AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Occasional Paper No. 35

THE DYNAMICS OF INCOME POVERTY IN UGANDA

Insights from the Uganda National Panel Surveys of 2009/10 and 2010/11

SARAH N. SSEWANYANA
IBRAHIM KASIRYE

OCTOBER 2013

Occasional Paper No. 35

THE DYNAMICS OF INCOME POVERTY IN UGANDA

Insights from the Uganda National Panel Surveys of 2009/10 and 2010/11

SARAH N. SSEWANYANA
IBRAHIM KASIRYE

OCTOBER 2013

Copyright © Economic Policy Research Centre (EPRC)

The Economic Policy Research Centre (EPRC) is an autonomous not-for-profit organization established in 1993 with a mission to foster sustainable growth and development in Uganda through advancement of research – based knowledge and policy analysis. Since its inception, the EPRC has made significant contributions to national and regional policy formulation and implementation in the Republic of Uganda and throughout East Africa. The Centre has also contributed to national and international development processes through intellectual policy discourse and capacity strengthening for policy analysis, design and management. The EPRC envisions itself as a Centre of excellence that is capable of maintaining a competitive edge in providing national leadership in intellectual economic policy discourse, through timely research-based contribution to policy processes.

Disclaimer: The views expressed in this publication are those of the authors and do not necessarily represent the views of the Economic Policy Research Centre (EPRC) or its management.

Any enquiries can be addressed in writing to the Executive Director on the following address:

Economic Policy Research Centre
Plot 51, Pool Road, Makerere University Campus
P.O. Box 7841, Kampala, Uganda
Tel: +256-414-541023/4
Fax: +256-414-541022
Email: eprc@eprc.or.ug
Web: www.eprc.or.ug

ABSTRACT

Using the Uganda National Panel Survey data of 2009/10 and 2010/11, the paper reveals significant income mobility as well as movements in and out of consumption poverty in a period of one year. Of the poor in 2010/11, more than half were new poor households against the rather strong economic growth – that grew from 5.9 percent in 2009/10 to 6.7 percent in 2010/11. Instead, shocks in terms of drought and ill-health seem to have led to significant reduction in the household incomes as well as reduction in food production. Regionally, the incidence of chronic poverty remains higher in the lagging regions of eastern and northern Uganda, although pockets of chronic poverty are also observed in the more developed regions. Overall, these results do confirm the dynamic nature of poverty in Uganda that needs to be considered in designing and any refinement of the government poverty reduction interventions.

TABLE OF CONTENTS

ABSTRACT I

1. INTRODUCTION 1

2. DATA AND METHODS 2
2.1 Data 2
2.2 Methods 2

3. RESULTS AND DISCUSSION 4
3.1 Attrition between 2009/10 to 2010/11 4
3.2 Changes in monthly household consumption expenditure 4
3.2.1 Per household 4
3.2.2 Per capita 6
3.2.3 Per adult equivalent 6
3.2.4 Changes household expenditure shares 7
3.2.5 Income mobility - quintile analysis 10
3.3 Changes in income poverty status: a cross-section perspective 10
3.4 Changes in income poverty status – a dynamic perspective 12
3.5 Changes in income inequality 14
3.7 Sensitivity to measurement errors in welfare 16
3.8 Poverty dynamics profiling 17
3.8.1 Household demographics 17
3.8.2 Household livelihood activities 18
3.8.3 Shocks 19
3.8.4 Other welfare indicators 21

CONCLUSIONS 21

REFERENCES 22

ENDNOTES 27

1. INTRODUCTION

This paper presents poverty trajectories of the Ugandan households based on the Uganda National Household Panel Surveys (UNPS) of 2009/10 and 2010/11. This is a shift from the traditional 'static' poverty estimates based on repeated cross-sectional surveys that have informed the poverty reduction interventions in Uganda since 1990s. Panel data in Uganda provide an opportunity for a deeper understanding of the dynamics of poverty and how poverty reduction interventions are addressing all causes and classes of the poor. These data provide a basis for monitoring poverty movements on a regular basis and in turn refinement of Government's poverty reduction interventions. As such, the findings from 2009/10 and 2010/11 UNPS are intended to stimulate rethinking on the Uganda's current policies/programs on poverty reduction. Previous studies on poverty dynamics have been based on the seven year Uganda national panel between 1992 and 1999 (for details see Ssewanyana 2010) as well as the recent 5 year panel between 2005/6 and 2009/10 (see Ssewanyana & Kasirye 2012).

During the panel period while Gross Domestic Product (GDP) grew from 5.9 percent in 2009/10 to 6.7 percent in 2010/11. Yet - the agricultural sector experienced a significant reduction in growth despite the fact that the sector that employs more than 60 percent of the Ugandan population. The agricultural GDP growth declined from 2.4 percent in 2009/10 to 0.7 percent in 2010/11. The decline was driven by a significant contraction in the cash and food crop sub-sectors. Partly due to poor performance of the food crop subsector, the period under review was marked with inflationary pressures that first emerged during 2010/11 period. The surge in consumer prices was driven largely by increasing food prices (MoFPED 2011, 2012; see also Figure A 1). Yet, there is limited empirical evidence on how these development challenges experienced during the panel period might have impacted on the living standards of Ugandans.

The paper takes cognizant of the growing demand to consider poverty in its multidimensional form (see, for example CPRC 2012; Christiaensen & Shorrocks 2012). However, this paper focuses on monetary measure to enable comparisons with the results from previous poverty works on Uganda. The paper provides insights into the dynamic aspect of poverty in Uganda – including exits and re-entries into poverty in any one survey year. It further examines the extent to which the poverty transitions might be due to biases in measuring household consumption expenditure.

The remainder of the paper is organised as follows: The next section briefly discusses the data sources and methods used to derive the consumption aggregate – the standard proxy measure for permanent income and the estimation of the incidence of income poverty. Section three presents and discusses the results. It starts with a critical examination of the changes in consumption expenditure in per household, per capita and per adult equivalent terms. This is followed by the static poverty analysis prior to the dynamic poverty analysis which estimates the poverty exits and re-entries. The dynamic analysis discusses the poverty transitions to gauge the extent of poverty movements within one-year panel period.

Section four profiles poverty trajectories by selected socio-economic characteristics. This is followed by some possible explanations of the observed poverty trends and movements, derived mainly from the surveys prior to concluding remarks.

2. DATA AND METHODS

2.1 Data

The data used are those of the UNPS of 2009/10 and 2010/11 (hereinafter referred to as UNPS I and UNPS II respectively). These panel data are nationally representative and contain detailed information on socio-economic characteristics and household consumption expenditures, among others. The Uganda Bureau of Statistics (UBoS)'s UNPS Programme that started in 2009/10 follows households. The households are revisited twice on annual basis. While panel data are said to suffer from a selection bias problem (Maluccio 2004), the UNPS Programme partly minimizes this problem by tracking households that move and/or split offs from the original households.

A total of 3,123 households drawn from the nationally representative Uganda National Household Survey of 2005/6 (UNHS III) were followed in 2009/10 and again in 2010/11 including their split-offs. In 2009/10, the Bureau managed to track 2,566 of the original households – representing an attrition rate of 17.8 percent - and 363 split-off households. During 2010/11, 2,405 original households and 256 split-off households were tracked from October 2010 to September 2011. This represents an attrition rate of 9.1 percent between 2009/10 and 2010/11 panel surveys. We also note that there is a further 80 either as original households in 2005/6 but not tracked in 2009/10 or split-offs in 2010/11. Overall, there were 2,577 households that were followed up in both 2009/10 and 2010/11 with complete consumption expenditure information throughout to 2010/11. However, the sample used in the poverty analysis was reduced further by 2 (two) households which had extreme changes in expenditures over the panel period. For further details about these data and data documentation refer to the UBoS UNPS Programme.

The two waves used similar instruments and are both based on the same sampling frame. That said, there were some notable changes in some of the relevant modules of the questionnaires between the two waves – in 2009/10 and 2010/11 – that are worth mentioning. The vegetable and fruits categories were each split into more categories in 2010/11. However, this change seems not to have been significant to make comparability over the panel period unreliable. In terms of timing the re-visits, in 2010/11 households were visited a month later relative to when they were visited in 2009/10. That said, there is a marked improvement in the distribution of households by farming season during 2009/10 and 2010/11 compared to 2005/6 and 2009/10 waves. Nearly three-quarters of the households were interviewed in the same farming season (see Figure A 2)[1].

