



Poverty Eradication Policies: How are Financing and Transfers Playing Together?

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Disclaimer

The views expressed in this presentation are purely those of the author and may not in any circumstances be regarded as stating an official position of the European Commission.

Introduction

- ▶ Ultimately, poverty eradication in Sub-Saharan Africa shall be driven by economic development
- ▶ But might not be fast enough for achieving this goal by 2030 – as defined by SDG 1 – nor reach the poor sufficiently
- ▶ For the nearer future, complementary, large-scale policy interventions directly targeted at alleviating poverty will be needed
- ▶ This necessitates transfers and corresponding funding
- ▶ Targeting, leakage, coverage, ..., Universal Basic Income

Motivation

- ▶ The *poverty gap* (P_1 , cost of poverty eradication) is often calculated as the extra amount of money needed by the poor population to reach the poverty line
- ▶ Typically assumes that consumer prices and incomes remain constant
- ▶ However, large-scale poverty policies will directly or indirectly affect these and might interact the goal potentially via these channels:
 - ▶ Policy instrument to finance the intervention
 - ▶ Policy instrument to transfer to poor households
 - ▶ Households' spending

The choice and combination of financing and transfer mechanisms might play an important role for a policy's financial feasibility

Uganda's poverty status

- ▶ Poverty gap P_1 : amount of extra money required by the average poor person to reach the poverty line z (as % of z)
- ▶ Cost of poverty eradication = $P_1 \cdot z \cdot N$ poor
= 4.2% of GDP in 2005/06

Evolution of poverty					
Survey year	Poor people	P_0	P_1	P_2	Gini
2005/06	8.4 million	31.1	8.8	3.5	0.41
2012/13	6.7 million	19.7	5.2	2.0	0.40
2016/17	8.0 million	21.4	5.3	1.9	0.42

Source: UBOS (2020). 2019 Statistical Abstract. Uganda Bureau of Statistics, Kampala

Research questions

The goal is a quantitative assessment

- ▶ How do different transfer and financing policies play together?
- ▶ What is the efficiency of different poverty alleviation policies?
- ▶ How does the efficiency change with upscaling?
- ▶ What structural factors of the economy limit the effectiveness of these policies?

This will be investigated by contrasting stylized targeted financing and transfer policies, using Uganda as a case study

Uganda CGE-microsimulation model

- ▶ Single country, comparative-static CGE model
- ▶ Based on IFPRI Standard CGE model (Lofgren et al.; 2002), tailored to the case of Uganda
- ▶ Calibrated to 2007 Uganda SAM by (Thurlow; 2008)
- ▶ Integrates all 7,421 observations from the 2005/06 Uganda National Household Survey (UNHS)

Described in Boysen and Matthews (2017)

Poverty measures

- ▶ Foster et al. (1984, FGT) poverty measures

$$P_{\alpha} = \frac{1}{N} \cdot \sum_{i=1}^N \left(\frac{z - y_i}{z} \right)^{\alpha} \cdot I_i$$

with N : population size, z : poverty line, y_i : income of individual i , $I_i = 1$ if $y_i < z$ and $I_i = 0$ otherwise

- ▶ Requires a well-behaved measure: P_0 is erratic, but P_1 is smooth!
- ▶ Poverty lines are kept constant at base level
 - Replicate UNHS 2005/06 rural and urban poverty headcounts
- ▶ To facilitate comparison with poverty line, income is measured by *equivalent income*

Equivalent income: Cost of attaining utility level of period 1 at period 0 prices $C(u_1, p_0)$

In the SAM, the aggregate national poverty gap amounts to 3.2%

Households are parameterised individually

- ▶ Each household's consumption Linear Expenditure System
 - ▶ Adopts predictions from econometrically estimated flexible demand system accounting for heterogeneous household characteristics (QUAIDS, Boysen; 2016)
 - ▶ Is calibrated using a generalized cross-entropy approach
- ▶ Each household's labour supply
 - ▶ Initially utilized to extent derived from household survey
 - ▶ Limits given by unemployed and fully employed
 - ▶ Utilization adapts in line with national wage curve

Uganda household characteristics in SAM

	All	Rural		Urban	
		non-poor	poor	non-poor	poor
Share in total population (%)	100.0	55.4	28.8	13.7	2.1
Home produced share in consumption (%)	26.1	31.5	37.7	11.0	15.9
Food share in consumption (%)	44.1	48.6	61.8	28.3	54.1
Labour utilization rate					
Unskilled (%)	79.6	80.0	68.3	84.1	76.6
Skilled (%)	89.1	91.8	91.9	87.3	62.5
Source of income	As share in household income (%)				
Labour unskilled	36.0	36.0	48.0	32.4	65.2
Labour skilled	12.3	9.2	1.8	20.2	2.6
Land	7.7	10.3	12.9	2.4	4.7
Capital	27.9	27.3	13.1	33.1	9.0
Transfers	16.0	17.2	24.2	12.0	18.4

Source: Own calculation from Uganda 2007 microsimulation SAM

Scenarios

- ▶ Objective: Reduction of poverty gap by between 10% and 95%
- ▶ Requires
 - (1) Financing mechanism (low economy-wide costs)
 - (2) Transfer mechanism (effective and cost-efficient, unconditional)

