

Universal Basic Income, Taxes, and the Poor

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Based on:

- Lustig N, Jellema J, Martinez-Pabon V. [Are Budget Neutral Income Floors Fiscally Viable in Sub-Saharan Africa?](#). Center for Global Development, Working Paper No. 588; 2021.
- Enami A, Gentilini U, Larroulet P, Lustig N, Monsalve E, Quan S, Rigolini J. [Universal Basic Income Programs: How Much Would Taxes Need to Rise?: Evidence for Brazil, Chile, India, Russia, and South Africa](#). Tulane University, Department of Economics, Working Paper 2108; 2021.

Key Questions

- What is the impact on poverty and tax burdens when existing transfers and subsidies are replaced by a budget-neutral UBI?
 - How does the impact change with different levels of UBI generosity?
- => Is UBI a desirable/feasible alternative to current transfers/subsidies?

How?

- Microsimulations to estimate the impact on poverty and the effective tax rate when existing transfers and price subsidies are replaced by a budget-neutral UBI with different levels of generosity.
- 10 Low- and lower-middle-income countries: Comoros, eSwatini, Ghana, India, Ivory Coast, Lesotho, Tanzania, Togo, Uganda, and Zambia.
- 4 Upper-middle- and high-income countries: Brazil, Chile, Russia, and South Africa.
- To define poverty, we use World Bank Income Class International Poverty Lines (in US\$ 2011 PPP/day):
 - low-income countries: \$1.90
 - lower-middle-income countries: \$3.2
 - upper-middle-income countries: \$5.50
 - high-income countries: \$11

Baseline and UBI Scenarios

Scenario	Average transfer per beneficiary
Baseline	Existing cash transfer programs and fiscal system
UBI-Spending Neutral	Universal transfer equals current spending on cash transfers and consumption price subsidies divided by the total population
UBI-Poverty Gap	Universal transfer equals the average prefiscal poverty gap calculated with the World Bank Income Class International Poverty Lines; budget neutrality is achieved by increasing direct personal income taxes or indirect taxes

Data

- Low- and lower-middle-income countries:
 - CEQI's harmonized microdata from individual fiscal incidence studies based on household surveys conducted between 2010 and 2017.
- Upper-middle- and high-income countries:
 - World Bank's Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE) conducted between 2012 and 2016.
 - CEQI's fiscal incidence of taxes and consumption subsidies by decile.

Country Characteristics

Country	Population (Millions)	GNI per capita (\$PPP 2017)	Poverty headcount ratio (%), income class international poverty lines	Squared poverty gap (%), income class international poverty lines	Direct transfers (% of GDP)	Indirect subsidies (% of GDP)	Direct taxes (% of GDP)	Indirect taxes (% of GDP)
Low-Income Countries, \$1.9 PPP Income Class International Poverty Line								
Comoros (2014)	0.8	2,999	13.6	1.6	2.1	na	2.3	6.0
Tanzania (2011)	45.7	2,061	49.8	6.7	0.1	1.2	2.7	9.8
Togo (2015)	7.3	1,982	36.7	6.2	0.1	3.2	1.1	17.1
Uganda (2016)	39.6	2,052	44.9	6.9	0.0	0.8	2.3	8.7
Lower-Middle-Income Countries, \$3.2 PPP Income Class International Poverty Line								
eSwatini (2017)	1.1	7,845	49.5	10.5	7.6	na	4.6	5.4
Ghana (2013)	26.6	4,624	29.3	4.6	0.1	1.3	2.7	7.8
India (2012)	1109.0	4,529	61.4	9.0	0.5	2.9	1.9	11.1
Ivory Coas (2015)	23.2	4,322	52.4	10.0	0.0	0.4	0.8	11.2
Lesotho (2017)	2.1	3,031	51.6	17.1	5.0	0.9	5.7	8.1
Zambia (2015)	15.9	3,331	72.9	31.6	0.1	1.7	4.1	7.9
Upper-Middle-Income Countries, \$5.5 PPP Income Class International Poverty Line								
Brazil (2015)	200.3	14,780	22.3	6.1	5.4	na	2.0	14.5
South Africa (2014)	54.8	13,701	59.2	36.6	3.0	na	9.1	8.8
High-Income Countries, \$11.0 PPP Income Class International Poverty Line								
Chile (2015)	16.2	23,730	36.4	7.0	1.6	0.5	1.3	9.8
Russia (2016)	146.1	24,798	8.8	1.1	5.3	na	3.9	6.4

Notes: The poverty measures are for prefiscal income. Prefiscal income here is market income plus income from contributory pensions.

