LEVERAGING CASH TRANSFERS FOR ORPHANS AND VULNERABLE CHILDREN: WHAT WORKS BEST?

EVIDENCE FROM A MICROSIMULATION ANALYSIS

POLICY BRIEF

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Introduction

Cash transfers across Africa and around the world have demonstrated widespread success in achieving multi-sectoral outcomes that reduce poverty and inequality. They have been shown to enable access to essential services including education and health care, improve gender dynamics, and reduce social exclusion. These results have led to growing support for cash transfer programs in sub-Saharan Africa over the past decade. In the face of the HIV epidemic, there is increasing appreciation for the role cash transfers can play in addressing structural drivers of HIV risk. A greater policy focus on building resilience, as opposed to addressing singular dimensions of risk, and adopting developmental approaches in HIV responses have also added to the appeal of cash transfers.

Understanding Resilience

Resilience has emerged as a unifying concept, facilitating the adoption of developmental approaches in HIV response. For OVC populations, resilience refers to their ability to adjust, survive and thrive in conditions of social, economic, physical, and psychological adversity deriving from either the occurrence of or the prevalence of HIV. (Rutter, 1983)

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Cash transfers generate human, social and economic capital that collectively enable better developmental outcomes and strengthen resilience at the individual, household, and community levels. By tackling the circumstances of vulnerability that make orphans and vulnerable children (OVC) prone to risk and risky behavior, cash transfers (i) strengthen their ability to prevent, manage and mitigate HIV and related risks, and (ii) offer promise for sustained development and economic, social, and psychosocial resilience among OVC populations.²

Existing evidence demonstrates that HIV-sensitive – rather than HIV-specific – approaches are appropriate in reaching OVC populations. There is no conclusive evidence that targeting cash transfers at HIV-affected individuals specifically has any additional impact on HIV-related outcomes. However, a growing body of evidence emphasizes the detrimental effects of HIV-specific targeting on the wellbeing of affected populations. HIV-specific targeting runs multiple risks associated with stigma, including exacerbating social exclusion and worsening social capital through disclosure of participants’ HIV status and self-exclusion from the program by qualified individuals due to fear of stigma.³

This policy brief highlights key learning from a microsimulation exercise conducted by EPRI. It provides new evidence about the efficacy of targeting OVC populations through inclusive targeting approaches and criteria that are frequently used in sub-Saharan Africa. Using microsimulation modeling, the study compares alternative program scenarios including a child grant, an old age grant and a low-income transfer in three diverse African countries – South Africa, Ghana, and Uganda – to generate policy guidance on designing cash transfers for OVC populations based on their coverage, targeting effectiveness, cost, and efficiency in reducing poverty and vulnerability.

³ Ogden and Nyblade, 2005
What is Microsimulation?

Microsimulation uses data on a micro-unit, such as an individual or household, to project the impact of policy or government programs on the micro-unit. In the case of this exercise, the simulation examines the extent to which different types of cash transfers have results at the household and individual level that are likely to affect the resilience and wellbeing of orphans and vulnerable children. It also simulates aggregate effects of the cash transfers on poverty and vulnerability at the national level.

Microsimulation Study Objectives

This microsimulation study summarized in this brief aims to achieve three broad objectives:

(i) **Identify target groups** that maximize cash transfers’ ability to reach orphans and vulnerable children without specifically targeting them.

(ii) **Evaluate the efficacy of three types of cash transfers and demographic targeting criteria in reaching orphans and vulnerable children**: a child grant targeted at households with children under 5 years of age, an old age pension targeted at households with individuals over the age of 60, and a low-income transfer targeted to households in the bottom quintile of income or expenditure.

(iii) **Evaluate the cost-efficiency of the various cash transfers** in reducing poverty and vulnerability.

Study Methodology

There is growing consensus among experts and practitioners that HIV-sensitive programming works better than HIV-specific programming. Making existing inclusive cash transfers program sensitive to HIV-specific risks and needs presents a valuable opportunity to improve HIV outcomes without compromising the social balance within affected communities. Universal programs that are designed with risks and vulnerabilities related to HIV in mind, but that cover a range of poor and vulnerable children regardless of their HIV status, have demonstrated a stronger effect on poverty reduction and ability to build HIV resilience across a larger segment of society.