2.2 Methods

The consumption expenditure is used as a proxy for permanent income as in the previous poverty works on Uganda. The derivation of the consumption aggregate follows a similar approach as in Appleton & Ssewanyana (2003). Briefly, all household

consumption expenditure reported from different sources (that is, food and non-food consumption expenses) were aggregated to the same base period – on a 30-days basis. The following price adjustments were made: (i) valuation of the consumption out of the home produce from farm-gate to market prices[2]; (ii) adjusting for spatial food price variations; and (iii) adjustments for inter-temporal price variations using CPI. The household consumption expenditures were all converted in 2005/6 prices using the all-goods consumer price index (CPI) in the respective survey years (see UBoS 2011). Thereafter, the household consumption aggregate is adjusted for household demographic composition in terms of sex and age[3] (see Appleton 2001, for the calculation of per adult equivalent scales for the Ugandan households). While the previous poverty works on Uganda considered usual members in the calculation of household size, in this paper we consider both usual and regular members[4] since the UNPS follows split-offs including those who might be regular members.

The level of consumption aggregate as a proxy for a household living standard is used to determine a household income poverty status. A household is deemed to be poor in a given survey year if its per adult equivalent consumption expenditure in that year fell short of the absolute poverty line. Uganda's poverty estimates are expressed in absolute terms rather than in relative terms. The Uganda's absolute poverty line constructed by Appleton (2001) follows a cost of basic needs approach. The official absolute poverty line (which is equivalent to $1 per day per person in purchasing power parity (PPP)) expressed in 2005/6 prices is used throughout this paper.

Issues surrounding the setting of Uganda's official absolute poverty line are a matter of policy concern. Despite the consensus that poverty reduction has significantly reduced since early 1990s, there are concerns among some policymakers and politicians on the magnitude of the reduction. Similar concerns have been raised elsewhere (see Chen & Ravallion 2013). Indeed, following the revisions in the global poverty line to $1.25 per day per person at 2005 PPP, we do note that some countries (such as India, China, Vietnam) have revised their poverty lines upward (see Chen & Ravallion 2013). On a positive note, some work has been done examining the appropriateness of Uganda's absolute poverty line[5] (see Appleton 2009). Specifically, Appleton (2009) reveals a significant change in the food basket as well as change in the share of non-food from about 40 percent in 1993/94 to about 60 percent in 2005/6. Despite these new developments, the analysis throughout this paper is based on the official poverty line for consistency with the previous poverty works[6].

To provide insights into the poverty movements of the Ugandan households between 2009/10 and 2010/11, we employed the Spells approach as in Ssewanyana & Kasirye (2012). The Spells approach focuses on the number of spells of poverty experienced by individual or household over a given number of time periods – in our case it is two years. From the dynamic perspective, it is possible to divide the poor into chronically poor and the transient poor. More specifically, a household is classified to be living in chronic poverty (always poor) if its per adult consumption expenditure remained below the absolute poverty line in both survey

years; a household in transient poverty if its consumption expenditure was below the absolute poverty line in either survey period; and always lived out of poverty or never poor if its consumption expenditure remained above the absolute poverty line in both survey periods.

The paper follows the standard Foster-Greer-Thorbecke (FGT) class of poverty indexes that incorporate the three most common poverty measures – poverty head count ratio (P0), poverty gap (P1) and the square poverty gap (P2) [7] (see Foster *et al.* 1984). The unit of analysis is the household unless otherwise stated. The results are weighted using the sample weights supplied by UBoS – which include split-off households revisited in 2010/11[8] (refer to UBoS UNPS Program documentation).

3. RESULTS AND DISCUSSION

3.1 Attrition between 2009/10 to 2010/11

While panel data provides information on poverty movements and income mobility, it suffers from attrition problems (Alderman *et al.* 2001; Lawson *et al.* 2006; Kasirye & Ssewanyana, 2011). Here we define a household to have attrited if it was tracked in 2009/10 but not in 2010/11. The overall attrition rate between 2009/10 and 2010/11 was 9.1 percent. This rate seem to be high given the short duration of 1 year between the two waves. For instance, it is higher than 6 percent reported for the 1992-1999 Uganda National Panel (see Kasirye & Ssewanyana 2010). Furthermore, the incidence of attrition varied considerably across geographical locations. As expected, the attrition rate was higher in the urban areas (19.9 percent) compared to the rural areas (9.3 percent) due to a high prevalence

Table 1: Comparisons of the initial characteristics of the panel and attrited households in 2009/10

Characteristics	Panel	Attrited	All	T-test
Per adult consumption expenditure (in 2005/6 prices), Shs	64,676	92,391	69,289	-3.2
Living in poverty, %	23.1	16.6	22.0	2.3
Household size, #	5.6	4.5	5.4	4.2
Location (%):				
Rural	78.1	57.6	74.7	4.5
Kampala	6.9	12.6	7.8	-2.0
Central	26.6	21.7	25.8	0.9
Eastern	23.7	17.0	22.6	1.2
Northern	20.1	10.2	18.5	2.8
Western	22.8	38.4	25.4	-2.3
Household Head characteristics:				
Male dummy %	71.7	71.9	71.7	-0.1
Age, years	44.1	37.5	43.0	6.8
Education, years of schooling	5.7	6.1	5.7	-1.2
Housing conditions:				
Permanent roof, %	68.8	77.1	70.2	-2.2
Permanent wall, %	61.1	57.6	60.5	0.7
Permanent floor %	31.8	43.3	33.7	-2.4

Source: Author's calculations based on UNPS I.

of non-permanent residence in urban areas. The higher rate observed in urban areas is driven by Kampala with nearly half of the households having attrited. This is followed by the western region at 20.5 percent. The rest of the regions registered attrition rates below 10 percent.

Table 1 presents a snapshot of the selected initial characteristics in 2009/10 of those households that were tracked (panel) and those who were never traced (attrited) in 2010/11. Relative to those households that attrited, the tracked households were significantly more likely to be poorer, with lower consumption expenditure, with larger household size, with older household heads and residents in rural areas. These findings are quite similar to those reported in Ssewanyana & Kasirye (2012) and Lawson *et al.* (2006). There are no notable significant differences by years of schooling and gender of household head. Worth noting is the relatively higher contribution of households resident in the western region as share in the total attrited households.

3.2 Changes in monthly household consumption expenditure

In this section, we present a snapshot of the changes in consumption expenditure by sub-groups over the 1-year panel period.

3.2.1 Per household

It is evident in Table 2 that panel households experienced reduction in consumption expenditure both at mean and median between 2009/10 and 2010/11 in per household terms. Although the decline was faster at the median (-2.4 percent) than at the mean (-1.9 percent) – a sign of worsening distribution of income. The decline was driven by the rather significant slowdown in per household incomes of those households that were resident in rural areas and in the eastern and western regions. These findings further seem to suggest that for a median Ugandan household, consumption expenditure fell regardless of geographical location. The only exception is for those households resident in the central region that registered positive annualised growth rates both at the mean and median – though faster growth at the mean. Households in urban areas including Kampala registered a positive annualised growth rate in per household incomes at the mean (of 3 percent) but negative growth at the median (of -6.2 percent). Comparing these findings in consumption growth with the overall annual GDP growth, one would argue that this growth seem to have not been felt by the majority of country.

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

	Mean		Median		Annualised growth %	
	2009/10	2010/11	2009/10	2010/11	Mean	Median
All	234,661	229,949	162,717	158,476	-1.9	-2.4
Rural	207,908	200,453	150,113	144,477	-3.4	-3.5
Urban	373,339	382,848	273,154	265,216	2.3	-2.7
Central	300,887	329,231	204,358	214,961	8.3	4.7
Eastern	212,690	182,855	154,899	138,131	-14.0	-10.6
Northern	154,834	158,508	118,728	116,398	2.2	-1.8
Western	217,715	198,233	165,354	151,231	-8.7	-8.2
Kampala	457,799	473,060	324,512	303,612	3.0	-6.2

3.2.2 Per capita

In this section we consider consumption expenditure in per capita terms. In nominal terms, mean consumption per capita among the panel household was UShs67,813 in 2010/11 compared to UShs61,814 in 2009/10 (Table 3). This represented a nominal increase of 9.7 percent compared to a rise in CPI of 17.1 percent.[9] After making price adjustments as well as adjustments for inflation as discussed in section 2.2 above, per capita consumption expenditure recorded a real decline of 3.2 percent. This decline implies an annualised growth rate of a -3.0 percent. Disaggregated analysis reveals that consumption growth contracted in rural areas, in real terms, from UShs 38,660 in 2009/10 to UShs37,714 in 2010/11, implying a real decline of 2.3 percent. By contrast, mean real consumption among the urban households registered a 1 percent annualised growth rate.

