GROWTH, INEQUALITY, CASH TRANSFERS AND POVERTY IN UGANDA

Sarah N. Ssewanyana
Economic Policy Research Centre, Kampala

Country Study

International
Policy
Centre for Inclusive Growth

GROWTH, INEQUALITY, CASH TRANSFERS AND POVERTY IN UGANDA[*]

Sarah N. Ssewanyana[**]

ABSTRACT

Uganda has made progress towards the Millennium Development Goal (MDG) of halving extreme income poverty by 2015, but there have been intermittent setbacks to the advances made. The incidence of poverty increased in the period 1999/00–2002/03, before falling significantly in the period 2002/03–2005/06. The findings of this Country Study suggest that poverty reduction is more responsive to changes in growth than to changes in distribution. More importantly, they indicate that any increase in inequality hurts the "ultra' poor more than the poor. If the current 3.69 per cent growth rate of consumption is maintained, Uganda will be able to achieve the MDG of reducing the share of its population living in poverty by half (to 28 per cent) by 2015. However, it might not achieve its Poverty Eradication Action Plan (PEAP) target of cutting the share to 10 per cent by 2017. If growth in consumption falls, poverty reduction will slow to such an extent that the trend will be upwards. It should also be noted that growth itself will not adequately improve the incomes of less advantaged individuals and households between now and 2015. This paper proposes a direct cash transfer (CT) scheme to curb the further marginalisation of this group of Ugandans. The proposed scheme seeks to reduce the current level of poverty by providing a targeted CT to people living in extreme poverty—that is, those living below the food poverty line. The impact of the transfer on mean incomes is modest, but there are strong and significant impacts on income distribution. The proposed cash transfer should complement the government's current pro-poor social spending.

1 INTRODUCTION

At the 2000 UN Millennium Summit, Uganda pledged to fight poverty in its many dimensions—income poverty, hunger, disease, lack of adequate shelter, and exclusion—while promoting gender equality, education and environmental sustainability. As 2015 approaches, there are concerns that Uganda might be unable to meet some of these targets. Even for those targets on which progress has been made, the advances have been uneven and sometimes there have been reversals. Like most Sub-Saharan African countries, Uganda faces the challenge of maintaining progress towards meetings its MDG and PEAP targets.

Uganda has experienced a remarkable reduction in income poverty, from 56.4 per cent of the population in 1992/93 to 31.1 per cent in 2005/06,[1] but a number of challenges remain. Over the period 1992–2006, the poverty, growth and inequality outcomes of Uganda's

[**] Economic Policy Research Centre, Kampala.

development efforts can be divided into four distinct episodes. The period 1992–1997 was marked by significant poverty reduction and an improvement in income distribution. The growth in consumption was poverty-reducing and inequality also declined. The annualised growth rate of consumption stood at about 3 per cent a year, while average GDP growth was 7.3 per cent. Poverty continued to decline in the period 1997–2000 but there was a significant increase in income inequality. The growth effect continued to be poverty-reducing but inequality was poverty-increasing. Consumption growth was very strong at 8.2 per cent a year, higher than the GDP growth rate of 5.8 per cent. The period 2000–2003 was marked by a reversal in poverty reduction and significant increases in income inequality. The rising inequality offset the gains from growth and caused a reversal in poverty trends. The lowest rate of consumption growth, 0.7 per cent a year, was recorded in this period. Finally, in the period 2003–2006 there was a reversal of the poverty trends observed in the previous period of 2000–2003. The poverty headcount declined by 7.8 percentage points in the former period and increased by nearly 4 percentage points in the latter period. During the period of poverty reduction the growth in consumption was 3.6 per cent a year.

In the period 1992/93–2005/06, income inequality increased by 11.8 per cent. The seemingly high level of income inequality is of great concern to policymakers (see, for example, MoFPED, 2004). The literature argues that not all Ugandans have benefited from the strong economic growth the country has enjoyed since 1992 (Okidi et al., 2007). A related study by Ssewanyana and Okidi (2007) maintains that inequalities in various dimensions are more likely to be harmful to growth and, in turn, to poverty reduction. In the decomposition of consumption inequality by consumption determinants carried out by Ssewanyana et al. (2004), education emerged as a key factor in explaining most of the observed variations. The implication was that policies should seek to make education accessible to most of the population, in the expectation that this would make a contribution to a decline in inequality over the long term.

The Ugandan government and its leaders remain committed to poverty reduction through the PEAP, and especially to promoting pro-poor growth. Despite the efforts made, however, a section of the population does not seem to benefit from government interventions. While targeting the poor is necessary to reduce poverty, it must be acknowledged that this group is not homogenous. Pro-poor spending through service provision, for example, does not seem to have reached the poorest of the poor and the less disadvantaged groups. This is the case of interventions under the Plan for Modernisation of Agriculture (PMA). Many of the PMA's service-delivery components exclude the poor. Consequently, less advantaged individuals and households are unable to take advantage of the opportunities attendant on economic growth. Clearly, market mechanisms cannot be relied upon to provide adequate protection for all Ugandans. If these individuals and households continue to be ignored, progress towards meeting the MDGs and the PEAP targets is likely to be hindered.

It is not surprising that the government set up a National Social Protection Task Force to suggest how every Ugandan could benefit from government interventions aimed at reducing poverty. This study focuses on vulnerable groups, including the elderly (most of whom are unable to engage fully in productive activities) and children. These groups are believed to be living in worse poverty than the national average. The social networks of the past no longer exist, and the HIV/AIDS epidemic has exacerbated the situation. Compared to other age groups, moreover, a significantly higher proportion of the elderly do not seek formal treatment when they are ill. And a substantial share of school-age children are not enrolled in school,

partly because of financial constraints (Ssewanyana and Okidi, 2007). These circumstances call for immediate interventions to curb the further marginalisation of these groups. Consequently, this study focuses on direct CTs as one type of instrument within the broad category of social protection. Would the introduction of direct CTs improve the well-being of these groups? If so, what forms should the transfers take? Should they be targeted or universal? The study aims to make a contribution in this respect.

The rest of the paper is organised as follows. The next section discusses the data and methods used to meet the study's objectives. Section 3 presents a profile of Uganda's child and elderly populations. The role of growth and inequality in poverty reduction is the subject of Section 4, which also examines the implications for poverty reduction of direct CTs to the child and elderly populations under alternative targeting options. Section 5 concludes and highlights the policy implications.

2 DATA AND METHODS

2.1 DATA

The main source of data is the Uganda National Household Survey of 2005/06 (UNHS III) conducted by the Uganda Bureau of Statistics (UBoS) between May 2005 and April 2006. The survey covered the entire country, including camps for internally displaced people. UNHS III covered 39,289 individuals[2] in 7,426 households. Additional data for the analysis is drawn from earlier, nationally representative household surveys conducted by UBoS since 1992/93. Survey sample weights from UBoS were applied to derived nationally representative estimates. We weight our estimates to apply to the appropriate levels.

2.2 METHODS

In this paper, children, adults and elderly persons are classified as follows: (i) children are individuals below 18 years of age, in line with Uganda's constitution; (ii) adults are individuals of prime age (between 18 and 59); and (iii) the elderly are individuals aged 60 or more. We construct a typology of households based on the composition of household members by age, the age of the household head, the gender and marital status of the head, and the household's poverty status.

First, as regards the composition of household members by age (hereafter, household type 1) there are households: (i) with only prime-age adults; (ii) with children; and (iii) with elderly persons. Second, classification based on the age of the household head (household type 2) includes households whose head is: (i) less than 25 years of age; (ii) aged between 25 and 59; and (iii) aged 60 or more. Third, classification based on the gender of the household head, controlled for marital status (household type 3), includes households headed by: (i) an unmarried female, including those who never married, are widows, and are separated or divorced; (ii) a married female; (iii) an unmarried male, including those who never married, are widowers, and are separated or divorced; and (iv) a married male. Finally, classification based on the household's poverty status (household type 4) includes households that are (i) extremely poor, with consumption per adult equivalent less than the food poverty line;[3] (ii) moderately poor, with consumption per adult equivalent greater than or equal to the food

poverty line but less than the absolute poverty line;[4] and (iii) non-poor, with consumption expenditure per adult equivalent greater than or equal to the absolute poverty line.

Following previous poverty analyses in Uganda (for details, see Appleton, 2001; Appleton and Ssewanyana, 2003; Ssewanyana and Okidi, 2007), this study takes the consumption expenditure per adult equivalent[5] as a measure of welfare and compares it to the official absolute poverty line in order to determine individual and household poverty status. The paper focuses on the Foster-Greer-Thorbecke (FGT) measures (P_α with $\alpha = 1, 2, 3$), namely: poverty headcount (P0), poverty gap/depth of poverty (P1), and poverty gap squared/severity of poverty (P2). The Gini coefficient and mean log deviation (MLD) measures of inequality are used.

