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RESEARCH SERIES No. 94

**POVERTY AND INEQUALITY DYNAMICS IN UGANDA:
INSIGHTS FROM THE UGANDA NATIONAL PANEL SURVEYS
2005/6 AND 2009/10**



**SSEWANYANA SARAH
KASIRYE IBRAHIM**

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ABSTRACT

While Uganda has made significant efforts in reducing the proportion of individuals and households living below the absolute poverty line, nearly 10 percent of the households continue to live in persistent or chronic poverty with significant differences across geographical areas. Of all households classified as poor in 2009/10, nearly 49 percent were chronically poor households and as such the poor are not a homogenous group. Compared to 1992-99 period, households in Uganda were found to be more vulnerable to poverty in the period 2005/6-2009/10. These observed changes in the nature and patterns of poverty dynamics in Uganda require government to move away from universal poverty reduction interventions that continue to treat the poor as a homogenous group. Otherwise, Uganda's achievement of the first millennium development goal of halving extreme income poverty earlier than 2015 might not be sustainable.

The paper also examines the drivers of income inequality and finds that education remains the key determinant of income inequality. At the same time, income differences between regions are narrowing suggesting an indication of regional convergence on average income. While government's fiscal targeting of the lagging areas and rural areas might explain the observed convergence in average income across geographical areas, there are other emerging development challenges that require further refinement for the current targeting. Access to public extension programs such as the National Agricultural Advisory Services (NAADS), which are intended to enhance agricultural production and productivity is skewed to well-to-do households and not evenly distributed across region. Similar observations are noted in terms of access to community infrastructure. There is also need to ensure that the benefit of economic growth reach the poorest in a way that expands their opportunities.

Key words: *Uganda, poverty dynamics, inequality, middle class*

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1. INTRODUCTION

During the past 20 years of implementing Poverty Reduction Strategy Papers (PRSPs) in Uganda, There has been limited attention to households vulnerable to poverty and the chronically poor. Most of the Government of Uganda (GoU)'s attention was on the currently poor households. Indeed, the various Poverty Eradication Action Plans implemented during 1997-2009 and even the current National Development Plan (201-2014) placed more emphasis on monitoring current poverty status. The limited focus on dynamic poverty in the public interventions was partly influenced by paucity of data. Panel data—required to track issues of poverty dynamics—was unavailable since 1999/2000. However, the recently launched seven-year Uganda National Panel Survey Program (UNPS) implemented by the Uganda Bureau of Statistics (UBoS) presents opportunities for understanding poverty dynamics at household level. Several researches conducted by the Chronic Poverty Research Centre (CPRC) (Addison et al. 2009) demonstrate the value of understanding poverty dynamics in any country's poverty reduction agenda. Poverty dynamics is important in terms of uncovering the nature and patterns of the poverty problem and also for formulating effective anti-poverty strategies. Studies based on the Uganda national panel surveys of 1992 and 1999/00 (see for example, Okidi and McKay 2003; Lawson et al. 2004; CPRC 2005; Ssewanyana and Bategeka 2007; Ssewanyana 2009) have enriched the understanding of poverty dynamics in Uganda. Using the first ever comprehensive household panel survey of 2004 and 2008 on the Northern Uganda Social Action Fund (NUSAF) region, Ssewanyana (2010) provides insights in the regional specific poverty dynamics. It is evident from all these studies that a significant proportion of households were living in chronic poverty despite the impressive growth at Uganda's macro level. As such CPRC (2008) classifies Uganda as a partially chronically deprived country (Anderson, 2007).¹

There is limited evidence on whether the nature and pattern of poverty dynamics in Uganda have changed since the last national panel of 1992/93- 1999/00. And if there are noticeable changes in the poverty dynamics profile, what are the implications in terms of designing effective anti-poverty reduction interventions? It is against this background that this paper seeks to provide insights into household poverty dynamics using the first two waves (i.e. 2005/6 and 2009/10) of UNPS. This paper provides descriptive evidence on how income poverty changed during 2005/6 to 2009/10 period, a period marked by a slowdown in economic performance with GDP growth declining from 10.8 percent in 2005/6 to 5.9 percent in 2009/10 (MoFPED 2009, 2011) partly as a result of the global financial crisis (Ssewanyana et al. 2009), high food prices (Benson et al. 2008) and annual inflation moving from single to double levels. Beyond poverty dynamics, the paper provides insights on whether income poverty declined significantly. Indeed, in the recent past, there have been concerns that Uganda's poverty line is set too low and that poverty might not have declined with significant magnitude (Levine, 2012). But we are also aware of the adjustment of the international poverty line from \$1 a day to \$1.25 in terms of 2005 purchasing power parity, which most African governments are yet to adopt.

The rest of the paper is structured as follows: the brief description of the data and methods used in the analysis is presented in the next section. Section three presents the empirical results and discussions prior to conclusions and emerging issues for policy in section four.

¹Partially chronically deprived country is defined as one chronically deprived in child mortality, fertility and under-nourishment but not in GDP per capita (Anderson 2007: p.7).

2. DATA AND METHODS

This study employs the panel survey based on 2005/06 Uganda National Household Survey (UNHS III) conducted by the Uganda Bureau of Statistics (UBoS) and 2009/10 re-survey—the panel followed households. The UNHS III survey covered 7,421 households with 42,111 individuals from May 2005 to April 2006. The survey was based on a two-stage stratified random sampling design. In the first stage, Enumeration Areas (EAs) were selected from the 4 geographical regions. In the second stage, 10 households were randomly selected from each of the EA. The seven-year Uganda National Panel Programme that was first implemented in 2009/10 by UBoS targeted to re-survey 3,123 households from the 2005/6 UNHS III sample. In 2009/10 re-survey, UBoS was able to track 2,888 households out of the targeted 3,123 households. We further note that out of 2,888 households, 41 had partially filled questionnaires whereas 281 households refused to participate in the survey. As such, only 2,566 households of the original target of 3,123 had complete information.

The UNHS III and the Panel of 2009/10 have some similarities and differences that are worth noting for measuring income poverty. First, the panel households in 2005/6 were visited in May 2005 through April 2006 whereas in 2009/10 the same households were visited during the period September 2009 to August 2010 – translating into 4.25 years. The detailed analysis reveals that 8.3 percent (214 households) were interviewed during the same month (see Appendix 1). Nevertheless, households were evenly spread over the survey period in both waves with a few exceptions as in the month of December. Some households were re-visited several months earlier or later.² Beyond whether households were visited in the same month, we go a step further to examine whether the households were visited during the same agricultural farming season (Main harvest runs from January to June; and second season from July to December). Nearly 51 percent of the households were visited during the same farming season (see Figure A1). However, these variations in the survey timing by farming season seem not to have accentuated or dampened poverty trends. Second, both waves shared very similar consumption sections, with the same list of item codes and identical recall periods. In addition, both surveys captured health and education expenditures at both individual and household levels.

The two waves collected information at individual, household and community levels on a wide range of characteristics including household roster, consumption expenditure, information on household shocks,³ and perception of food security, community infrastructure, education and health, among others. Households were visited twice in both waves to capture agricultural related information on the entire farming calendar in both waves. Given that these households were not visited during the same month, this might bias our estimates; however, this is beyond the scope of this paper. That said, we endeavoured to restrict the analysis to comparable information collected in both waves. Consistent with the routine national household surveys, different recall periods were used to capture

² See WTO, Regional Trade Agreements http://www.wto.org/english/tratop_e/region_e/region_e.htm

³ See Historic First EAC-SADC-COMESA Tripartite Summit <http://www.africanexecutive.com/modules/magazine/articles.php?article=3725> visited on 11th July, 2011

⁴ See Historic First EAC-SADC-COMESA Tripartite Summit <http://www.africanexecutive.com/modules/magazine/articles.php?article=3725> visited on 11th July, 2011

⁵ See Africa: Deeper regional integration needed in response to crisis Published in SUNS #6728 dated 26th June 2009. <http://www.twinside.org.sg/title2/wto.info/2009/twninfo20090702.htm> visited on 30th June, 2011

information on different sub-components of household expenditures as already discussed. While a 7-day recall period was used for expenditure on food, beverages and tobacco, a 30-day recall period was used in the case of household consumption expenditure on non-durable goods and frequently purchased services. For the semi-durable and durable goods and services, and non-consumption expenditures a 365-day recall period was used.

In both waves, all purchases by household members and items received free as gifts were valued and recorded as per the current prices. The items consumed out of home produce were valued at the current farm-gate/producer prices while rent for owner occupied houses was also imputed at current market prices. There were about 128 households that did not report information on rent and we employed a hedonic regression to impute these missing information. Food consumption includes food consumed from own production, purchases and free collection/gifts. Information was gathered on values, quantities and prices of food items. For further details on the survey instruments see UBoS (2011) which contains official data and documentation.

In this paper, we follow the same methodological approach in the construction of the consumption aggregate in 2009/10 as that employed by Ssewanyana and Okidi (2007) for 2005/6. A brief description of this approach is given below. UBoS collects consumption expenditure data on item-by-item basis. These expenditures were aggregated according to the recall period used and by broader sub-components of expenditures to a household level. Given the different recall periods used to collect data on household expenditures, some conversion factors were applied to change the data on a 30-day monthly basis. After which all the different sub-components of the expenditures were aggregated to derive the total consumption expenditures at household level. It should be noted that non-consumption expenditures are excluded in our calculations. Throughout this paper, consumption expenditure is used as proxy for permanent income.⁴

Further adjustments were made by revaluing home food consumption at market prices and taking into account the spatial price variations.⁵ We accounted for intertemporal⁶ variations by converting all monetary values into 2005/6 prices using the consumer price index (CPI). The paper follows Appleton (2001) in accounting for household composition in terms of sex and age.⁷

Unlike the previous poverty studies on Uganda that have focused on static definition of poverty, this paper follows a dynamic approach to shed more light on how income poverty has evolved itself over time. Thereafter, per adult equivalent consumption expenditure⁸ (Y) was compared to the absolute poverty line (Z) as constructed by Appleton (2001) that follows a cost of basic needs (CBN)

⁴ This follows the permanent income hypothesis by Friedman (1957) and given the fact that the degree of measurement error is lower for consumption expenditure than income, especially in developing countries.

⁵ We use the food index as derived from information provided in the respective household survey. This is meant to account for differences in food prices across region (rural/urban divide).

⁶ We use the national composite Consumer Price Index (CPI) in 2005/6 prices.

⁷ The adult male aged 18-30 years used as the reference person for the calculation of per adult equivalents.

⁸ The equivalent scale for a person of a given age and sex is set to be equal to the ratio of the recommended intake for a male of the relevant age divided by 3,000 per adult caloric requirement (equivalent to 2,283 calories per capita) for moderate work, the requirements for the reference category of males aged 18-30 years (Appleton 2001).

approach but also expressed in 2005/6 prices.⁹ The paper follows the standard FGT class of poverty indexes that incorporate the three most common poverty measures - the headcount (P0), poverty gap (P1) and the square poverty gap (P2)(see Foster, Greer and Thorbecke 1984).¹⁰

The i^{th} household is deemed to be poor in the t^{th} year (P_t^i) if its per adult consumption expenditure (Y^i) in the t^{th} year ($t= 2005/6, 2009/10$) is below the absolute poverty line as expressed in Eq. (1):

$$(1) \quad P_t^i = \begin{cases} 1 & \text{if } Y_t^i < Z \\ 0 & \text{otherwise} \end{cases}$$

This paper employs the spells approach to provide information about exits or escapes from poverty conditional on being in poverty in 2005/6. The exits/outs provide information on income mobility whereas the stays (poor/never poor) provide information on the stability of income over time. Thus, a household is deemed to:

- a) Be chronically poor if it was poor in both 2005/6 and 2009/10;
- b) Have moved out of poverty if it was poor in 2005/6 and non-poor in 2009/10;
- c) Be slipped into poverty if it was non-poor in 2005/6 and is poor in 2009/10; and
- d) Be never poor if it was never poor in both periods.

The results presented in this paper are at household level unless otherwise stated. The results are further weighted using sample weights¹¹ supplied by UBoS for representation at national and sub-national (regional) levels.

3. RESULTS AND DISCUSSIONS

3.1 Attrition

Attrition of households is common feature of panel surveys in Africa (Alderman et al., 2001; Lawson et al, 2006). Indeed even for the most organized and well-resourced surveys, the tracking of households for re-interview can be a complicated process and the attrition can bias estimates based on panel surveys. The paper by Kasirye and Ssewanyana (2011) provides insights into the determinants of attrition based on the Northern Uganda Surveys of 2004 and 2008.

For this paper, we define attrition as the case where a household was part of the first visit in 2005/6 survey but it did not participate in the second wave in 2009/10 due to various reasons. The national panel household attrition stood at 17.8 percent with the majority of households attrition residing in Kampala district (24.1 percent) followed by Western region at 23 percent. The overall urban households contributed 49% of the total that attrited, a share that is well above their share in the total sampled households (of 27.6 percent).

⁹ The absolute poverty line derived by Appleton (2001) was found to be equivalent to \$1 per day per capita in PPP terms. While these poverty line in dollars terms seem to be lower than the revised international poverty line of \$1.25 in PPP terms (2005) for developing countries, this paper maintained the earlier figure for comparability over time. However, efforts are underway on the reconstruction of the poverty line.