Based on this premise, this study evaluates three HIV-sensitive approaches that target households based on vulnerability factors associated with HIV risk, as opposed to households directly affected by HIV. In order to maximize opportunities for learning, the simulation included (i) multiple countries with diverse characteristics, (ii) cash transfers that reach target groups where the concentration of orphans and vulnerable children is likely to be high, and (iii) multiple targeting scenarios that adopt different targeting criteria.

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COUNTRIES OF INTEREST

South Africa, Uganda, and Ghana were selected for this microsimulation because they provide a diverse context for analysis – differing populations, experience with HIV and AIDS, economies, and geography. The high prevalence of HIV-affected children in South Africa, many of whom are orphaned, provides evidence relevant to contexts with similarly high concentrations of HIV-affected children. Uganda presents an opportunity to study the cash transfer effects in a context with a lower rate of HIV among children, but with a disproportionate prevalence of HIV among young women. Ghana offers useful evidence about cash transfer effects in countries with lower HIV prevalence.

TARGET GROUPS

The study identified three target groups: populations that have been traditionally recognized as vulnerable and received social protection support which are broader than OVC populations, but likely to be vulnerable due to HIV and include orphans and vulnerable children. These groups are **households with orphans, female-headed households, and skip-generation households**. The microsimulation tests how well a particular cash transfer program reaches these groups (described in aggregate as “HIV-vulnerable” households in the Key Findings section).

Data Sources for the Microsimulation

**South Africa**: the 2014 General Household Survey (GHS), a nationally representative survey of individuals and households.

**Uganda**: the 2012/2013 Uganda National Household Survey (UNHS) a nationally representative survey that collects information on households and communities.

**Ghana**: the Ghana Living Standard Survey (GLSS) Round 6, a nation-wide household survey conducted from 2012-2013.

The Target Groups

- **Households with orphans** were identified in South Africa and Uganda using information on the status of parents recorded in GHS and UNHS data sets. The GLSS does not record whether a child’s parents are alive, so the analysis of the three cash transfers in Ghana does not include households with orphans.
- **Female-headed households** were identified based on the surveys’ household rosters identifying the household head as a woman.
- **Skip-generation households** were defined as households with children with no working-age adults and a household head over the age of 60.
TARGETING SCENARIOS

The exercise simulates three cash transfers and analyzes the extent to which each cash transfer reaches the target groups of interest. The target groups are the vulnerable households the cash transfer program aims to reach, while the targeting scenarios specify the criteria or approach used to reach the target groups. The study evaluated three cash transfer options – a child grant, an old age pension, and a low-income/lowest quintile transfer. Targeting and benefits for each cash transfer type are described in the box at right.

BENEFIT VALUES

The benefit value (i.e., the cash transfer amount) is set at 20% of the per capita poverty line in each of the three countries, ensuring consistency in the benefit amount across regions of the country for administrative simplicity. The benefit amount per beneficiary is the same for all three cash transfer types. The total value per household will vary as described in the box above.

Table 1. Benefit Values

<table>
<thead>
<tr>
<th>Country</th>
<th>Monthly Benefit (local currency)</th>
<th>Monthly Benefit (USD)</th>
<th>Total Annual Benefit (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>109.39 ZAR</td>
<td>$10.08</td>
<td>$120.98</td>
</tr>
<tr>
<td>Uganda</td>
<td>6,421.25 Shillings</td>
<td>$2.48</td>
<td>$29.79</td>
</tr>
<tr>
<td>Ghana</td>
<td>70.81 Cedi</td>
<td>$36.31</td>
<td>$435.75</td>
</tr>
</tbody>
</table>

For South Africa, this is Statistics South Africa’s lower per capita poverty line of ZAR 546.94 per month, see http://beta2.statssa.gov.za/publications/Report-03-10-11/Report-03-10-11.pdf. For Uganda, the study derived an average per capita poverty line (UGX 32,106.25) from regional poverty lines established by the Ugandan Bureau of Statistics, which are based on household average per person expenditure. For Ghana, the study replicated the methodology used by the Ghana Statistical Service, which defines the poverty line as the amount of expenditure needed to meet basic nutritional requirements for each household member, generating an average per capita poverty line of GHS 354.06.