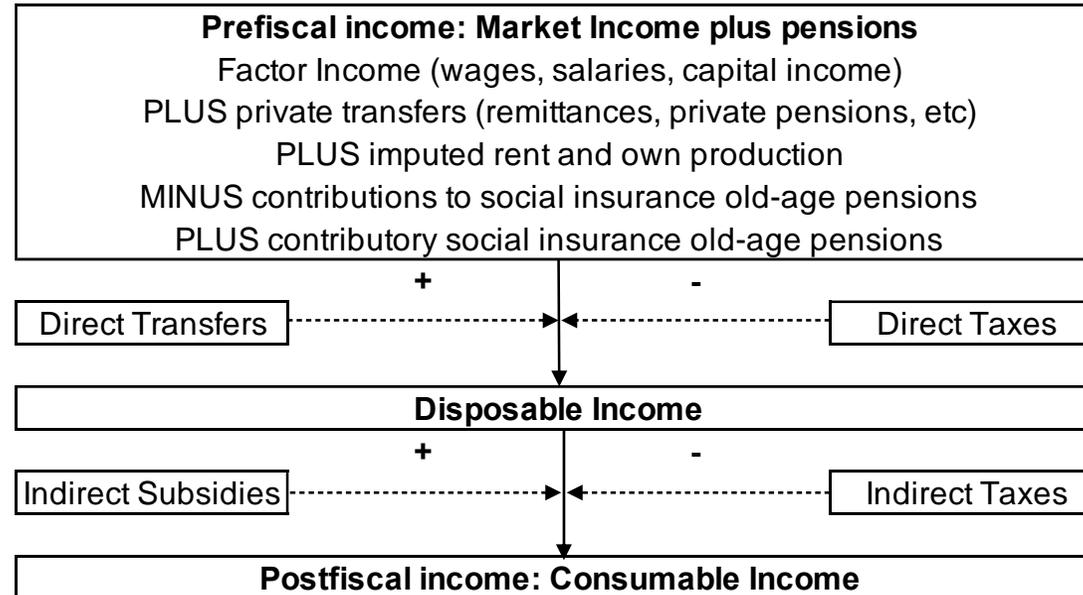
Source: Own elaboration based on Enami et al. (2021) and Lustig, Jellema and Martinez Pabon (2021). GNI per capita from the World Bank's World Development Indicators; accessed in February 2022. Direct transfers, indirect subsidies, direct taxes, and indirect taxes as a percentage of GDP from the CEQI Data Center on Fiscal Redistribution.

Methodology

- Simulations step-by-step:
 - Consumption subsidies are eliminated; funds added to pool available to finance the universal transfer.
 - UBI is assigned to the whole population.
 - Budget-neutrality is obtained by either increasing direct taxes or indirect taxes (everybody's taxes are increased proportionally).
 - Prefiscal and postfiscal income are calculated to estimate the impact on poverty and tax burdens.
- Caveat:
 - The microsimulations do not take into account behavioral responses or general equilibrium effects, so they yield first-order effects only.

Methodology

- Income concepts:



Impact on Poverty

... but UBI-spending neutral scenario is also poverty increasing

Existing fiscal systems are poverty increasing

Country	Year of Survey	Income Class International Poverty Lines	Prefiscal income poverty headcount ratio (%)	Postfiscal income poverty headcount ratio (%)				Prefiscal income squared poverty gap (%)	Postfiscal income squared poverty gap (%)					
				Baseline	Spending Neutral Scenario		Poverty Gap Scenario		Baseline	Spending Neutral Scenario		Poverty Gap Scenario		
					DT	IT	DT			IT	DT	IT	DT	IT
Low- and Lower-Middle-Income Countries														
Comoros	2014	1.9	13.6	14.1	14.1			1.6	1.7	1.7	1.7			
eSwatini	2017	3.2	49.5	50.1	50.2	50.2		10.5	9.4	9.9	9.9			
Ghana	2013	3.2	29.3	31.5	30.4	30.4	22.0	4.6	5.1	4.4	4.4		1.6	
India	2012	3.2	61.4	65.8	63.7	63.6	60.2	9.0	10.6	9.1	9.0	3.5	4.1	
Ivory Coast	2015	3.2	52.4	54.6	54.6	54.6		10.0	10.6	10.5	10.5			
Lesotho	2017	3.2	51.6	53.3	53.5	53.5		17.1	13.6	15.3	15.3			
Tanzania	2011	1.9	49.8	58.0	57.9	57.9	50.4	6.7	8.6	8.2	8.2		3.3	
Togo	2015	1.9	36.7	42.7	42.7	42.7	34.4	6.2	7.7	7.7	7.7		2.6	
Uganda	2016	1.9	44.9	47.2	46.7	46.7		6.9	7.4	7.1	7.1			
Zambia	2015	3.2	72.9	73.6	73.5	73.5	46.3	31.6	31.7	30.9	30.9	2.1		
Upper-Middle- and High-Income Countries														
Brazil	2015	5.5	22.3	25.5	26.2	26.2	17.1	19.5	6.1	5.5	6.6	6.6	2.0	2.4
Chile	2015	11.0	36.4	41.1	41.7	41.7	32.1	34.6	7.0	6.8	7.3	7.3	2.4	3.2
Russia	2016	11.0	8.8	9.1	9.0	9.0	7.2	7.6	1.1	1.0	0.9	0.9	0.5	0.6
South Africa	2014	5.5	59.2	60.3	59.2	59.2	43.0	51.3	36.6	19.9	25.0	24.9	5.4	7.3

Note: Numbers in red refer to the cases when prefiscal poverty is higher than the postfiscal one in the baseline scenario. The scenarios highlighted in gray fail to meet the condition that the prefiscal poverty measures are not higher than the postfiscal ones. Cells left blank are the scenarios which resulted in negative consumable incomes or extreme reranking.

Source: Own elaboration based on Enami et al. (2021) and Lustig, Jellema and Martinez Pabon (2021).

Impact on Poverty

... while the UBI-poverty gap scenario yield postfiscal poverty lower than prefiscal poverty

Country	Year of Survey	Income Class International Poverty Lines	Prefiscal income poverty headcount ratio (%)	Postfiscal income poverty headcount ratio (%)				Prefiscal income squared poverty gap (%)	Postfiscal income squared poverty gap (%)					
				Baseline	Spending Neutral Scenario		Poverty Gap Scenario		Baseline	Spending Neutral Scenario		Poverty Gap Scenario		
					DT	IT	DT			IT	DT	IT	DT	IT
Low- and Lower-Middle-Income Countries														
Comoros	2014	1.9	13.6	14.1	14.1	14.1	14.1	1.6	1.7	1.7	1.7			
eSwatini	2017	3.2	49.5	50.1	50.2	50.2	50.2	10.5	9.4	9.9	9.9			
Ghana	2013	3.2	29.3	31.5	30.4	30.4	22.0	4.6	5.1	4.4	4.4		1.6	
India	2012	3.2	61.4	65.8	63.7	63.6	60.2	9.0	10.6	9.1	9.0	3.5	4.1	
Ivory Coast	2015	3.2	52.4	54.6	54.6	54.6	54.6	10.0	10.6	10.5	10.5			
Lesotho	2017	3.2	51.6	53.3	53.5	53.5	53.5	17.1	13.6	15.3	15.3			
Tanzania	2011	1.9	49.8	58.0	57.9	57.9	50.4	6.7	8.6	8.2	8.2		3.3	
Togo	2015	1.9	36.7	42.7	42.7	42.7	34.4	6.2	7.7	7.7	7.7		2.6	
Uganda	2016	1.9	44.9	47.2	46.7	46.7	46.7	6.9	7.4	7.1	7.1			
Zambia	2015	3.2	72.9	73.6	73.5	73.5	46.3	31.6	31.7	30.9	30.9	2.1		
Upper-Middle- and High-Income Countries														
Brazil	2015	5.5	22.3	25.5	26.2	26.2	17.1	19.5	6.1	5.5	6.6	6.6	2.0	2.4
Chile	2015	11.0	36.4	41.1	41.7	41.7	32.1	34.6	7.0	6.8	7.3	7.3	2.4	3.2
Russia	2016	11.0	8.8	9.1	9.0	9.0	7.2	7.6	1.1	1.0	0.9	0.9	0.5	0.6
South Africa	2014	5.5	59.2	60.3	59.2	59.2	43.0	51.3	36.6	19.9	25.0	24.9	5.4	7.3