¹⁰ The P0 indicator is "headcount", the percentage of individuals estimated to be living in households with real private consumption expenditure per adult equivalent below the poverty line for their region; The P1 indicator is the "poverty gap". This is the sum over all individuals of the shortfall of their real private consumption per adult equivalent and the poverty line divided by the poverty line; The P2 indicator is the "squared poverty gap". This is the sum over all individuals of the square of the shortfall of their real private consumption per adult equivalent and the poverty line divided by the poverty line.

¹¹ UBoS provided recalculated weights based on the panel sample after taking into account attrition and split-offs.

Kampala recorded attrition rate of 41.5 percent and 12.5 percent for rural households. Indeed, the attrition rate at national level is higher than that observed in the national panel of 1992/99 of 6.3 percent (Lawson et al., 2006); but lower than the rate observed in the Northern Uganda Surveys of 2004 and 2008 of about 25 percent (Kasirye and Ssewanyana 2011).

Table 1: Comparisons of the initial characteristics of the panel and attrited households in 2005/6

	Panel	Attrited	All	T-test
Per adult consumption expenditure (in 2005/6 prices)	63,791	102,430	70,679	-6.9
Living in poverty, %	27.7	15.8	25.6	6.7
Household size, #	5.4	3.6	5.1	15.6
Location (%):				
Rural	77.1	50.9	72.4	11.5
Kampala	7.4	24.1	10.3	-8.9
Central	22.8	20.7	22.4	1.1
Eastern	23.2	18.9	22.4	2.3
Northern	24.2	13.3	22.3	6.5
Western	22.4	23.0	22.5	-0.3
Household Head characteristics:				
Male dummy %	73.0	68.3	72.1	2.1
Age, years	42.4	37.8	41.6	6.3
Education, years of schooling	5.6	6.4	5.8	-3.5
Housing conditions:				
Permanent roof, %	58.9	67.3	60.4	-3.8
Permanent wall, %	53.7	63.1	55.4	-4.1
Permanent floor %	26.8	48.2	30.7	-9.3

Table 1 presents comparisons of selected initial characteristics in 2005/6 between those households that UBOS was able to track and those it was unable to track. The last column reveals whether the estimates for a given characteristic were statistically significant between those households that were tracked and those that attrited. Relative to those households not tracked in 2009/10, those who were re-interviewed had significantly lower consumption, higher family size, poorer housing condition indicators, more likely to have heads who were males, lesser educated and older. Turning to geographical location, attrition was more likely to be among urban households in particular residents in Kampala districts, and those residents in Western region.

3.2 Changes in consumption per household

At the mean, the monthly consumption expenditure per household increased by 3.6 percent over 4.25 years at national level – in real terms (**Table 2**). The annualised growth rate in consumption was driven by growth in rural areas (4.2 percent) and in Eastern region at 6.4 percent. Households resident in Western region did not register improvement whereas growth was quite similar for households in Central and Northern regions. We further note from **Table 2** that while consumption expenditure increased at the mean, the increase was faster at the median. To illustrate this point, for an average Ugandan household consumption grew at 4.7 percent at the median relative to growth at the mean of 3.6 percent. However, these patterns change once the changes in household demographics are taken into account as will be discussed later. Overall, the annual income of an average rural Ugandan household increased from about Shs1.8 million in 2005/6 to Shs2.1 million in 2009/10, in real terms. The above figures fall far short of the Uganda President’s aspiration to have every homestead receive incomes of at least Shs 20 million per year (State of the Nation Address, 2008).

Table 2: Monthly consumption expenditure per household (in 2005/6 prices)

	Mean, Ushs			Median, Ushs		
	2005/6	2009/10	Annualised growth%	2005/6	2009/10	Annualised growth%
Uganda	243,636	284,245	3.6	162,627	198,710	4.7
Rural	202,803	242,235	4.2	147,737	176,107	4.1
Urban	427,173	473,074	2.4	267,080	348,429	6.2
Kampala	495,266	540,507	2.1	304,495	400,080	6.4
Central	279,626	344,098	4.9	188,388	242,182	5.9
Eastern	198,266	260,373	6.4	148,366	200,563	7.1
Northern	138,781	170,020	4.8	105,043	131,376	5.3
Western	243,602	246,035	0.2	172,307	182,311	1.3

3.3 Changes in consumption expenditure per capita

In nominal terms, mean consumption per capita among the panel household was Shs 65,743 in 2009/10 compared to Shs43,239 in 2005/6 (**Table 3**). This represented a nominal increase of 52 percent compared to a rise in CPI of 43.5 percent.¹² After making price adjustments as well as those for inflation, real mean consumption per capita is estimated to have increased by 8.2 percent. This rise implies an annualised growth rate of a 1.8 percent. Disaggregated analysis reveals that growth was stronger in rural areas (of 3.2 percent) than in urban areas (of 2.1 percent).

¹² The composite CPI averaged 95.9 between May 2005 and April 2006 period; and 139.4 during the period September 2009 to August 2010.

Table 3: Changes in household consumption expenditure per capita

	Survey round		%age change	Annualised growth, %
	2005/6	2009/10		
a) Uganda				
As calculated in official reports	43,239	65,743	52.0	9.8
Revaluing home consumed food at market prices	45,077	67,524	49.8	9.5
Adjusting for regional prices	45,116	71,392	58.2	10.8
Adjusting for inflation (2005/6 prices)	45,976	49,735	8.2	1.8
b) Rural				
As calculated in official reports	33,544	52,551	56.7	10.6
Revaluing home consumed food at market prices	34,683	55,820	60.9	11.2
Adjusting for regional prices	35,427	59,284	67.3	12.1
Adjusting for inflation (2005/6 prices)	36,060	41,264	14.4	3.2
c) Urban				
As calculated in official reports	90,574	135,131	49.2	9.4
Revaluing home consumed food at market prices	87,311	129,069	47.8	9.2
Adjusting for regional prices	84,484	135,096	59.9	11.0
Adjusting for inflation (2005/6 prices)	86,269	94,303	9.3	2.1

3.4 Changes in consumption expenditure per adult equivalent

Real growth in per adult equivalent consumption expenditure grew by 3.4 percent per annum with significant geographical variations (**Table 4**). The rural households registered higher growth than that of their counterparts in urban areas. Nonetheless, the urban incomes are almost double the national average. Regionally, growth was stronger in the Central region (excluding Kampala) and a contraction is observed for households living in the Western region. Per adult consumption, on average was almost the same for households residing in Western and Eastern regions in 2009/10. Yet, in 2005/6 consumption for households in Western region was 1.3 times as high as that of their counterparts in Eastern region. In other words, there has been convergence of income between these two regions. The households living in the Northern region had the lowest mean income but with strong growth at 4.1 percent. The strong growth if maintained presents opportunities for private investments in this post-conflict region.

How do these observed changes in welfare based on the panel survey data relate to those based on the routine UNHS cross-section surveys conducted during the same period? The patterns of annualised growth rates are consistent with those based UNHS of 2005/6 and 2009/10. To illustrate this, consumption grew by 3.2 percent per annum based on these cross-section surveys (see last column of **Table 4**). However, the patterns at disaggregated level seem to differ – growth in consumption per adult equivalent is higher in urban areas relative to rural areas; and lower growth recorded for households residing in Eastern region. Notably, the panel shows negative growth for households in Western region.

At the median, per adult equivalent consumption grew by 2.6 percent per annum. Kampala remains the richest with median consumption that is 3.7 times that of Northern region; and twice that of Central (excluding Kampala) region. This pattern of per adult consumption disparities is well known. But more notably is the fact that consumption per adult equivalent grew slower at the median than at the mean – implying increasing inequality as will be discussed later.

Table 4: Changes in monthly per adult consumption expenditures, (2005/6 prices)

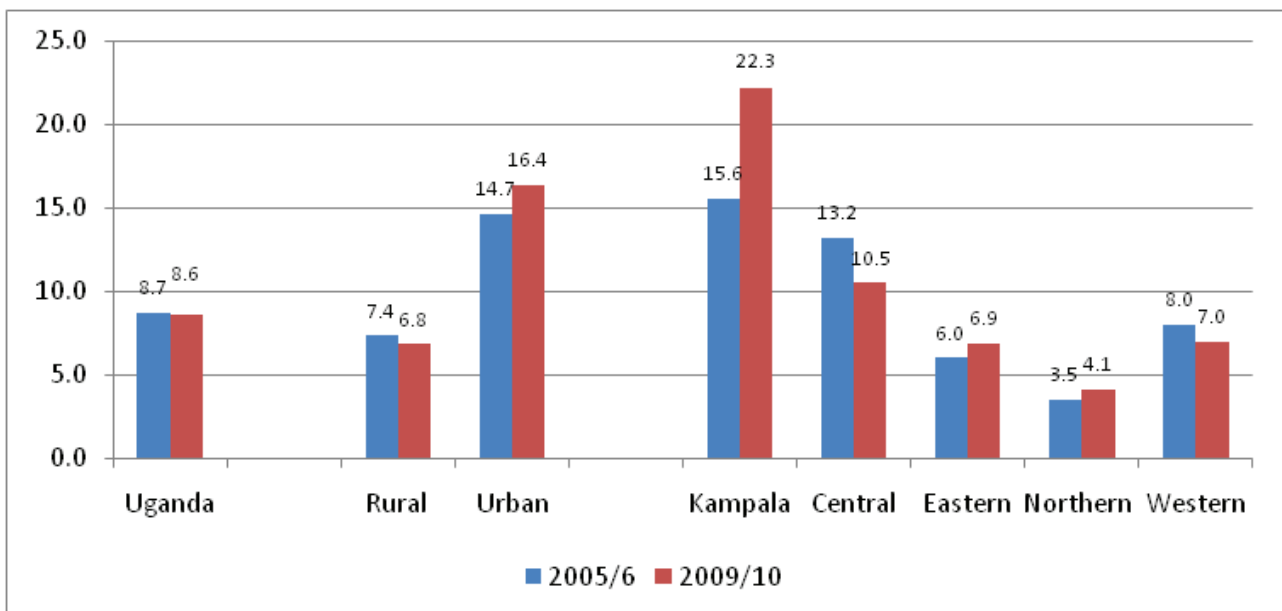
Location	Mean consumption, Ushs		Annualised growth rates, %	
	2005/6	2009/10	Panel	Based on UNHS 2005/6 & 2009/10 ^a
Uganda	65,705	76,787	3.4	3.2
Rural	52,672	61,983	3.8	2.7
Urban	124,193	139,354	2.7	4.6
Kampala	142,779	164,025	3.3	
Central ^b	79,067	102,792	6.2	5.7
Eastern	49,527	58,729	4.0	2.6
Northern	37,092	44,124	4.1	5.5
Western	62,726	59,490	-1.2	0.4
	Consumption at median, Shs			
Uganda	41,485	46,425	2.6	
Rural	38,016	42,591	2.7	
Urban	79,069	87,621	2.4	
Kampala	97,311	114,817	3.9	
Central	50,426	55,418	2.2	
Eastern	34,056	43,859	5.9	
Northern	27,716	31,149	2.7	
Western	44,596	42,567	-1.1	

^aNote: UBoS, 2011; ^bThis estimate for Central region excludes Kampala.

3.4.1 Emergence of middle class

There has been a lot of discussion on emerging middle class in sub-Saharan African countries (AfDB 2011; Ravallion 2009). Yet there is no common understanding of what being in the middle class means. The paper by Ravallion (2009) provides a review of related literature on measuring middle class. In this paper, we follow Thurow (1987) as cited by Ravallion (2009) to define middle class as a household/individual with per adult consumption expenditure/incomes between 75 percent and 125 percent of the median per adult income in a given period. **Figure 1** depicts that nearly 9 percent of the households qualify as middle income households, though no significant changes are noted during the panel period. As expected most of these households are residents in urban areas; and the Northern region lags other regions at about 4 percent. A marginal reduction in middle class households from 8 percent in 2005/6 to 7 percent in 2009/10 is noted for households resident in Western region. This seems to be consistent with the earlier observation of slowed growth in consumption. Notably, there are significant movements in and out of the middle class – raising issues of economic vulnerability.

Figure 1: Share of households in middle class (%)



3.5 Changes in the composition of household consumption expenditure

Table 5 reveals that the share of food remains the highest and seems to have increased by more than 2 percentage points driven by urban areas and Western region. The increase in the share could be picking the high cost of living during the period. The share of education in total household expenditure was higher compared to that of health. This finding is consistent with other studies on Uganda (World Bank 2007). The share of education increased among households resident in the regions of Northern and Western Uganda but remained constant among their counterparts in the other regions. The share of transport and communication increased for households residing in Kampala and Eastern region.

Next we consider the extent of changes in food consumption (expressed in market value) by source of acquisition.

Table 6 reveals that households resident in urban areas reduced their dependence on the market as depicted by a declining share from 82.6 percent in 2005/6 to 78.8 percent in 2009/10. Broadly speaking, the share of food purchases fell relative to own consumption and gifts; and those acquiring food through free/gifts was on the rise except for households resident in Western region. These changes in composition need to be interpreted with caution. Nearly 46 percent of the households registered reduction in food availability largely due to drought/poor rains. And this impacted on household income and food availability leading some households to change their diets as one of the coping strategies.