3.2.3 Per adult equivalent

Previous poverty works in Uganda express consumption aggregate in per adult equivalent and not in per capita terms. In this sub-section we report the results based on per adult equivalent measures which adjusts for household composition by sex and age. The results are presented in Table 4. It is evident that real per adult consumption expenditure grew by 3.6 percent per annum, at the mean. With households in urban areas and in the Central region registering stronger growth per annum. Consistent with the analysis based on the per capita measure, households in rural areas, and in the western and eastern regions experienced negative growth rates at the median. While there was convergence of mean incomes for households resident in the eastern and western regions between 2005/6 and 2009/10 (see Ssewanyana &

Table 3: Monthly household consumption expenditure per capita, Ushs

	Mean		Percentage change	Annualised growth, %
	2009/10	2010/11		
a) Uganda				
As calculated in official reports[a]	61,814	67,813	9.7	8.6
Revaluing home consumed food at market prices	62,757	67,872	8.1	7.2
Adjusting for regional prices	64,301	69,591	8.2	7.3
Adjusting for inflation (2005/6 prices)	45,265	43,830	-3.2	-3.0
b) Rural				
As calculated in official reports	50,200	56,500	12.5	10.9
Revaluing home consumed food at market prices	52,969	57,599	8.7	7.7
Adjusting for regional prices	55,376	59,912	8.2	7.3
Adjusting for inflation (2005/6 prices)	38,660	37,714	-2.4	-2.3
c) Urban				
As calculated in official reports	118,447	131,553	11.1	9.7
Revaluing home consumed food at market prices	110,490	125,747	13.8	12.0
Adjusting for regional prices	107,826	124,122	15.1	13.0
Adjusting for inflation (2005/6 prices)	77,472	78,290	1.1	1.0

Notes: [a] refers to consumption expenditure as reported in the survey data without any adjustments; the means are calculated via a macro approach, where total consumption is divided by the total population.

Kasirye 2012), the reverse in noted between 2009/10 and 2010/11. Households in the eastern region seem to have suffered a significant reduction in the living standard relative to their counterparts in the western region.

As earlier pointed out, the panel households were revisited a month later in comparison of when visited in 2009/10. This necessitated an examination of the seasonality dimension in consumption. Although not presented Table 4 (but available upon request), there were no significant changes by month when a given household was visited. The only exception were for those households that were visited in July, August and December. Considering the changes in consumption by quintile (see Table 4: Panel B), it is evident that all lower quintiles (up to 3rd quintile) experienced a negative growth in mean income. The most affluent 20 percent registered real growth of 6.1 percent, almost two times the average national growth rate. The growth was slowest among the poorest 20 percent at -4.4 percent annualised growth per annum. It is also evident that the mean consumption for the poorest quintile is well below the official poverty line. Overall, these findings imply that as much as Uganda recorded growth in the GDP during the panel period, its distribution was not uniform across geographical areas and socio-economic groups.

3.2.4 Changes household expenditure shares

Table 5 presents the changes in household expenditure (including non-consumption expenses) shares across broad consumption categories. Minimal changes in the share of food are noted at national and rural/urban levels. That said, the food share remained below 50 percent – a finding that implies that the composition of expenditure of the Ugandan households is shifting from

Table 4: Monthly per adult equivalent household consumption, Ushs

	Mean		Median		Annualised growth %	
	2009/10	2010/11	2009/10	2010/11	Mean	Median
All	53,653	55,812	41,607	41,167	3.6	-1.0
Rural	47,284	48,542	39,049	37,839	2.4	-2.9
Urban	90,483	96,769	70,172	72,767	6.2	3.4
Central	69,887	83,911	53,414	57,306	16.9	6.5
Eastern	47,332	43,141	39,872	34,785	-8.6	-12.6
Northern	36,809	39,203	31,127	32,165	5.8	3.0
Western	48,715	47,377	41,646	39,501	-2.6	-4.9
Kampala	117,240	123,749	94,170	101,397	5.0	6.8
Panel B: By quintile						
Poorest 20%	18,913	18,042			-4.4	
2	32,189	30,966			-3.6	
3	45,119	44,911			-0.4	
4	64,887	65,206			0.5	
Top 20%	147,558	157,625			6.1	

necessities to discretionary expenditures. The share of education in total household expenditure increased by 2.7 percentage points.

The trends in shares of expenditures allocated to food differ across geographical regions. The analysis suggests a decline in the share of food only for households in the northern region – by 1 percentage point. By contrast, the food share slightly increased for other regions. Notably, the food share increased by 4.2 percentage points for households resident in Kampala. Broadly speaking, the share of education in total household expenditure increased over the panel period. Households resident in the central region registered the highest increase of 5.9 percentage points followed by Kampala at 3.1 percentage points well above the national increase of 2.9 percent point. This finding could partly be picking the increase in cost of education during the panel period but also the fact that Ugandans seem to be spending on better education provided by the private sector at all levels.

Table 5: Changes in household expenditure shares, %

	All		Rural		Urban					
	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11
Food	45.0	46.5	49.5	50.8	35.8	36.3				
Drinks & tobacco	2.4	3.0	2.3	3.2	2.4	2.6				
Clothing & footwear	2.9	2.2	2.9	2.3	2.9	2.2				
Rent, fuel & energy	17.1	15.7	15.6	13.4	20.2	21.4				
Household & personal goods	5.5	5.3	5.3	5.3	6.0	5.2				
Transport & communication	7.8	6.8	6.6	5.7	10.4	9.6				
Education	8.7	11.6	8.3	11.1	9.6	12.9				
Health	5.0	4.7	5.5	4.8	3.9	4.3				
Other consumption expenditure	1.8	1.7	1.5	1.3	2.5	2.7				
Non-consumption expenditure	3.8	2.3	2.6	2.0	6.4	2.9				
	Central		Eastern		Northern		Western		Kampala	
Food	38.4	41.2	52.8	54.7	52.1	51.1	50.4	52.5	29.6	33.8
Drinks & tobacco	2.8	2.8	2.1	2.6	3.2	4.4	1.6	3.3	2.1	2.2
Clothing & footwear	2.5	1.6	2.7	2.5	3.0	2.5	2.8	2.8	3.8	2.2
Rent, fuel & energy	19.3	16.4	15.6	15.3	14.4	15.2	15.2	11.1	20.8	22.0
Household & personal goods	6.9	5.4	4.7	5.0	4.9	5.5	4.6	4.7	6.1	6.0
Transport & communication	10.0	7.1	6.4	5.0	5.0	4.3	5.2	7.3	12.8	10.9
Education	10.7	16.6	6.2	8.3	6.3	6.5	9.9	10.3	9.6	12.7
Health	5.0	5.7	5.1	3.8	5.0	4.9	6.2	4.5	3.0	3.6
Other consumption expenditure	2.3	1.7	1.2	0.7	1.1	1.5	1.7	1.7	3.1	3.5
Non-consumption expenditure	2.1	1.5	3.1	2.0	5.1	4.0	2.5	1.8	9.1	3.2

3.2.5 Income mobility - quintile analysis

In this section we examine the movements of household consumption expenditures over the 1-year panel period using quintile analysis. Table 6 presents households' position on the welfare distribution from the poorest 20 percent to richest 20 percent. More than 50 percent of the households that were in the poorest 20 percent quintile of the population in 2009/10 had moved upward the welfare distribution one year later. On the other hand, about 40 percent of the households that were in the richest quintile in 2009/10 had moved down the welfare distribution in 2010/11. This finding reveals that the level of mobility was higher among the poorest relative to the richest quintile. It is evident that 37.4 percent of the households remained in the same quintile in both years whereas 30.7 percent and 31.8 percent moved to upper and lower quintiles respectively. The percent of households that either moved up or down by one quintile was about 19 percent. Downward income mobility contributed 45.2 percent of the aggregate mobility. Literally this would be interpreted to mean that upward mobility was greater than downward mobility. We further note that households in the lower two quintiles contributed 43.8 percent of the aggregate mobility, whereas the corresponding estimate for richest 20 percent stood at 8.9 percent. These findings partly reflect the transitory nature of poverty in Uganda as will be discussed later.

3.3 Changes in income poverty status: a cross-section perspective

Table 7 provides insights on how the distribution of consumption based poverty has changed over time based on the FGT measures. Nationally, the share of households living in extreme poverty ($1 per day per person) increased from 24.2 percent in 2009/10 to 27.2 percent in 2010/11. However, the increase was not statistically significant. Similar patterns are noted for the other poverty measures.

Spatially, the patterns do not differ from those reported in other studies on poverty in Uganda. The share of poor households resident in rural areas increased significantly from 26.7 percent in 2009/10 to 31.2 percent in 2010/11. This significant increase (of 4.5 percentage points) is driven by significant increase in the incidence of poverty among households resident in the eastern region (of 11.1 percentage points). Regionally, the eastern region is the only region that experienced significant increases in the incidence of poverty for all poverty measures. The increase in headcount ratio was faster

Table 6: Consumption expenditure mobility by quintile, 2009/10-2010/11

	2010/11					
2009/10	Poorest 20%	2	3	4	Top 20%	Total
Poorest 20%	8.9	5.6	2.9	1.9	0.6	20.0
2	5.6	5.8	4.4	2.8	1.4	20.0
3	3.7	4.2	5.8	4.3	2.0	20.0
4	1.5	3.5	4.6	5.6	4.8	20.0
Top 20%	0.3	0.9	2.2	5.3	11.2	20.0
Total	20.1	20.1	19.9	20.0	20.0	100.0

than that in the depth and severity poverty measures. The distributionally sensitive measures suggest that even among the poor in the region, a greater share moved away from the poverty line. We further note insignificant differences in the incidence of poverty as measured by the headcount ratio between households resident in the eastern and northern regions in 2010/11. The strong consumption growth among households in the northern region partly explains this finding. Yet, the cost of eliminating poverty (see poverty gap estimates, P1) using the direct transfers remains higher in the northern region in comparison to the eastern region. The somewhat significant reduction in the headcount ratio in urban areas was driven by the modest reduction in Kampala. Overall, the observed changes in static poverty measures seem to illustrate high vulnerability to poverty within a one year period. This casts doubt on Uganda's ability to sustain the progress so far made in terms of achieving MDG 1 on halving extreme poverty ahead of 2015.