Next, using the nationally representative household survey data for the period 1992–2006, we analyse the relationship between poverty, growth and inequality in Uganda. Here we take two approaches. First, we decompose the change in poverty into its growth and redistribution components, following the Datt and Ravillion (1992) decomposition method. Second, we extend the work of Okidi et al. (2003) and Okidi et al. (2007) to provide insights into the responsiveness of growth and inequality on poverty reduction. In other words, we estimate the growth and inequality elasticity of poverty for the three FGT measures. The simple models are presented in equations (1) and (2), respectively. We constructed pseudo panel data (rural/urban divide) from eight survey rounds of the national household survey data, making 64 observations used in the regression exercise.

$$\ln p_{\alpha t} = \phi_\alpha + \beta_\alpha \ln cpae_t + \gamma_\alpha \ln gini_t + \varepsilon_{\alpha t} \tag{1}$$

where α refers to the FGT measures, t refers to the survey year, $\ln cpae$ is the log of the consumption expenditure per adult equivalent, $\ln gini$ refers to the log of the Gini coefficient, and β and γ are the growth and inequality elasticity for a given poverty measure. In equation (2) we follow Ravillion's (1997, 2004) approach to derive distribution-corrected growth estimates.

$$\ln p_{\alpha t} - \ln p_{\alpha t-1} = \eta_\alpha + \varphi_\alpha (1 - gini_{92}) * (\ln cpae_t - \ln cpae_{t-1}) + v_{\alpha t} \tag{2}$$

In addition to the above analysis, we conduct transfer simulations. The main aim here is to provide insights into the impact of different CT designs (universal or targeted) on aggregate poverty and inequality, in line with different targeting criteria. To assess this impact, we conduct an *ex-ante* poverty simulation. We experiment with different budget scenarios, with transfers given as a percentage of GDP (0.5 per cent and 1 per cent).

Before targeting certain categories of the population, we demonstrate how much it would cost if the government were to close the consumption poverty gap in the entire population. Targeting different groups regardless of household type, we target the following groups of children separately: all children, vulnerable children, orphans and school-age children (aged 6–17); for the elderly, we target all elderly persons. We also target children and the elderly by household type. For children, we target all children living with elderly persons, in

households headed by the elderly, in households headed by an unmarried female, and in extremely poor households. Additionally, we target transfers on school-age children and children in extremely poor households. By extension, we target separately all elderly persons, all those living with children, all those living in elderly-headed households, and all those in extremely poor households.

Our simulations make some assumptions. First, the individual transfer to the targeted beneficiary is derived by dividing the total amount of money, according to our budget scenarios above, by the total number of targeted beneficiaries. Second, we assume that transfers given to individuals are pooled within households and distributed to each member. In other words, every member enjoys the same level of welfare. Third, we assume that there are no administrative costs involved in managing a CT.

The amount transferred is added to the initial consumption expenditure at household level to derive the new consumption expenditure. The new consumption expenditure is then divided by the total adult equivalent to derive the new consumption expenditure per adult equivalent. Finally, this new welfare measure is compared to the absolute poverty line in order to determine the impact on national poverty and group-specific changes in welfare. By extension, we examine the impact of transfers on income distribution. The next section presents a profile of the child and elderly population.

3 PROFILE OF THE CHILD AND ELDERLY POPULATION

3.1 BASIC CHARACTERISTICS

Uganda has one of the highest population growth rates among Sub-Saharan African countries. In the intercensal period 1991–2002, the population grew by 3.2 per cent a year (UBoS, 2006). Over the period 1975–2004, however, it grew by 3.3 per cent a year, and it is expected to grow by at 3.7 per cent a year between 2004 and 2015 (UNDP, 2006). According to the 2005/06 survey data, the total population stood at 27.2 million in 5.2 million households. The age structure of the population is of note. At the national level the population is generally young: 50.6 per cent were below 15 years of age in 2005/06, compared to 49.6 per cent in 1992/93. As in most Sub-Saharan African countries, the elderly (60 years old and more) comprise a very small proportion of the population. At the national level their share declined from 4.9 per cent in 1992/93 to 4.4 per cent in 2005/06. Figure A1 in the appendix shows the population by age group.

Table 1 presents the distribution of the population by household type. In 2005/06 there were an estimated 15.6 million children and 1.2 million elderly. There is a higher concentration of children in households headed by a married male or a person of prime age. Households with elderly members have 18 per cent of the child population. Households headed by an elderly person have 13.7 per cent of the child population and 85.2 per cent of the elderly. In household type 3, households headed by married males are home to 73.5 per cent of Uganda's total population and have the largest share of children and the elderly. Households headed by unmarried females have more children than those headed by married females.

TABLE 1

Population Share (%) by Household Type, 2005/06

	Children <18 yrs	Adults 18–59 yrs	Elderly >=60 yrs	Share in total (%)	
				Households	Population
Household type 1					
With children no elderly	82.1	75.9	n.a.	68.5	76.1
With elderly	17.9	14.5	100.0	19.2	20.2
Only with adults	0.0	9.5	n.a.	12.3	3.7
Household type 2					
<25 yrs	5.9	10.6	0.9	12.4	7.5
25–59 yrs	80.4	78.9	13.9	71.6	76.9
>=60 yrs	13.7	10.6	85.2	16.0	15.6
Household type 3					
Unmarried female	14.4	13.1	30.0	18.3	14.6
Married female	9.4	7.3	4.8	8.7	8.4
Unmarried male	2.2	5.0	8.7	8.5	3.5
Married male	74.1	74.6	56.5	64.6	73.5
Household type 4					
Extremely poor	16.5	13.3	13.5	12.7	15.2
Moderately poor	17.0	14.3	16.4	13.8	15.9
Non-poor	66.5	72.5	70.1	73.5	68.9
Est. population ('000)	15,585.1	10,377.7	1,196.1	5,229.3	27,158.9

Source: Author's calculations based on UNHS III.

Note: "Unmarried" category includes single, divorced/separated and widow/widower.

Table 2 presents a profile of orphans and vulnerable children (OVC) in Uganda by household type. There is no systematic pattern in the distribution of OVC within each type of household, but there is a higher concentration among households headed by a person of prime age and those headed by a married male. More notable is the higher concentration of orphans, school-age children who are not in school and married children among extremely poor households, relative to moderately poor households. Nearly a quarter of the orphans live in households headed by elderly people. Additionally, these households have 37.6 per cent of the children who are not orphans but who are not living with their biological parents. There is also a higher concentration of OVC in households headed by unmarried females, relative to those headed by unmarried males.

TABLE 2

Distribution of Orphans and Vulnerable Children by Household Type (%)

Household type	All	Type of vulnerability							
		Orphans	Not in school 6-17 yrs	Living with disability	Married	Non-orphan but not living with parents	Living in poverty	Living with elderly persons	Heads
Household type 1									
With children no elderly	61.3	70.1	78.9	82.2	84.0	56.9	81.6	0.0	100.0
With elderly	38.7	29.9	21.1	17.8	16.0	43.1	18.4	100.0	0.0
Household type 2									
<=25 yrs	4.9	5.9	5.6	3.5	47.9	5.6	5.8	0.0	100.0
26-59 yrs	60.7	68.8	76.9	82.4	41.1	56.8	80.1	0.0	0.0
>=60 yrs	34.4	25.3	17.6	14.1	11.1	37.6	14.1	100.0	0.0
Household type 3									
Unmarried female	29.6	44.5	18.8	17.7	12.9	32.5	15.4	30.2	32.5
Married female	9.3	9.3	11.9	10.8	4.5	9.8	11.1	3.0	11.8
Unmarried male	4.1	6.2	3.8	2.1	4.5	4.1	2.1	3.0	54.0
Married male	57.0	40.1	65.5	69.3	78.1	53.7	71.3	63.8	1.7
Household type 4									
Extremely poor	17.6	18.1	28.7	18.4	21.7	12.7	49.3	15.4	9.0
Moderately poor	17.4	15.9	19.2	18.2	11.3	17.9	50.7	19.2	8.3
Non-poor	65.0	66.0	52.2	63.4	67.0	69.3	*Na*	65.4	82.7
Est. population (000)	6,189.2	2,221.5	1,207.9	594.7	52.1	2,326.7	5,227.7	2,130.6	32.1

Source: Author's calculations based on UNHS III.

3.2 POVERTY AMONG CHILDREN AND THE ELDERLY

This section endeavours to provide insights into the poverty distribution in Uganda by different types of household, focusing in particular on poverty levels among children and the elderly. Specifically, this analysis forms a background for the selection of the target household types and groups for the CT scheme. Table 3 shows the extent of poverty by individual and household type. As regards individuals, poverty among children aged 6–17 is significantly higher than the national average. This is the case for all the poverty measures. In contrast, there is no similar statistical significance between the elderly population and the national average for the entire population. The incidence of poverty among children is significantly higher than among the elderly. The only exception is the severity of poverty, which is almost the same for younger children and for the elderly. These results seem to suggest that children aged 6–17 are in much worse conditions than the entire population, and especially the elderly.

TABLE 3

Poverty Profile by Individual/Household Type

	Headcount	Depth of poverty	Severity of poverty
Uganda	31.1	8.7	3.5
Individual type			
<=5 years	33.6	9.4	3.8
6–17 years	33.5	9.6	3.9
Male 18–59 years	26.7	7.4	2.9
Female 18–59 years	28.2	7.8	3.1
>= 60 years	29.9	8.0	3.2
Household type 1			
With children no elderly	31.8	9.1	3.7
With elderly	32.8	8.8	3.5
Only with adults	7.0	1.3	0.4
Household type 2			
<25 yrs	28.3	6.8	2.4
25–59 yrs	31.0	8.9	3.7
>=60 yrs	32.8	8.8	3.4
Household type 3			
Unmarried female	32.2	9.5	4.0
Married female	36.9	11.9	5.2
Unmarried male	23.7	7.0	3.1
Married male	30.6	8.3	3.3

Source: Author's calculations based on UNHS III.

Note: "Unmarried" category includes single, divorced/separated and widow/widower.