Table 5: Expenditure shares, %

	All		Rural		Urban					
	2005/6	2009/10	2005/6	2009/10	2005/6	2009/10				
Food	44.4	47.8	52.8	54.2	30.1	32.8				
Drinks and tobacco	2.9	2.0	2.7	1.9	3.3	2.1				
Clothing and footwear	3.6	3.0	3.6	2.8	3.7	3.7				
Rent, fuel and energy	17.2	16.2	14.2	14.2	22.5	21.0				
Household and personal goods	5.1	6.0	4.8	5.2	5.8	7.9				
Transport and communication	6.8	8.0	5.1	6.2	9.6	12.2				
Education	11.1	10.2	8.0	8.8	16.5	13.5				
Health	6.2	4.8	6.9	5.2	4.9	4.0				
Other consumption expenditure	2.6	2.0	1.9	1.6	3.7	2.8				
	Central		Eastern		Northern		Western		Kampala	
Food, drink and tobacco	40.8	41.1	55.7	57.1	54.3	56.5	53.5	56.1	27.4	30.5
Drinks and tobacco	2.8	2.0	2.5	1.5	4.9	3.4	2.7	1.5	3.2	2.0
Clothing and footwear	3.5	2.8	3.4	2.8	3.8	3.6	3.9	2.6	3.7	4.2
Rent, fuel and energy	17.6	17.6	13.5	13.2	14.4	14.0	12.9	13.8	25.0	22.6
Household and personal goods	5.4	6.8	5.1	6.0	5.8	5.3	4.7	4.2	5.0	7.4
Transport and communication	8.0	9.8	4.3	5.8	4.5	4.4	5.5	5.3	9.3	13.8
Education	12.8	12.4	8.0	8.0	6.6	7.6	7.0	9.1	17.5	12.5
Health	5.9	5.1	6.5	4.6	5.4	4.2	8.1	5.8	4.7	3.7
Other consumption expenditure	3.3	2.5	1.2	1.0	0.6	1.1	2.0	1.6	4.2	3.4

The results in **Table 6** (Panel b) further reveal that nearly all households depended on the market for food consumption (at least of any food item). This implies that high food inflation would impact on household's consumption. On the other hand, the majority of households consumed from own production especially staple food. This finding confirms the critical role of agriculture as a source of food security. The very low share of own production in total food expenditures (below 10%) for Kampala is not surprising given a small share of households that are involved in agriculture. However, we do note a significant increase in the share of households that reported free/gift as a source (at least of any food item) from 17.1 percent in 2005/6 to 24.8 percent in 2009/10. This result has to be interpreted with caution given the low share in total household food expenditure (for example of 8.4 percent in 2009/10). Indeed, the number of poor households resident in urban areas increased as will be discussed later. We further note that households in the Northern region were more likely to depend on gift/free food relative to the rest of the country. This is not surprising given the fact that this region is still recovering from the more than two decades conflict.

Table 6: Changes in food composition by source of acquisition, in real terms

	2005/6				2009/10			
	Market	Own	Free/gift	Col. %	Market	Own	Free/gift	Col. %
<i>a) Share in total food expenditure:</i>								
All	51.4	42.9	5.6	100.0	45.4	48.2	6.4	100.0
Rural	40.8	53.7	5.4	100.0	36.6	57.5	5.9	100.0
Urban	82.6	11.2	6.2	100.0	78.8	12.8	8.4	100.0
Kampala	90.4	3.7	5.9	100.0	88.7	3.0	8.4	100.0
Central ^a	55.9	38.4	5.7	100.0	50.6	42.6	6.7	100.0
Eastern	41.1	54.3	4.6	100.0	38.0	55.1	6.9	100.0
Northern	50.3	40.4	9.3	100.0	44.1	45.1	10.8	100.0
Western	34.8	60.8	4.5	100.0	31.3	66.1	2.6	100.0
<i>a) Share of households consuming from:</i>								
All	99.3	72.9	33.6		98.9	75.9	32.5	
Rural	99.3	85.8	36.5		98.8	86.0	32.9	
Urban	99.2	25.7	23.0		99.3	30.5	30.8	
Kampala	99.1	9.2	17.1		99.8	7.6	24.8	
Central ^a	99.6	68.7	30.2		99.4	71.3	30.8	
Eastern	98.7	90.9	39.9		98.7	87.4	36.5	
Northern	99.2	78.3	45.3		97.2	78.2	45.8	
Western	99.7	88.3	30.6		99.4	90.2	23.6	

Notes: ^aExcludes Kampala

3.6 Changes in poverty status: a cross-section perspective

There has been concern on the extent to which income poverty has declined in Uganda. In this section, we first present and discuss the proportion of poor households in each wave separately for comparability with the UNHS of 2005/6 and 2009/10. Applying this cross-section approach, the proportion of poor households reduced from 25.1 percent in 2005/6 to 20.5 percent in 2009/10 (**Table 7** Panel A). This translates into 4.6 percentage points drop in a 4.25 year period. Yet, there is no significant reduction in the other two poverty measures (P1 and P2) that capture the degree of poverty as experienced by the poor. Spatially, poverty significantly reduced among households residing in rural areas, and those in Northern and Eastern regions. Even at disaggregated level, neither the depth of poverty nor the poverty severity changed during the panel period. The only exception is the significant decline in the poverty gap for households in the Eastern region; whereas severity of poverty estimate shows a clear worsening in poverty among households in Western region though statistically insignificant. The findings might be reflecting that the economic growth as measured by GDP was not beneficial to those households in extreme poverty. Put differently, the situation of the poorest seems not to have improved over 4.25 years. Regardless of poverty measure, the incidence of poverty for households in Western region worsened to the levels observed in Eastern region. The possible explanations are discussed in the subsequent sections. What is important to note at this point is that poverty reduction was not experienced uniformly throughout the country. And that the results are mixed for different poverty measurement indices.

Table 7: Poverty estimates, %

	Poverty headcount (P0)			Poverty gap (P1)			Severity of poverty (P2)		
	2005/6	2009/10	T-test	2005/6	2009/10	T-test	2005/6	2009/10	T-test
<i>Panel A – Household level:</i>									
All	25.1	20.5	-2.45	6.8	5.8	-1.49	2.7	2.4	-0.77
Rural	29.2	23.5	-2.56	8.0	6.7	-1.58	3.1	2.7	-0.88
Urban	6.5	6.7	0.14	1.6	1.8	0.33	0.7	0.8	0.62
Kampala	1.9	1.0	-0.67	0.3	0.3	-0.64	0.3	0.1	-0.83
Central	16.5	11.6	-1.61	4.1	3.1	-1.05	1.4	1.4	-0.09
Eastern	33.0	22.5	-3.54	8.0	5.6	-2.60	2.8	2.1	-1.62
Northern	48.9	38.2	-2.20	16.3	12.5	-1.67	7.3	5.5	-1.37
Western	17.0	21.0	1.18	3.8	5.6	1.53	1.2	2.2	1.66
<i>Panel B - Individual level:</i>									
All	28.5	23.9	-2.20	7.9	6.8	-1.36	3.1	2.8	-0.70
Rural	32.4	26.7	-2.39	9.0	7.6	-1.50	3.6	3.2	-0.85
Urban	8.7	9.3	0.26	2.2	2.5	0.38	0.9	1.1	0.64
Kampala	3.2	2.39	-0.40	0.9	0.6	-0.34	0.5	0.2	-0.67
Central	19.2	13.7	-1.51	4.6	4.2	-0.38	1.6	1.9	0.61
Eastern	37.4	24.4	-3.88	9.2	5.6	-3.35	3.3	2.0	-2.36
Northern	52.7	43.8	-1.79	18.1	14.6	-1.40	8.2	6.5	-1.13
Western	19.0	24.9	1.48	4.5	6.6	1.48	1.6	2.6	1.53

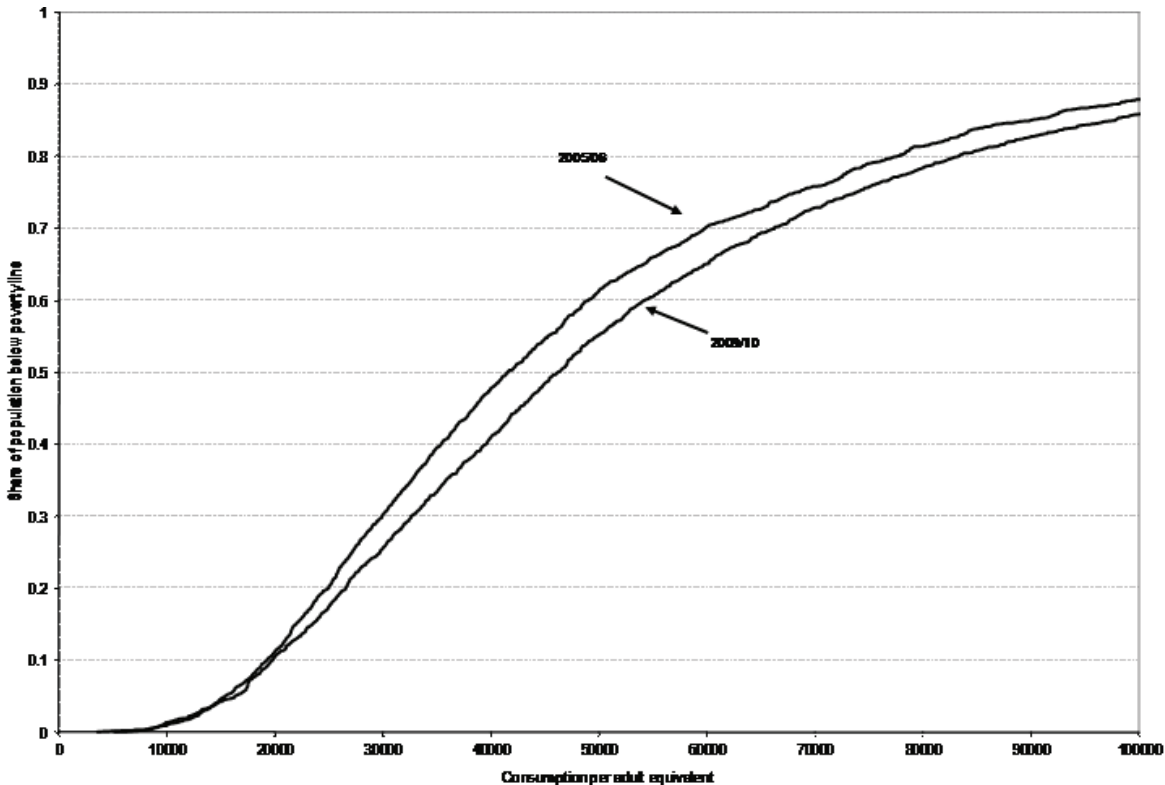
Notes: Analysis based on 2,563 households covered in both waves.

In population terms, proportion of persons below the official poverty line fell significantly from 28.5 percent in 2005/6 to 23.9 percent in 2009/10 (Table 7 Panel B). However, the changes in other poverty measures were minimal declines – poverty gap declined from 7.9 percent to 6.8 percent whereas severity of poverty declined from 3.1 percent to 2.8 percent. The declining trend is consistent with that observed based on the routine cross-section surveys UNHS of 2005/6 and 2009/10. This confirms that poverty in Uganda actually declined during these two periods.

Regardless of level of analysis, the trends in P1 and P2 mirror the observed changes in the poverty headcount for Eastern region – that a greater share of people is closer to the poverty line than in 2005/6 indicating improvements in living standards. Limited movements in other regions are observed. By all measures, income poverty in rural areas and in the Northern region continues to be higher than the national average. Notwithstanding the strong consumption among households in Northern region relative to the national average, depth of poverty remains highest in this part of the country - almost two-fold the national average.

However, there have been concerns over official absolute poverty line as constructed by Appleton (2001). Some argue that it was set below the minimum income required to meet the cost of basic needs.¹³ Given this challenge, we need to investigate the robustness of this reduction in the poverty headcount through the theory of stochastic dominance. Each point on a stochastic dominance curve gives the proportion of the population consuming less than the amount given on the horizontal line. It is evident from Figure 2 that for every possible choice of the poverty line, poverty rate in 2009/10 is well below that of 2005/6. Hence, there is first order stochastic dominance. In other words, the precise choice of the poverty line is unimportant no matter what poverty line is chosen, we still conclude that income poverty declined following a cross-section perspective. Similar findings do hold for per capita consumption expenditure.

Figure 2: Poverty incidence curve 2005/6 and 2009/10



¹³According to Appleton (2001) the Uganda’s poverty line was equivalent to \$1 per person per day.

3.7 Changes in poverty status: a dynamic perspective

Table 8 shows the inter-temporal mobility on who is falling behind, who is getting ahead and who is standing still. Based on the income based definition of poverty, on average, 10 in every 100 Ugandan households remained poor in both years. Contrasting this figure with the 1992-1999 panel (of nearly 19 in every 100 Ugandan households, Lawson et al. 2006), it is evident that the incidence of chronic poverty is on a declining trend. We further note that more households moved out of poverty than slipped into poverty with the exception of households residing in Western region. The picture for Western region contrasts that of 1992-1999, where more households moved out than slipped into poverty. As expected chronic poverty is a rural phenomenon, with nearly 12 percent of the households living in chronic poverty. Northern region has the highest incidence of chronic poverty that stood at almost 26.4 percent. It is worth to note that the prevalence of chronic poverty in this region shows a marked reduction from that of 38.9 percent reported by Lawson et al. (2006); and 44.9 percent by Ssewanyana (2010). The drastic reduction occurred due to high growth in consumption as earlier discussed. The restoration of peace and resettlement of the formerly internally displaced persons partly explains the observed improvement in welfare.