There are some notable changes in the overall contribution to total poverty (figures not shown in Table 7). The contribution of the eastern region increased from 26.1 percent in 2009/10 to 32.5 percent in 2010/11, whereas that of the northern region declined from 36.6 percent to 31.9 percent respectively. This finding seems to suggest worsening standards of living for households in the eastern region.

Table 7: Poverty estimates in 2009/10 and 2010/11, %

	Headcount			Poverty Gap			Severity of poverty		
	2009/10	2010/11	T-test	2009/10	2010/11	T-test	2009/10	2010/11	T-test
At household level									
All	24.1	27.2	1.55	7.1	7.9	1.03	3.0	3.4	1.01
Rural	26.7	31.2	2.03	7.8	9.0	1.26	3.2	3.8	1.16
Urban	11.0	7.0	-1.66	3.3	2.4	-0.98	1.4	1.1	-0.66
Central	13.9	12.3	-0.50	3.3	2.8	-0.68	1.3	1.0	-0.90
Eastern	25.5	36.8	3.47	6.9	9.3	2.15	2.6	3.8	1.99
Northern	39.3	38.9	-0.09	13.9	14.0	0.03	6.4	6.5	0.08
Western	22.5	26.3	1.00	5.8	7.3	1.22	2.2	3.0	1.47
Kampala	5.2	1.0	-1.99	0.6	0.4	-1.38	0.6	0.1	-1.04
At individuals level:									
All	27.8	30.5	1.21	8.2	9.1	1.00	3.4	3.9	1.09
Rural	30.1	34.4	1.75	8.9	10.1	1.11	3.7	4.4	1.06
Urban	17.0	8.7	-2.30	4.6	3.2	-1.05	1.8	1.6	-0.39
Central	17.4	13.9	-0.86	4.9	2.8	-1.79	2.0	0.9	-2.25
Eastern	28.6	37.9	2.90	7.3	9.9	2.41	2.6	4.0	2.79
Northern	45.9	44.7	-0.21	16.2	16.5	0.12	7.5	7.8	0.22
Western	24.6	29.4	1.07	6.4	8.4	1.29	2.5	3.5	1.40
Kampala	2.5	1.88	-0.3	0.5	0.8	0.42	0.1	0.3	0.72

Next we consider whether there are significant differences between the original households in 2005/6 and their split offs. While the poverty status of the original households was similar to the split-off households in 2009/10, the picture was different in 2010/11. The incidence of poverty was significantly higher among the original households relative to their split-off households. This finding holds for all the poverty measures. This implies that these households left poor behind as well as confirming migration as one of the pathway out of poverty.

Broadly speaking, the above static poverty estimates reveal that poverty was quite stable at the national level. However, this stability is lost with a disaggregated analysis based on geographical location. Poverty significantly increased for households residing in rural areas and in the eastern region. That said, the analysis so far does not provide us with insights on poverty movements, which is the subject of the next section.

3.4 Changes in income poverty status – a dynamic perspective

Table 8 presents insights into poverty movements between 2009/10 and 2010/11 using the official absolute poverty line. The results reveal that there are significant changes in poverty movements even within one year. These results confirm that while there seem to have been limited changes in the distribution of income, it is evident that more households slipped into than moved out of poverty. A greater proportion of poor households slipped into poverty as a percentage of overall poverty – of the poor in both waves, 53.7 percent slipped into poverty (representing the new poor in 2010/11), nationally. Similar patterns are observed across geographical regions with the exception of the northern region where only 38.4 percent of the poor slipped into poverty. Put differently, the majority poor households residing in the northern region were chronically poor. It is further noted that the households that were poor in 2009/10, 46.3 percent were no longer poor in 2010/11 and of those that were non-poor in 2009/10 nearly 18.8 percent of slipped into poverty in 2010/11.

Based on the official absolute poverty line, 13 in every 100 Ugandan households remained poor in both years. This figure is slightly higher than that reported during 2005/6-2009/10 of 10 in every 100 households (see Ssewanyana & Kasirye 2012[10]) but lower than 19 percent in 1992-1999 (see Lawson *et al.* 2006). Put differently, there was an increase of 3 percentage points for households living in chronic poverty. As reported in previous poverty dynamics, the incidence of chronic poverty remains higher in rural areas (14.6 percent) and in the northern region (24.0 percent).

Regardless of geographical location, transient poverty was more prevalent relative to chronic poverty during the review period. This finding holds true for the northern region signifying a turnaround in the region that was marked more with chronic than transient poverty as reported in Ssewanyana & Kasirye (2012) and Lawson *et al.* (2006). Overall the transient poor households were a bigger proportion of the overall population than chronic poor regardless of location. In both waves, nearly 25.6 percent of the households were poor in one year during the reference panel period compared to 13 percent who were chronically

poor. To sum up, Ugandan households were vulnerable to income poverty between 2009/10 to 2010/11. As Ravallion (2003) argues, such high levels of vulnerability to poverty calls for effective social protection systems. With such systems in place, he argues households could be protected against risk of income loss, among others. As Ssewanyana & Kasirye (2012) observed, most households in Uganda opt for coping strategies that might be detrimental to their well-being.

In terms of persons, nearly 4.3 million persons in about 691,734 households were living in chronic poverty. On the other hand, about 26.6 percent of the population was in transient poverty, translating into 7.5 million persons.

Next we consider the overall contribution to total poverty. The northern region remains a home for the majority of the chronically poor households (see Table 8 – Panel B). This finding is consistent with the previous studies on poverty dynamics on Uganda (see, Ssewanyana & Kasirye 2012). Notably, recent panel data reveal that the chronically poor households are becoming more concentrated in the northern region with two-fifth of such households compared to about one third in 1992-1999 as reported by Lawson *et al.* (2006). The eastern region contributed 30.3 percent of the overall chronically poor households - a contribution to overall chronic poverty that is far higher than its share of the total population (of 24.9 percent). These findings seem to suggest that chronic poverty is concentrated in the least developed regions in Uganda. Yet, on the other hand, chronically poor households are not restricted to least developed regions

Table 8: Poverty trajectory by location, %

	Chronic	Moved out	Slipped into	Never poor	All
Panel A: Poverty trajectory, %					
All	13.0	11.2	14.3	61.6	100.0
Rural	14.6	12.1	16.5	56.8	100.0
Urban	4.2	6.7	2.8	86.3	100.0
Central	3.3	8.6	6.5	81.6	100.0
Eastern	16.0	9.5	20.8	53.7	100.0
Northern	24.0	15.4	14.9	45.7	100.0
Western	10.6	11.9	15.7	61.8	100.0
Panel B: Contribution to poverty trajectory:					
All	100.0	100.0	100.0	100.0	100.0
Rural	94.7	90.3	96.9	77.3	83.8
Urban	5.3	9.7	3.1	22.7	16.2
Central	6.9	20.9	12.3	36.0	27.1
Eastern	30.7	21.2	36.3	21.8	24.9
Northern	41.4	30.8	23.4	16.6	22.4
Western	21.0	27.2	28.0	25.6	25.5
Panel C: Average consumption for panel period					
Mean welfare	19,201	36,136	33,403	83,190	62,520
Standard deviation	4,656	12,172	9,183	74,817	64,603
Coefficient of variation	2.10	2.89	1.65	4.83	4.68

but also to the so called advantaged regions – the central and western regions. For instance, the central region is a home to about 7 percent of the total chronic poverty. This finding suggests that being a more developed region does not necessarily mean total eradication of extreme poverty. These findings seem to call for more targeted anti-poverty interventions/programs. Yet, we note that targeting interventions to say, chronically poor households resident in the central region is more complicated relative to targeting the same group in the northern region where chronic poverty is more widespread.

We extend the analysis to examine whether there are significant differences in the living standards between the original and split-off households (analysis available upon request). It is evident that the latter were more likely to have moved out than slipped into poverty during the panel period. The reverse is true for the former category.

