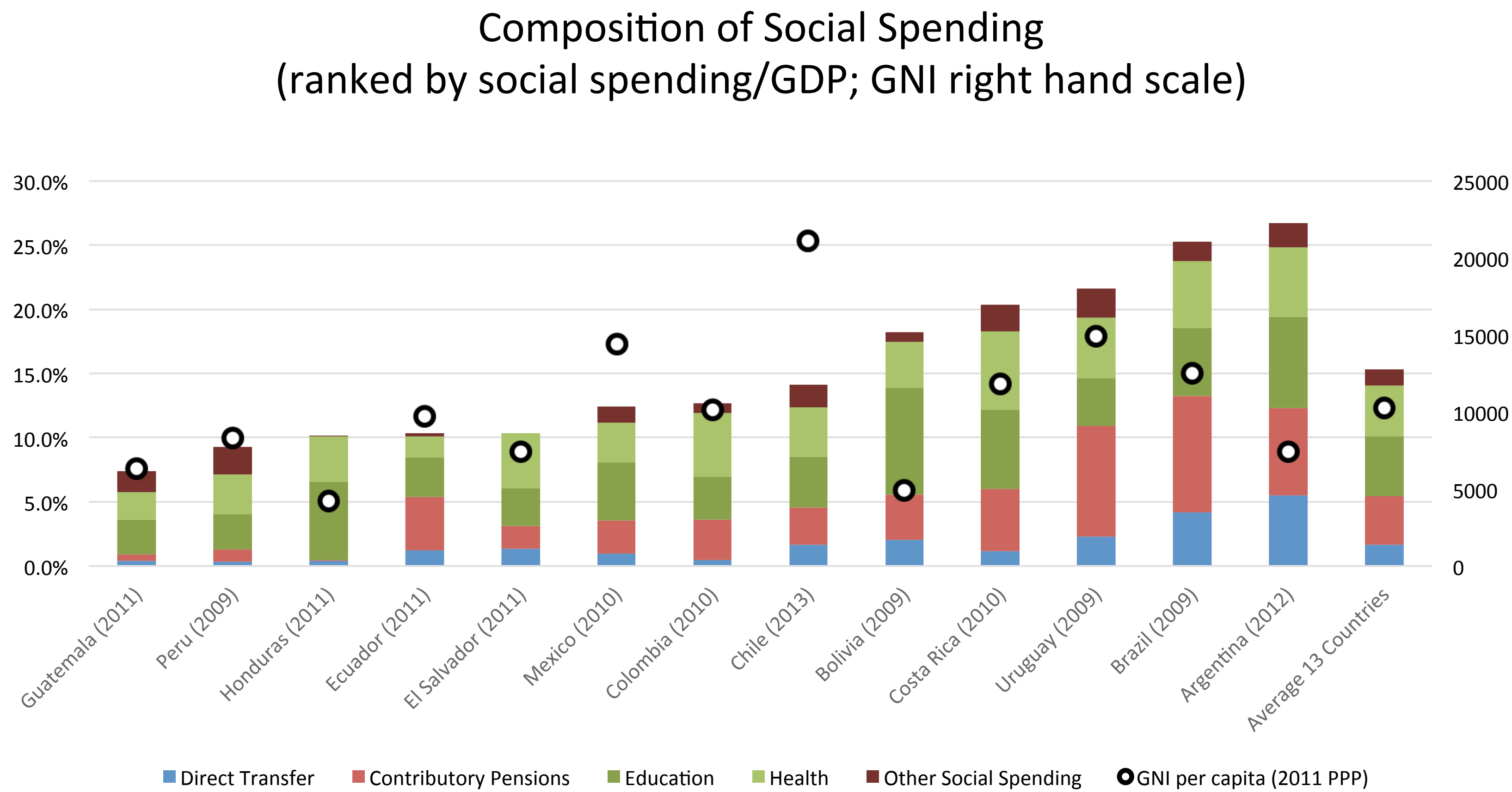
Public Spending

Primary and Social Spending as share of GDP (circa 2010)
(ranked by primary spending/GDP, GNI right hand scale)



GNI per capita for Argentina in 2005 PPP
Source: Lustig (2015b)