Note: Numbers in red refer to the cases when prefiscal poverty is higher than the postfiscal one in the baseline scenario. The scenarios highlighted in gray fail to meet the condition that the prefiscal poverty measures are not higher than the postfiscal ones. Cells left blank are the scenarios which resulted in negative consumable incomes or extreme reranking.

Source: Own elaboration based on Enami et al. (2021) and Lustig, Jellema and Martinez Pabon (2021).

Impact on Net Tax Burdens

% Change in Postfiscal Income Between UBI scenarios the Baseline

UBI-Spending neutral scenario is regressive

UBI-Poverty gap scenario progressive, but decline in postfiscal income for top decile large, exc Russia

Decile	Low- and Lower-Middle-Income Countries				Upper-Middle- and High-Income Countries									
	Ghana (2013)	India (2012)	Togo (2015)	Zambia (2015)	Brazil (2015)	Chile (2015)	Russia (2016)	South Africa (2014)						
	Poverty Gap Scenario	Poverty Gap Scenario	Poverty Gap Scenario	Poverty Gap Scenario	Poverty Gap Scenario	Poverty Gap Scenario	Poverty Gap Scenario	Spending Neutral Scenario		Poverty Gap Scenario				
	IT	IT	IT	DT	DT	IT	DT	IT	DT	IT	DT	IT		
1	65.3	37.5	75.9	592.8	45.1	37.1	53.5	39.6	4.1	2.4	-100.7	-100.7	67.9	48.9
2	33.8	27.3	38.1	333.3	34.7	27.6	34.3	24.9	3.9	2.5	-26.2	-26.1	123.6	98.7
3	21.8	20.5	23.9	241.6	24.8	18.8	22.5	16.8	3.2	2.3	-10.0	-9.8	97.7	76.4
4	14.7	17.2	16.3	183.1	17.5	12.4	16.2	11.9	2.3	1.6	-2.9	-2.7	77.9	58.5
5	8.9	11.0	9.7	138.6	13.1	8.5	11.9	8.4	2.1	1.5	5.0	5.3	68.6	49.0
6	4.5	7.6	4.8	104.3	9.5	5.5	8.5	5.7	0.7	0.3	4.1	4.3	47.6	29.7
7	0.6	2.8	0.0	76.7	5.8	2.7	5.4	2.9	0.9	0.5	5.4	5.6	31.0	16.5
8	-3.0	-1.5	-4.1	48.9	2.5	0.1	3.0	0.2	-0.7	-0.5	3.4	3.5	2.2	0.7
9	-6.5	-8.1	-8.3	-3.5	-2.2	-2.9	-0.1	-3.4	-1.2	-0.6	2.5	2.5	-13.9	-9.8
10	-12.0	-18.9	-15.6	-41.0	-12.6	-7.8	-15.9	-9.4	-2.3	-1.6	1.3	1.2	-22.9	-15.9

Note: Deciles marked in red are under the country category-specific poverty line in the pre-fiscal income. The scenarios which fail to meet the condition that the prefiscal poverty measures are not higher than the postfiscal ones or which resulted in negative consumable incomes or extreme reranking are not shown.

Source: Own elaboration based on Enami et al. (2021) and Lustig, Jellema and Martinez Pabon (2021).