We further note that the chronically poor households had average per adult equivalent consumption over the panel period that was about 1.5 times below the absolute poverty line. In addition, the per capita consumption growth among the chronically poor households recorded a real decline of 6.9 percent. Indeed, this decline is significantly higher than the national average of 3.6 percent (see Table 4). In terms of expenditure shares, the chronically poor households' share on food in total household expenditure remained constant at 60 percent well above the national average of 46.5 percent in 2010/11. This implies that increases in the cost of living might have a greater impact on their food intake – given the fact that inflation was driven by higher-than-average inflation of the items that are mainly consumed by poorer households (see also Okidi & Nsubuga 2010). Consistent with the discussion in section 3.2, expenditure share on education increased regardless of poverty trajectory. We further note an increase in expenditure on health by 0.8 percentage points and 1.5 percentage points among those households that remained chronically poverty and those that moved out of poverty respectively. Broadly speaking, household private spending on education and health increased, in nominal terms, by nearly 47 percent and 3.2 percent respectively. The poor quality of public health and education facilities could partly explain the increasing private spending. The other possible explanation could be due to increase in the cost of education and health during the panel period as already alluded to. Households living in chronic poverty spent a higher share of their total expenditure on drinks and tobacco, a share that is well above the national average.

3.5 Changes in income inequality

Table 9 presents per adult consumption at each decile during the panel period. It is evident that not all deciles appear to have experienced falling welfare levels. Nationally, the lower deciles registered worsening living standards driven mainly by noticeable worsening living standards in rural areas. While the living standards for the median household in rural areas worsened during the panel period, no changes are observed for their counterparts residing in urban areas.

Table 9: Per adult consumption expenditure at each decile in 2005/6 prices

Decile	National		Rural		Urban	
	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11
1	19,709	18,453	18,831	17,734	29,616	37,364
2	26,160	25,103	24,886	23,828	49,234	48,375
3	32,316	30,785	30,151	28,226	58,461	59,010
4	38,253	37,555	35,683	34,131	70,172	68,622
5	44,858	44,436	40,975	39,964	83,785	83,828
6	53,193	53,454	47,788	47,170	97,468	101,397
7	64,603	64,183	56,296	56,616	116,859	121,534
8	79,494	81,979	67,978	69,678	138,546	156,002
9	112,420	120,944	92,067	99,350	206,554	214,567

While the result seem to suggest worsening distribution of income, these changes as measured by the Gini coefficient and Theil index are significant at national level (Table 10). The distribution of income somewhat worsened in the rural areas. This confirms that growth benefited the more affluent households as depicted in Figure A 4. Despite the low incidence in poverty, the central region is the most unequal region with a Gini coefficient higher than the national average. The strong growth as highlighted seem to have been somewhat beneficial across the board – thus the insignificant changes in the distribution of income. In terms of relative mean expenditure, average household in the central region spent 1.465 times more per adult expenditure than their counterparts in the northern region in 2009/10 but reduced to 1.266 times in 2010/11. While the change might have been minimal between rural and urban households, it is evident that the expenditures for rural households stood at about 75 percent that of their urban counterparts.

Following Datt & Ravallion (1992), we decomposed the changes in poverty into growth and redistribution components to provide insights of the extent to which the observed changes in the headcount ratio are due to pure growth effects or to changes in income redistribution. Growth in mean consumption would have reduced household poverty headcount ratio by nearly 1 percentage point assuming distribution

Table 10: Changes in inequality measures

	Gini		Theil		Income share		Relative mean	
	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11
Uganda	0.373	0.411	0.255	0.350	1.000	1.000	1.000	1.000
Rural	0.340	0.382	0.210	0.325	0.751	0.739	0.881	0.870
Urban	0.374	0.387	0.250	0.263	0.249	0.261	1.686	1.734
Central	0.396	0.428	0.287	0.394	0.379	0.418	1.484	1.659
Eastern	0.311	0.329	0.163	0.189	0.233	0.205	0.882	0.773
Northern	0.339	0.362	0.193	0.220	0.149	0.157	0.686	0.702
Western	0.310	0.339	0.161	0.203	0.238	0.220	0.908	0.849

Table 11: Decomposition of poverty into growth and inequality

Sub-group	Change in P0	Growth	Inequality
Panel A: At household level			
National	3.111	-0.928	4.040
Rural	4.477	-1.060	5.537
Urban	-3.965	-0.245	-3.721
Central	-2.128	-1.864	-0.264
Eastern	11.315	8.251	3.064
Northern	-0.435	-3.436	3.001
Western	3.777	-0.279	4.056
Panel B: At individual level:			
National	2.709	-1.668	4.376
Rural	4.011	-1.198	5.209
Urban	-4.243	-1.084	-3.159
Central	-4.58	-4.837	0.257
Eastern	10.407	8.281	2.126
Northern	-1.292	-3.572	2.28
Western	4.731	1.947	2.784

remained the same as in 2009/10. Instead, the changes in distribution effect was regressive, implying a 3.1 percentage points rise in poverty. At the national level, growth component is lower than the redistribution component, in absolute terms. Similar findings are noted for rural areas. On the other hand, households resident in urban areas, the central and northern regions experienced a stronger growth component than the inequality component resulting into poverty reduction – in absolute terms. The growth component was positive for the eastern region, implying a decline in mean income resulting into higher poverty levels given the initial distribution.

3.7 Sensitivity to measurement errors in welfare

As discussed above, this paper follows the Spells approach which is prone to some limitations. Among these limitations is its sensitivity to measurement errors. Following the approach used in Ssewanyana & Kasirye (2012), we examine the extent to which measurement errors could influence poverty movements. We consider movements within the range of ±10 percent around the absolute poverty line (implying the household near the poverty line) and the extent of poverty transitions as a result of changes within ±10 in living standards within

Table 12: Sensitivity to measurement errors, %

	Poverty trajectory				
	Chronic	Moved out	Slipped into	Never poor	Uganda
Changes in welfare within 10%	20.0	1.1	2.4	17.3	13.7
Movement along poverty line of 10%:					
2009/10	14.9	22.2	15.6	4.9	9.8
2010/11	17.5	10.7	24.7	4.5	9.7

a 1-year panel period. Nearly 14 percent of the households registered changes in consumption with ±10 percent range, with a higher proportion among the chronically poor and the never poor households. On the other hand, nearly 1 in every 10 households had their consumption bunched up around the poverty line. Yet, significant changes are observed by poverty trajectory, with less clustering among those households that moved out poverty and increasing clustering among those that slipped into poverty between 2009/10 and 2010/11.

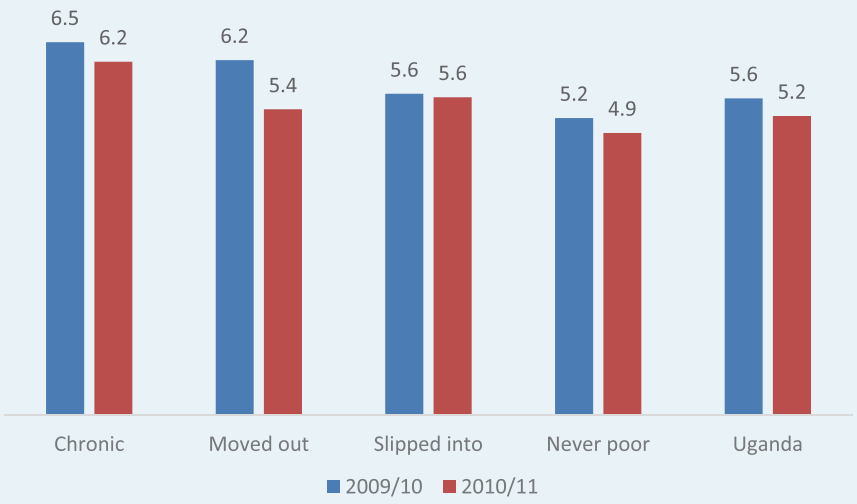
3.8 Poverty dynamics profiling

3.8.1 Household demographics

There is a significant reduction in household size from 5.6 to 5.2 driven by a reduction among those households that moved out of poverty and never poor (Figure 1). We further note that those households that moved out had almost the same number of members as their counterparts in chronic poverty in 2009/10. There are no observable changes among those households that slipped into poverty. While households living in chronic poverty experienced insignificant reduction in family size, the chronically poor households are still characterised with a significantly larger family size in comparison with the national average.

Next we consider the extent these changes in household size influenced the observed poverty estimates. Had the Ugandan households maintained the same household size in 2009/10, the incidence of poverty would have increased from 27.6 percent to 29.5 percent. On the other hand, assuming the 2009/10 welfare levels with household size of 2010/11, the share of households living below the poverty line reduces from 24.2 percent to about 23 percent. In terms of poverty movements, the share of chronically poor households increases from 13 percent to 14.4 percent assuming the 2009/10 household size. These results illustrate the extent to which changes in demographics could impact on the incidence and movements in income poverty. These results seem to suggest that as much as there was a significant reduction in household size, the reduction was not followed by significant growth in income to avert the observed increase in poverty.