Table 8 (Panel B) reveals that households in the rural areas and those residing in the Northern region accounted for 94.3 percent and 48.5 percent respectively of the chronically poor households. Notable is the finding that the contribution of Northern region to chronically poor households is well above 30 percent cited in Lawson et al. (2006). The share of household living in chronic poverty in Northern Uganda is more than two-fold of the national average; and twice as many households were prone to fall into or out of poverty. We further note that poverty in Uganda is more of transient than chronic nature. To illustrate this point at national level, 25.6 percent of the households either slipped into or moved out of poverty (interpreted as being vulnerable to income poverty). This figure shows a reduction from 39.9 percent based on 1992-1999 panels reported by Lawson et al. (2006).¹⁴ This reduction notwithstanding, Ugandan households remain highly vulnerable to income poverty than being persistently poor. This presents a development challenge and demonstrates the need for future poverty reduction interventions to take into account this new twist. Spatially, households residing in the Central and Western regions seem to be more likely to move into poverty than being in persistent chronic poverty. The regions that have for long been perceived as better off relative to the other two regions.

In terms of population, there is 11.6 percent of the Ugandan population that persistently remained in chronic poverty between 2005/6 to 2009/10. Of these individuals, 63.3 percent are children (below 18 years), 32.4 percent adults (aged 18-59 years) and 4.3 percent are elderly persons (aged 60 years and more). The representation of the children is well about their share in the total population of 57.7 percent in 2009/10. And as already discussed, there is compelling evidence that the high population growth is impacting on government's poverty reduction efforts. To illustrate this point, household income among the chronically poor households grew at the mean at 1.8 percent and at the median at 2.7 percent. However, this growth is eroded once household demographic compositions are taken into account. We further note the share of households that slipped into poverty would have been 1.1 percentage points less had there been no changes in their 2005/6 household composition.

¹⁴Although this finding has to be interpreted with caution given that the fact that 1992-1999 was a seven year panel relative to 4.25 years for the 2005/6-2009/10 panel.

Table 8: Poverty trajectory by location, %

	Poverty trajectory				All
	Chronic	Moved out	Slipped into	Never poor	
Panel A: Poverty headcount, %					
All	10.0	15.1	10.5	64.4	100.0
Rural	11.5	17.7	12.0	58.7	100.0
Urban	3.1	3.4	3.6	89.9	100.0
Central	3.0	10.1	6.1	80.8	100.0
Eastern	11.9	21.1	10.6	56.4	100.0
Northern	26.4	22.6	11.8	39.2	100.0
Western	5.8	11.1	15.2	67.8	100.0
Panel B: Contribution headcount, %					
All	100.0	100.0	100.0	100.0	
Rural	94.3	96.0	93.7	74.6	
Urban	5.7	4.0	6.3	25.4	
Central	10.0	22.6	19.8	42.5	
Eastern	26.7	31.4	22.8	19.7	
Northern	48.5	27.4	20.7	11.2	
Western	14.8	18.7	36.7	26.7	

The progress in reducing chronic poverty notwithstanding, the currently chronically poor households did not register significant improvements in their welfare in 2005-2010 period as was noted in 1992-99 period (this corroborates with Figure 2). This raises policy concerns and calls for targeted interventions specifically for this group. On the other hand, for those households that slipped into poverty, consumption expenditure declined by almost 20 percent per annum; and those households that moved out of poverty registered 20 percent annualised growth in their consumption relative to 3.3 percent for those households that were never poor in both waves. In terms of expenditure shares (see Appendix 2), the chronically poor households spent nearly 68 percent of their total consumption expenditure on food, a share well above the national average (see Table 5); but the shares on education¹⁵ and health are well below the national average. The UPE and abolition of user fees in health could partly explain these lower shares among the chronically poor households.

The analysis further indicates that almost 51 percent of the poor in 2009/10 were also poor in 2005/6. Of the new poor in 2009/10, nearly 12.7 percent had been in the top quintile in 2005/6. This finding requires further analysis that is beyond the scope of this paper. Additionally, 48.8 percent of poor households in 2009/10 were chronically poor a confirmation that the poor are not a homogenous group. This finding reveals that government poverty interventions that target the currently poor might miss on this category (in chronic poverty); and also further illustrates the extent of vulnerability to poverty among the Ugandan households.

¹⁵Expenditures on education includes all level of education – primary, secondary and tertiary education.

Next we pose a question on whether a higher poverty line would lead to significant changes in the households' poverty trajectory. Using a higher poverty line (based on the assumption of 11.7 percent increase of the current official poverty line) as illustrated in Appendix 3, leads to a significant increase of 4.8 percentage points of the chronically poor households; and a significant reduction of 7.6 percentage change of the non-poor households. There are no notable significant changes in the share of households that are either slipped into or moved out of poverty. Similar findings are noted by geographical location.

3.8 Changes in income inequality

This section presents measures of inequality and how their have evolved over the panel period. Nationally, the Gini coefficient as a measure of inequality increased from 0.408 in 2005/6 to 0.411 in 2009/10. However, these changes were not statistically significant though the levels remain high for a developing country. **Table 9** reveals that inequality levels remained flat or increased slightly over the panel period. Similar patterns are observed by selected socio-groups in **Table 9**. Considering the contribution to national consumption, the rural population accounted for more than 70 percent well below its population share of nearly 84 percent.

The consumption of households resident in Central region is nearly four times as high as that of their counterparts in Northern region; and a reduction of households residing in Western region from about 25 percent in 2005/6 to 22 percent in 2009/10. The income share for households resident in Eastern region registered an increase from 18.9 percent to 21.2 percent respectively. Indeed the Central region (including Kampala) dominates the regional distribution of income but the most unequal with a gini coefficient of 0.424 well above the national average; whereas Northern region remains the most deprived region and also with growing inequalities. We also note that incomes were significantly more likely to be unequal among households headed by female relative to their counterparts headed by male in 2005/6. However, the average income differences disappear in 2009/10.

We further note that households residing in the Central region, with better educated heads (with at least some secondary education), and heads in non-agricultural sector were more likely to have income shares well above their population share. To illustrate this point, household with heads with secondary education and above accounted for 18 percent of the national income well above their population share of 7.2 percent in 2009/10. These findings seem to suggest that high inequality, if this remains unchecked, is likely to threaten Uganda's growth process. The Wananchi might not be satisfied with their own economic status – as was reflected in the walk-to-walk activities late in 2011. This in turn, might impact on future investment and business in the country and ultimate impact on government tax revenue collection.

Considering sector of employment of the household head, the results suggest an increase in the gini coefficient from 0.377 to 0.420 for industry; and a reduction for those in services from 0.416 to 0.405 in 2005/6 and 2009/10 respectively. The income share of households with heads in agricultural sector was well below its population share. The reverse is observed for the other sectors.

Table 9: Income inequality

	Pop. Share		Gini		Theil (1)		Income share	
	2005/6	2009/10	2005/6	2009/10	2005/6	2009/10	2005/6	2009/10
Uganda	100.0	100.0	0.408	0.411	0.310	0.322	1.000	1.000
Rural	83.5	84.0	0.356	0.366	0.229	0.259	0.691	0.707
Urban	16.5	16.0	0.407	0.407	0.289	0.285	0.309	0.293
<i>Regions:</i>								
Central	31.8	31.5	0.411	0.424	0.302	0.335	0.451	0.455
Eastern	24.5	24.2	0.353	0.348	0.248	0.224	0.189	0.212
Northern	17.9	17.9	0.340	0.359	0.200	0.230	0.107	0.112
Western	25.9	26.4	0.347	0.350	0.224	0.221	0.254	0.221
<i>Head's education:</i>								
No formal education	17.2	18.5	0.357	0.359	0.219	0.220	0.109	0.119
Some primary	39.9	40.7	0.325	0.348	0.188	0.226	0.307	0.330
Completed primary	15.7	14.3	0.373	0.332	0.267	0.188	0.153	0.130
Some secondary	14.3	13.3	0.356	0.356	0.234	0.232	0.179	0.163
Completed secondary	5.1	5.2	0.356	0.351	0.215	0.205	0.076	0.070
Post secondary plus	7.2	7.2	0.392	0.424	0.264	0.315	0.171	0.181
Not stated	0.6	0.9	0.435	0.325	0.399	0.235	0.005	0.007
<i>Head's economic sector:</i>								
Agriculture	63.9	58.6	0.335	0.338	0.196	0.208	0.480	0.440
Industry	7.5	7.4	0.377	0.420	0.235	0.323	0.087	0.093
Services	23.4	26.3	0.416	0.405	0.313	0.311	0.378	0.396
Not stated	5.2	7.6	0.423	0.453	0.322	0.362	0.055	0.072

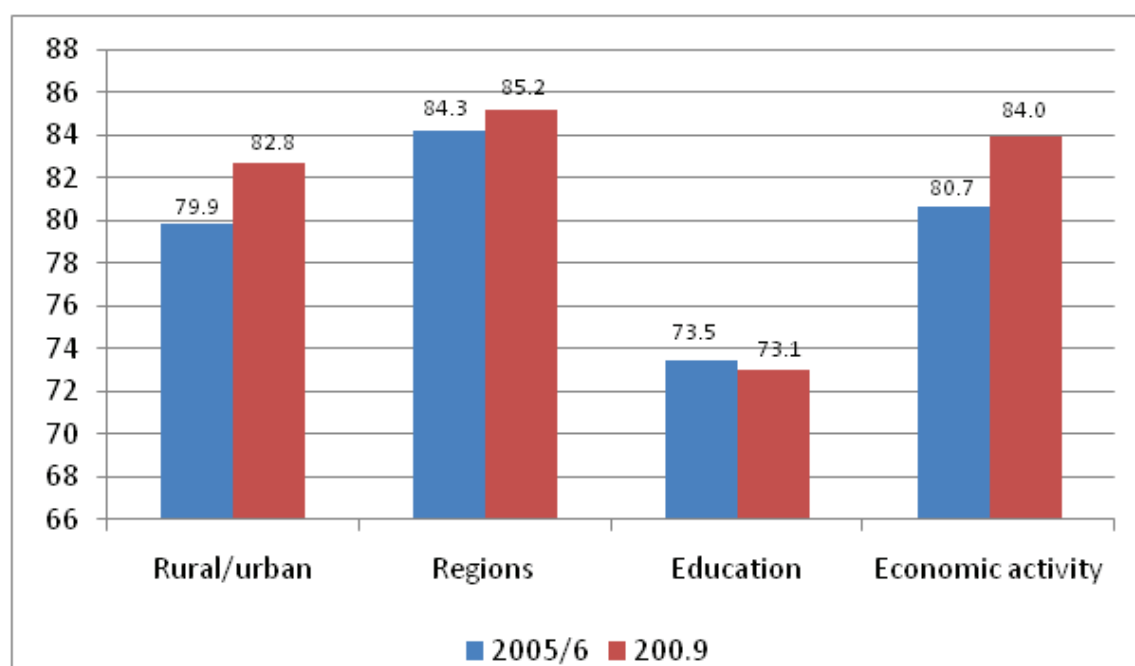
Here we decompose Theil index total inequality into ‘between-group’ component and ‘within-group’ components based on per adult consumption expenditure as proxy for income. The former reflects inequality between people in a given group and the latter inequality among the people within the same group. In this paper, we consider geographical location and selected characteristics of household head in order to provide insights on the nature of inequality and its evolution.

The percent contribution of different inequality components to the national Theil index is presented in **Figure 3**. It is evident that for all the spatial and household head characteristics subgroups the contribution to national inequality of within-group inequality is several-fold higher than that of between-group inequality. The ranges for these sub-groups are range from 73 to 85 percent, which are within those ranges reported for most sub-Saharan African countries. Nevertheless, the between-group contribution is distinctly higher for education followed by rural/urban subgroups. As already discussed the living standards (welfare) of households in urban areas is more than two times that of households in rural areas (**Table 3**), whereas only 11.8 percent of the total inequality in 2009/10 is accounted for by the differences in their average consumption expenditures (**Figure 3**). Although the

between rural-urban income differences reveal a declining trend. The finding suggests that average income differences between rural and urban areas are narrowing, but inequalities increasing within rural/urban area. Inter-regional differences accounted for 15.7 percent in 2005/6 and 14.8 percent in 2009/10 of total inequality, implying the gap is reducing. This result could be partly explained by faster growth in income in the formerly lagging regions. That said, differences in average incomes between rural and urban areas are wider compared to those between regions.

