The effectiveness of social protection in five African countries through normal times and times of crisis

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Motivation and Background

To cope with a negative shock, in the absence of social protection, individuals can:
- Self-insure (by borrowing, drawing on savings, relying on support from family members etc)
- Insure privately on the market

But:
- Not everyone can save or borrow
- Ability to rely on others may be constrained at times of widespread increase in needs
- Private insurance against a job loss usually does not exist

Government policy response via social protection benefits key for redistributing resources and providing social assistance and insurance
Motivation and Background

- Social protection in Sub-Saharan Africa
  - A large share of benefits go to the poor (e.g. Handa et al. 2012; Coady et al. 2004)
  - But limited benefit coverage of the poor and limited effectiveness of systems to redistribute resources and reduce poverty (e.g. World Bank 2022; Warwick et al. 2022; Adu-Ababio 2022; Bargain et al. 2021; Gasior et al. 2021; Brown et al. 2018; Inchauste and Lustig 2017)

- Poverty in Sub-Saharan Africa increasing due to Covid-19 and surging prices (Mahler et al., 2022) but little government spending on social protection in the region (ILO, 2021)

- Little evidence on how responsive social protection systems are to negative shocks in low- and lower-middle-income countries
  - Important to understand in order to design (more) effective systems
Our paper

- Examine the performance of social protection systems in five African countries
  - Lower-middle-income: Ghana and Tanzania
  - Low-income: Mozambique, Uganda and Zambia

- Study population coverage of social protection benefits and their impact on consumption poverty in normal times and times of crisis
  - ‘Normal’ times → pre-pandemic 2019
  - Crisis → simulate hypothetical reduction to household earnings or employment

- Use a new microsimulation model for Sub-Saharan African countries (SOUTHMOD)
  - Uses nationally representative household surveys
  - To calculate benefit entitlements, tax liabilities, and hh net income in normal times and during crisis

- Study effects of benefits on hh consumption
Our paper

1. Assess the extent to which social protection benefits provide support to households in ‘normal’ times
   - The better benefit coverage and adequacy, the better households are prepared for an economic shock

2. Examine how effective benefits – ‘automatic stabilisers’ – are in protecting incomes/consumption during crisis
   - The more responsive policies are to changes in people’s circumstances, the more insurance and income/consumption smoothing provided
Why are automatic stabilisers (AS) important?

- In-built flexibility of existing benefits to respond automatically to expansion and contraction of economy, e.g. unemployment insurance and means-tested benefits

- ↓ variation in hh incomes and consumption and provide social insurance against risks (Brewer and Tasseva 2021; Cantó et al. 2021; Jara et al. 2021; Lastunen et al. 2021; Fernández Salgado et al. 2014; Dolls et al. 2012; Browning and Crossley 2001)

- ↓ poverty volatility over the business cycle (Bitler and Hoynes 2016)

- Redistribute resources (Paulus and Tasseva 2020)
Why are AS important?

Many advantages of AS over discretionary gov’t response. With AS:

- No extra gov’t intervention needed → no time delay between gov’t decision and new policy
- Support provided for as long as needed and targeted to those in need
- Policy provision via existing administration and infrastructure
- Policy makers freed up to focus on the idiosyncratic and unanticipated aspects of crisis (Orszag et al., 2022)
Constraints on AS

• By design policies may not respond to fluctuations in hh incomes or only respond with a delay, e.g. proxy means-tested benefits
  – But can act as a safety net for families in receipt prior to shock

• Limited effectiveness due to limitations of existing policies, e.g. gaps in coverage or low value of benefit payments

• Limited fiscal space to expand spending in crisis, e.g. inability to borrow limiting impact of policies
  – But all countries raised debt to GDP levels substantially through the pandemic (by 19% in Uganda to 32% in Zambia in 2020 compared to 2019)
## Existing benefits

<table>
<thead>
<tr>
<th></th>
<th>Ghana</th>
<th>Mozambique</th>
<th>Tanzania</th>
<th>Uganda</th>
<th>Zambia</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-means-tested benefits (NMTB)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children, youth</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Old-age</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farmers</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Means-tested benefits (MTB)</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Social assistance</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Farmers</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Social insurance pensions (P)</strong></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

