Poverty Dynamics in Uganda: 1992 to 2000

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Abstract

It is well known that Uganda has achieved impressive progress in poverty reduction over the 1990s, based to a large extent on a good macroeconomic performance in combination with a specific package of poverty eradication measures. Monetary poverty fell from 56% of the population in 1992/93 to 35% in 1999/2000. Large numbers of households escaped from poverty, but equally a substantial number of households remained in persistent poverty throughout this period. Such chronic poverty typically reflects particularly deep-seated disadvantages, so tackling this poverty is likely to be an especially difficult challenge over the next years as the government seeks to approach its poverty eradication aim. This paper focuses on the extent and nature of chronic poverty in Uganda over this period, and the likely implications for policy, in particular the Poverty Eradication Action (PEAP). It is based particularly on the good quality household panel data set available for up to four rounds between 1992 and 1996, though also draws on evidence from the 1992 to 1999 panel data set. The results show that chronic poverty in Uganda is not only location-specific but depends on various initial household characteristics. The findings have important policy implications, in that the chronic poor appear not to have benefited much from the market-oriented development policies that have been responsible for much of Uganda's macroeconomic success over this period.

AN OVERVIEW OF CHRONIC POVERTY AND DEVELOPMENT POLICY IN UGANDA

1   Introduction

The commitment of the Government of Uganda to reforms during the nineties attracted a series of donor-supported programs that facilitated Uganda's economic recovery from the collapse in the seventies and early nineties. In the initial phases of the recovery process, emphasis was given to rehabilitation of key social and economic infrastructure, after which focus shifted onto establishing and maintaining a stable macroeconomic environment. Next, structural strategies for translating the macroeconomic successes into real improvements in people's standards of living were developed into the main policy framework, the Poverty Eradication Action Plan (PEAP). The PEAP is the policy vehicle for translating the country's long-term development aspirations, some of which are expressed in the *Uganda Vision 2025*, into specific and achievable goals.

To monitor the impact of government policies and programs on welfare, the country has, since 1992, conducted national household surveys to produce the micro-level data needed for impact evaluation. Using the time series of cross-sectional survey data, analysts have established that the incidence of income poverty has reduced from 56% in 1992 to 35% by 2000.

In this paper we exploit several statistical results from analyses of the Uganda National Household Survey data to provide evidence of whether or not chronic poverty is a significant component of overall poverty and evaluate the need for differential policy focus on sub-groups of the poor. Because of the high incidence of poverty at the beginning of the 1990s, the concept *chronic poverty* has not featured explicitly in the various studies that have sought to shed light on the poverty situation in Uganda. Other than the emphasis on the *poorest of the poor*, policy statements on poverty are silent on chronic poverty. Availability of panel household data enables us to sufficiently describe chronic poverty especially in the duration sense of the concept.

The chronically poor are those who either experience extended duration of poverty, or those who benefit the least and/or suffer most from contemporary development policies and practices, and for whom emergence from poverty is most difficult (Hulme and Sheperd, 2001). In the context of Uganda's economic liberalization, the chronically poor Ugandans are those who have not benefited from various welfare-improving opportunities in the economy and have therefore remained below the income poverty line for several consecutive years. In consistency with this characterization, the Uganda Participatory Poverty Assessment Project (UPPAP) report (1999) distinguishes the chronically poor Ugandans to be predominantly found among: (i) internally displaced persons in areas of protracted violent conflicts; (ii) groups that are marginalized in decision-making processes pertaining to matters that directly affect welfare growth; (iii) the elderly and civil war and HIV/Aids-related orphaned children; (iv) people in remote rural areas with limited assets and little access to public social services; (v) residents of areas that are susceptible to natural disasters such as landslides and earthquakes in western Uganda; and (vi) people with disabilities.

Analysis of cross-sectional income poverty in Uganda indicates that the poorest 20% of the population are a large subset of the chronically poor. Evidently, from 1993 to

1996 the poorest 20% did not experience noticeable improvements in living standards; furthermore, the poorest got poorer (Appleton, 1999). Precisely, consumption per adult equivalent for the bottom decile was 4% lower in 1995/96 than in 1993/94 while for the second lowest decile, living standards were essentially unchanged. Among the poorest 20% food consumption constituted 63% of total expenditure. In as far as the non-food expenditure for the poorest 20% is usually met at the expense of food energy requirements, food poverty is expected to be a prominent feature of persistent poverty. It is also arguable that intense poverty (experiencing several dimensions of poverty) is correlated with persistent poverty.