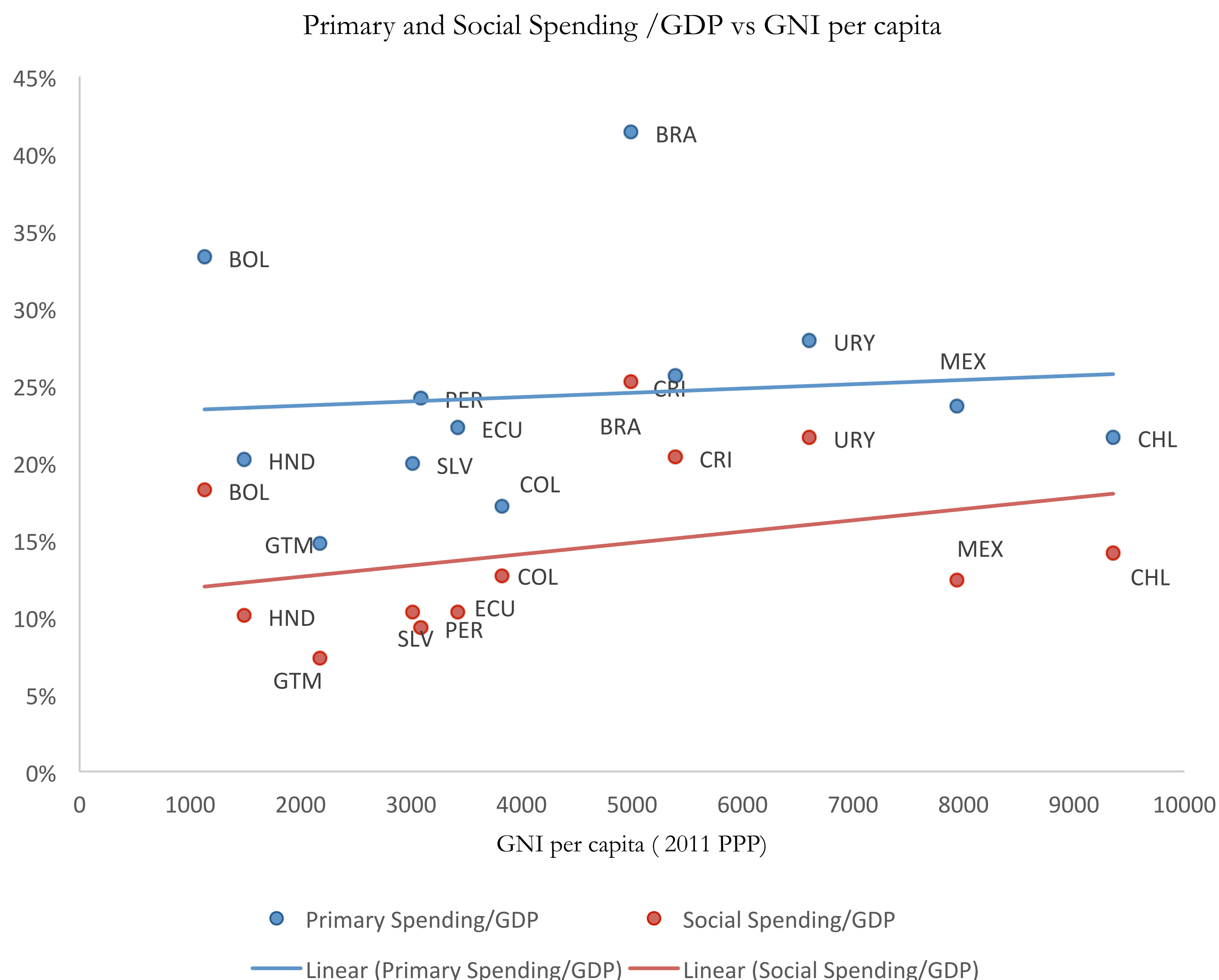
Size and Composition of Government Budget



GNI per capita for Argentina in 2005 PPP

Source: Lustig (2015b)

Public Spending vs GNI



Source: Lustig (2016)