With regard to household type, several observations should be made. First, the poverty headcount for households with children but no elderly members is similar to the national average. But those households' depth and severity of poverty is greater than the national average. Second, households headed by an elderly person are not much worse off than those whose head is of prime age. Third, female-headed households are generally in much worse poverty than male-headed households.

The discussion so far reveals that poverty is worse among children than among the population as a whole. MoFPED (2006) reports similar findings. At this point, we present a detailed analysis of children's poverty status by age group and household type. While the incidence of poverty is greater among children, Table 4 reveals an age dimension. Broadly speaking, children between six and nine years of age suffer far greater poverty than children in other age groups. This is unsurprising, given that they comprise a relatively greater share of the population. Those aged between 15 and 17 suffer the least poverty.

Table 4 also shows that the incidence varies by the age of the household head. The prevalence of poverty is greater among children (less than 10 years of age) in households headed by the elderly than their counterparts in households headed by an adult aged

between 26 and 59. By extension, the poverty headcount among children living in households headed by the elderly is much higher than that for children on average. This seems to suggest that targeting households headed by elderly persons would also be effective in reducing poverty among children. Moreover, while the poverty headcount among younger children living with elderly persons is greater than the national average, there are no significant differences for the other poverty measures. By extension, younger children living in households headed by unmarried females are in worse poverty than their counterparts in households headed by married males. This is true for all three poverty measures. Notably, the depth of poverty is greater among children in households headed by unmarried females than children in other types of household.

Figure 1 shows the poverty status of the elderly in 2005/06. As regards the headcount index, there are no significant differences between age groups and the entire elderly population. It increases only for those aged 60–64 and 65–69. Thereafter it declines for the remaining age groups. The other two poverty measures have similar patterns. But poverty is less deep among those aged 75 years and above, relative to the entire elderly population.

Overall, it is evident from the income poverty analysis that the standard of living of children in general is far worse than the national average. Children between the ages of six and nine suffer far greater poverty than children in other age groups. But their living arrangements matter. Poverty levels are generally the same among the elderly population.

TABLE 4
Poverty Profile for Children (0–17 years) by Living Arrangements

	All	With children, no elderly	With elderly	Prime age head	Elderly head	Unmarried female	Married male
Headcount							
<=5 years	33.6	32.8	38.8	33.2	38.9	38.5	32.2
6–9 years	35.4	35.2	36.7	35.0	37.3	39.3	33.6
10–14 years	33.0	33.6	31.2	33.3	31.4	33.9	32.0
15–17 years	30.9	30.8	31.2	31.3	30.8	31.2	30.8
All children	33.5	33.3	34.6	33.4	34.6	36.0	32.3
Poverty gap							
<=5 years	9.4	9.4	9.9	9.6	9.6	12.2	8.6
6–9 years	9.9	10.0	9.6	10.0	9.6	11.1	9.1
10–14 years	9.7	9.9	8.9	9.9	9.0	9.8	9.1
15–17 years	9.0	9.1	8.6	9.3	8.4	8.8	8.7
All children	9.5	9.6	9.3	9.7	9.2	10.6	8.9
Severity of poverty							
<=5 years	3.8	3.8	4.0	3.9	3.7	5.2	3.4
6–9 years	4.0	4.1	3.7	4.1	3.7	4.5	3.6
10–14 years	4.0	4.1	3.6	4.1	3.6	4.0	3.6
15–17 years	3.7	3.8	3.4	3.9	3.3	3.7	3.5
All children	3.9	3.9	3.7	4.0	3.6	4.4	3.5

Source: Author's calculations based on UNHS III.

FIGURE 1

Poverty Measures for the Elderly Population, 2005/06
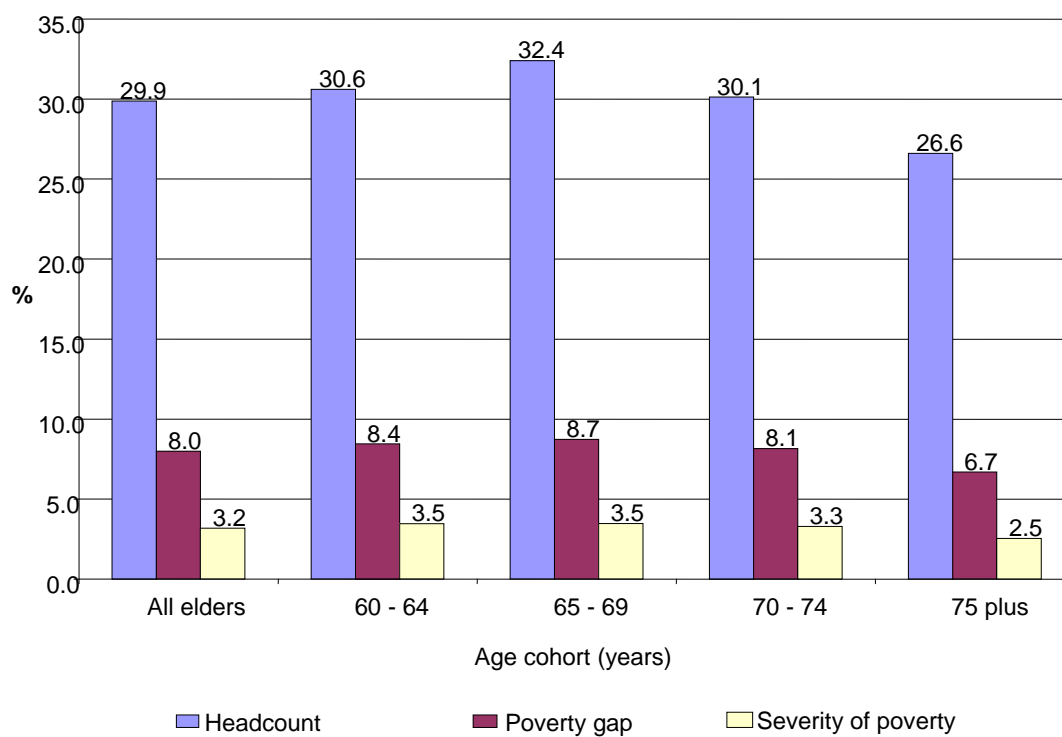
Source: Author's calculations based on UNHS III.

4 IMPACT OF GROWTH AND INEQUALITY ON POVERTY

4.1 *EX-POST* ANALYSIS

Okidi et al. (2007) presents a detailed growth-poverty-inequality nexus for the period 1992/93–2002/03 for Uganda, which need not be repeated here. Table 5 shows that for the period 1992–2006, there was overall growth in consumption expenditure per adult equivalent: the mean grew by 3.69 per cent and the median by 2.95 per cent. Growth was stronger in urban areas than in rural areas. In the countryside, growth was skewed towards the richest 10 per cent of the income distribution, whereas their counterparts in urban areas experienced a slowdown (Figure A.2). The rate of pro-poor growth was positive but lower than the growth of mean consumption. Broadly speaking, growth was stronger over a shorter period, 2003–2006, than over the entire period 1992–2006 (Figure A.4). In the period 2003–2006, growth in rural areas was stronger than the national average. All percentiles experienced positive consumption growth. It is striking that, on average, the mean growth in consumption was negative for urban areas. Figure A.3 shows that the richest 15 per cent of the income distribution in urban areas experienced negative growth.

Table 5 further shows the impact of growth and redistribution on poverty following the Datt and Ravallion (1992) approach. For the entire period 1992–2006, growth brought about poverty reduction while a deterioration in income distribution undermined the positive effects

of growth on poverty. But since the growth impact was stronger (in absolute terms) than the redistribution impact, the net impact was a reduction in poverty. Indeed, had there been no growth in consumption, poverty would have increased by 5.7 percentage points. In the period 2003–2006 and at the national level, the total poverty headcount declined by 7.8 percentage points. Some 84 per cent of the decline can be attributed to growth in consumption and the rest to an improvement in redistribution. Put differently, in this three-year period, poverty would have declined by 1.2 percentage points if there had been no growth in consumption. Turning to urban areas, the improvement in income distribution from a Gini coefficient of 0.43 to 0.41 partly explains the observed decline in poverty. Notwithstanding the dampening effects of rising income inequality in rural areas, the growth component was very strong and brought about a reduction in poverty. Our finding corroborates that of Okidi et al. (2007), which is that poverty reduction in Uganda has been followed by a growth in consumption but also by a deterioration/improvement in income distribution. The implications are, first, that current growth patterns are widening income disparities; and second, that policy action is needed to keep inequality levels low in order to maintain pro-poor growth.

TABLE 5

Growth in Consumption Expenditure per Adult Equivalent (CPAE) and Decomposition of Poverty Change into Growth and Inequality

	Growth CPAE			Growth and inequality decomposition of poverty		Change in poverty
	Growth in mean CPAE	**Growth rate in median CPAE**	**Rate of pro-poor growth**	**Growth**	**Inequality**	
1992–2006						
National	3.69	2.95	3.05	-31.0	5.7	25.3
Rural	3.42	2.84	3.00	-30.7	4.6	26.1
Urban	3.69	3.33	2.54	-20.1	5.0	15.1
1992–2003						
National	4.09	2.68	2.92	-25.7	8.1	17.6
Rural	3.37	2.56	2.85	-22.2	4.6	17.6
Urban	5.64	3.80	3.28	-22.9	8.4	14.5
2003–2006						
National	3.61	4.87	4.43	-6.6	-1.2	7.8
Rural	4.77	4.73	4.42	-9.3	0.8	8.5
Urban	-1.34	2.91	1.09	1.3	-1.9	0.6

Source: Ssewanyana and Okidi (2007).