This paper explicitly analyzes the dynamics of poverty in Uganda by exploiting three sets of panel household data – a four-year 1992 to 1996, a two-year 1992 to 1996, and a two-year 1992 to 1999 data sets. Essentially, panel data sets provide a unique opportunity to investigate the characteristics and determinants of chronic versus transitory poverty. This paper is limited to descriptive statistics to characterize the various aspects of poverty dynamics with emphasis on the chronically poor. It finds that intertemporal poverty transition is not only location-specific but depends on various initial household characteristics.

In the rest of this paper we summarize the patterns, trends and policy responses to income/consumption poverty in section two, discuss the need for a dynamic perspective of poverty analysis in section three, describe the Uganda panel data set in section four, discuss descriptive statistics on poverty dynamics in section five, and present the policy implications of the analysis in section six.

2   Poverty in Uganda: patterns, trends and policy responses

The official poverty statistics of Uganda, which show that absolute income/consumption poverty declined nationally from 56 to 30 percent between 1992 and 2000, are derived from a time series of cross-sectional household survey that the Uganda Bureau of Statistics has collected periodically since 1992. The surveys are designed to provide information for tracking micro-level impacts of the economic reforms that the country has implemented for more than a decade now. Analysis of the survey data show that consumption expenditure per adult equivalent grew by one third and one half in rural and urban areas respectively between 1992 and 2000 (Appleton, 2001). In addition to urban bias in welfare growth, data for 1997 to 2000 provide evidence of general welfare inequality in that consumption expenditure for the richest 10% of the population grew by 20% while that of the poorest 10% grew by only 8%. Regional imbalance, especially between Northern and the rest of the country, has persisted at a deteriorating rate because it was only in the Northern region where per capita consumption declined between 1997 and 2000. The picture is expected to have been worse if the war-ravaged northern districts of Gulu and Kitgum were included in the analysis.

Decomposition of changes in poverty by economic sector (Appleton, 2001) indicates huge disparities in the ability of different socioeconomic groups to exploit the economic opportunities created by the stable macroeconomic environment in the country. Of all the major sectors reported by household heads as the main area of economic activity, the food crop sector was found to be the poorest in 1992 but poverty in this sector declined from 64% in 1992 to 46% in 2000. Although cash crop farming was the

second poorest sector in 1992, it experienced a substantial decline in poverty from 60% in 1992 to 30% in 2000. In the non-crop agricultural sector there was an observed decline in poverty from 52 to 41 percent over the same period. It was in manufacturing and trade where the greatest proportionate decline in poverty occurred.

These trends in income poverty reveal that the economic reform programs that Uganda embarked on in the beginning of the last decade generated substantial welfare increasing opportunities that enabled a significant fraction of the population to move out of poverty. But without specific measures that target welfare inequality and regional growth disparities, the full potential of growth-led economic reform programs to reduce poverty, especially for the chronically poor, may not be achieved. Regression analysis and simple simulation exercises using panel household data show that although coffee price increases during the 1990s significantly increased household economic growth and poverty reduction, low levels of household economic diversification leaves households very vulnerable to price falls (Deininger and Okidi, 2002).

In response to such challenges and other general constraints to trickle-down effects of the macroeconomic achievements of reforms, in 1997 the Government of Uganda launched a Poverty Eradication Action Plan (PEAP) as the national policy framework for medium-term growth and development. The development and implementation of the PEAP are guided by the dynamic principles of feedback mechanism and time-consistency. In other words, progress in achieving the goals in the PEAP are closely monitored and regularly revised in order to update it in a manner that reflects and accommodates changing socioeconomic trends, priorities and achievements in the fight against poverty. In this regard, the 1997 PEAP was revised in March 2000, which has, in turn, been revised in 2003.

The main features of the PEAP are its four fundamental goals of creating a framework for economic growth and transformation, ensuring good governance and security, directly increasing the ability of the poor to raise their incomes, and directly increasing the quality of life of the poor. The details of the processes for realizing the goals of the PEAP are contained in the individual sector strategic plans such as the Plan for Modernization of Agriculture, the Medium Term Competitiveness Strategy, the Education Sector Investment Plan, the Health Sector Strategic Plan, and the Road Sector Development Plan. These plans form the basis for sector specific policy interventions. The link between these plans and the PEAP is two-way and iterative, with the sector plans feeding into the PEAP, while simultaneously drawing from it.