FISCAL POLICY AND INEQUALITY

CEQ Assessment: Income Concepts

CEQ INSTITUTE
COMMITMENT TO EQUITY
Tulane University

MARKET INCOME

↓

PLUS DIRECT TRANSFERS MINUS DIRECT TAXES

↓

DISPOSABLE INCOME

↓

PLUS INDIRECT SUBSIDIES MINUS INDIRECT TAXES

↓

POST-FISCAL or CONSUMABLE INCOME

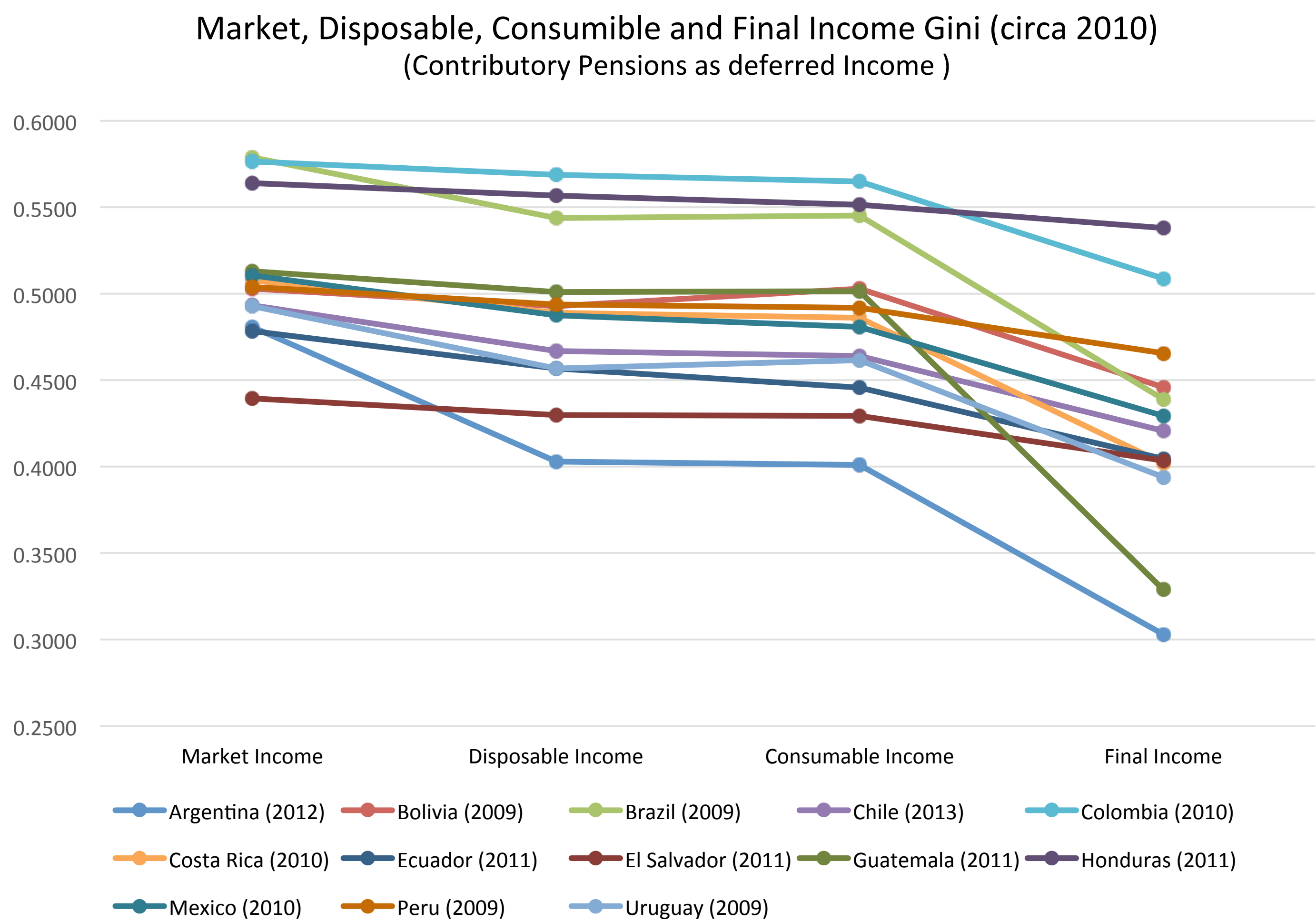