Notes: 1. The estimates for the period 1992–2003 differ slightly from those presented in Okidi et al. (2003). These figures refer to the entire country. 2. The rate of pro-poor growth is the growth rate that gives the same rate of poverty reduction as observed, but with no change in inequality.

Table A.1 presents the findings on the responsiveness of the poverty measures to growth and inequality, on the basis of a simple model as in Okidi et al. (2003) and Ravallion's (1997, 2004) distribution-corrected growth approach. These results are summarised in Table 6. They indicate that growth in consumption and its distributional aspects are strongly correlated with the chosen poverty measures at any level of statistical significance. While growth causes a decline in poverty, inequality leads to rising poverty.

The growth elasticity in the "distribution-neutral model" is the partial elasticity, which measures the effect of growth on poverty when the distribution is held constant. The elasticity is estimated at 1.79 for the poverty headcount. This means that for every 1 per cent increase in consumption growth, the proportion of poor people declines by nearly 2 per cent. The estimates are slightly higher than those reported in Okidi et al. (2003) of 1.67 per cent. On the other hand, if inequality is allowed to change, the impact of growth on the poverty headcount is reduced to 1.48, slightly higher than 1.39 per cent cited in Okidi et al. (2003). Our results are also lower than those reported by McGee (2000). In part, the differences are due to the number of observations used in the analysis. Similarly, findings for the responsiveness of the poverty measures to growth, adjusting for initial inequality, are slightly lower than those based on "distribution-neutral" models. Notably, responsiveness to changes in growth increases with the sensitivity of the poverty measure to large poverty gaps, indicating that growth not only benefits those just below the poverty line but also alleviates the depth and severity of poverty.

The results show a significant positive association between changes in poverty and changes in inequality for all poverty measures. The impact is greater as the severity of poverty increases. This is unsurprising, since the mean income levels are higher than the absolute poverty line. In other words, as inequality increases, holding growth in consumption constant, poverty will increase. More importantly, the results suggest that any increase in inequality hurts the "ultra" poor more than the poor. Overall, in absolute terms the impact of growth is greater than the impact of inequality on poverty measures. Additionally, our findings underscore the fact that growth in consumption does not explain all the changes in poverty measures; the inequality dimension is also important. In other words, improving income distribution is good but is not sufficient to reduce poverty in Uganda. As regards the distribution-neutral estimates, the poverty headcount and the depth and severity of poverty are projected to fall by 6.6 per cent, 8.7 per cent and 10.25 per cent a year, respectively. But the annual percentage decline is sharper for the severity of poverty measures than for the other poverty measures.

TABLE 6

Responsiveness of Poverty to Growth and Inequality, 1992–2006

Poverty measure	Annual % change in poverty index	Growth elasticity of poverty	Inequalityelasticity of poverty
Distributional neutral			
Poverty headcount	6.62	-1.79	1.25
Poverty gap	8.77	-2.38	2.07
Poverty gap squared	10.25	-2.78	2.61
Allowing for change in inequality			
Poverty headcount	5.48	-1.48	
Poverty gap	6.89	-1.87	
Poverty gap squared	7.87	-2.13	
Distribution corrected growth			
Poverty headcount	6.36	-1.72	
Poverty gap	7.95	-2.15	
Poverty gap squared	9.53	-2.58	

Source: Extracted from Table A1.

Notes: 1. The distribution-correction growth uses the 1992 Gini coefficient as the initial inequality index because that is the year when reforms in Uganda fully got underway. The initial Gini index was 0.364.

2. The ordinary rate of growth in consumption was 3.69 per cent a year for the period 1992–2006.

4.2 *EX-ANTE* ANALYSIS

On the basis of our estimated relationship between poverty, growth and inequality, we move a step further and use simple simulations to illustrate what would happen to the income poverty measures (P0, P1, P2) in the 25 years after 1992, assuming: (i) both the rate and pattern of aggregate growth are maintained (baseline); (ii) there are different rates of non-redistributive growth (inequality is constant); (iii) there is no growth but there is redistribution (inequality decreases); and (iv) there are different patterns and rates of inequality-reducing (pro-poor) growth. The results are summarised in Tables 7 and 8. Detailed results are available from the author upon request.

Over the period 1992–2006, if Uganda had maintained a consumption growth rate of 3.69 per cent a year, holding inequality constant, the poverty headcount would have been 21.6 per cent in 2006 instead of 31.1 per cent, as long as the responsiveness of poverty to growth is 1.79 per cent. The projections do not differ much from estimates based on the distribution-corrected growth model. On the other hand, allowing for changes in inequality, the poverty headcount would have been 25.6 per cent. Overall, one would have expected lower poverty estimates in 2006 given the poverty headcount in the initial period (56.4 per cent in 1992).

TABLE 7

Poverty Simulations Assuming Changes in Growth Rates and Constant Growth Elasticities, Assuming 1992/93 Poverty Levels

Poverty measure	Distribution-neutral growth			Allowing for changes in inequality			Distribution-corrected growth		
	2006	**2015**	**2017**	**2006**	**2015**	**2017**	**2006**	**2015**	**2017**
Base scenario									
Poverty headcount	21.6	12.5	10.2	25.6	16.3	13.8	22.5	13.3	10.9
Poverty gap	5.8	2.8	2.1	7.7	4.4	3.5	6.6	3.4	2.6
Poverty gap squared	2.3	1.0	0.7	3.3	1.7	1.3	2.5	1.1	0.8
Growth rate of 2%									
Poverty headcount	33.8	25.3	22.6	37.0	29.1	26.6	34.5	26.1	23.5
Poverty gap	10.6	7.2	6.2	12.3	9.1	8.1	11.3	7.9	7.0
Poverty gap squared	4.6	2.9	2.5	5.6	3.9	3.5	4.9	3.2	2.7
Growth rate of 4%									
Poverty headcount	19.9	11.0	8.8	24.0	14.7	12.2	20.7	11.7	9.5
Poverty gap	5.2	2.3	1.7	7.1	3.8	3.0	5.9	2.9	2.2
Poverty gap squared	2.0	0.8	0.5	3.0	1.4	1.1	2.2	0.9	0.7
Growth rate of 5%									
Poverty headcount	15.1	7.1	5.4	19.2	10.3	8.2	16.0	7.8	5.9
Poverty gap	3.6	1.3	0.9	5.3	2.4	1.8	4.2	1.7	1.2
Poverty gap squared	1.3	0.4	0.2	2.1	0.9	0.6	1.5	0.5	0.3

Source: Author's calculations.

Note: In deciding on rates of consumption growth, we relied heavily on the past growth rates based on household surveys.

Assuming the current consumption growth rates are maintained, Uganda will meet its MDG of reducing income poverty to 28 per cent by 2015. The poverty headcount is projected to be 10.2 per cent but is expected to be 13.8 per cent if we allow for changes in inequality by 2017. Indeed, these projected poverty headcounts are above the PEAP target of reducing the share of the population living in poverty to less than 10 per cent by 2017. But if the consumption growth rate were to fall to 2 per cent a year, 29.1 per cent and 26.6 per cent of Ugandans will be living in poverty in 2015 and 2017, respectively. Any growth rate above 4 per cent a year, however, would enable Uganda to meet its PEAP targets, holding constant the growth elasticities with no change in inequality. Nevertheless, income inequality in Uganda has been changing over time, and thus growth of more than 5 per cent a year will be required to meet the PEAP targets.

What would happen to poverty levels, given the most recent levels? Would Uganda be able to halve the level by 2015? At the current growth rates of consumption, Uganda will not be able to halve the current proportion of people living in poverty by 2015. By extension, it is less likely than under the previous scenario to meet the PEAP targets. Given current poverty levels, a minimum growth rate of 5.5 per cent would be required (see Table 8). Regardless of the projected growth rate in consumption, the effect on the other poverty measures remains in the same direction.

TABLE 8

Poverty Simulations Assuming Changes in Growth Rates and Constant Growth Elasticities, Assuming 2005/06 Poverty Levels

| | Actual poverty levels | Simulated poverty levels | | | | | |
| | | Distribution neutral growth | | Allowing for changes in inequality | | Distribution corrected growth | |
	2006	**2015**	**2017**	**2015**	**2017**	**2015**	**2017**
Base scenario							
Poverty headcount	31.1	16.8	14.7	18.8	16.8	17.2	15.1
Poverty gap	8.7	3.8	3.2	4.6	4.0	4.1	3.5
Poverty gap squared	3.5	1.3	1.1	1.7	1.4	1.4	1.2
Growth rate of 2%							
Poverty headcount	31.1	22.4	20.8	23.7	22.3	22.7	21.2
Poverty gap	8.7	5.6	5.1	6.2	5.7	5.9	5.4
Poverty gap squared	3.5	2.1	1.9	2.4	2.2	2.2	2.0
Growth rate of 4%							
Poverty headcount	31.1	15.9	13.7	18.0	15.9	16.4	14.2
Poverty gap	8.7	3.5	2.9	4.3	3.7	3.9	3.2
Poverty gap squared	3.5	1.2	1.0	1.6	1.3	1.3	1.1
Growth rate of 5%							
Poverty headcount	31.1	13.4	11.1	15.6	13.3	13.8	11.6
Poverty gap	8.7	2.8	2.2	3.6	3.0	3.1	2.5
Poverty gap squared	3.5	0.9	0.7	1.3	1.0	1.0	0.8

Source: Author's calculations.