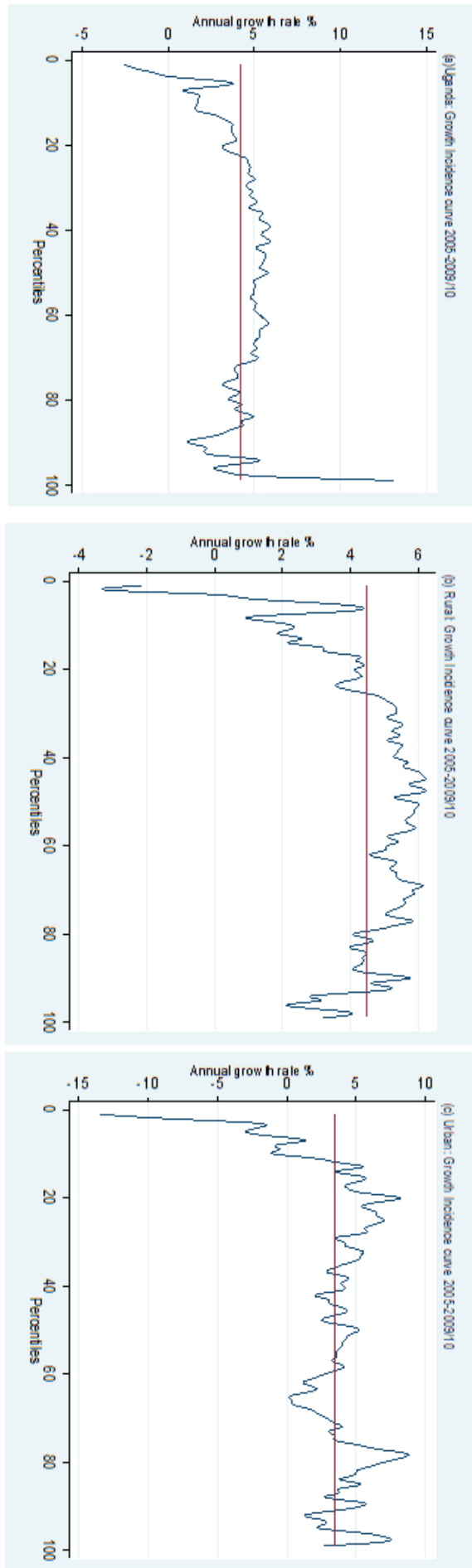
Differences in head of household's education level between-group contribution to inequality remained at about 27 percent in both years. The differences in income between regions declined slightly over the panel period, whereas differences in income within economic activities widened by almost 3.3 percentage points. Overall, household incomes vary more within than between different groups. The current government policy to focus on the "lagging areas" might not be narrowed to income inequalities. Instead this calls for targeted interventions to the most vulnerable within each region. Though not presented in the figure below, the sex-based composition suggests that contribution to total inequality of income between-gender is very negligible. In other words, addressing gender income inequality might not reduce the overall inequality. Policies should focus on reducing within-gender inequality.

Figure 3: Contribution of within-group to overall inequality, %



The growth incidence curves (GICs) are increasingly being employed to describe the distributional effects of growth. The upward sloping of GIC suggests that growth contributed to disequalising the distribution of income. As noted by Marrota et al. (2011), the GIC constructed based on the panel allows one to examine how each household's welfare has evolved over time. In this paper, we examine based on the panel how each household's welfare evolved over the 4.25 years. The GIC suggest that the middle percentiles 25th – 75th experienced faster growth compared to other percentiles. Those households that were among the poor in 2005/6 experienced the slowest growth (negative). In the words of Ravallion (2004), growth was not pro-poor during the panel period. Notably, the rural households registered higher growth in average consumption but also considerable growth in inequality as will be discussed later. Indeed the GIC for rural areas does reveal that growth was concentrated among the middle percentiles.

Figure 4: Growth incidence curve, 2005/6-2009/10



3.9 Decomposition of change in poverty

Next we decompose changes in poverty into growth and redistribution following Ravallion and Datt (1992). This is intended to provide insights into how growth of mean income and any changes in distribution of income affected poverty during the panel period. The inequality component that captures the extent to which poverty reduction would not have taken place because of adverse effects of inequality. The results are presented in **Table 10**. At the national level, the increase in the mean income was followed by improved distribution of income – though marginally in terms of magnitude. Spatially, the growth component was negative with the exception of the Western region. This implies that mean income increased resulting into poverty reduction given the initial distribution. On the other hand, the redistribution component was positive implying that inequality worsened during the reference period. The only exception is the Central region. The potential for poverty reduction due to increase in mean income has to some extent been affected by worsening distribution of income. Overall, in absolute terms, the growth component was stronger than the inequality component resulting in poverty reduction with the exception of the urban areas and the Western region. Increasing inequality did not just attenuate the poverty reducing impact growth in the Western region and urban areas – it completely offset. Broadly speaking, the poverty reduction during the panel period was attributed to growth rather than improved redistribution of income. This finding corroborates with similar studies on Uganda (such as Ssewanyana & Okidi 2007; Okidi et al. 2007). The growth-poverty link shows a situation of higher growth with some degree of inequality. In other words, the decline in poverty was driven by strong growth in consumption.

Table 10: Decomposition of change in poverty into growth and inequality

	Change in P0	Growth	Inequality
National	-4.6	-7.1	2.5
Rural	-5.7	-9.0	3.3
Urban	0.3	-1.7	2.0
Central	-3.9	-5.8	1.8
Eastern	-10.5	-10.7	0.3
Northern	-10.7	-11.7	1.0
Western	4.1	2.8	1.3

3.10 Sensitivity to measurement errors in welfare

Panel data are prone to measurement errors that might introduce bias in estimates (see for example, Maluccio 2004). Since we are dealing with panel data, it was important that we examine the extent to which measurement errors would influence, if any, the household movement in and out of poverty. Studies such as Marrotta et al. (2011) have applied different methodologies. Here we consider movements in the range of ± 10 percent around the poverty line whether these changes in welfare are due to a household being very near the poverty line; and also transitions generated by changes not exceeding ± 10 percent. The results are presented in Table 11. Nearly 12 percent

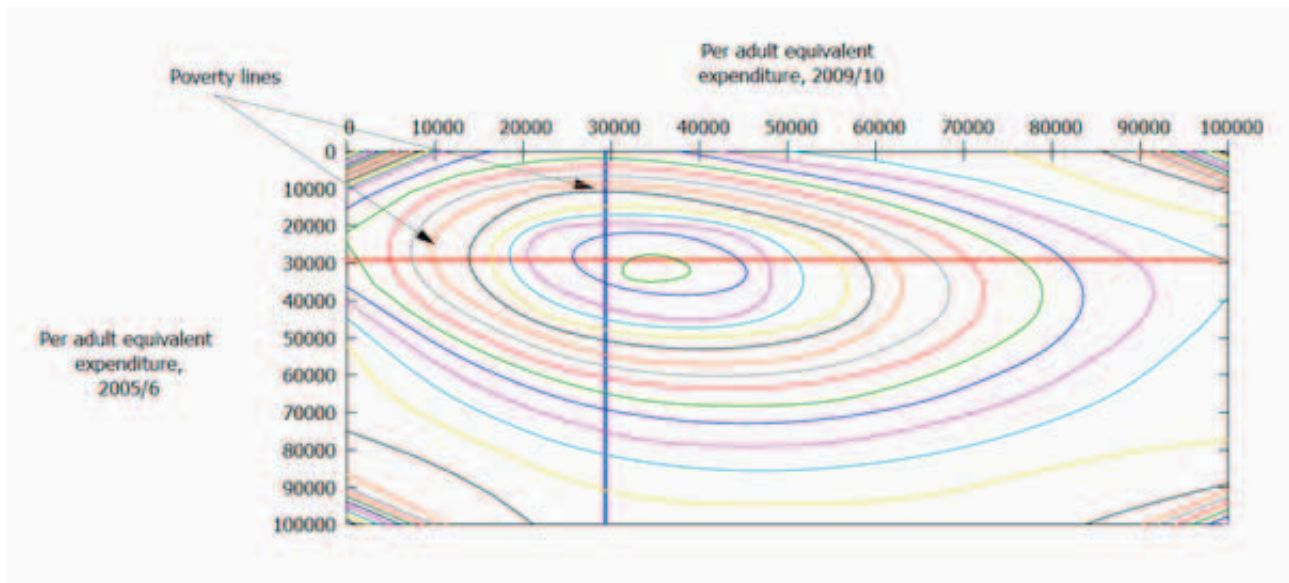
of the households had variations in their welfare within ± 10 percent, with a higher proportion of chronically poor households. And only a small proportion of the households had income within the range of ± 10 percent of the poverty line. The share of households whose income remained close to poverty with income bunched up within ± 10 percent range declined over panel period. The higher proportion (of 25.2 percent) for those households that slipped into poverty reveals how vulnerable the Ugandan households are to even small changes in their incomes.

Table 11: Sensitivity to measurement errors, %

	Chronic	Moved out	Slipped into	Never poor	All
Change in welfare within	25.0	0.9	3.2	14.2	12.1
Movements along Z within					
- 2005/6	19.0	20.8	14.7	5.1	9.8
- 2009/10	15.5	12.9	25.2	3.7	8.5

On the other hand, Baulch and Shutes (2008) cite the difficulties with poverty transition matrices as presented in section 3.7. More important for this present paper is the situation if consumption expenditures are measured with errors leading to erroneous classification of households along the poverty trajectory. Instead, Baulch and Shutes (2008) propose use of contour plots – which are diagrams that provide a two dimensional view of a bivariate distribution. The contour plot for the same panel households is presented in **Figure 5**.¹⁶ It is evident that the peak of the contour plot is mainly positioned in the third quadrant but very close to the poverty line in 2005/6. Like discussed earlier, while more households were able to escape poverty during the panel period, some households remain vulnerable to falling back into poverty as illustrated in **Figure 5**.

Figure 5: Contour plot for Uganda, 2005/6 – 2009/10



¹⁶The contour plots are not sample weighted estimates.

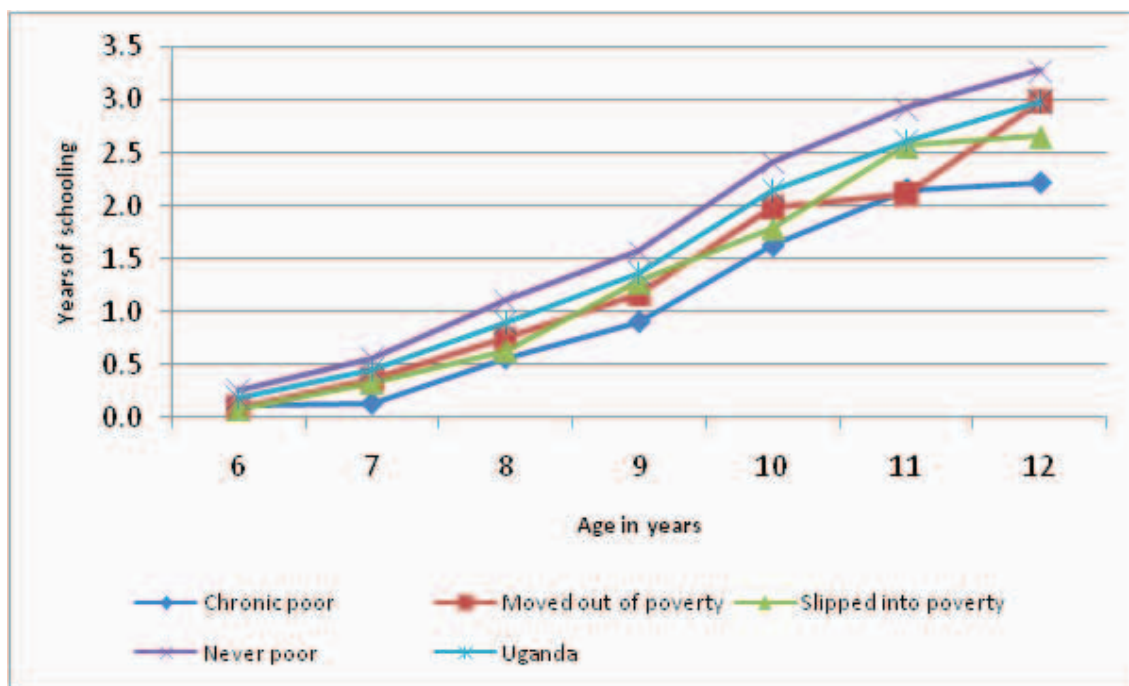
3.11 Poverty dynamics profiling

This analysis has so far focused on profiling of poverty and inequality of income over time. Here we endeavour to relate these changes to changes in selected household characteristics and labour changes.

3.11.1 Demographic composition

The results in **Table 12** reveal that all poverty trajectories experienced a significant increase in the number of household members with the exception of those households that moved out of poverty. Among the chronically poor households, the increase was driven mainly by increase in children aged 10-14 years and increase in the female adult labour supply. Similar observations hold for those that slipped into poverty. The only exception is that these households experienced significant increase in the number of elderly persons and that of male adult labour supply. We further note that chronically poor households are more likely to have larger family size and in particular that of children. This corroborates with previous studies on Uganda (such as Ssewanyana 2009). Overall, it is evident that those households that either slipped into poverty or remained poor in both periods have labour as their major assets. However, this labour especially for chronically poor households is least educated. Their stock of education¹⁷ of adult members stood at about 7 years well below the national average of nearly 13 years. Considering the years of schooling of household head, on average, it was 3 years in 2005/6 relative to the national average of 5.7 years. **Figure 6** reveals very low years of schooling of the primary school going age 6-12 years. As expected the children in chronically poor households are more likely to have lower years of schooling relative to their counterparts in other poverty trajectory. This low level of years of schooling even after the introduction of the Universal Primary Education in 1997 is worrying for a country that looks up to becoming a middle income country by 2017. Given the importance of education, there is need for government to ensure that persons in chronically poor households access basic education to enable them to participate in and benefit from growth.

Figure 6: Mean years of schooling for children aged 6-12 years in 2009/10



¹⁷Stock of education calculated as the total number of years of schools for all adults aged 18 years and above in a given household.