Targeting and Benefits: The Cash transfers

- **The child grant** is provided to households with at least one child under the age of five. The value is determined by multiplying the monthly benefit amount (Table 1) by the number of children under age five living in the household.
- **The old age pension** is provided to households with at least one adult above the age of 60. The value is determined by multiplying the monthly benefit by the number of adults over age 60 living in the household.
- **The low-income/lowest quintile transfer** is provided to households that fall in the bottom quintile of income in South Africa and the bottom quintile of expenditure in Uganda and Ghana. The value of the transfer is calculated by multiplying the monthly benefit by the number of individuals living in the household.
MICROSIMULATION ASSUMPTIONS

Each cash transfer is simulated with several assumptions that affect program costs:

- **Maturity**: The analysis considers each cash transfer at a “mature” phase rather than at its inception. Cost per beneficiary is therefore much lower than would be projected for a pilot or a program in an early implementation phase.

- **Administrative costs**: The child grant and old age pension incorporate administrative costs equal to 6% of the total value of transfers. Due to the more complex nature of the lowest quintile transfer, including the need for means testing and other administrative costs to ensure compliance, the simulation incorporates administrative costs equal to 25% of the value of transfers. These costs are in line with the global evidence related to cash transfer administrative costs.6

- **Targeting**: The child grant and old age pension assume 100% coverage of their target populations. The lowest quintile transfer modeling incorporates inclusion and exclusion errors. Both errors are set equal to 40%, meaning that 40% of eligible households (i.e., those in the lowest quintile) are excluded from the cash transfer and households outside of the lowest quintile (ineligible households) receive the cash transfer instead. These benchmarks reflect the outcomes of multiple targeting studies that analyze targeting errors across a range of programs.7

**Methodology**

The study team constructed the poverty line using officially recognized measures in each of the three countries (see footnote 5). The microsimulation model identified the target group households and then calculated the pre-transfer poverty indicators: the poverty headcount, the poverty gap, the vulnerability headcount, and the vulnerability gap. The model then carried out a microsimulation for the three cash transfers and calculated the post-transfer poverty indicators, cost, and efficiency indicators for the entire population as well as for each of the target groups.

**Important Concepts**

**Poverty headcount**: The number of individuals living below the poverty line.

**Poverty gap**: The shortfall of one’s income compared to the poverty line (with the non-poor having zero shortfall), expressed as a percentage of the poverty line.

**Vulnerability headcount**: The number of individuals below the vulnerability line, which is defined as twice the poverty line.

**Vulnerability gap**: The shortfall of one’s income compared to the vulnerability line, which is defined as twice the poverty line (with the non-vulnerable as having zero shortfall), expressed as a percentage of the poverty line.

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6 Sabates-Wheeler et al., 2015; Devereux et al., 2015; Samson et al., 2006.
7 Coady et al., 2004; Handa et al., 2012; Sabates-Wheeler et al., 2015; Devereux et al., 2015.
Key Findings

Poverty-targeted transfers consistently reach a large share of HIV-vulnerable households, but universal categorical transfers can outperform them when targeted to the right population group

An analysis of the microsimulation data demonstrates that HIV-vulnerable households\(^8\) consistently form a large proportion of beneficiary households for the lowest quintile transfer across the three countries. The universal categorical transfers (the child grant and old age pension) demonstrate performance that is strongly context-driven – in some settings, universal categorical cash transfers can outperform poverty-targeted transfers. As shown in the chart at left, the child grant and lowest quintile transfer achieved comparable outreach to HIV-vulnerable households in South Africa and Ghana. The pension outperformed the lowest quintile transfer in Uganda and Ghana.