↓

PLUS MONETIZED VALUE OF PUBLIC SERVICES: EDUCATION & HEALTH

↓

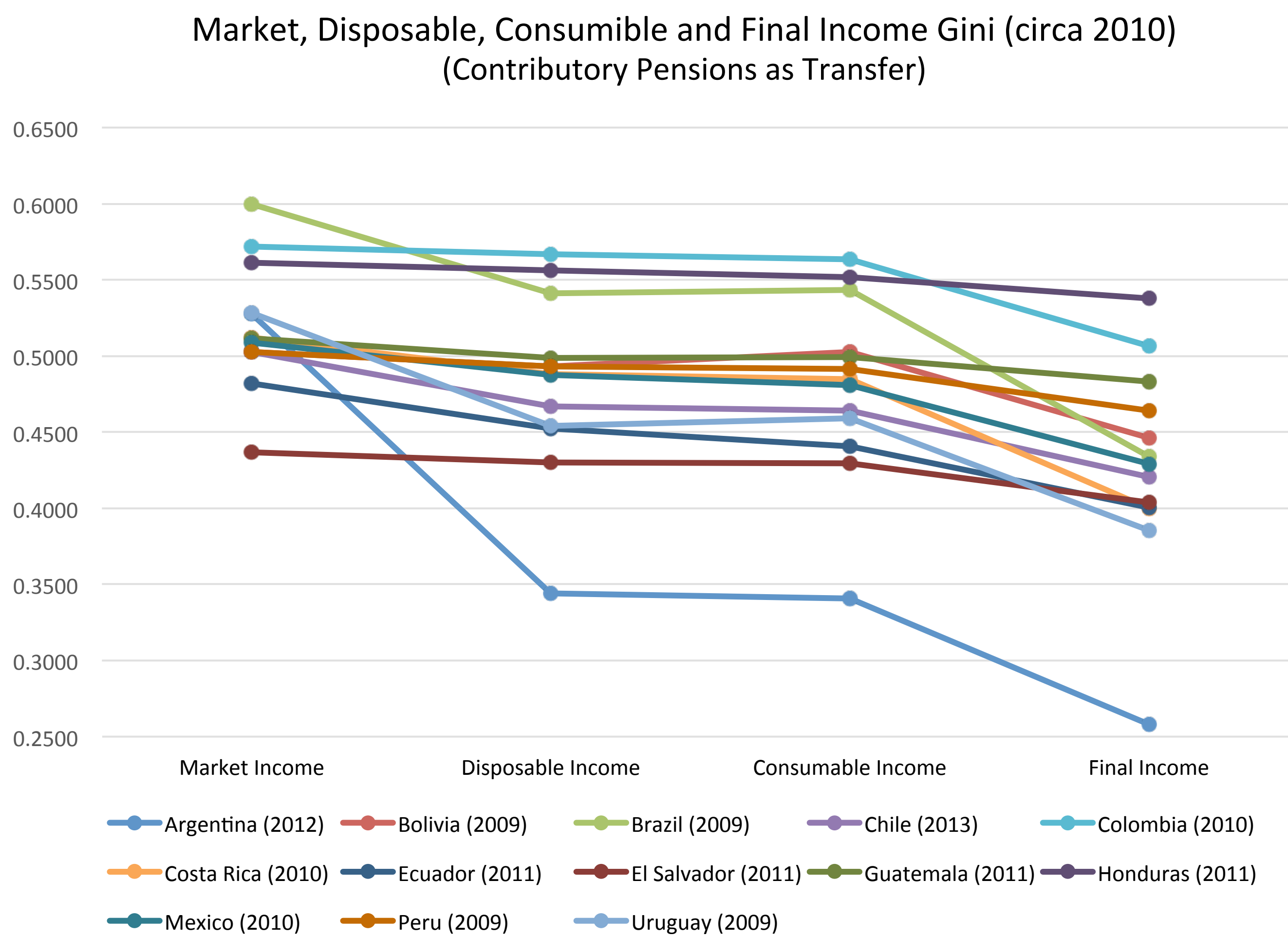
FINAL INCOME

Fiscal Redistribution



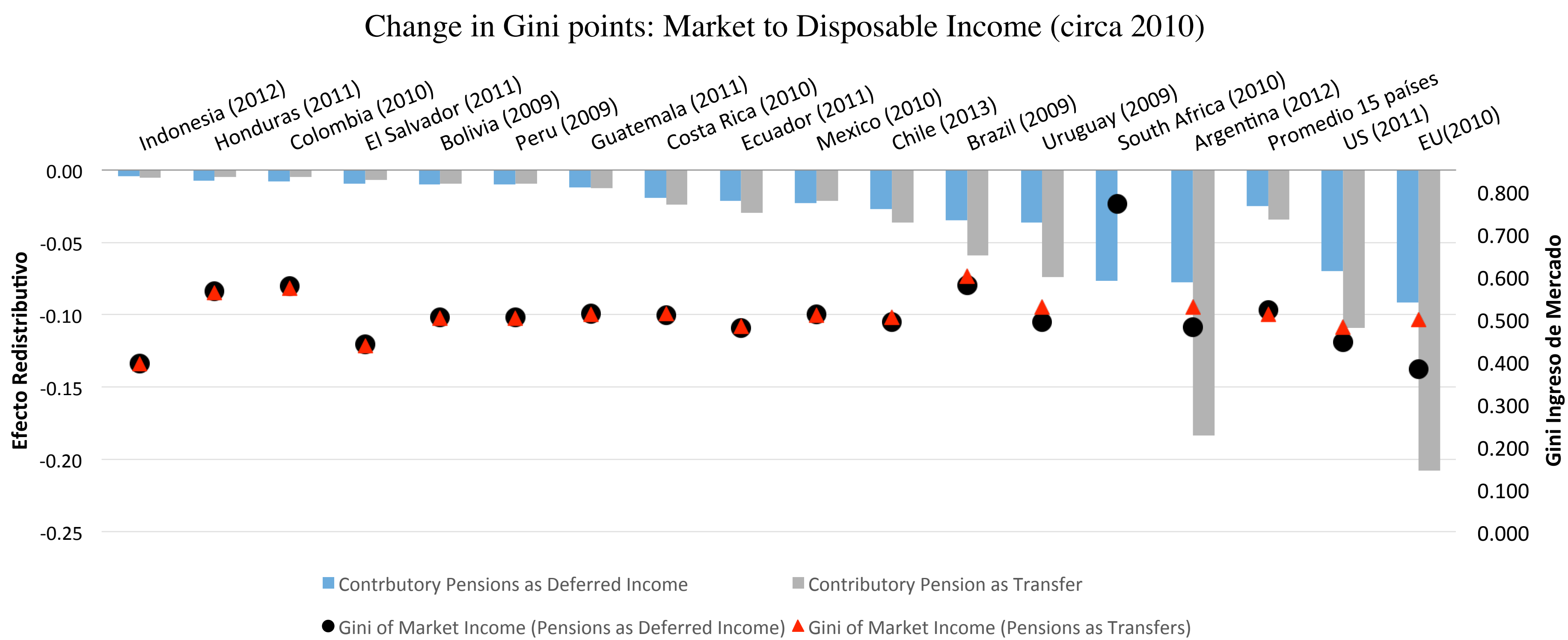
Ginis for Chile are estimated using Total Income. Official figures of inequality are estimated using Monetary Income
Source: Lustig (2016)