Note: In deciding on rates of consumption growth, we relied heavily on the past growth rates based on household surveys.

As regards changes in the elasticity of poverty with respect to inequality, holding the growth in consumption constant, there would be less poverty reduction than observed above (Table 9). If there were no growth in consumption for the entire period, nearly 45.3 per cent of Ugandans in 2015 and 44 per cent in 2017 will have less than the minimum income required to meet basic needs. Overall, improving income distribution with the growth component constant will lead to some poverty reduction, but the decline will be slower than it would be with growth in consumption.

TABLE 9

Poverty Simulations Assuming Constant Inequality Elasticity and No Changes in Growth Rates

	2006	2015	2017
Base scenario (0.797%)			
Headcount	49.1	45.3	44.0
Poverty gap	16.6	14.5	13.8
Poverty gap squared	7.7	6.5	6.1
Inequality rate -0.9%			
Headcount	48.2	44.0	42.6
Poverty gap	16.1	13.8	13.1
Poverty gap squared	7.4	6.1	5.7
Inequality rate -0.8%			
Headcount	49.0	45.3	43.9
Poverty gap	16.6	14.5	13.8
Poverty gap squared	7.7	6.5	6.1
Inequality rate -0.75%			
Headcount	49.5	45.9	44.6
Poverty gap	16.8	14.8	14.2
Poverty gap squared	7.8	6.7	6.3
Inequality rate -0.7%			
Headcount	49.9	46.5	45.3
Poverty gap	17.1	15.2	14.5
Poverty gap squared	8.0	6.9	6.5

Source: Author's calculations.

Note: The inequality rates are derived based on the past changes in the Gini coefficient based on household surveys.

Overall, if the current ordinary growth rate in consumption is maintained, it would significantly reduce poverty in the near future. At the projected growth rates, assuming population growth remains constant, the number of poor people will decline. If growth tapers off, poverty reduction will slow to the extent that the trend will be upwards. Nonetheless, growth *per se* will not adequately improve the income of the less advantaged individuals/households between now and 2015. A cash transfer scheme is therefore justified. Bringing together all these findings, it is evident that policymakers should devise strategies that are growth-enhancing and redistributive if Uganda is to make progress towards achieving its MDG and PEAP targets, and to maintain those targets in future.

4.3 CASH TRANSFER SIMULATIONS

4.3.1 Financial Resources Needed To Eliminate Poverty

Table 10 shows the fiscal cost of closing the absolute poverty gap and the food poverty gap in Uganda. It also shows the share of resources needed to close the poverty gap as a percentage of GDP (for different individual and household types). Extending transfers to nearly 8 million poor individuals in about 4 million households would cost about 3.8 per cent of GDP. It would cost 1.48 per cent of GDP to eliminate the absolute poverty gap among the child population aged 6–17, and only about 0.2 per cent to eliminate the gap for the elderly. Moreover, more resources would be needed to eliminate the poverty gap among households with elderly persons (0.80 per cent of GDP) than among households headed by the elderly (0.62 per cent). And more resources would be required (2.88 per cent of GDP) to bring all of the extremely poor above the absolute poverty line than to bring the moderately poor above the line (0.99 per cent).

TABLE 10

Fiscal Cost to Eliminate Consumption Poverty in Uganda, 2005/06 (millions of Ugandan shillings)

Individual/household type	Close the absolute poverty gap		Close the food poverty gap	
	Amount	**Cost as % GDP**	**Amount**	**Cost as % GDP**
All	592,555	3.77	180,079	1.15
Extremely poor	451,514	2.88	180,079	1.15
Moderately poor	141,041	0.90		
Individual type (years)				
<=5	87,356	0.56	26,742	0.17
6–17	231,932	1.48	72,538	0.46
Male 18–59	121,265	0.77	35,515	0.23
Female 18–59	125,727	0.80	37,566	0.24
60 and older	26,275	0.17	7,719	0.05
Household type 1				
HH with children no elderly	462,531	2.95	141,547	0.90
HH with elderly	125,899	0.80	37,772	0.24
HH only with adults	4,124	0.03	761	0.00
Household type 2				
<=25 yrs	33,173	0.21	7,820	0.05
26–59 yrs	461,458	2.94	144,124	0.92
>=60 yrs	97,924	0.62	28,135	0.18
Household type 3				
Unmarried female	94,994	0.60	30,686	0.20
Married female	65,469	0.42	22,163	0.14
Unmarried male	18,212	0.12	6,337	0.04
Married male	413,880	2.64	120,893	0.77

Source: Author's calculations.

Note: Cost if expressed in current market prices.

Although Uganda is considered a country with agricultural potential, some Ugandans cannot afford to meet their minimum food requirements. Nearly 15 per cent of the entire population, accounting for nearly half of the poor, live below the food poverty line. Thus it would cost 1.2 per cent of GDP to eliminate the threat of starvation in Uganda.

On the basis of 2005/06 survey data, the government would require 592.6 billion Ugandan shillings (USh), equivalent to 3.8 per cent of GDP, to close the absolute poverty gap. This percentage is relatively high given the fiscal constraints the government faces, an argument highlighted by a comparison with actual government spending on social services in 2005/06: the government spent 2.9 per cent and 3.7 per cent of GDP, respectively, on health and education. More disturbingly, it represents 93 per cent of public spending on education. The absolute value is far higher than public spending on health. In other words, it is not affordable to transfer 3.8 per cent of GDP.

The cost of eliminating the food poverty gap is also high, though much lower than the cost of closing the absolute poverty gap. It would require USh 180.1 billion to close the food poverty gap, which is equivalent to 1.15 per cent of GDP. This is close to the social development subsector's share of nearly 1 per cent of the entire national budget. One per cent of GDP amounts to nearly USh 154.9 billion, equivalent to about 24.4 per cent and 30.5 per cent, respectively, of recurrent expenditure on education and health in 2005/06. A transfer of 0.5 per cent of GDP (USh 77.4 billion) is within the government's affordable range. In light of the above, the cost of eliminating either the absolute poverty gap or the food poverty gap seems to be beyond Uganda's fiscal capacity. Given the fiscal constraints, there can be only extremely limited spending on cash transfers—a smaller share of GDP, but well targeted.

4.3.2 Poverty Simulation Results

This section presents poverty simulations based on the alternative budget scenarios and target strategies discussed in Section 2. Following the assumptions discussed earlier, transfers made to those groups are shared among household members. The simulations are presented in Table 11 (for details, see Tables A.2 and A.3). The target households and population for the cash transfer are presented here, as well as the estimated effect on income poverty measures. As expected, the poverty reduction impact is greater as the budget increases, although it is always important to be aware of fiscal affordability. The interpretation of the results is straightforward. For instance, if a cash transfer scheme reaches all children, about 15.5 million children in 4.3 million households will be beneficiaries. If all the elderly are targeted, nearly 1.2 million people in 1 million households would be beneficiaries.

The major findings of the simulation exercise (Table 11) can be summarised as follows. Broadly speaking, cash transfers to any group bring about a greater reduction in the poverty gap and poverty gap squared than a reduction in the poverty headcount. But the impact on the severity of poverty is greater than on the poverty gap. The "ultra" poor also benefit from such transfers. The implication is that cash transfers should not be viewed as a mean of reducing the poverty headcount but as a means of improving people's incomes, especially those in extreme poverty, and in turn lessening their vulnerability to poverty.

Targeting all children leads to a greater poverty reduction in the national poverty headcount than targeting all of the elderly. Cash transfers to all children reduce poverty to a similar extent as targeting only orphans or school-age children aged 6–17 years. Narrowing the

targeting of transfers to specific groups of children does not seem to lead to greater aggregate and group-specific poverty reduction. Such targeting will entail distributing benefits to non-poor children. Put simply, nearly 67 per cent of children are living in non-poor households. Thus, distributing benefits to all children would include the two-thirds who are living above the absolute poverty line.

It is evident from the analysis so far that universal categorical transfer might not be a better alternative for Uganda. Hence we investigate targeting by household type. Targeting children living with elderly persons, elderly-headed households or households headed by unmarried females yields somewhat similar poverty impacts. The impact of targeting children in extreme poverty is nearly three-fold for depth of poverty and severity of poverty. In other words, the effects are significant when such transfers focus only on those in extreme poverty.

TABLE 11

Impact on National Poverty Reduction of Allocating 0.5% and 1% of GDP (% change)

	0.5% of GDP			1% of GDP		
	P0	**P1**	**P2**	**P0**	**P1**	**P2**
Uganda (base scenario)						
All children	2.4	4.5	6.3	4.8	8.9	12.2
All vulnerable children	2.8	4.5	6.4	4.8	8.8	12.2
Orphans	1.8	4.2	6.0	4.2	8.0	10.5
All school-age, 6–17 yrs	2.3	4.4	6.1	4.5	8.6	12.0
Living arrangements: children						
Living with elderly persons	3.0	4.2	5.3	5.5	7.6	9.3
Living in elderly-headed household	2.8	4.0	5.0	5.6	7.3	8.3
Living in unmarried female-headed household	2.4	4.3	6.0	4.8	7.9	10.0
Living in households in extreme poverty	0.0	13.6	26.9	0.0	27.1	48.1
Living in rural households in extreme poverty	0.0	13.6	26.8	0.0	27.2	47.5
School-age children in extreme poverty						
All 6–17 years	0.0	13.2	26.1	0.1	26.4	46.0
6–10 years	0.0	13.6	25.4	2.7	26.4	42.3
11–13 years	0.1	13.2	25.0	2.4	25.6	40.9
14–17 years	0.0	12.7	23.5	3.1	24.7	38.2
Elderly persons						
All elderly persons	2.0	3.5	4.3	5.2	6.2	7.5
Living with children	2.0	3.5	4.3	5.2	6.2	7.5
Living in elderly headed households	1.9	3.4	4.1	4.8	5.8	7.0
Living in household in extreme poverty	2.6	9.9	14.3	7.0	13.8	17.3
Children and elderly						
Living in households in extreme poverty	0.0	13.5	26.9	0.0	27.0	48.1

Source: Author's calculations.