Figure 1: Changes in household size by poverty trajectory



3.8.2 Household livelihood activities

Next we discuss any changes in household livelihood activities and how this might have influenced the observed poverty movements. Broadly speaking, the share of households reporting agriculture (dominated by subsistence agriculture) as the most important source of earnings in the last 12 months prior to the survey reduced from 49.7 percent in 2009/10 to 45.5 percent in 2010/11[11]. This decline could partly be explained by the prolonged drought in 2010/11 during January-March quarter. Further analysis reveals that 65.8 percent of the households (not shown in Table 13) maintained the same most important source of earnings in 2010/11 as in 2009/10. The shift in changes in the most important source of earnings varied across sources for example, those who changed from agriculture to others was 28.7 percent. The corresponding figures for wage employment and non-agricultural sectors were 34.4 percent and 35.6 percent respectively.

Regardless of poverty trajectory, the results in Table 13 reveal that agriculture remains the most important source of income. This confirms the importance of agriculture as a key sector in Uganda's poverty reduction efforts. While there is a noticeable increase in the share of households living in chronic and those that slipped into poverty that cited wage employment as the most important source of earnings, this increase might not have translated into high enough earnings to keep them out of poverty. We also note a reduction in the share of the chronically poor households citing non-agriculture activities as the most important source of earning, whereas the reverse in noted for those households that remained non-poor in both periods. Although these activities would offer better opportunities for the chronically poor households and in turn minimise their exposure to vagaries of weather as will be discussed later.

Table 13: Changes in household livelihood activities by poverty trajectory

	Chronic		Moved up		Slipped into		Never poor		Uganda	
Sub-group	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11
Panel A: Most important source of earnings during the last 12 months prior to the survey (%):										
Agriculture	57.7	57.6	59.3	57.0	62.2	59.9	43.3	37.5	49.7	45.5
Wage employment	16.9	19.5	13.3	14.5	17.8	20.3	27.4	28.3	23.0	24.5
Non-agriculture	18.3	16.0	20.0	18.6	12.6	11.7	20.5	24.9	19.0	21.2
Transfer	0.0	0.0	0.0	0.5	0.0	0.2	0.5	0.3	0.3	0.3
Others	7.1	6.9	7.4	9.3	7.5	7.9	8.5	9.0	8.0	8.6
Panel B: Economic activities, %:										
Crop and livestock	71.7	67.8	70.9	71.4	74.6	70.8	57.2	54.9	63.1	60.7
Only crop agriculture	24.7	23.8	16.6	15.9	20.2	22.7	14.1	15.4	16.6	17.6
Only livestock	0.2	0.0	1.3	0.0	1.7	1.1	3.6	2.6	2.6	1.8
Non-agriculture	3.4	8.4	11.3	12.8	3.6	5.4	25.1	27.1	17.6	20.0

The survey requested households to indicate whether any member engaged in crop farming or livestock rearing during the last 12 months prior to the survey. It is evident from Table 13 Panel B that a significant proportion of households did engage in both crop and livestock agriculture, although the share declined over the pane period. Instead, we note an increase in the share of households in non-agriculture activities. We further note a higher share of those chronically poor households and their counterparts that slipped into poverty that engaged in only crop agriculture in comparison with the national average.

It is evident that the livelihood activities are heterogeneous across poverty trajectory. However, what markedly distinguishes the chronically poor households from the rest of the trajectories is their heavy reliance on subsistence agriculture, in particular crop agriculture.

Broadly speaking, these findings reveal that Ugandans are still stuck in low productivity agriculture (in particular subsistence agriculture) despite numerous government efforts to enhance production and productivity and shed off labour away from the agricultural sector to other sectors. Indeed as highlighted in MoFPED (2011, 2012), the sector did not perform well during 2010/11. The prolonged drought affected the cash crop sector especially coffee, tea and tobacco. On the other hand, the improvements in cotton prices and government support to the sector partly explains the observed growth in consumption in the northern region. This is not to undermine the huge funds that continue to be injected in the region through various government programs/interventions such as the Northern Uganda Social Action Fund (NUSAF) and Peace Recovery and Development Plan (PRDP); and directly by different development partners.

3.8.3 Shocks

As previously discussed, Ugandan households are becoming more vulnerable to poverty. The share of households reporting at least a negative shock in the last 12 months prior to the survey, declined from 60.7 percent in 2009/10 to 40.1 percent in 2010/11. Similar trends are noted regardless of poverty trajectory. Yet, the share of chronically poor households reporting a shock was significantly higher than the national average. This is not surprising given the disproportionate share of the chronically poor in agriculture and in particular crop agriculture. Consequently the current social protection interventions are not strong enough to avert households from falling into poverty.

Further analysis of the data reveal that 28.7 percent of the panel households did report to have experienced a negative shock, whereas 29.5 percent experienced a shock in both survey periods (hereinafter “double distressed”) during the past 12 months prior to each survey. These results are suggestive of a high vulnerability to shocks – with 41.8 percent of the Ugandan households reporting at least a shock in either survey year. Contrary to other poverty trajectories, a higher share of the chronically poor households (35.9 percent) were more likely to have experienced negative shocks in both surveys. Their overall contribution to total “double distressed” households was 15.8 percent, a share that is higher than their share in total household population (13 percent). We also note that a higher share

of the never poor households (32.4 percent) was less likely to have experienced a shock during the panel period.

Table 14 presents shocks by broad categories and by poverty trajectory. It is evident in both years that the most cited distress events include agro-climatic related from 77.3 percent to 67.7 percent followed by health related shocks from 24.1 percent to 30.9 percent in 2009/10 and 2010/11 respectively. The former displayed a significant declining share, whereas the shares for the latter increased significantly. The share reporting crime related shocks showed a declining share over the panel period. Focusing on the agro-climatic shocks, drought/irregular rains was cited by 72.6 percent in 2009/10 and 59.1 percent in 2010/11. There were no notable significant changes in the shares for households living in chronic poverty and those that moved out of poverty. The other poverty trajectories registered significant reduction during the panel period.

At the national level, more than 80 percent of those households that experienced drought/irregular rains indicated that drought led to a decline in their incomes and food production. This finding is expected since the majority of the Ugandan households as discussed above derive their livelihood from agriculture. Without adequate measure to mitigate such natural calamities, shocks to agriculture will continue to affect the standard of living of Ugandans. The most cited coping strategies by households to mitigate the effect of drought/irregular rains were involuntary change in dietary patterns followed by household members taking on more non-farm activities. The latter is already observed in the inter-sectoral shifts and the reduction in the importance of agriculture as the most important source of earnings as discussed in the previously section.

Regarding health, the most cited health shocks were serious illness/accident of either the income earner or any other household member. This led to a reduction of incomes of more than 80 percent of households and reduction in food production of more than half of the households. This findings partly depicts that poor health of the breadwinner(s)/any member negatively impacts on household living standards.

Table 14: Broad shocks by poverty trajectory, %

		Poverty trajectory				
Type of shocks	**Year**	**Chronic**	**Moved out**	**Slipped in**	**Never poor**	**Uganda**
Agro-climatic	2009/10	78.6	75.8	80.4	76.4	77.3
	2010/11	75.1	65.6	68.3	66.2	67.7
Economic	2009/10	2.2	5.3	5.1	7.6	6.1
	2010/11	2.4	4.0	12.7	5.8	6.1
Health	2009/10	22.3	20.5	27.9	24.3	24.1
	2010/11	29.0	32.3	31.8	30.9	30.9
Crime	2009/10	7.5	7.3	10.1	15.5	12.5
	2010/11	6.3	3.7	5.3	8.4	7.1
Others	2009/10	7.8	11.8	5.3	9.0	8.5
	2010/11	8.8	11.2	9.0	8.8	9.1

Again, this finding confirms our earlier observation that as much as household size might have declined, there were minimal increases in household incomes.

3.8.4 Other welfare indicators

Table 15 shows other welfare indicators notably the consumption of protein rich food stuff by poverty trajectory. The results in Table 15 reveal a still low consumption of protein related foods in the last 7 days prior to the survey among Ugandan households. As expected, the shares among the never poor category are well above the national averages. We further note an increase in share of the chronically poor households that consumed meat and milk, whereas a reduction is noted among those households that slipped into poverty.

Households were further asked to indicate whether they were faced with situation when they did not have enough food to feed on in the past 12 months prior to the survey. We noted a significant reduction in the incidence of inadequate food from 45.7 percent in 2009/10 to 22.5 percent in 2010/11. Similar trends are noted by poverty trajectory. Yet, the incidence among the chronically poor households was significantly higher than the national averages in both years. Overall, observed significant reduction in the incidence of inadequate food seem to mirror the reduction in the incidence of shocks.

CONCLUSIONS

The increasing availability of panel data in Uganda presents a greater opportunity to understand poverty movements - especially in and out of poverty. It also provides an opportunity for government to rethink and refine its poverty interventions.