Fiscal Redistribution



Ginis for Chile are estimated using Total Income. Official figures of inequality are estimated using Monetary Income
Source: Lustig (2016)

Redistributive Effect



The Gini coefficients for the United States are for equivalized income. Ginis for Chile are estimated using Total Income. Official figures of inequality are estimated using Monetary Income

Source: Lustig (2016)

Main messages

- Extent of redistribution very heterogeneous: From Argentina (similar to the European Union) to Honduras (negligible)

- Contributory Pensions can be equalizing or unequalizing (Colombia, Honduras, Mexico)

Lambert, 2001; Lustig et al., forthcoming

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

Lustig (2016)

Main messages

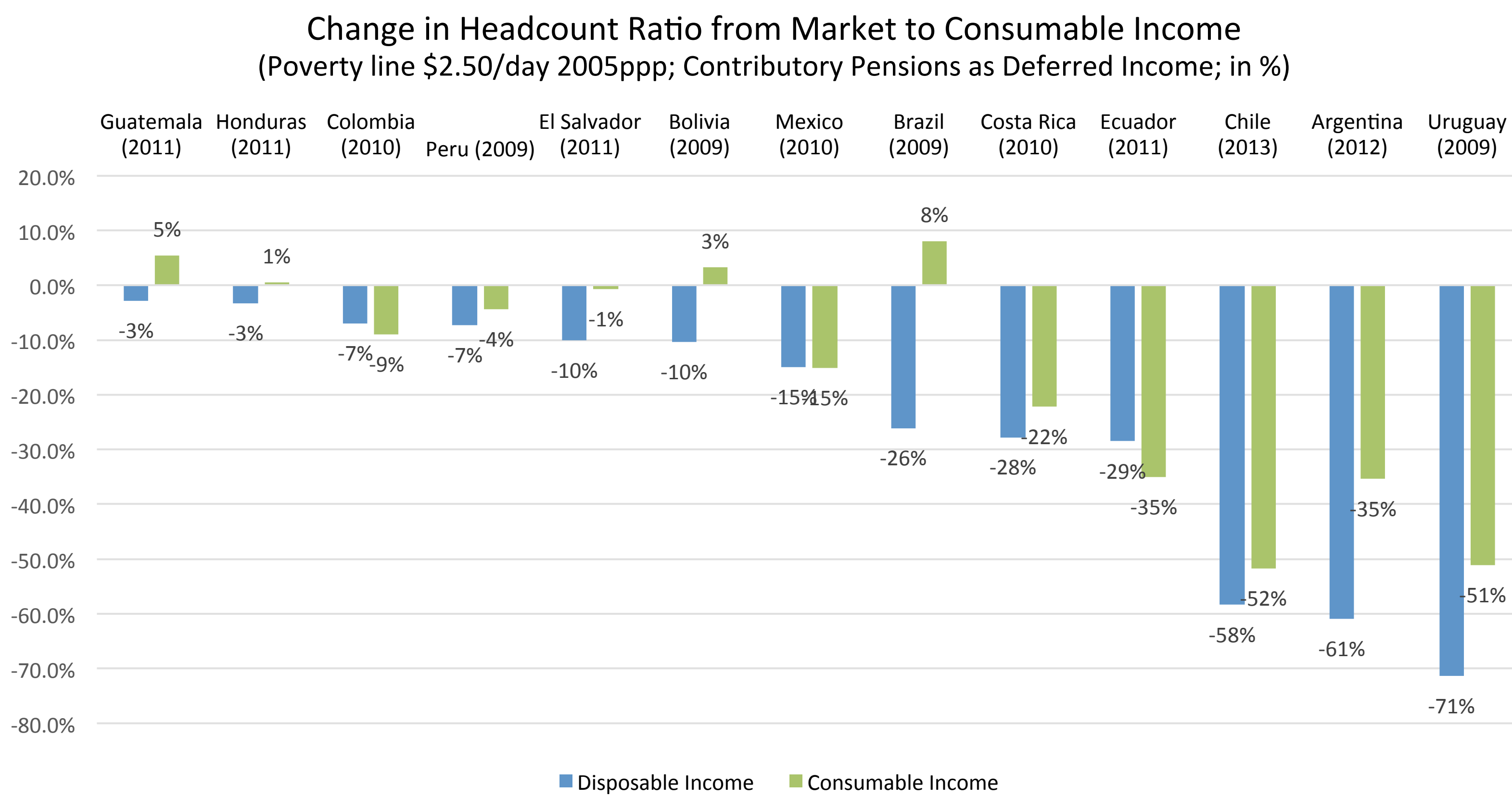
Analyzing the tax side without the spending side, or vice versa, is not very useful