Note: P0= poverty headcount, P1= poverty gap and P3= Poverty gap squared.

Targeting children living in extremely poor households brings about a greater reduction in the depth and severity of poverty than targeting all children. The geographical targeting of rural children in extreme poverty yields similar results. This is unsurprising, since most of the poor live in rural areas. The effects are similar if elderly persons in extremely poor households are targeted, rather than providing a universal transfer to all the elderly. Notably, the impact is greater if transfers are extended to children than to elderly persons living in households headed by an elderly individual.

The results suggest that a universal transfer to the elderly or children does not benefit a large proportion of vulnerable people. Regardless of the budgetary scenario, a cash transfer would have a greater impact on the depth and severity of poverty if the money went to either children or elderly persons living in extremely poor households. Not presented here, but available from the author upon request, are data showing that targeting all poor children rather than extremely poor children would have greater impacts on the poverty headcount.

What about providing a child benefit and an old-age pension? Table 11 further illustrates the impact of offering transfers to all children and elderly persons in extremely poor households. The impact does not seem different from the effects of transfers made only to children in extremely poor households, which suggests that distributing benefits only to this group of children would also benefit the elderly.

We also address the issue of combining immediate poverty reduction with long-term human capital development by focusing on education. A universal categorical transfer to all school-age children would result, respectively, in a 4.5 per cent, 8.6 per cent and 12 per cent reduction in the national poverty headcount, the poverty gap, and the severity of poverty (assuming a cash transfer equivalent to 1 per cent of GDP). This result corroborates our earlier observations that greater impacts would be achieved by targeting those living in extreme poverty. But age-specific targeting does yield similar impacts on aggregate poverty.

Next we discuss the impact of the proposed CT on mean consumption and income distribution (Table 12). The impact on mean consumption per adult equivalent is modest and not statistically significant. The transfer, however, does reduce inequality, though the degree varies depending on the inequality measure used and level of resources transferred. For instance, a CT to children in extreme poverty reduces the Gini coefficient from 0.408 to 0.401, and the mean log deviation measure from 0.276 to 0.262. The percentage reduction is greater in the latter measure of inequality than in the former. This is unsurprising, since the Gini coefficient is not bottom-sensitive while the mean log deviation is. A fixed budget transfer of 1 per cent of GDP will lead to significant reduction in inequality based on the mean log deviation measure, regardless of household type. But a transfer of 0.5 per cent of GDP will only lead to a significant reduction if the scheme targets those in extreme poverty. The improvement in income distribution is far greater for targeted transfers than universal categorical transfers. Summarising our findings, children and elderly persons living in extremely poor households seem to be identified as cash transfer beneficiaries. Targeting these groups has a greater impact on the depth and severity of poverty, as well as on overall inequality.

TABLE 12

Impact on Mean Income and Inequality of Allocating 0.5% and 1% of GDP

	0.5% GDP			1% GDP		
	Mean CPAE	**Gini**	**MLD**	**Mean CPAE**	**Gini**	**MLD**
Uganda (base scenario)	39,746	0.408	0.276	39,746	0.408	0.276
All children	39,991	0.405	0.272	40,237	0.403	0.268
All vulnerable children	39,985	0.406	0.272	40,224	0.403	0.268
Orphans	39,982	0.406	0.273	40,218	0.404	0.269
All school-age, 6–17 yrs	39,984	0.406	0.272	40,222	0.403	0.268
Living arrangements: children						
Living with elderly persons	39,983	0.406	0.273	40,220	0.404	0.270
Living in elderly-headed household	39,982	0.406	0.273	40,218	0.404	0.270
Living in unmarried female-headed household	39,988	0.406	0.272	40,231	0.403	0.269
Living in households in extreme poverty	39,993	0.401	0.262	40,240	0.393	0.250
Living in rural households in extreme poverty	39,993	0.401	0.262	40,240	0.393	0.250
School age children in extreme poverty						
All 6–17 years	39,987	0.4 01	0.262	40,228	0.394	0.251
6–10 years	39,994	0.401	0.262	40,243	0.394	0.252
11–13 years	39,987	0.401	0.263	40,229	0.394	0.253
14–17 years	39,978	0.401	0.263	40,210	0.395	0.254
Elderly persons						
All elderly persons	39,974	0.406	0.273	40,201	0.404	0.271
Living with children	39,974	0.406	0.273	40,201	0.404	0.271
Living in elderly headed households	39,973	0.406	0.273	40,200	0.405	0.271
Living in household in extreme poverty	39,978	0.404	0.272	40,210	0.402	0.270
Children and elderly						
Living in households in extreme poverty	39,992	0.401	0.262	40,238	0.393	0.250

Source: Author's calculations based on UNHS III.

Broadly speaking, it is evident that universal categorical has only a limited impact on poverty in Uganda. While significant reductions are observed by targeting children/elderly persons living in extremely poor households, we should not ignore the poverty effectiveness of categorical transfers relative to targeting such transfers according to other household types, as presented in Table 11. The impact on the depth and severity of poverty is greater if the transfer is given to all children or all elderly persons than to a smaller group. The only exception is household type "living in extreme poverty". Hence if targeting all children or all the elderly is likely to entail a very high fiscal burden, a well selected smaller group of those children would be a suitable alternative. In the interests of fiscal affordability and sustainability, we propose a more focused target: children and elderly persons living in extremely poor households. This would mean targeting 2.6 million children in about 0.63 million households, and 0.1 million elderly persons in about 0.14 million households. But if transfers are made to both children and the elderly, 2.7 million people in 0.66 million households would benefit. Extreme poverty should not be seen as transitional. Studies such as CPRC (2006) and Deinenger and Okidi (2003) have shown that most of the extremely poor households are

chronically poor. In other words, there are limited prospects for reducing income poverty to the expected levels if this group is further marginalised.

Does targeting households in extreme poverty reach most of the vulnerable groups and areas? Spatially, lagging regions—including the northern and eastern areas—stand to benefit; this is also true for rural areas (Table 12). Both children and the elderly would benefit. For a given fixed budget, narrowing the coverage implies a higher unit transfer and in turn leads to a greater poverty impact.

TABLE 13

Impact of 0.5% Transfer to Children and Elderly Persons in Extreme Poverty

	Before transfer			After transfer		
	P0	P1	P2	P0	P1	P2
National	31.1	8.7	3.5	**31.1**	**6.4**	**1.8**
Rural	34.2	9.7	3.9	**34.2**	**7.0**	**2.0**
Urban	13.7	3.5	1.4	**13.7**	**2.8**	**0.8**
Central	16.4	3.6	1.3	**16.4**	**2.7**	**0.7**
Eastern	35.9	9.1	3.4	**35.9**	**6.7**	**1.8**
Northern	60.7	20.7	9.2	**60.7**	**14.8**	**4.7**
Western	20.5	5.1	1.8	**20.5**	**3.8**	**1.0**
<=5 years	33.6	9.4	3.8	**33.6**	**6.7**	**1.9**
6–17 years	33.5	9.6	3.9	**33.5**	**6.9**	**2.0**
Male 18–59 years	26.7	7.4	2.9	**26.7**	**5.7**	**1.7**
Female 18–59 years	28.2	7.8	3.1	**28.2**	**5.9**	**1.7**
60 and older	29.9	8.0	3.2	**29.9**	**5.8**	**1.6**

Source: Author's calculations based on UNHS III.

To conclude this section, we are aware that by linking transfers to the presence of children, CT schemes might advertently increase the desirability of having children. Second, the proportion of children in the entire population is greater than that of the elderly. In other words, we are talking of a large population. This has implications for the amount of transfers per unit. There is a risk of having marginal impacts because of large numbers. Third, the benefits might not reach the children, because such CTs might be misused by other household members. There are also fears that CTs might not be compatible with longer-run income growth for the poor. Despite these adverse incentives, there is a need to put in place social protection interventions such as the proposed cash transfer scheme, so as to further lessen the marginalisation of the less advantaged sectors of the population.

5 CONCLUSIONS AND POLICY IMPLICATIONS

The analysis presented in this study provides insights into the trajectory of income poverty in Uganda using available household survey data collected by UBoS. The poverty reducing impact of growth has been partly offset by increasing inequality. Additionally, the growth elasticity of poverty is greater than the inequality elasticity of poverty, in absolute terms. More importantly, simply making interventions to improve household incomes without addressing

inequalities might not be enough to ensure sustainable progress towards meeting the 2015 MDG for income poverty (28 per cent) or the 2017 PEAP target (10 per cent). Our simulations suggest that household incomes would have to grow by at least 4 per cent a year to keep the number of poor people from rising. If the number of people in extreme poverty is to be halved by 2015 (the MDG), not only will household incomes have to grow but incomes will have to be distributed more equitably.