The child grant consistently reaches a large share of HIV-vulnerable households in the population

The child grant covers the highest share of all HIV-vulnerable households in South Africa and Uganda. In Ghana, the dataset does not allow for the identification of households with orphans, but the analysis shows that the child grant still covers a higher share of all skip-generation and female-headed households than the other two transfers.

The old-age pension covers all skip-generation households in each country, so it has greater ability to reach a higher share of HIV-vulnerable households in

\(^{8}\) Households with orphans, female-headed households and skip-generation households.
countries with a high prevalence of skip-generation households. This can be seen in the chart, where the old age pension performs much better in Uganda, where skip-generation households comprise 12% of the population, than it does in Ghana (2%) or South Africa (1%). Female-headed households and households with orphans represent significantly larger shares of the HIV-vulnerable population across all three countries, however. The child grant is generally more effective than the pension at reaching HIV-vulnerable households. The lowest-quintile grant reaches the smallest share of HIV-vulnerable households in Uganda and Ghana; it fares relatively better in South Africa.

<table>
<thead>
<tr>
<th>Table 2. Composition of Beneficiary Households</th>
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<tbody>
<tr>
<td>Country</td>
</tr>
<tr>
<td>Measure</td>
</tr>
<tr>
<td>Child Grant</td>
</tr>
<tr>
<td>Old Age Pension</td>
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<tr>
<td>Lowest Quintile Transfer</td>
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</tbody>
</table>

The lowest quintile transfer offers great promise for delivering both poverty and vulnerability reduction

Despite its limited ability to reach HIV-vulnerable households, the lowest quintile transfer generates greater poverty and vulnerability gap reductions in all three countries. By design, the lowest quintile transfer reaches a larger share of poor and near-poor households than the child grant and old age pension, which explains its high poverty and vulnerability gap-reducing impact.

Figure 3. Reduction in Poverty and Vulnerability Gap in South Africa, Uganda and Ghana

The lowest quintile transfer also achieves the highest poverty headcount reduction in South Africa and Ghana. In Uganda, however, the child grant outperforms the lowest quintile transfer
in this regard (Figure 4). The child grant and the lowest quintile transfer both perform equally well in terms of vulnerability headcount reduction, with the lowest quintile transfer performing marginally better in South Africa and Uganda and the child grant doing so in Ghana.

**Figure 4. Reduction in Poverty and Vulnerability Headcount in South Africa, Uganda and Ghana**

![Figure 4](image)

**Poverty-targeted transfers are more expensive than universal categorical programs**

Although the lowest quintile transfer demonstrates the highest poverty and vulnerability gap reduction, it also costs the most in all countries. The program is designed to provide a benefit of 20% of the poverty line per household member as opposed to per under-5 child (child grant) or per over-60 person (old age pension) living in each household. In addition, poor households tend to be larger than average, implying a second-order increase in costs (Table 2). The old-age pension is the least expensive of the three, a factor of lower targeting and administrative costs, and lower outreach.

**Figure 5. Cost of the Transfers (% of GDP)**

![Figure 5](image)
Table 3. Cost of the transfers (% of GDP)

<table>
<thead>
<tr>
<th></th>
<th>South Africa</th>
<th>Uganda</th>
<th>Ghana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 grant</td>
<td>0.75%</td>
<td>2.53%</td>
<td>4.13%</td>
</tr>
<tr>
<td>Old age pension</td>
<td>0.57%</td>
<td>1.08%</td>
<td>2.18%</td>
</tr>
<tr>
<td>Lowest quintile</td>
<td>2.31%</td>
<td>3.99%</td>
<td>5.01%</td>
</tr>
</tbody>
</table>

The costs of the three transfers fluctuate substantially between countries due to the countries’ different demographic and economic profiles. While the transfers place the least burden on the economy in South Africa, the transfers place a significant burden on the economy in Ghana.

### Important Concepts

**Targeting Effectiveness**: A measure of targeting success in reaching intended beneficiaries, i.e., the success with which the alternative targeting approaches (children under 5 years, adults over 60 years, and households in the lowest quintile) cover HIV-vulnerable households.