- A tax can be regressive but when combined with transfers make the system more equalizing than without the regressive taxes: e.g, VAT in Chile
- Transfers can be equalizing but when combined with taxes, post-fisc poverty can be higher

Lambert, 2001; Lustig et al., forthcoming

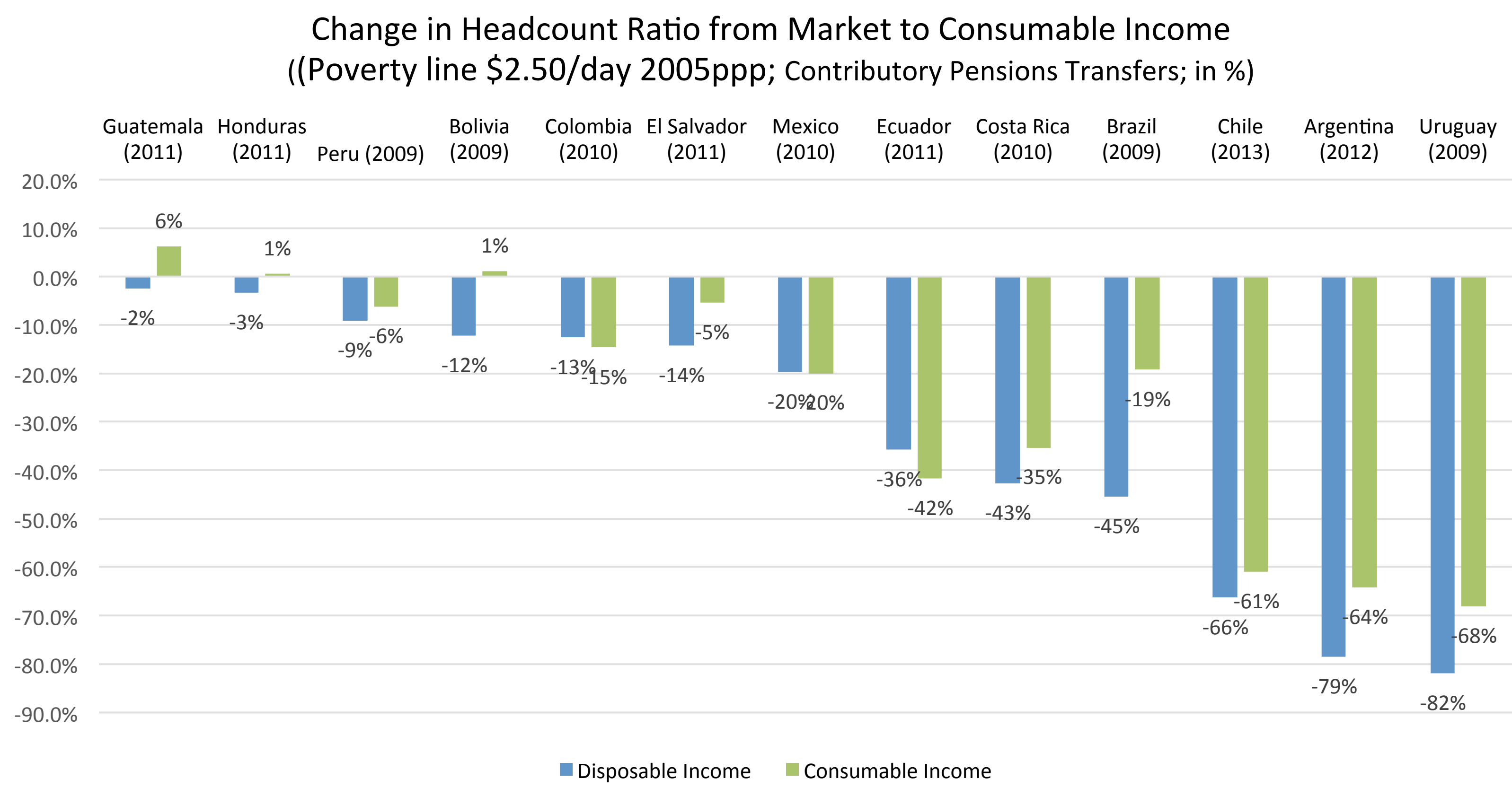
FISCAL POLICY AND POVERTY REDUCTION