NMTB = universal within a certain group e.g. children.
MTB = targeted at poorer/vulnerable groups subject to a means-test.
P = eligible if paid social insurance contributions for e.g. old-age or disability.
Existing benefits

- Eligibility for means-tested benefits includes an income-test in Mozambique and Tanzania

- But generally linked to proxies of income, and not income itself, and/or eligibility criteria are tight
  - e.g. food insecurity (Tanzania, Zambia); vulnerability (Ghana, Zambia); hh presence of children (Ghana, Tanzania, and Zambia) and/or disabled or chronically ill people (Ghana, Mozambique, Zambia)

- Unemployment insurance programmes generally don’t exist

- Overall little spending on social protection as % of GDP
  - 1.7% in Ghana and Tanzania and <1% in Mozambique, Uganda and Zambia
  - Compared to 3.8% on average for Africa and 12.9% for the World
The data and SOUTHMOD

- Nationally representative household budget surveys
  - Main source for official national statistics on poverty and inequality
  - Source for the World Bank Poverty and Inequality Platform + Our World in Data’s poverty section

- Tax-benefit model SOUTHMOD (Decoster et al., 2019)
  - Developed by UNU-WIDER, SASPRI, Uni Essex + national partners in each country
  - Combines survey info on household gross incomes, consumption and characteristics with tax-benefit policy rules
  - Calculates, for each household, social protection benefit entitlements, tax liability and net income
Simulation of shocks

- Stress-test the benefit system (Atkinson, 2009)

- Simulate two types of shock (Dolls et al., 2012) to:
  - Earnings: 10% proportional reduction to individual’s earnings
  - Employment: randomly move people into unemployment, so aggregate earnings fall by 10%

- Use SOUTHMOD to calculate hh benefits, income and consumption before & after shock
  - Assume Marginal Propensity to Consume of 1, i.e. all of an increase in income is consumed (results assuming MPC=0.7 qualitatively similar)

- Advantages of hypothetical shocks over observing actual crisis:
  - Isolate response of benefit AS, without interactions with potential discretionary gov’t response
  - Assess cross-country differences in benefit AS
  - Assess if type of shock matters for benefit responsiveness
## Benefit coverage: % of individuals living in households receiving benefits

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>NMTB</th>
<th>MTB</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>53.7</td>
<td>52.5</td>
<td>.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Mozambique</td>
<td>8.5</td>
<td>.0</td>
<td>6.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Tanzania</td>
<td>8.0</td>
<td>.0</td>
<td>8.0</td>
<td>.0</td>
</tr>
<tr>
<td>Uganda</td>
<td>3.8</td>
<td>3.8</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>Zambia</td>
<td>53.0</td>
<td>39.7</td>
<td>23.4</td>
<td>.9</td>
</tr>
</tbody>
</table>

*Notes: Number of people living in households receiving benefits, as a proportion of total population. B = all benefits (NMTB + MTB + P). NMTB = non-means-tested benefits. MTB = means-tested benefits. P = social insurance pensions.*
Benefit coverage by income/consumption quintiles

Benefit coverage in %

Income/Consumption quintile groups (before shock)

- Ghana
- Mozambique
- Tanzania
- Uganda
- Zambia

Notes: Number of people living in households receiving benefits, as a proportion of total population/population in quintile group.
Consumption poverty rate and poverty reduction ($\Delta$) due to benefits

<table>
<thead>
<tr>
<th>Country</th>
<th>Poverty rate (%)</th>
<th>$\Delta$ (% points) due to B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>17.3***</td>
<td>19.8***</td>
</tr>
<tr>
<td></td>
<td>(.46)</td>
<td>(.50)</td>
</tr>
<tr>
<td>Mozambique</td>
<td>56.7***</td>
<td>57.5***</td>
</tr>
<tr>
<td></td>
<td>(.49)</td>
<td>(.48)</td>
</tr>
<tr>
<td>Tanzania</td>
<td>44.3***</td>
<td>44.3***</td>
</tr>
<tr>
<td></td>
<td>(.63)</td>
<td>(.63)</td>
</tr>
<tr>
<td>Uganda</td>
<td>65.3***</td>
<td>65.5***</td>
</tr>
<tr>
<td></td>
<td>(.58)</td>
<td>(.58)</td>
</tr>
<tr>
<td>Zambia</td>
<td>54.3***</td>
<td>56.6***</td>
</tr>
<tr>
<td></td>
<td>(.66)</td>
<td>(.65)</td>
</tr>
</tbody>
</table>