Considering household formation in terms of generations, the results do suggest that a higher share of the chronically poor households were three-generation families (i.e. with children, adults and elderly persons) was well above the national average in both years. We further note that nearly 2.4 percent of the households were missing prime aged adults in 2005/6. This share remained stable in 2009/10. While those households that slipped into poverty registered a reduction, the chronically poor registered an increase from 4.1 percent in 2005/6 to 5 percent in 2009/10. Notably, the chronically poor households were more likely to report a missing generation relative to their counterparts in other poverty trajectory. Put differently, these households are more likely to be labour constrained and this impacts sustainability of their livelihood.

Table 12: Selected household characteristics by poverty trajectory

Characteristic	Year	Poverty trajectory				All
		Chronic poor	Moved out	Slipped into	Never poor	
Household size, #	2005/6	6.2	6.1	5.4	5.1	5.4
	2009/10	6.7	6.0	6.7	5.3	5.7
Children <=5 years	2005/6	1.48	1.40	1.29	1.08	1.19
	2009/10	1.35	1.29	1.37	1.06	1.15
Children 6-9 years	2005/6	0.95	0.85	0.73	0.59	0.68
	2009/10	1.03	0.91	0.98	0.67	0.78
Children 10-14 years	2005/6	1.03	0.93	0.83	0.74	0.81
	2009/10	1.30	1.00	1.21	0.79	0.92
Adult females 15-59 years	2005/6	1.31	1.32	1.20	1.28	1.28
	2009/10	1.46	1.31	1.40	1.34	1.35
Male adults 15-59 years	2005/6	1.09	1.16	1.11	1.15	1.14
	2009/10	1.24	1.20	1.40	1.22	1.24
Elderly persons 60 year+	2005/6	0.23	0.23	0.21	0.21	0.21
	2009/10	0.28	0.28	0.33	0.26	0.27
% Heads with sick	2005/6	42.1	43.1	50.4	43.9	44.2
	2009/10	50.3	58.0	51.0	51.4	52.2
Head's years of schooling	2005/6	3.0	4.1	4.4	6.7	5.7
	2009/10	2.8	4.0	4.2	6.5	5.5
Adults' stock of education ^a	2005/6	7.0	9.4	9.0	14.8	12.6
	2009/10	6.8	9.4	10.1	15.1	12.9
%multigenerational households	2005/6	14.5	14.0	11.5	12.2	12.6

	2009/10	18.0	16.1	20.1	15.0	16.0
%with missing generation ^b	2005/6	4.1	2.5	3.4	2.0	2.4
	2009/10	5.0	2.1	2.6	2.2	2.5

Notes: ^arefers to household members aged 18 years and above; ^b. refers to households without prime aged adults 18-59 years.

3.11.2 Vulnerable groups

Uganda's Ministry of Gender, Labour and Social Development (MoGLSD) defines vulnerable groups to include children, orphans, elderly and persons living with disabilities (PLWDs). **Table 14** shows that the share of widows/widowers in the adult population increased significant from 6.9 percent in 2005/6 to 8.1 percent in 2009/10. Going by poverty trajectory, the share increased from 7.8 percent in 2005/6 to 10.2 percent in 2009/10 among the chronically poor households and a negligible increase for those that slipped into poverty. We further note that in every 100 widow/widowers about 89.5 are female but more notably the share is higher among the chronically poor households (**Table 14**). This finding has to be interpreted with caution as males are less likely to report themselves as widowers. Probably, males quickly remarry as compared to women who remain widowed for life as dictated by society. In addition, men usually have lower life expectancy than women. Alternatively, the relatively high polygamous families might account for the high over representation of females.

Turning to headship, the share of households with heads who are widow/widower increased significantly from 11.9 percent to 14.7 percent; and the increase was driven by a significant increase noted among the chronically poor and never poor households (**Table 13**). The observed increase in female heads among the chronically poor households is largely driven by Northern region. This is explained by an increase in the share of households headed by a widow in the region from 9.9 percent in 2005/6 to 15.7 percent in 2009/10¹⁸. Indeed these findings seem to suggest a gender bias in the extent of persistent poverty.

The majority of the households with head either as widow/widower, female and PLWDs were more likely to be engaged in agriculture. And subsistence farming was cited as the most important source of income. In other words, these vulnerable groups derive their livelihood from a sector that is highly vulnerable to erratic weather conditions (as discussed above). Indeed targeting these vulnerable groups would partly address the persistence of poverty among Uganda's households.

¹⁸The increase in share of widowhood is partly explained by the conflict in the region.

Table 13: Headship by poverty trajectory and region, %

	Elderly		Widow		Female		PLWDS ^a
	2005/6	2009/10	2005/6	2009/10	2005/6	2009/10	2009/10
Chronic poor	17.8	20.7	14.0	20.0	32.9	37.1	15.6
Moved out	16.1	21.4	14.1	15.4	27.6	30.5	13.9
Slipped into	16.3	23.6	12.9	16.0	25.3	24.8	12.0
Never poor	14.5	18.0	10.9	13.6	25.4	27.2	10.5
Central	13.6	17.6	11.8	14.5	28.7	29.0	14.7
Eastern	18.6	23.7	14.1	15.5	25.9	28.7	12.5
Northern	14.3	19.1	9.9	15.7	30.1	34.0	14.1
Western	15.2	18.2	11.6	13.7	21.5	23.3	5.1
Uganda	15.3	19.4	11.9	14.7	26.5	28.4	11.7

Note: ^aNo comparable data for 2005/6.

The share of orphans to all children aged below 18 years declined from 14.1 percent in 2005/6 to 11.7 percent in 2009/10; and for the chronically poor households from 12.9 percent to 11.5 percent – though these changes were not statistically significant. Despite these reductions, the share remains higher if these children are left uncared for and this might pose serious social problems. The share of households with at least an orphan remained constant at about 21 percent during the panel period. The majority had lost a father. Yet, significant increases are noted for the Northern region from 18.8 percent in 2005/6 to 24 percent in 2009/10. This finding is not surprising given the fact that this region is just emerging from a conflict.

Table 14: Vulnerable groups by poverty trajectory, %

	2005/6						2009/10					
	Chronic poor	Moved out	Slipped into	Never poor	Uganda	Chronic poor	Moved out	Slipped into	Never poor	Uganda		
%Orphans of total children	12.9	13.4	12.1	15.0	14.1	11.5	10.9	12.7	11.8	11.7		
Of whom with:												
- Only father dead	68.9	56.6	70.6	49.9	55.2	76.9	56.0	73.2	54.1	59.9		
- Only mother dead	16.6	23.0	14.1	22.7	21.2	16.1	25.4	17.6	25.9	23.4		
- Both parents dead	14.5	20.4	15.3	27.4	23.6	7.0	18.6	9.2	20.0	16.6		
%Youth to population	14.9	17.6	17.1	21.0	19.3	13.2	14.9	15.2	18.3	16.8		
Widow/widower as % adults>18 yrs	7.8	7.8	7.0	6.5	6.9	10.2	8.5	7.1	7.8	8.1		
- %Female of widow/widower	95.7	86.8	84.0	87.9	88.2	93.2	90.7	85.5	89.1	89.5		
%Elderly persons to population	3.7	3.8	3.9	4.1	4.0	4.3	4.7	4.9	4.9	4.8		
%PLWDs to population						5.1	4.5	4.2	3.6	4.0		

Nearly 4 percent of all the Ugandan population reported some degree of disability¹⁸ (**Table 14**), with similar level of incidence for Northern region and for chronically poor households. At individual level, Northern region contributes 23.2 percent of the PLWDs, which is higher than its share in total population (of 18 percent). At household level, the Central region contributes 42.6 percent of the total households with PLWDs and the Northern region contributes 22.1 percent. While the Central region has a greater incidence of households with PLWDs, the Northern region is a home to more persons with PLWDs. Again the more than two decades conflict could partly explain the over representation of PLWDs in this region. There are no notable differences by poverty trajectory, however, we note that the contribution of the chronically poor and those households that slipped into poverty in the total PLWDs is greater than their population share.

3.11.3 Livelihood

Broadly speaking, **Table 15** reveals that the share of adult workers in total household size increased significantly from 39.9 percent in 2005/6 to 43.6 percent in 2009/10. Going by poverty trajectory, it is evident that the shares are significantly lower than the national average with the exception of those households that remained non-poor during the panel period. The significant increase among those households that slipped into poverty is worth noting—experienced an increase in adult labour supply with an annualised reduction in household income of -12.5 percent. Turning to the ratio of children to adult earners¹⁹, at national level, the ratio increased significantly from 1.8 in 2005/6 to 2 in 2009/10. As expected, the ratio is significantly lower among the never poor households relative to the national average. The reverse is noted for the other poverty trajectory. Those households that slipped into poverty registered a significant increase in the ratio of children to adult earners from 2 to 2.4 over the panel period. The ratio in 2009/10 is comparable to that of the chronically poor households in 2005/6. The ratio is higher among the chronically poor households, though not significant during the reference period. Next considering the share of adult earners to total adult population, it is evident that adults in chronically poor households are as equally active as their counterparts in other poverty trajectory. By gender, the share of female earners in total adult earners remained almost constant at about 53 percent. However, the chronically poor households were more likely to have a higher proportion of female earners in total adult earners relative to their counterparts in other poverty trajectory, with the share increasing from 56.4 percent in 2005/6 to 57.5 percent.

Table 15: Status of adult earners by poverty trajectory

	%household size		Ratio of children:adult earners		%in total adult population	
	2005/6	2009/10	2005/6	2009/10	2005/6	2009/10
Chronic poor	32.6	34.5	2.4	2.5	94.3	91.5
Moved out	36.1	35.7	2.1	2.2	92.6	91.1
Slipped into	36.4	41.8	2.0	2.4	90.5	86.5
Never poor	42.4	47.1	1.7	1.8	88.4	87.7
Uganda	39.9	43.6	1.8	2.0	89.9	88.5

¹⁸The disability module of 2005/6 is not comparable to that of 2009/10. And the 2009/10 captures issues of disabilities better than that of 2005/6.

¹⁹The adult earners exclude elderly persons.

The share of household heads engaged in agriculture as the main activity declined from 62.2 percent in 2005/6 to 56.3 percent in 2009/10 reflecting movement of labour out of agriculture; whereas those in the services sector increased from 24.5 percent to 27.5 percent respectively (Table 16 last column). This corroborates with a declining contribution of agriculture to total GDP from 18.3 percent in 2005/6 to 14.6 percent in 2009/10 (MoFPED 2010). We further note that 46.9 percent of the heads of households remained in the agriculture sector over the panel period; and only 16.8 percent in services. The inter-sector mobility accounted for 30.9 percent – suggesting limited inter-sectoral mobility during the panel period. Among the household heads who reported agriculture as the main economic activity in 2005/6, 75.3 percent remained in the same sector in 2009/10; whereas about 12.7 percent moved into the services sector. Those that remained in services sector stood at 68.5 percent whereas 21 percent moved into the agriculture sector. The results suggest a higher share moving into agriculture from services than that moving into services from agriculture. Industry seems to be the most unstable economic sector with only 42.5 percent remaining in the same sector during the panel period; whereas 29.8 percent moved into the agriculture sector and 23.5 percent into services sector. Again, there are more movements from industry into agriculture than into services. The rather higher mobility in the industry sector could partly be reflecting the challenges the sector faced during the panel period. The energy challenges in 2005/6 that were later eased up through the introduction of thermal power generation impacted on the industrial production; and also the contraction of the construction sector GDP from 20.3 percent in 2005/6 to 10.8 percent in 2009/10 (MoFPED 2010). On the other hand, the higher movement into the agricultural sector could partly be reflecting the high food prices at that time due to high regional food demand especially in South Sudan as highlighted in MoFPED (2010).

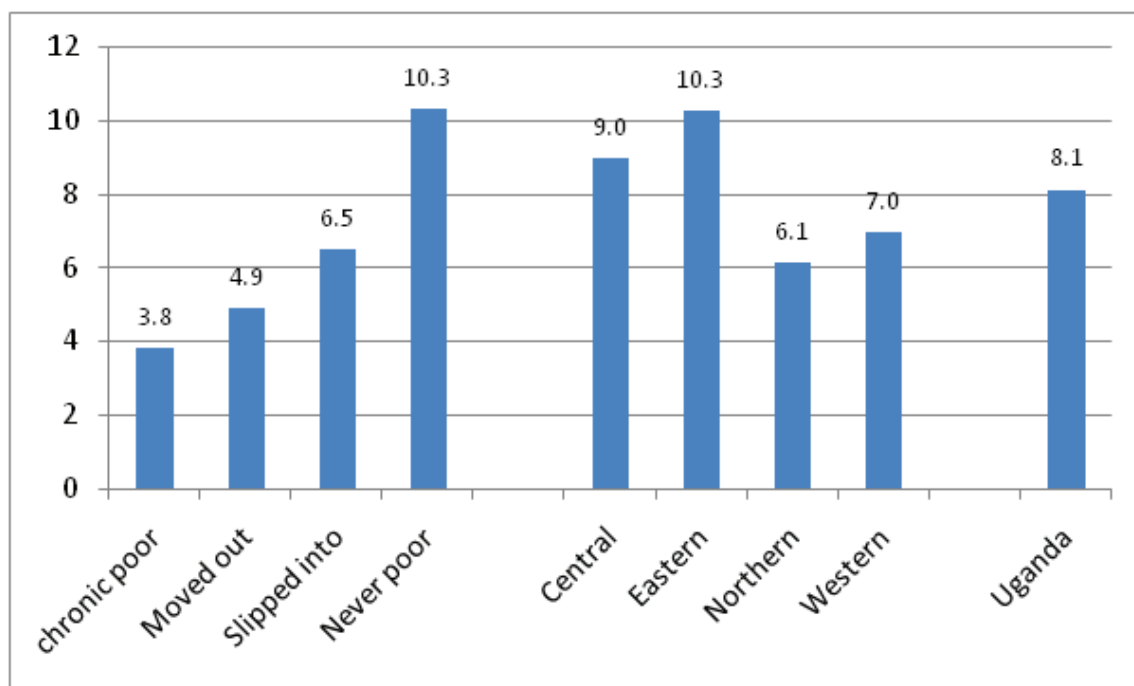
Overall, we are unable to judge whether the observed movements were from low to high productivity sectors, though national estimates from UBoS seem to suggest low productivity in the agricultural sector. Then if this is the case, what pushes Ugandans into a lower productivity sector –agriculture? What kind of policies should be put in place to avert such movements? To what extent could these movements be part of the story of high vulnerability to poverty?