To obtain the views of the poor on their welfare statuses, the Uganda Participatory Poverty Assessment Project (UPPAP) was carried out in nine districts in 1998. A total of 24 rural and 12 urban communities were consulted. A second round of the participatory process was conducted in 2002. The process has helped to incorporate the voices of the poor into the national planning and policy formulation by complementing quantitative with qualitative evidence of poverty. The quantitative trend information and the qualitative information could be enriched by a dynamic investigation of the poverty experiences of households that have been interviewed repeatedly over time.

3 The need for a dynamic perspective

An understanding of the evolution of poverty requires tracking the poverty statuses of the same individuals or groups of people across time. In the process of doing so, those who are observed to experience extended duration of poverty or benefit the least and suffer most from contemporary development policies and practices, and for whom emergence from poverty is most difficult constitute the chronically poor (Hulme and Sheperd, 2001). In the context of Uganda's economic liberalization, the chronically poor Ugandans are those who have been unable to seize welfare-improving opportunities and have therefore remained below the income poverty line over a significant period of time.

The essence of chronic poverty and the importance to address it in Uganda mainly derive from the Country's national development framework – the PEAP, which targets reducing absolute income-poverty to less than 10% by 2017. Because of the comprehensiveness of the PEAP for poverty reduction, the approximately 10% who may still be in poverty by 2017 are expected to be those who will have least benefited from the transformation programs and are most likely to be those who will have been in poverty for an extended period of time. Similarly, the Millennium Development Goal of reducing income poverty to half the level in 1990 implies that a significant proportion of the population in the developing countries will still be poverty, a subgroup that is most likely to be dominated by those who will have been in poverty for an extended period of time.

In this regard, it is important that those who have experienced extended durations of poverty be identified and characterized in order to maximum the opportunities to achieve the national and international income-poverty goals. This is especially vital in Uganda, which is characterized by an absence of a formal social safety net system and a highly liberalized economy with market-based development intervention programs.

To examine the claim that chronic poverty is important in Uganda, we need to analyze the poverty situation in Uganda from a dynamic perspective including statistical characterization of households according to various poverty statuses and by spatial and socioeconomic categories. To do this, we explore a time series of cross-sectional survey data that were collected during the nineties for purposes of monitoring the microeconomic welfare implications of the reforms that Uganda implemented during this period. Using the survey data, a household that was surveyed repeatedly over time is categorized as chronically poor if in each of the surveys the household is observed to have maintained per adult equivalent consumption expenditure levels that are below the national poverty line.

4 The Uganda panel data

In Uganda commendable efforts have been made to produce nationally and regionally representative time series of household survey data with sizeable panel elements. In this section we exploit panel household data to shed light on the dynamics of poverty in Uganda during 1992 to 2000. Specifically, there are two panel household survey data sets in Uganda.

The first panel household data set comprises four waves, 1992/93 to 1995/96. The sample frame incorporated panel elements but during data entry panel identification numbers were not created but a sizeable number of the panel observations were recovered

by a group of experts from Gothenburg University and the World Bank. The recovered set has 344 observations. When we subset it to observations in 1992 and 1996 only, we obtain 818 observations. This subset is used in the paper to investigate poverty situations at the endpoints of the four-year period. The second panel data set is a two-year wave comprising 1309 households that were surveyed both in 1992/93 and 1999/2000. The panel sample frame was designed to cover 1398 households as a sub sample of the 9924 and 10687 households that were surveyed in 1992/93 and 1999/2000 respectively.

Due to the small sample size of the four-year panel and the fact that the panel recovery exercise referred to earlier could not identify all the surveyed panel households, resulting in non-random attrition, it is farfetched to claim its representativeness. The representativeness of the 1992/99 panel set is also very unlikely given that the probit estimates discussed in Deininger and Okidi (2002) demonstrate that belonging to the panel is systematically correlated with geographical location and certain household characteristics. However, we investigate the seriousness of the representativeness issue by comparing within each year the consumption expenditures for the panel households with those of the households that were excluded from the panel.