Notes: The poverty line equals $1.9 per day (2011 PPP). Total = total hh consumption. Pre-B = hh consumption before accounting for benefits receipt. B = the reduction to poverty due to benefits (i.e. the difference in poverty based on Total versus Pre-Benefits consumption).
Results so far

- Less than 1 in 10 individuals receive social protection benefits in Mozambique and Tanzania and 1 in 20 in Uganda, compared to 1 in 2 in Ghana and Zambia.

- Relatively high poverty rate in Ghana (17%) and very high poverty rates of more than 40% in remaining countries.

- A large proportion of the consumption-poorest 20% of population receive benefits in Ghana (74%), Zambia (68%) and Tanzania (40%).

- But, though an important source of income for some in poverty, benefits do relatively little to reduce poverty in normal times.
  - Highest impact in Ghana of 2.5pp reduction (14.5%), and Zambia of 2.3pp (4%).
  - Negligible impact in Mozambique, Tanzania and Uganda.
<table>
<thead>
<tr>
<th>Country</th>
<th>Normal times (%)</th>
<th>Impact of a shock (%)</th>
<th>Employment shock</th>
<th>Earnings shock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>53.7</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>Mozambique</td>
<td>8.5</td>
<td>.1</td>
<td>.1</td>
<td>.0</td>
</tr>
<tr>
<td>Tanzania</td>
<td>8.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>Uganda</td>
<td>3.8</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
</tr>
<tr>
<td>Zambia</td>
<td>53.0</td>
<td>.0</td>
<td>.0</td>
<td>.0</td>
</tr>
</tbody>
</table>

Notes: Coverage = number of people living in households receiving benefits, as a proportion of total population.
Consumption poverty rate in normal times and impact of an employment shock

<table>
<thead>
<tr>
<th></th>
<th>Normal times</th>
<th>Impact of a shock: Δ (% points) to normal times</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Pre-B</td>
</tr>
<tr>
<td>Ghana</td>
<td>17.3***</td>
<td>19.8***</td>
</tr>
<tr>
<td></td>
<td>(.0)</td>
<td>(.1)</td>
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<tr>
<td></td>
<td>(1.8)</td>
<td>(1.8)</td>
</tr>
<tr>
<td>Uganda</td>
<td>65.3***</td>
<td>65.5***</td>
</tr>
<tr>
<td></td>
<td>(.2)</td>
<td>(.2)</td>
</tr>
<tr>
<td>Zambia</td>
<td>54.3***</td>
<td>56.6***</td>
</tr>
<tr>
<td></td>
<td>(.5)</td>
<td>(.8)</td>
</tr>
</tbody>
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Impact of an employment shock on mean net income

Notes: The figure shows the distributional impact of the shock. Changes in net income are broken down by income source and based on equivalised household net income.
Conclusion

- Assess effectiveness of benefit systems to respond to negative shocks in five low-/lower-middle-income countries in Sub-Saharan Africa
- Benefit system in all countries ineffective in stabilising income and consumption during crisis
- Benefit coverage higher in Ghana and Zambia and lower in Tanzania, Mozambique and Uganda
- Benefits pro-poor in Ghana, Tanzania and Zambia but overall equally distributed across households in Mozambique and Uganda
Conclusion

- Simulated shocks to earnings and employment $\rightarrow$ reduction in net income and consumption and a rise to poverty

- Benefits are not responsive to changes in person’s earnings or employment because:
  - universal within a certain group e.g. children
  - linked to proxies of income, and not income itself, and/or eligibility criteria are very tight

- Designing strong benefit stabilisers important to prepare for future crises
Thank you!

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