Considering poverty trajectory, **Table 16** suggests notable increases in the services sector with the exception of those households that slipped into poverty; and in industry with the exception of the never poor households. With the exception of those households that slipped into poverty, the results suggest a declining importance of agriculture as the main source of economic activity. The decline was faster among households that were able to escape poverty. Their movement in other non-agricultural sector might have yielded higher income and hence a significant reduction in incidence of poverty. The share of those inactive/unemployed heads of households increased from 5.3 percent to 7.9 percent in 2005/6 and 2009/10 respectively. The increase was faster among those households that slipped into poverty.

Table 16: Household heads' broad economic sector of employment by poverty trajectory, %

		Chronic	Moved out	Slipped into	Never poor	Uganda
Agriculture	2005/6	83.1	81.7	73.7	52.6	62.2
	2009/10	73.6	68.4	72.4	48.1	56.3
Industry	2005/6	4.1	4.4	6.0	9.5	7.8
	2009/10	5.4	7.0	7.1	9.3	8.4
Services	2005/6	6.2	8.5	12.5	33.1	24.5
	2009/10	10.7	16.1	8.1	35.9	27.5
Not stat	2005/6	0.1	0.0	0.0	0.2	0.1
	2009/10	0.0	0.0	0.0	0.1	0.0
Inactive/unemployed	2005/6	6.5	5.4	7.8	4.7	5.3
	2009/10	10.4	8.5	12.4	6.6	7.9

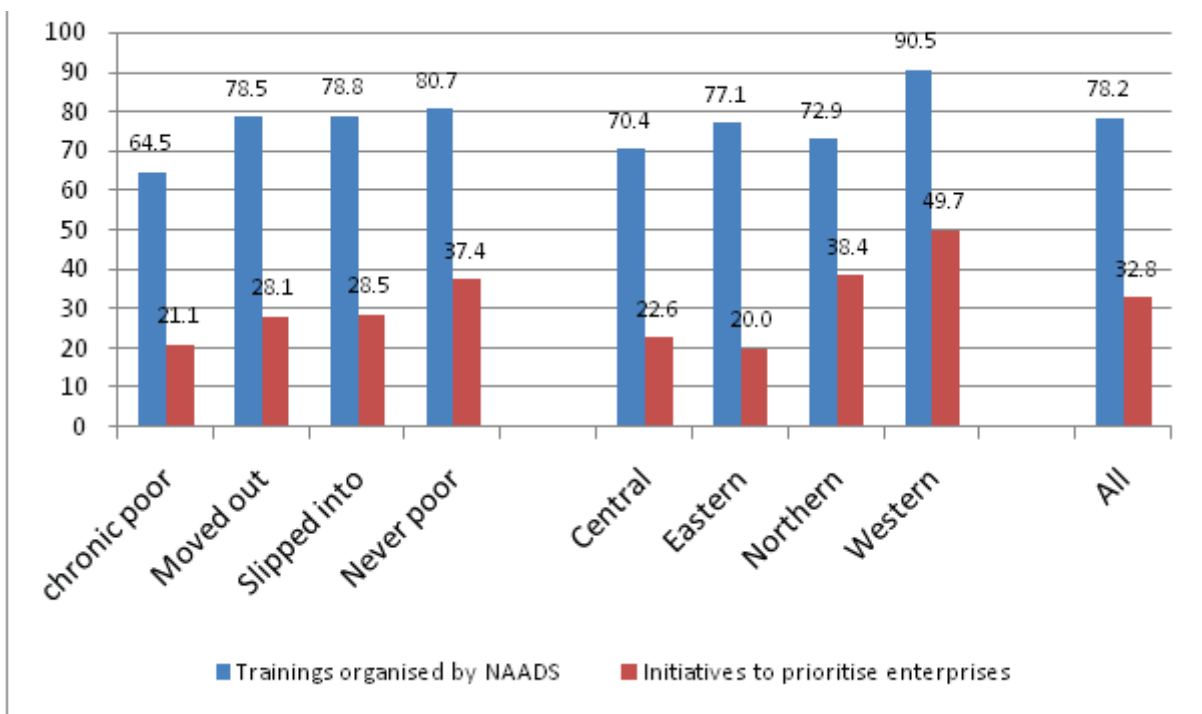
The preceding discussion has confirmed that agriculture remains a key sector in Uganda poverty reduction efforts. There is need to enhance agricultural productivity of existing crops and diversification of crops grown where possible, especially for chronically poor and households vulnerable to poverty. One would also argue that agriculture is a fall back sector to many Ugandans. It is against this, that this paper goes further to examine the extent to which Ugandan agriculture households are able to access government programs intended to address critical issues in the sector. The prime example of such program is NAADS. NAADS is among the key government programs aimed at enhancing agricultural production and productivity in Uganda. Here we relate access to these initiatives by poverty trajectory and region. In 2005/6, 8.1 percent of the agricultural households reported having been visited by an extension worker during the past 12 months prior to the survey (**Figure 7**). And it is evident that the chronically poor households were less likely to be visited relative to their counterparts in other poverty trajectory. Regionally, households in the Eastern region were more likely to be visited relative to their counterparts in other regions.

Figure 7: Share households visited by an extension worker in the past 12 months, 2005/6

The 2009/10 survey has a richer set of questions that were aimed at assessing households' awareness of the NAADS program and its components. At the national level, nearly 78 percent of the households indicated that they were informed of the training programs organised by NAADS, but there are variations by poverty trajectory and region (**Figure 8**). The chronically poor households were less likely to be aware of such trainings and those households resident in Central region. On the other hand, those households that remained non-poor in both years and those residing in Western region were more likely to be aware of such trainings. The relatively high level of awareness in Western region could be partly attributed to the presence of stronger community-based institutions that facilitate community mobilisation.

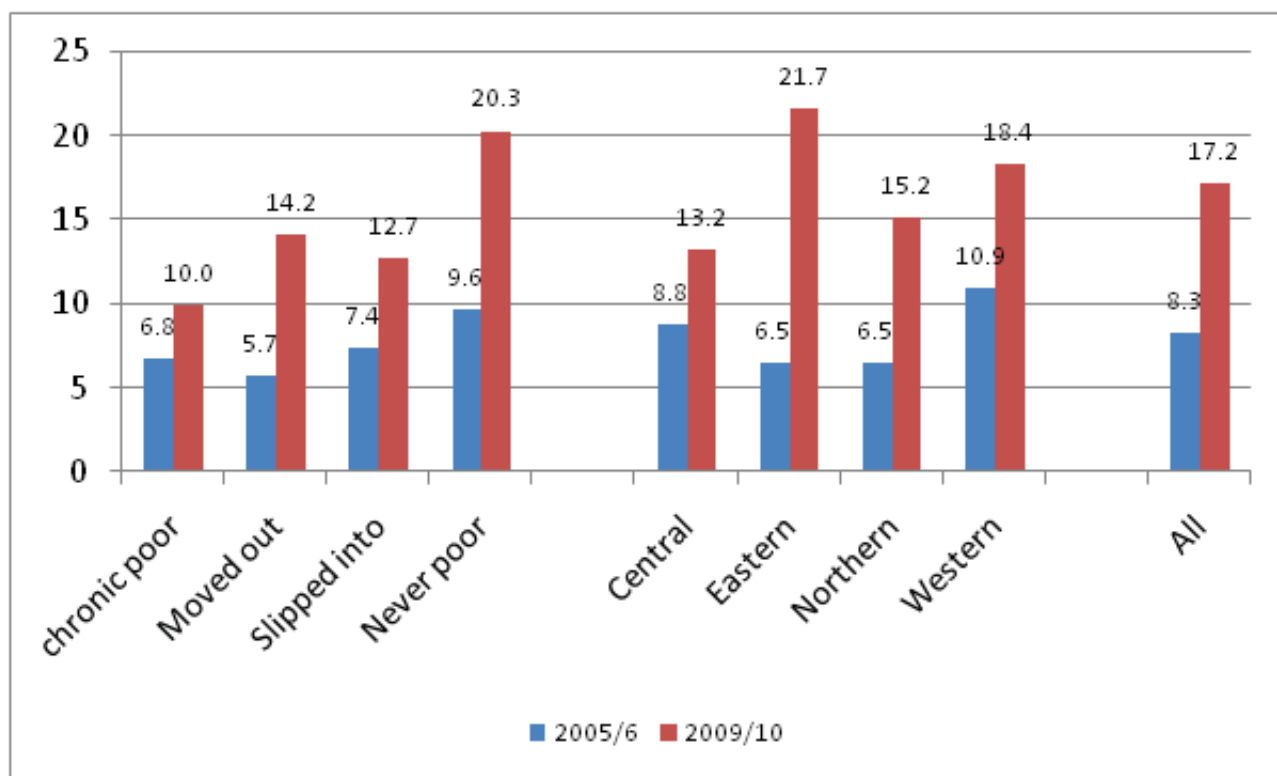
Households were further requested to indicate whether they were informed of NAADS initiatives to prioritize enterprises in order to demand for advisory services. Nationally, 32.8 percent reported awareness with a less likelihood among the chronically poor households and those households resident in Eastern and Central regions. There seems to be more awareness on training component than enterprise priorities component. This finding seem to suggest that agricultural households seem to make their own decisions on what to grow not necessary driven by production zoning being promoted under NAADS.

Figure 8: Share of households aware of NAADS program in 2009/10, %



In both waves, UBoS captured information on whether any household member participated in a training program organised by NAADS in the past 12 months. The results in **Figure 9** suggest a significant increase from 8.3 percent in 2005/6 to 17.2 percent over 4.25 years. Similar increases are observed by poverty trajectory and region. However, the chronically poor households were less likely to participate and the observed increase in participation was slower compared to their counterparts in other poverty trajectory. Put differently, the trainings were biased toward the never poor households. Again this is another confirmation that public investments in NAADS are biased toward the richer households. Regionally, while participation in such trainings started at a low base for the households in Eastern region, the households have been able to catch up and registered a higher participation well above the national average in 2009/10 of 21.7 percent.

Figure 9: Households with members that participated in the NAADS training in the past 12 months, %



3.11.4 Household assets²⁰

In this section, we endeavor to link changes in physical asset base to poverty trajectory as presented in **Table 17**. The results reveal that a greater proportion of households owned small animals or poultry than the high value livestock, which one would argue that are more liquid assets. However, the chronically poor households are the same as other households in terms of livestock ownership. These estimates are driven by households in Northern Uganda, who are the majority of chronically poor.

Table 17: Changes in household physical asset ownership, %

	Poverty trajectory				Region				
	Chronic poor	Moved out	Slipped into	Never poor	Central	Eastern	Northern	Western	All
Livestock:									
2005/6	35.0	23.0	27.9	37.6	31.7	46.8	37.1	21.0	33.6
2009/10	36.7	35.5	29.7	39.1	32.5	49.5	44.3	24.8	37.1
Small animals:									
2005/6	55.4	56.2	54.0	62.4	58.3	58.5	61.1	60.2	59.5
2009/10	63.9	64.4	56.1	60.6	58.5	61.0	65.8	60.1	61.1
Poultry:									
2005/6	64.8	59.8	68.4	64.1	56.3	74.7	70.2	56.3	63.9
2009/10	66.6	68.8	61.1	64.0	53.7	79.2	71.9	57.0	64.8

²⁰For a detailed profiling of household assets by poverty trajectory see Ssewanyana (2012).

3.11.5 Access to community infrastructure

The net enrolment rate for primary school going age (i.e. 6-12 years) increased from 68.6 percent in 2005/6 to 70.8 percent in 2009/10 well below the national average. The increase notwithstanding, the rates are very low given the fact that most of the households lived within 3km of a government primary school (**Table 18**). This demonstrates that government's focus on improving physical access to primary school might not be sufficient to address issues of non-enrolment. The chronically poor have more access to government than private primary school – where a lot of quality issues have raised public concern. As expected, well-to-do households were more likely to live within 3km of the private primary school. We note a higher percentage of households living within proximity to primary than secondary schools.

On the physical access to health, it is evident that government continued investments in the construction of health facilities is biased towards the never poor households, who already have an added advantage of better proximity to private health services. Overall, households had better physical access to public primary schools than public health facilities based on the standard radius of 3km.