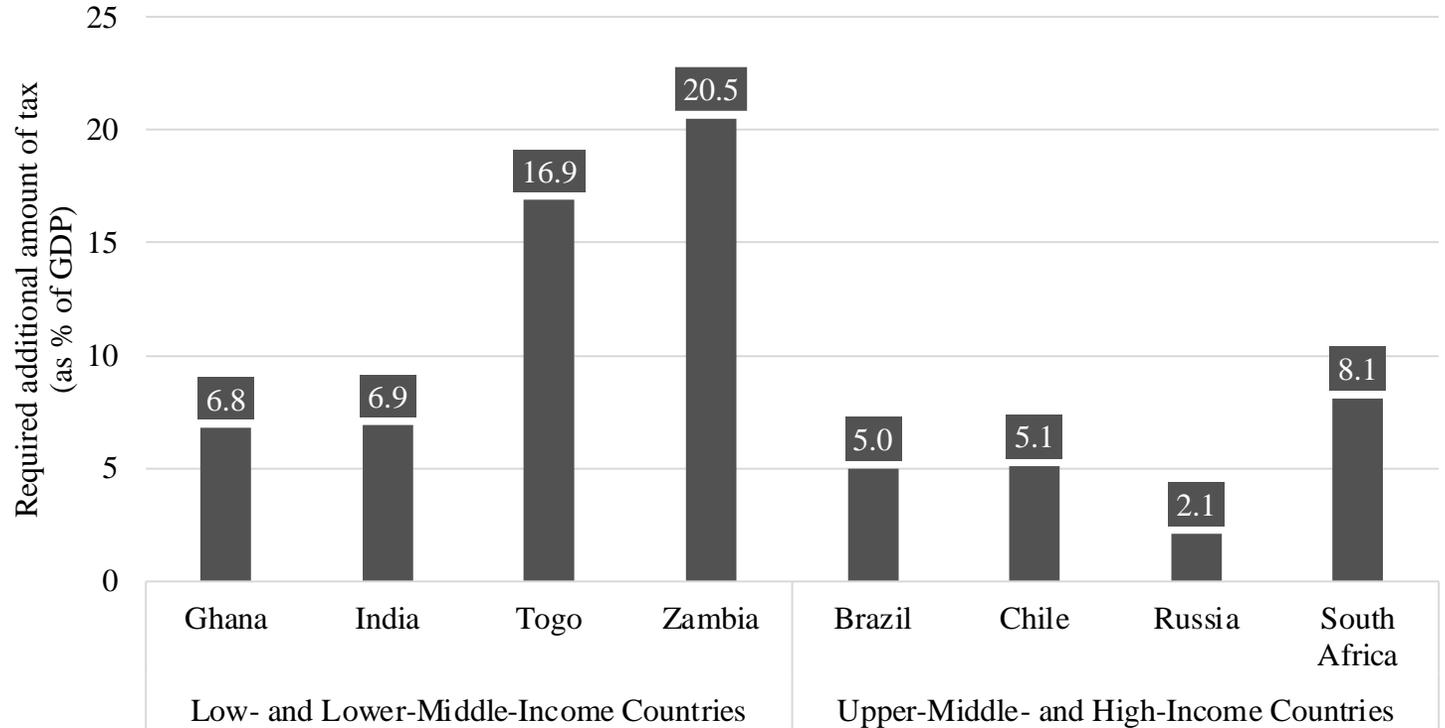
Conclusions

- Implementation of a budget-neutral UBI should account for the tradeoff between its generosity and the implied increase in tax burden.
- When budget neutrality is achieved by raising direct or indirect taxes paid by households, the increase in tax burdens for top deciles is significant. Efficiency costs and political resistance could make such a policy change a nonstarter in most low- and middle-income countries.
 - The lowest required increase is for indirect taxes in Russia: 35.3 percent.
- The pressure on tax burdens could be eased by lowering the generosity of the UBI transfer. However, this would hurt the poor.

Conclusions

- There might be other options to achieve budget-neutrality:
 - Of course, an obvious one is to reduce the poverty line. For example, not to use the "high-income" poverty line for Chile or Russia. Or, define the income floor with lowest possible poverty line.
- Beyond the above:
 - increasing the tax base.
 - resort to other sources of revenues such as corporate taxes
 - cutting down government spending on other items.
- However...

Budget-Neutral UBI Poverty Gap Scenario: Change in Fiscal Cost as % of GDP



Source: Own elaboration based on Enami et al. (2021) and Lustig, Jellema and Martinez Pabon (2021).

Thank you!