Fiscal Policy and Poverty Reduction



Source: Lustig (2016)

Fiscal Policy and Poverty Reduction



Source: Lustig (2016)

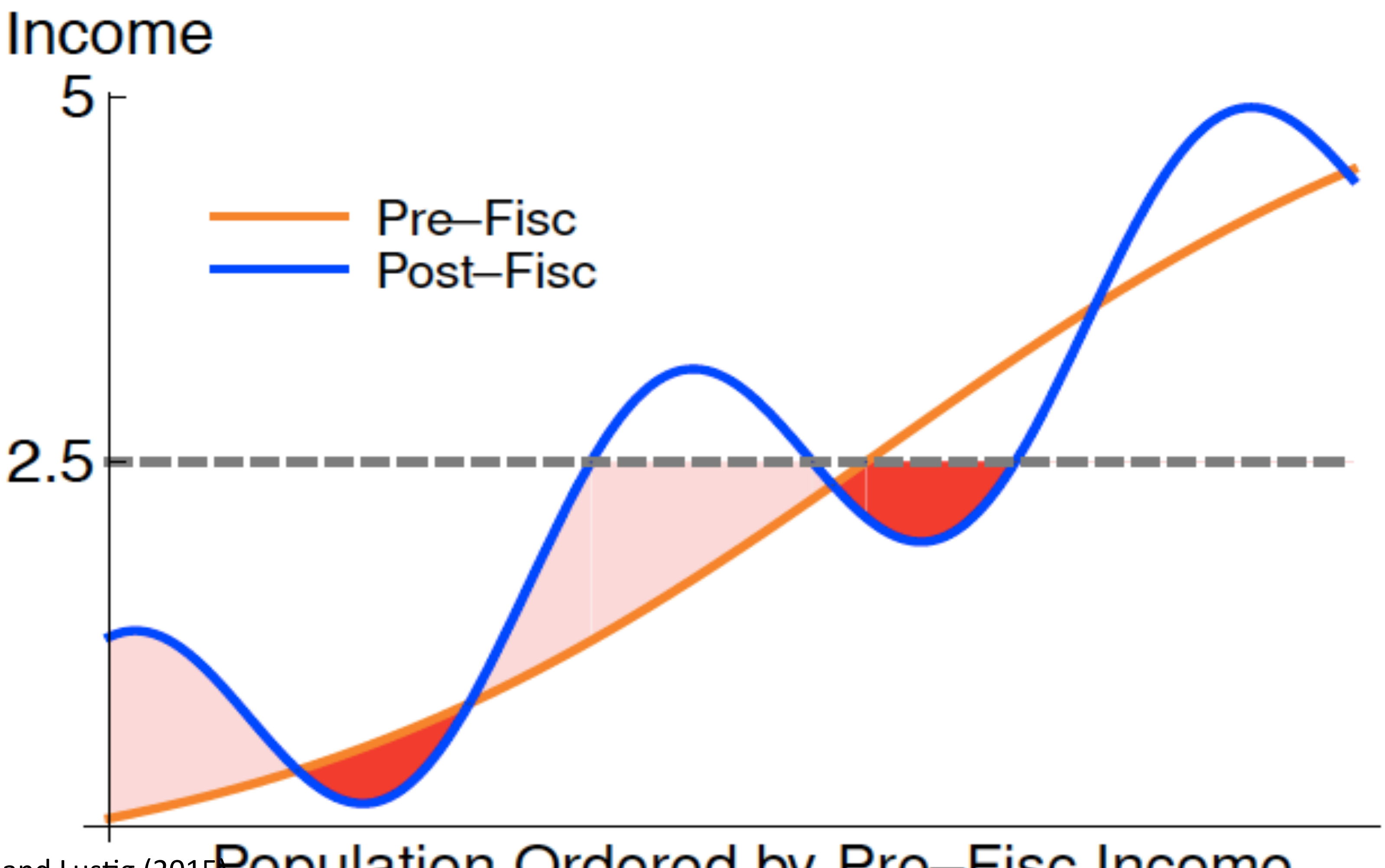
Main messages

Analyzing the impact on inequality only can be misleading

- Fiscal systems can be equalizing but poverty increasing: Bolivia, Brazil, Guatemala, Honduras