The results in **Table 18** further confirm that the chronically poor households had less access to credit institution and bank within 10km relative to their counterparts in other poverty trajectory and national average. Similar results are observed for access to input and output markets. It is further evident that the chronically poor households live in communities with less access to quality truck (in terms of tarmac) roads within 10km radius in 2005/6.

Table 18: Households' access to community infrastructure in 2005/6 by poverty trajectory, %

	Chronic poor	Moved out of poverty	Slipped into poverty	Never poor	Uganda
Access to Schools:					
Government primary school within 3km	91.7	88.4	93.5	91.4	91.2
Private primary school within 3km	25.9	34.5	36.1	58.4	49.4
Government secondary school within 10km	72.8	71.8	80.4	77.7	76.7
Private secondary school within 10km	61.0	74.1	66.3	81.7	77.0
Access to health facilities within 3km:					
Government health unit	28.3	34.4	43.6	43.9	41.0
NGO health unit	18.0	22.9	18.5	33.3	28.8
Private clinic	35.3	47.2	50.8	70.4	61.5
Access to road infrastructure:					
Trunk murrum road within 10km	74.5	77.4	73.7	83.6	80.7
Trunk tarmac road within 10km	29.4	31.3	32.9	52.5	45.1
Seasonal feeder road within 1km	65.7	71.6	69.6	77.4	74.6
Feeder road within 1km	60.4	73.7	62.8	79.6	75.1
Access to financial institutions with 10km:					
Bank	15.3	16.2	15.0	38.9	30.7
Credit institution	35.1	39.6	42.4	61.6	53.8
Access to markets with 5km:					
Consumer market	57.5	61.6	62.9	76.0	70.8
Input market	37.9	43.6	42.8	65.2	57.0
Output market	45.9	51.0	52.1	70.6	63.4

4. SUMMARY AND CONCLUSIONS

Using the first two waves of the UNPS of 2005/6 and 2009/10 data, this paper has provided insights into the nature and patterns of changes in poverty and inequality in Uganda. Over a 4.25 years period, one in ten households survived on income levels below the minimum income required to meet the cost of basic needs whereas a quarter of households moved between poverty and non-poverty. It is evident that transient poverty is more prevalent than chronic poverty with significant differences across the regions and rural/urban dichotomy. Northern Uganda accounts for the largest share of individuals that moved out of poverty during 2005/6-2009/10. While government economic recovery programs in Northern Uganda might have enabled growth in consumption, this region remains a home to the majority of chronically poor households due to its very high initial poverty levels. On the other hand, households in the Western region were more likely to have slipped into poverty than moved out of poverty – partly explained by erratic weather conditions.

The incidence of chronic poverty almost halved in 2005/6-2009/10 period compared to that in 1992-99 period. This further confirms Uganda's ability to have achieved the first Millennium Development Goals earlier than 2015 as reported in UBoS (2010). The observed reduction in chronic poverty notwithstanding, the limited growth in household incomes (1.8 percent per annum at the mean and 2.7 percent at the median) as discussed was eroded by large families. The findings have revealed that the living standards of these households in 2009/10 were not different from those experienced in 2005/6. As such the unchecked large family sizes are eroding gains in household incomes and in turn impacts on government's poverty reduction efforts.

The paper has further revealed that the seemingly high income inequality is largely driven by increasing inequalities within sub-groups. The strong growth in incomes of the households in Northern and Eastern regions contributed to the narrowing of the average incomes between regions. In other words, there has been regional convergence in average income. Similar results were noted for the rural-urban grouping. Indeed, the convergence was faster among regions than between rural and urban areas. Government's fiscal targeting of the lagging regions and rural areas might have partly attributed to this observed convergence in incomes. Education remains a key determinant of income inequality in Uganda. On the other hand, the analysis based on sector of employment reveals significant increases in distribution of income among those households whose heads were engaged in the industry sector.

While government fiscal targeting as mentioned above might have yielded positive results, there are other emerging development challenges that need policy attention. Indeed, Ugandan households are becoming more vulnerable to poverty than before and incomes are increasingly becoming unequal with regions and rural/urban. These emerging challenges need to be taken into account in future poverty reduction interventions. We also note overrepresentation of certain social groups in chronic poverty. There is a gender dimension in poverty trajectory, with households with female heads or widows more likely to be chronically poverty. These findings seem to support targeted interventions. We therefore, recommend further refinement of the current fiscal targeting to take into account the observed changes in the nature and patterns of poverty dynamics with the ability to reach those Ugandans that might not benefit from the universal programs. There is need to improve targeting efficiency for better and broad based outcomes.

Focusing on one of the popular government program - NAADS, the paper argues for increase in the level of awareness of such programs to boost demand among the targeted beneficiaries. Social mobilisation - through the existing community groups and farmer groups - among others, is critical in promoting successful implementation of government programs and need to be strengthened. One should not overlook the finding that public investment such as NAADS are biased towards the well-to-do households and regions. The smallholder farmers, who are at the same time over represented among the chronically poor households, need to be integrated in the agricultural systems. There is need for policies and strategies that ensure equal access to opportunities. It is expected that the ongoing efforts to develop a comprehensive social protection will guide government's interventions for the benefits of all Ugandans.

The panel survey period (2005/6-2009/10) was marked by limited changes in the structure of the Ugandan economy with regard to the sectoral shares for agriculture, industry and services. These limited changes might have translated into the limited inter-sector labour mobility observed at household level. Nonetheless, the movement of chronically poor households from agriculture to either industry or services did not translate into better welfare. They seem to have moved with their poverty into other sectors. We should not ignore the fact that lack of skills and training of most adults could also limit inter-sector mobility. We further noted that a higher proportion of the household heads moved from industry to agriculture than to services. The movement away from industry is partly explained by the slowdown in the growth of the construction sub-sector from 25 percent in 2005/6 to -4.4 by 2009/10 (MoFPED 2010). This would be linked to the extent of movements in and out of poverty. More research is needed to investigate the factors behind these labour market dynamics.

Despite the observed declining importance of agriculture as the main activity during 2005/6-2009/10 period, the sector remains a key source of livelihood especially for the rural population. Indeed, the sector is not only a home to the majority of the chronically poor households but also to those households that remained non-poor in both periods. As such, the government's renewed focus on enhancing agricultural production and productivity is a welcome attempt. However, there is need to pay attention to crop diversification and overall economic production diversification of the rural areas, since we have demonstrated that those households that were able to move out of poverty were more likely to be engaged in non-agricultural activities.

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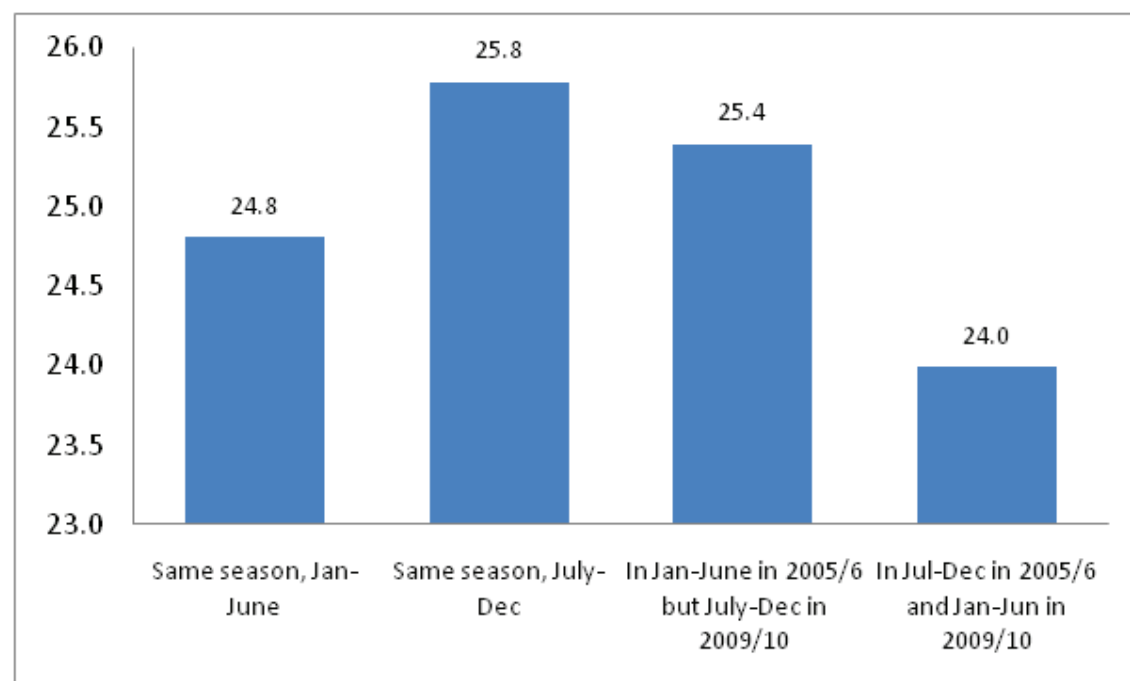
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Appendix 1: Timing of interviews

	2009/10													Total	%
	2010						2009								
2005/6	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec			
2006	Jan	18	29	30	23	13	16	15	17	26	22	12	19	240	9.4
	Feb	19	21	35	29	18	14	11	14	25	23	35	25	269	10.5
	Mar	18	30	17	16	19	22	21	27	19	32	28	24	273	10.7
	Apr	8	24	8	11	8	8	9	8	3	22	8	16	133	5.2
2005	May	20	10	9	9	19	9	9	6	13	4	26	19	153	6.0
	Jun	23	28	16	13	14	12	19	22	13	24	18	17	219	8.5
	Jul	3	23	15	18	14	24	5	7	22	19	22	27	199	7.8
	Aug	29	48	20	17	8	9	25	25	33	38	21	11	284	11.1
	Sept	13	35	33	18	16	18	8	18	16	18	43	21	257	10.0
	Oct	23	22	3	20	6	12	15	9	3	36	11	26	186	7.3
	Nov	21	21	11	19	27	15	16	14	17	25	27	19	232	9.1
	Dec	16	18	3	3	6	8	16	15	10	8	8	7	118	4.6
Total	211	309	200	196	168	167	169	182	200	271	259	231	2,563		
%	8.2	12.1	7.8	7.6	6.6	6.5	6.6	7.1	7.8	10.6	10.1	9.0		100.0	

Figure A 1: Distribution of households by farming seasonality when visited, %



Appendix 2: Shares in consumption expenditure by poverty trajectory, %

	All		Rural		Urban			
	2005/6	2009/10	2005/6	2009/10	2005/6	2009/10	2005/6	2009/10
	Chronic		Moved out		Slipped into		Never poor	
Food	64.0	64.8	61.0	63.8	58.8	62.6	41.0	43.9
Drinks and tobacco	3.5	2.7	2.5	1.7	3.4	2.2	3.0	1.9
Clothing & footwear	2.8	2.7	3.7	2.4	3.0	3.1	3.7	3.1
Rent, fuel & energy	15.5	16.2	16.2	12.5	12.2	15.9	17.9	16.8
Household & personal goods	4.1	3.9	5.0	4.1	3.9	4.0	5.3	6.5
Transport & communication	1.4	1.8	1.9	3.7	2.4	2.0	7.8	9.2
Education	3.4	3.7	3.8	4.8	4.4	5.1	12.6	11.6
Health	5.2	3.9	5.4	5.7	10.6	4.6	5.9	4.7
Other consumption expenditure	0.5	0.3	0.7	1.2	1.7	0.5	2.9	2.2

Appendix 3: Comparison of poverty trajectory with a higher poverty line, %

Poverty path/ location	Official poverty line		Increase official poverty line by 11.8%		T-statistic
	Mean	Std. err	Mean	Std. err	
Chronically poor:					
Uganda	0.100	0.009	0.148	0.011	-3.5
Rural	0.115	0.011	0.173	0.013	-3.5
Urban	0.031	0.010	0.036	0.011	-0.4
Central	0.030	0.008	0.045	0.010	-1.3
Eastern	0.119	0.013	0.175	0.017	-2.6
Northern	0.264	0.026	0.341	0.028	-2.0
Western	0.058	0.013	0.122	0.019	-2.8
Moved out:					
Uganda	0.151	0.010	0.167	0.009	-1.2
Rural	0.177	0.011	0.195	0.011	-1.2
Urban	0.034	0.008	0.037	0.008	-0.3
Central	0.101	0.016	0.112	0.016	-0.5
Eastern	0.211	0.021	0.245	0.022	-1.1
Northern	0.226	0.023	0.217	0.020	0.3
Western	0.111	0.015	0.134	0.015	-1.1
Slipped into:					
Uganda	0.105	0.009	0.117	0.009	-0.9
Rural	0.120	0.011	0.133	0.010	-0.9
Urban	0.036	0.008	0.043	0.009	-0.5

Central	0.061	0.011	0.065	0.012	-0.2
Eastern	0.106	0.011	0.124	0.012	-1.1
Northern	0.118	0.023	0.126	0.022	-0.2
Western	0.152	0.027	0.172	0.022	-0.6
Never Poor:					
Uganda	0.644	0.017	0.569	0.017	3.2
Rural	0.587	0.019	0.498	0.019	3.3
Urban	0.899	0.016	0.884	0.018	0.6
Central	0.808	0.025	0.778	0.027	0.8
Eastern	0.564	0.025	0.455	0.029	2.9
Northern	0.392	0.035	0.316	0.031	1.6
Western	0.678	0.033	0.573	0.032	2.3

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