The consumption based-poverty measures reveal significant increases in poverty headcount ratio in the eastern region and in rural areas. The underlying growth process seem to have yielded different results. For instance, the rural areas registered a positive growth in mean income, but the growth was not sufficient enough to pull households above the poverty line and instead distribution of income worsened. Whereas in the central region, the registered strong growth seem to have benefited the lowest as well as the higher income groups more

Table 15: Welfare indicators by poverty trajectory, %

		Poverty trajectory				
	Year	Chronic	Moved	Slipped	Never	Uganda
Fish	2009/10	28.7	*23.9*	*30.0*	36.0	32.8
	2010/11	29.3	*34.5*	*21.7*	35.2	32.4
Meat	2009/10	18.3	*21.6*	*36.0*	50.0	40.7
	2010/11	25.5	*39.6*	*23.3*	54.1	44.4
Milk	2009/10	9.5	*21.5*	26.3	42.3	33.4
	2010/11	14.7	*32.1*	20.1	42.2	34.3
Salt	2009/10	50.2	38.3	37.9	27.5	33.1
	2010/11	56.3	33.9	44.6	23.1	31.6
Did not have enough food	2009/10	75.8	58.6	50.9	35.7	45.7
	2010/11	46.9	25.8	28.9	15.1	22.5

than the middle income groups with not significant changes in the poverty measures. Of the poor in 2010/12, more than half (53.7 percent) were new poor households. The results seem to suggest that economic growth, as measured by the GDP, during the panel period did not benefit the poor – this finding is supported by the growth incidence curve (Figure A 4). This is not surprising given the fact that the agriculture sector where majority of the poor in particular the chronically poor derive their livelihood performed poorly. The poor performance of the agricultural sector can be attributed in a large part to the negative shocks. The shocks especially in terms of drought and incidence of illness seem to have led to a reduction not only in incomes but also impacted on the food production. This resulted in the observed high income mobility via the quintile analysis. These findings confirm that GDP growth is necessary but not sufficient to sustain poverty reductions.

Within a period of one year, we have noted significant movements in and out of poverty. This confirms the dynamic nature of poverty that needs to be taken into account in the designing or refining of the poverty interventions. Pockets of the chronic poverty even in well to do Central region despite the fact that the average consumption is three (3) times well above the absolute poverty line. Indeed, the presence of pockets of households living in chronic poverty within 'rich' neighbourhood might pause serious social problems if remains not addressed. The rather high incidence of shocks, though at declining rate, especially drought pause serious consequences to the standard of living of the Ugandan households. It is therefore not surprising that poverty in Uganda is becoming more of a transient than of a persistent nature.

Overall, the macroeconomics development in 2010/11 in large part explain the observed movements in poverty and inequality in Uganda. There is no doubt that such developments could easily reverse Uganda's achievement of the first MDG of halving extreme income poverty ahead of 2015. The government poverty reduction related policies/interventions at that time might have failed to protect households from falling into poverty as well as pulling out households from their chronic poverty state.

REFERENCES

Alderman, H., J. Behrman., H. P. Kohler., J.A. Maluccio and S.C. Watkins (2001) 'Attrition in Longitudinal Household Survey Data', Demographic Research, *Max Planck Institute for Demographic Research*, 5(4): 79-124.

Appleton, S. and S. Ssewanyana (2003), "Poverty analysis in Uganda," 2002/03, Economic Policy Research Centre, *Mimeo*.

Appleton, S. (2001), "Poverty reduction during growth: The case of Uganda, 1992-2000". University of Nottingham. Mimeo.

Appleton, S. (2009), Uganda's Poverty Line – A Review, *Final report to DFID Uganda on Poverty Line Methodology and Trends*. A memo.

Chen S. and M. Ravallion (2013), "More relatively poor people in a less absolutely poor world", *The Review of Income and Wealth,* 50(1): 1-28.

CPRC (2005), *Chronic Poverty in Uganda: The Policy Challenges*, CPRC

publication.

Christiaensen. L. and A. Shorrocks (2012), "Measuring poverty overtime", *The Journal of Economic Inequality*, 10(2): 137-143.

Datt, G. and M. Ravallion (1992) "Growth and redistribution components of changes in poverty measures: a decomposition with application to Brazil and India in the 1980s" *Journal of Development Economics* 38:275-295

Foster, J., J. Greer and E. Thorbecke (1984), "A class of decomposable poverty measures", *Econometrica*, 52: 761-776.

Kasirye I. and S. Ssewanyana (2011), Determinants of attrition: evidence from Northern Uganda Survey, *EPRC Research Series #74*.

Lawson, D., A. McKay and J. Okidi (2006), "Poverty persistence and transitions in Uganda: Combined qualitative and quantitative analysis", *Journal of Development Studies*, 42(7), 1225-1251.

Maluccio, J. A (2004), "Using Quality of Interview Information to Assess Non-random Attrition Bias in Developing-Country Panel Data", *Review of Development Economics,* 8(1): 91-109.

Ministry of Finance, Planning and Economic Development (MoFPED) (2012), Background to the Budget 2012/13, *Priorities for Renewed Economic Growth and Development,* Kampala.

_____ (2011) Background to the Budget 2011/12, *Promoting Economic Growth, Job Creation and Improving Service Delivery,* Kampala.

_____ (2010), Background to the Budget 2010/11, *Strategic priorities to accelerate growth, employment and socio-economic transformation for prosperity,* Kampala.

Okidi, J.A. and V.M. Nsubuga (2010), "Inflation differentials among Ugandan households: 1997-2007", EPRC Research Series #72.

Ravallion, M. (2003), "Targeted transfers in poor countries: Revisiting the trade-offs and policy options", *World Bank Social Protection Discussion Papers #0314.*

Ssewanyana, S. (2010), *Combating chronic poverty in Uganda: Towards a new strategy*, EPRC Research Series #67.

Ssewanyana, S. and I. Kasirye (2012), "Poverty and inequality dynamics in Uganda: Insights from the Uganda National Panel Surveys 2005/6 and 2009/10", EPRC Research Series #94.

_____ (2010), *Impacts and determinants of panel survey attrition: The case of Northern Uganda Survey 2004-2008,* EPRC Research Series #74.

Uganda Bureau of Statistics (2011), *Consumer Price Index*, Kampala, Uganda.