Scenarios

► Financing mechanisms

TRICH Income tax only for richest 30% of households

TCAP Tax on factor capital

TM Uniform increase of import tariffs (on manufactured goods incl. food excl. fuel)

FAID Foreign aid, remittances

► Transfer mechanisms

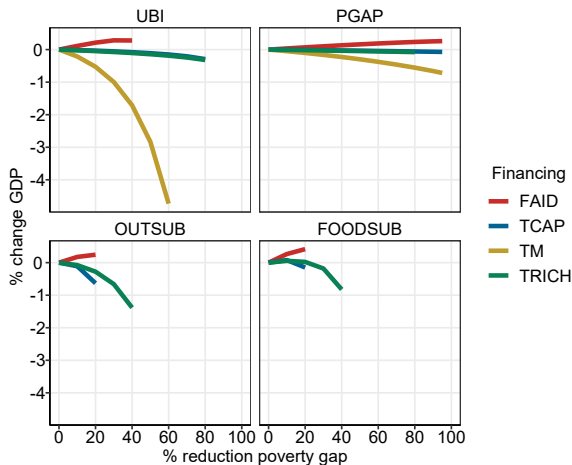
PGAP Perfect targeting, poverty gap of all households reduced by $X\%$

UBI Lump sum subsidy for all households

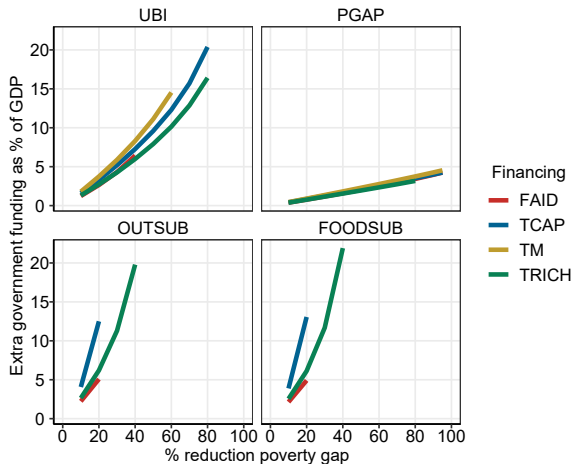
FOODSUB Uniform sales subsidy (on staple foods, fruits and vegetables)

OUTSUB Subsidy on output (of non-processed staple foods, fruits and vegetables)

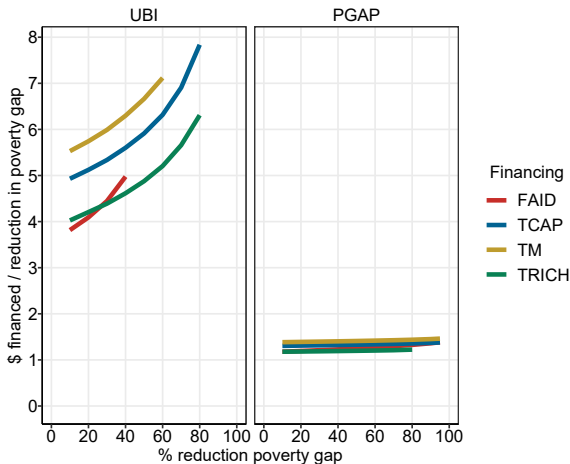
Real GDP



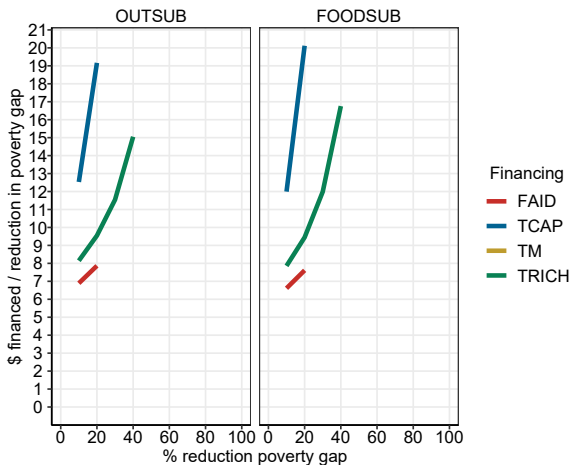
Additional government funding required



Government targeting efficiency: UBI and PGAP



Government targeting efficiency: OUTSUB and FOODSUB



Ceverts

- ▶ Additional costs for policy implementation, monitoring, etc.
- ▶ Additional benefits of poverty reduction, e.g.
 - ▶ Better nutrition = better productivity and less healthcare costs
 - ▶ Improved quality of life
 - ▶ Less crime
- ▶ Additional problems of financing, e.g. institutions or tax evasion
- ▶ Additional problems of targeting, e.g. informal activity

Conclusions

- ▶ Efficiency of transfer policies can differ strongly by financing policy
- ▶ The efficiency of policies decreases with scale, upscaling potentially prohibitive
- ▶ Thus, full poverty eradication needs more than a single simple policy
- ▶ Even moderate poverty reduction by way of transfers might require a combination of different financing and transfer mechanisms
- ▶ Targeting transfers might be inevitable

Thanks for your attention!

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