**Poverty-reducing Efficiency**: A measure of the grant’s ability to reduce the poverty gap relative to the total cost of the program, calculated as poverty gap reduction divided by the total program cost; expressed as a percentage.

**Vulnerability-reducing Efficiency**: A measure of the grant’s ability to reduce the vulnerability gap relative to the total cost of the program, calculated as vulnerability gap reduction divided by the total program cost; expressed as a percentage.

**Coverage Ratio**: The ratio of the percentage coverage of HIV-vulnerable households to the percentage coverage of non-vulnerable households.

**Cash transfers can achieve both high targeting effectiveness and poverty/vulnerability-reducing efficiencies**

The three targeting approaches generate different poverty-reducing/vulnerability efficiencies and targeting effectiveness — as measured by the coverage ratio — in different countries. In Uganda, the old-age pension provides the best combination of targeting effectiveness and poverty-reducing efficiency. In South Africa, the child grant does, closely followed by the lowest quintile transfer. In Ghana, all three cash

![Figure 6. Relationship between poverty-reducing efficiency and coverage ratio](image-url)
transfers show very poor coverage of target households because the dataset does not allow the identification of households with orphans. Without this information, it is not possible to assess which cash transfer has the best targeting effectiveness. The lowest quintile transfer achieves the highest poverty-reducing efficiency in Ghana. The findings highlight that there is no one-size-fits all cash transfer and context is integral to program design.

The vulnerability-reducing efficiency and coverage ratio depict a similar story. In South Africa, the child grant and the lowest quintile transfer perform similarly in terms of vulnerability reducing efficiency and coverage ratio. The old age pension performed the best of all programs in Uganda. In Ghana, all three transfers had low coverage ratios but the child grant achieved the highest vulnerability reducing efficiency. The analysis demonstrates that high poverty-reducing and vulnerability-reducing efficiency and high coverage of HIV-vulnerable households can be achieved when cash transfers are targeted to leverage a country’s demographic and poverty profile.

Conclusions and Recommendations

The microsimulation analysis makes a strong case for informed policymaking by demonstrating the impact that demographics and poverty profiles of countries can have on program outcomes. The study shows that it is not the type of transfer that influences the reduction in vulnerability or poverty. What is critical is developing the right type of the transfer for the demographic and poverty profile of a country. The findings demonstrate that:

- The effectiveness of each cash transfer in reaching HIV-vulnerable populations varies in each country, but when the demographic characteristics of HIV-vulnerable populations inform program design, universal categorical programs outperform poverty-targeted programs.

- When mapping programs’ value-for-money in achieving poverty reduction against coverage of HIV-vulnerable populations, program design that is sensitive to the demographic and poverty profile of the country will minimize trade-offs.
• Each of the three cash transfers reach a sizeable proportion of HIV-vulnerable households in all three countries without specifically targeting based on HIV status, adding to the body of evidence in favour of HIV-sensitive targeting to build resilience among HIV-vulnerable populations, rather than HIV-specific targeting.

In designing effective and efficient cash transfer programs, policymakers must:

• Understand who the intended beneficiaries are and what key characteristics differentiate the target group. It is useful to identify and answer whether the target group can be differentiated and identified at the individual level or at the household level.
• Be able to answer questions such as “What does the poverty profile of the country look like?” “What does the demographic profile of the country look like?” and “Where in the demographic and poverty profile of the country does the intended target group belong?”
• Explore whether data that is readily available is adequate to forecast the impact of potential cash transfer options.
• Be prepared to compare two or three potential policy options so make sure that policy choices are rooted in evidence.
• Know the budgetary constraints for the program to inform policy trade-offs, i.e., the trade-offs the government willing to make when choosing between key program parameters such as larger benefit value vs. coverage or targeting accuracy vs. cost.

The most successful programs not only maximize financial and operational efficiencies but also align with national political interests. While the analysis of data can provide valuable insights into the financial and operational requirements of the program, it is crucial for policymakers to ensure that any program design is politically acceptable and socially inclusive. When designing policies, it is essential that design parameters be finalized in line with the national social and policy contexts.
References


http://www.fao.org/docrep/018/i2968e/i2968e06.pdf


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