Figure A 1: Monthly Trends in the Consumer Price Index (2005/6=100), %

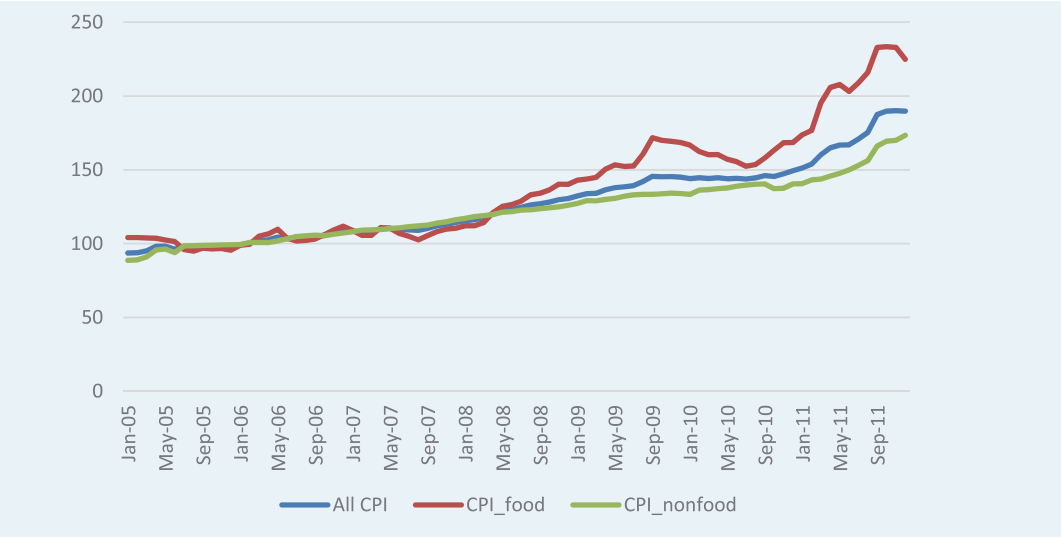


Figure A 2: Distribution of households by farming seasonality when visited, %

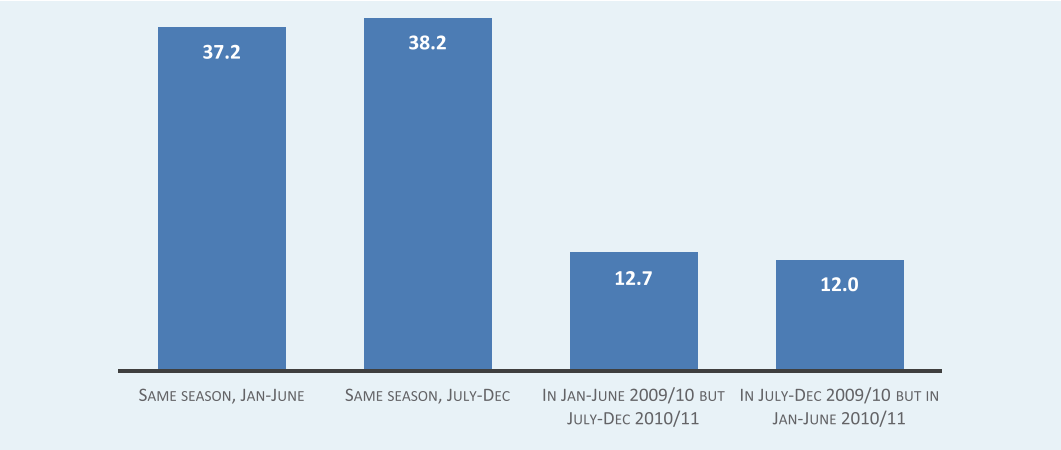


Figure A 3: Cumulative distribution of per adult consumption expenditure

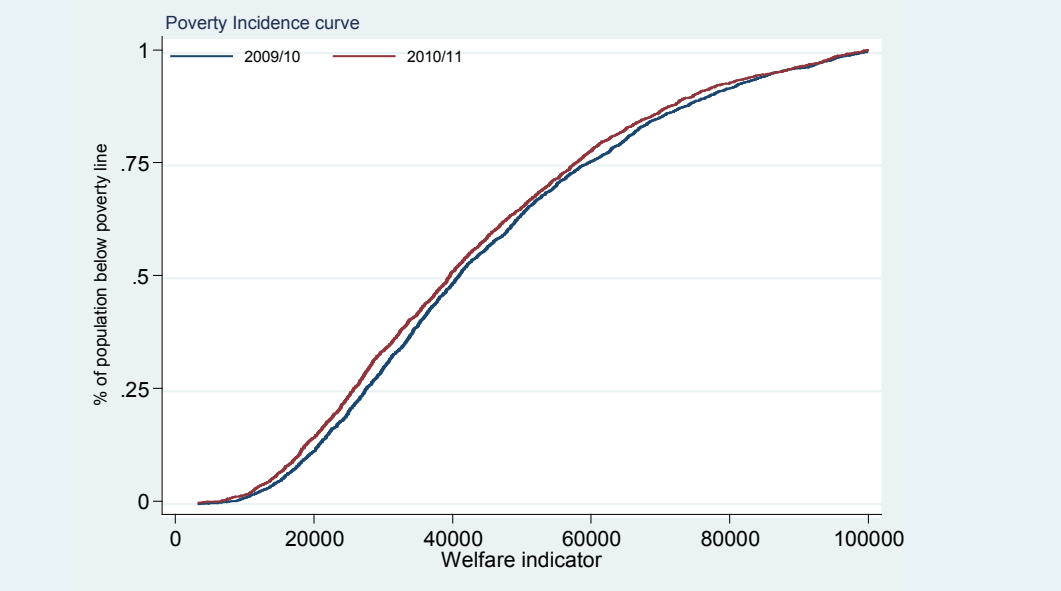
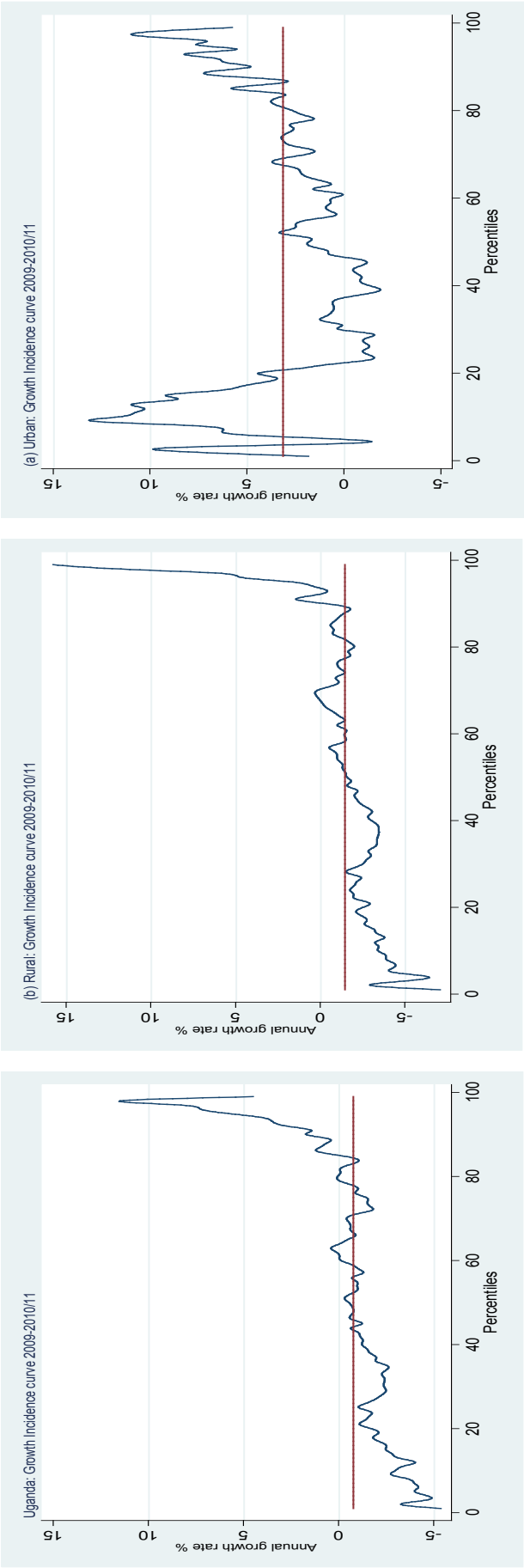


Table A 1: Expenditure shares by poverty trajectory, %

	Chronic		Moved out		Slipped into		Never poor		All Uganda	
	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11	2009/10	2010/11
Food	60.4	60.0	57.8	57.9	60.0	58.6	41.4	43.7	45.0	46.5
Drinks & tobacco	3.4	4.6	2.1	3.1	2.3	2.5	2.3	3.0	2.4	3.0
Clothing & footwear	2.6	2.4	2.5	2.2	2.5	2.8	3.0	2.2	2.9	2.2
Rent, fuel & energy	17.3	14.6	18.3	12.5	12.9	15.4	17.5	16.2	17.1	15.7
Household & personal goods	4.1	5.1	3.9	4.8	4.4	5.2	5.8	5.3	5.5	5.3
Transport & communication	2.0	2.2	2.0	3.3	3.8	3.9	9.1	7.7	7.8	6.8
Education	4.0	5.5	5.3	6.8	4.4	6.2	9.7	12.9	8.7	11.6
Health	3.7	4.5	4.3	6.7	7.3	4.0	4.8	4.5	5.0	4.7
Other consumption expenditure	0.5	0.4	0.5	1.2	0.9	0.5	2.1	1.9	1.8	1.7
Non-consumption expenditure	2.1	0.7	3.3	1.5	1.4	1.0	4.3	2.6	3.8	2.3

Figure A 4: Growth incidence curve, 2009/10 – 2010/11



ENDNOTES

1 We do note that households that were covered in January – June period in 2009/10 but revisited in July-December in 2010/11 had an average consumption expenditure that was significantly higher than the national average in 2009/10. There are no significant differences that were noted in 2010/11.

2 The conversion factors used for 2010/11 were based on the 2011/12 market price survey. In this market survey, heap/pieces/bundle/bunches were further broken down to small, medium and large.

3 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).

4 "**Usual members** are defined as those persons who have been living in the household for 6 months or more during the last 12 months. However, members who have come to stay in the household permanently are to be included as usual members, even though they have lived in this household for less than 6 months. Furthermore, children born to usual members on any date during the last 12 months will be taken as usual members. **Regular members** refer to those persons who would have been usual members of this household, but have been away for more than six months during the last 12 months, for education purposes, search of employment, business transactions etc. and living in boarding schools, lodging houses or hostels etc." [Extracted from UBoS, Uganda National Household Survey 2009/10, Manual of Instructions].

5 The key argument behind the revisions was that the current food basket is outdated. Appleton (2009) also extends the review to consider regional food basket instead of a national food basket given the significant differences in food consumed in different regions.

6 . Uganda is among those countries in the world where the national poverty line is well below the proposed global poverty line.

7 The P0 indicator is "headcount" ratio, 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.

8 The sample weights were recalculated based on the panel sample after taking into account attrition and split-offs, for further details check with UBoS.

9 The composite CPI averaged 144.58 between September 2009 and August 2010 period; and 161.70 during the period October 2010 to September 2011.

10 Although, the analysis in Ssewanyana & Kasirye (2012) focused on original households in both 2005/6 and 2009/10.

11 This estimate is based on 2,508 instead of 2,575 households. Some 67 households did not respond to this question in either survey year.

Economic Policy Research Centre
Plot 51, Pool Road, Makerere University Campus
P.O. Box 7841, Kampala, Uganda
Tel: +256-414-541023/4, Fax: +256-414-541022
Email: eprc@eprc.or.ug, Web: www.eprc.or.ug