Lustig, forthcoming

Fiscal Impoverishment and Fiscal Gains to the Poor



Higgins and Lustig (2015)

Fiscal Impoverishment

($1.25/day PPP 2005, Market to Consumable Income)

	Market income + pensions poverty headcount	FI headcount (among whole population)	FI headcount among post fiscal poor	FI per impoverished as proportion of income	Poverty went up or down?	Unambiguously progressive?	Inequality went up or down?
Bolivia (2009)	10.9%	6.6%	63.2%	15.2%	DOWN	YES	DOWN
Brazil (2009)	6.5%	0.4%	10.3%	7.7%	DOWN	YES	DOWN
Chile (2013)	0.8%	0.0%	5.2%	5.3%	DOWN	YES	DOWN
Ecuador (2011)	3.4%	0.1%	4.1%	4.4%	DOWN	YES	DOWN
El Salvador(2011)	4.3%	1.0%	27.0%	5.2%	DOWN	YES	DOWN
Guatemala (2010)	12.0%	7.0%	62.2%	6.4%	DOWN	YES	DOWN
Mexico (2012)	4.9%	0.8%	23.7%	14.8%	DOWN	YES	DOWN
Peru (2011)	4.4%	0.8%	21.8%	18.5%	DOWN	YES	DOWN

Higgins and Lustig (2015)

Main messages

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 (in Bolivia and Guatemala the share is over 60 percent)

Higgins and Lustig (2015)

Progressivity of Education Spending

	Educ Total			Pre-school			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	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
Argentina (2012)		+		nd			nd			nd					+	
Bolivia (2009)		+		+			+			+					+	
Brazil (2009)	+			+			+			+					+	
Chile (2013)	+			nd			nd			nd			nd			
Colombia (2010)	nd			+			+			+					+	
Costa Rica (2010)	nd			+			+			+					+	
Ecuador (2011)	+			nd			+					+	nd			
El Salvador (2011)	+			+			+				+					+
Guatemala (2011)		+		+			+				+					+
Honduras (2011)		+		+			+				+				+	
Mexico (2010)	+			+			+			+					+	
Peru (2009)	+			+			+			+					+	
Uruguay (2009)	+			+			+								+	

Source: Lustig (2016)

Progresivity 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
Argentina (2012)	+		
Bolivia (2009)		+	
Brazil (2009)	+		
Chile (2013)	+		
Colombia (2010)	nd		
Costa Rica (2010)			
Ecuador (2011)	+		
El Salvador (2011)			+
Guatemala (2011)			+
Honduras (2011)	+		
Mexico (2010)		+	
Peru (2009)			+
Uruguay (2009)	+		

Source: Lustig (2016)

Main messages

- Education spending per person tends to decline with income (“pro-poor”) or be the same across the income distribution
  - Middle-classes opting out?
- Tertiary education spending is equalizing except for El Salvador and Guatemala
- Health spending per person tends to decline with income (“pro-poor”) or be the same across the income distribution, except for El Salvador, Guatemala and Peru where although not unequalizing per capita spending increases with income

Higgins and Lustig (2015)

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 (forthcoming)
- 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. 33, 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 (forthcoming)
- 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)
- 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

- 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 and Marcela Melendez. 2015. *The Impact of Taxes and Transfers on Inequality and Poverty in Colombia.* CEQ Working Paper No 24, Center for Inter-American Policy and Research and Department of Economics, Tulane University and Inter-American Dialogue. 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. Accepted in *Journal of Globalization and Development.*
- Lustig, Nora. 2016. "El impacto del sistema tributario y el gasto social en la distribución del ingreso y la pobreza en América Latina: Argentina, Bolivia, Brasil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, México, Perú y Uruguay." CEQ Working Paper No. 47, Commitment to Equity Institute, Tulane University, forthcoming. To be published in *El Trimestre Económico.*

References

CEQ INSTITUTE
COMMITMENT TO EQUITY
Tulane University

- Lustig, Nora, editor. Commitment to Equity Handbook: Estimating the Redistributive Impact of Fiscal Policy. (Forthcoming)
- Martinez, Sandra, Alan Fuchs and Eduardo Ortiz-Juarez. 2016 "The Impact of Fiscal Policy on Inequality and Poverty in Chile." CEQ Working Paper No. 46, Commitment to Equity Institute, Tulane University and the World Bank, forthcoming.
- 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)
- 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.

Thank you!