Although the simulations suggest that Uganda might meet the MDG and PEAP income poverty targets, a group of Ugandans remain excluded from the government's development process. For instance, we have demonstrated that there is a strong correlation between income poverty and the presence of children in the household. Because growth in consumption is seen as key to sustainable poverty reduction in Uganda, it is crucial to address the poverty-growth-inequality nexus from a cash transfer perspective. There have been government interventions to improve household incomes, but these have been frustrating because most of them are yet to have the desired results. There is a need to help the less advantaged individuals and households if Uganda is to attain the MDGs between now and 2015. In that context, this study proposes a cash transfer. It is assumed that such a scheme would provide a steady and reliable source of income for vulnerable groups. The cash could be used by households to invest in the capacities of targeted beneficiaries, thereby mitigating the threat of long-term and persistent poverty. The scheme aims to reduce current poverty by providing targeted cash transfers to those in extreme poverty, but focusing on children and the elderly. We propose a cash transfer of not more than 1 per cent of GDP. The targeted transfer would significantly reduce the poverty measures that are more sensitive to the bottom of the distribution, with a remarkable effect.

While such transfers might have only a modest impact on mean incomes, the impact on inequality is strong and statistically significant. This suggests that channelling public funds through a CT scheme, if effectively implemented, will reduce the worsening income inequality and in turn reduce the overall incidence of poverty. There are certainly important matters that policymakers would have to consider, such as whether it is sensible to divert funds from existing public social spending (excluding social development) to finance the proposed CT scheme. We argue that the scheme should be regarded as a complement to, not a replacement for, core anti-poverty interventions. Interventions to protect vulnerable Ugandans deserve to be accorded high priority if the country is to reduce poverty systematically and meet the MDG and PEAP income poverty targets.

APPENDIX

FIGURE A1

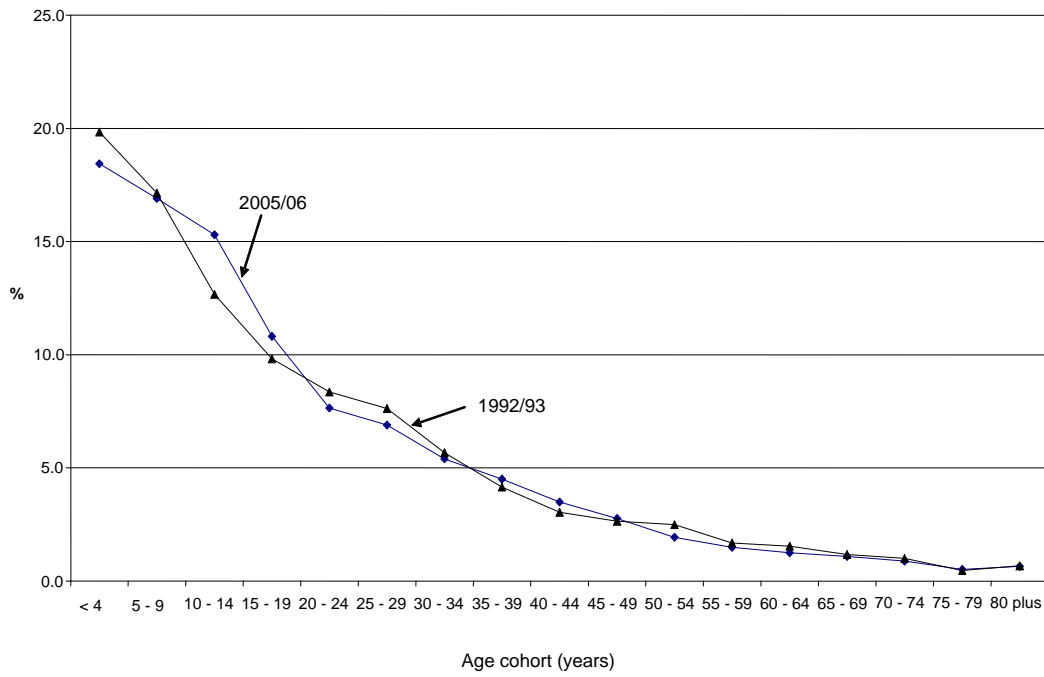## Population Shares (%) by Age Group, 1992/93 and 2005/06

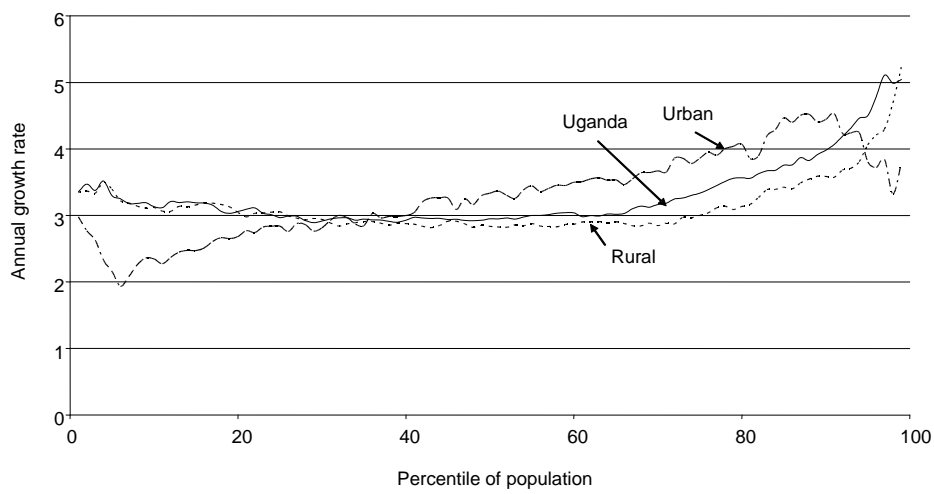FIGURE A2

Growth Incidence Curve, 1992–2006
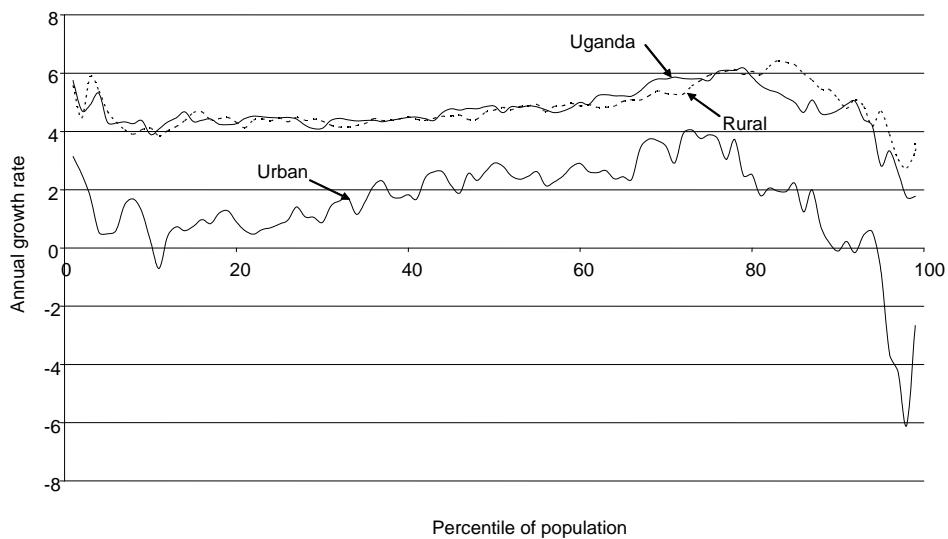
FIGURE A3

Growth Incidence Curve, 2002–2006

FIGURE A4

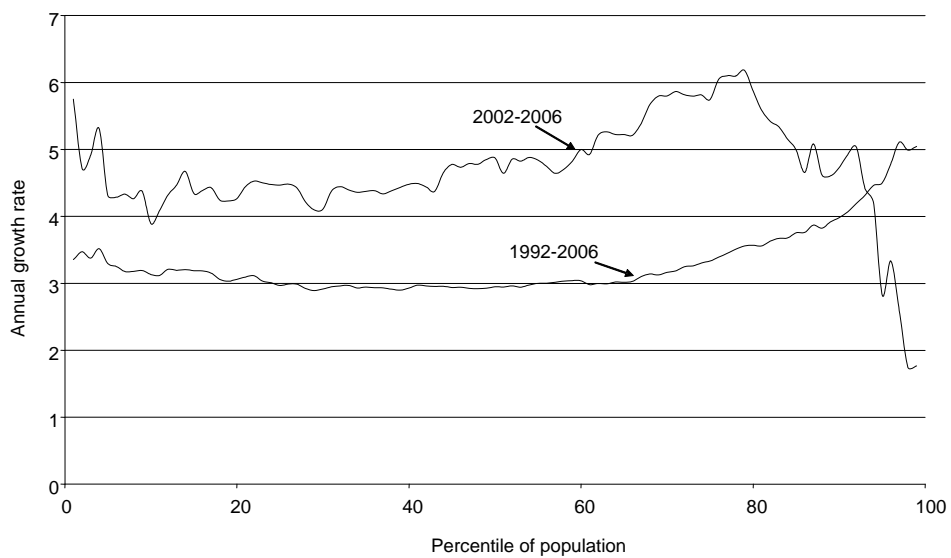**Uganda: Growth Incidence Curve, 1992–2006**

TABLE A1

Regression Changes in Log of Poverty Measures

	Model 1		Model 2	
	Coeff.	p-value	Coeff.	p-value
Poverty headcount				
lnCpae	-1.793	0.000	-1.484	0.000
lnGini	1.247	0.000		
Constant	18.874	0.000	14.313	0.000
R-squared = 0.97	0.97		0.94	
Poverty gap				
lnCpae	-2.378	0.000	-1.866	0.000
lnGini	2.066	0.000		
Constant	24.602	0.000	17.046	0.000
R-squared	0.97		0.92	
Poverty gap squared				
lnCpae	-2.778	0.000	-2.132	0.000
lnGini	2.609	0.000		
Constant	28.455	0.000	18.914	0.000
R-squared	0.97		0.90	
Model 3				
Poverty headcount				
Distributional trend	0.003	0.700		
Distribution corrected growth	-2.716	0.000		
R-squared = 0.67				
National growth elasticity = -1.72				
Poverty gap				
Distributional trend	0.000	0.983		
Distribution corrected growth	-3.392	0.000		
R-squared = 0.64				
National growth elasticity = - 2.15				
Poverty gap squared				
Distributional trend	0.000	0.991		
Distribution corrected growth	-4.069	0.000		
R-squared = 0.58				
National growth elasticity = -2.58				

Source: Author's calculations.

Notes: Estimates for Model 1 and 2 are derived following the Okidi et al. (2003) approach; whereas those in model 3 are derived following Ravallion's (1997, 2004) distribution corrected growth.

TABLE A2

Cash Transfer Simulations Assuming a 1% of GDP Transfer

	Mean CPAE	Poverty measures			#poor ('000)	Targeted ('000)		Transfer per month	T-test statistic		
		P0	P1	P2		Households	Population		P0	P1	P2
Uganda (base scenario)	39,746	31.1	8.7	3.5	8,441						
All children	40,237	29.6	8.0	3.1	8,039	4,339	15,585	828	1.10	1.60	1.80
All vulnerable children	40,224	29.6	8.0	3.1	8,032	2,633	6,189	2,085	1.09	1.58	1.81
Orphans	40,218	29.8	8.0	3.2	8,085	1,114	2,221	5,810	0.98	1.44	1.55
All school-age, 6–17 yrs	40,222	29.7	8.0	3.1	8,060	3,576	9,526	1,355	1.03	1.55	1.76
Living conditions: children											
Living with elderly persons	40,220	29.4	8.1	3.2	7,978	758	2,788	4,629	1.24	1.35	1.35
Living in elderly headed household	40,218	29.3	8.1	3.2	7,966	610	2,131	6,058	1.27	1.28	1.20
Living in unmarried female-headed household	40,231	29.6	8.1	3.2	8,035	734	2,238	5,766	1.11	1.43	1.48
Living in households in extreme poverty	40,240	31.1	6.4	1.8	8,441	629	2,578	5,007	0.00	5.46	8.42
Living in rural households in extreme poverty	40,240	31.1	6.4	1.9	8,441	596	2,438	5,295	0.00	5.47	8.26
School-age children in extreme poverty											
6–17 years	40,228	31.1	6.4	1.9	8,433	554	1,588	8,128	0.02	5.26	7.92
6–10 years	40,243	30.2	6.4	2.0	8,213	413	603	21,421	0.62	5.26	7.20
11–13 years	40,229	30.3	6.5	2.1	8,239	351	450	28,674	0.56	5.05	6.79
14–17 years	40,210	30.1	6.6	2.2	8,179	339	535	24,107	0.72	4.80	6.25
Elderly persons											
All elderly persons	40,201	29.5	8.2	3.3	7,999	1,006	1,196	10,791	1.19	1.09	1.09
Living with children	40,201	29.5	8.2	3.3	7,999	1,006	1,196	10,791	1.19	1.09	1.09
Living in elderly headed households	40,200	29.6	8.2	3.3	8,036	838	1,019	12,671	1.08	1.03	1.00
Living in household in extreme poverty	40,202	28.9	7.5	2.9	7,849	139	161	79,982	1.64	2.57	2.62
Children and elderly											
Living in households in extreme poverty	40,238	31.1	6.4	1.8	8,441	654	2,739	4,712	0.00	5.43	8.43

TABLE A3

Cash Transfer Simulations Assuming a 0.5% of GDP Budget

	Mean	Poverty measures			#poor	Targeted ('000)		Transfer	T-test statistic		
	CPAE	P0	P1	P2	('000)	Households	Population	per month	P0	P1	P2
Uganda (base scenario)	39,746	31.1	8.7	3.5	8,441						
All children	39,991	30.3	8.4	3.3	8,239	4,339	15,585	414	0.55	0.80	0.90
All vulnerable children	39,985	30.2	8.4	3.3	8,206	2,633	6,189	1,043	0.64	0.80	0.92
Orphans	39,982	30.5	8.4	3.3	8,288	1,114	2,221	2,905	0.42	0.75	0.86
All school–age, 6–17 years	39,984	30.4	8.4	3.3	8,243	3,576	9,526	678	0.54	0.77	0.88
Living conditions: children											
Living with elderly persons	39,983	30.2	8.4	3.3	8,192	758	2,788	2,315	0.68	0.74	0.75
Living in elderly-headed household	39,982	30.2	8.4	3.4	8,208	610	2,131	3,029	0.62	0.71	0.71
Living in unmarried female-headed household	39,988	30.3	8.4	3.3	8,237	734	2,238	2,883	0.56	0.77	0.87
Living in households in extreme poverty	39,993	31.1	7.6	2.6	8,441	629	2,578	2,504	0.00	2.55	4.30
Living in rural households in extreme poverty	39,993	31.1	7.6	2.6	8,441	596	2,438	2,648	0.00	2.56	4.28
School-age children in extreme poverty											
6–17 years	39,987	31.1	7.6	2.6	8,441	554	1,588	4,064	0.00	2.47	4.13
6–10 years	39,994	31.1	7.6	2.6	8,437	413	603	10,711	0.01	2.56	4.03
11–13 years	39,987	31.1	7.6	2.6	8,433	351	450	14,337	0.02	2.47	3.91
14–17 years	39,978	31.1	7.6	2.7	8,441	339	535	12,054	0.00	2.36	3.63
Elderly persons											
All elderly persons	39,974	30.4	8.4	3.4	8,269	1,006	1,196	5,395	0.47	0.61	0.61
Living with children	39,974	30.4	8.4	3.4	8,269	1,006	1,196	5,395	0.47	0.61	0.61
Living in elderly headed households	39,973	30.5	8.5	3.4	8,282	838	1,019	6,335	0.43	0.59	0.58
Living in household in extreme poverty	39,974	30.3	7.9	3.0	8,219	139	161	39,991	0.60	1.81	2.14
Children and elderly											
Living in households in extreme poverty	39,992	31.1	7.6	2.6	8,441	654	2,739	2,356	0.00	2.54	4.29

TABLE A4

Group-Specific Impact on National Poverty Reduction Assuming 1% GDP Budget Transfer

	Only children and elderly			Only elderly			HH headed by elderly			HH headed by widow		
	Poverty measures			Poverty measures			Poverty measures			Poverty measures		
	P0	P1	P2	P0	P1	P2	P0	P1	P2	P0	P1	P2
Uganda (base scenario)	33.7	7.5	2.7	21.2	5.3	2.0	32.8	8.8	3.4	33.9	10.2	4.3
All children	33.2	6.5	2.3	21.2	5.3	2.0	31.6	8.1	3.1	31.6	9.3	3.8
All vulnerable children	22.2	5.3	1.8	21.2	5.3	2.0	28.8	7.2	2.6	30.2	8.3	3.2
Orphans	28.2	4.8	1.4	21.2	5.3	2.0	31.0	7.5	2.8	28.3	7.2	2.6
All school-age 6–17 yrs	31.9	6.4	2.2	21.2	5.3	2.0	31.6	8.0	3.0	31.0	9.3	3.7
All children living with elderly	0.4	0.0	0.0	21.2	5.3	2.0	28.0	7.7	3.0	31.1	9.4	4.0
All children living in households headed by elderly	15.8	2.8	0.7	21.2	5.3	2.0	21.7	4.7	1.5	29.6	8.5	3.4
All children living in households headed by widows	26.3	4.9	1.6	21.2	5.3	2.0	29.2	7.4	2.8	18.7	3.5	1.0
All children living in poor households	21.0	5.0	1.6	21.2	5.3	2.0	27.8	6.9	2.5	29.7	7.8	2.9
All children (6–17 years) living in poor households	29.2	4.3	1.4	21.2	5.3	2.0	28.5	6.6	2.3	29.3	7.6	2.8
All poor children residing in rural areas	21.2	5.0	1.6	21.2	5.3	2.0	28.6	6.9	2.5	29.6	7.9	2.9
All elderly persons	15.7	3.7	1.2	2.4	0.4	0.1	24.0	5.9	2.0	31.4	9.0	3.6
All elderly persons living alone	33.7	7.5	2.7	0.0	0.0	0.0	31.9	8.5	3.3	33.7	10.1	4.2
All elderly persons living with children	0.0	0.0	0.0	21.2	5.3	2.0	27.9	7.7	3.0	31.1	9.4	4.0
All elderly persons in elderly headed households	14.5	3.3	1.0	2.0	0.2	0.0	23.3	5.5	1.9	31.0	8.9	3.6
All elderly persons living in poor households	6.8	0.7	0.1	0.0	0.0	0.0	14.5	2.4	0.6	27.1	7.3	2.9