Table 1 and Table 2 present the mean monthly real household consumption expenditure for panel and non-panel households in each of the years in the two panel data sets. For the 1992 to 1996 four-year panel, the mean consumption expenditure for the panel is higher than for the non-panel observations by five to nine percent. For the 1992 to 2000 two-year panel, the differences in means are less than five percent. The *P*-values reported in the tables indicate that the mean differences are not statistically different from zero at the standard levels of significance.

We conclude that sample statistics based on expenditure data from the panel and non-panel observations do not significantly differ. To corroborate this conclusion, we apply stochastic dominance method (Figures 1 to 4), which shows that in both the panel and non-panel sub-samples of the 1992/96 data sets, welfare improvements that are robust to the choice of a poverty line were observed. With a *P*-value of zero, mean monthly consumption expenditure for panel and non-panel households in 1992 and 1996 were statistically different at all levels of significance. Similar results were obtained in the comparison of the panel and non-panel sub-samples in the 1992/2000 data sets.

5 Poverty dynamics in Uganda – the panel data evidence

The data described above are used in this section to highlight the dynamics of poverty in Uganda with emphasis on estimating the extent of chronic poverty and identifying some basic characteristics of the chronically poor.

5.1 Poverty transition, 1992 to 1996

We first use the panel of 818 households to describe movements into and out of poverty from 1992 to 1996 at the national level and by rural/urban and regional groupings. Table 3 presents the 1996 poverty statuses of households who were below the poverty line in 1992. It shows that 46% of the 1992 poor households moved out of poverty by 1996. The distribution of movement out of poverty was distinctly in favor of the households closer to the poverty line. Of the panel households whose 1992 consumption expenditures were within five percentage points below the poverty line, 68% had moved out of poverty by

1996. This is in sharp contrast with the corresponding figure of 31% for those households whose 1992 consumption expenditures were at least 50% below the poverty line.

To provide further insights on the dynamics of poverty we generate simple indications about how far above the poverty line the movers went, enabling us to make the inference that the nearer a poor household is to the poverty line the higher the probability of moving out of poverty. But the degree to which the welfare of the movers improves beyond the poverty line does not seem to be related to how far below the poverty line the household was in 1992. For example, of the households whose welfare was at least 45% below the poverty line in 1992 but moved out of poverty by 1996, half of them moved beyond the 50th percentile above the poverty line. Nevertheless, the majority of those who moved out of poverty could not increase their consumption expenditure beyond the 50th percentile.

At the rural/urban and regional levels (Table 4) we present a more aggregate poverty transition structure. We describe the conditional distribution of whether or not a household was observed as poor in 1996 given its poverty status in 1992. In 1992 52% of the rural-based panel households were below the consumption poverty line as compared to a corresponding figure of 32% in the urban areas. The poverty dynamics between 1992 and 1996 were also in favor of urban households. Whereas 61% of the urban households that were poor in 1992 moved out of poverty by 1996, only 39% of rural households were out of poverty over the same period, leaving a large proportion (61%) in chronic poverty.

The significant positive trends in poverty in Uganda are also captured in Table 4. More than 60% of the households that were non-poor in 1992 were able to retain their non-poverty status by 1996. Nevertheless, the urban bias of the poverty trends is quite phenomenally reflected in the results that during 1992 to 1996 86% of the urban households as compared to 66% of their rural counterparts maintain their consumption expenditures above the poverty line.[1]

Another aspect of poverty dynamics that is very important for antipoverty policy interventions is the regional distribution. Table 4 provides additional information that corroborates the common knowledge that Northern Uganda is far behind other regions of the country in terms of the extent to which poverty has declined during the past decade.
In this part of the country 58% of the households that were non-poor in 1992 maintained that poverty status by 1996. Although substantial, this proportion is much lower than the corresponding figures of 82% in Western, 81% in Central and 74% in Eastern. In other words, 42% of the households in the Northern region were incapable of maintaining their consumption expenditures above the poverty line and therefore plunged into poverty between 1992 and 1996. An alternative way of looking at the regional differences in the dynamics of poverty is by computing the regional statistics of movement out of poverty. In Northern, only 27% of the households that were poor in 1992 had moved out of poverty by 1996, a figure much lower than the 37% in Eastern, 60% in Western and 63% in Central.

In Table 5 we present the rural/urban and regional distributions of poverty persistence in each of the four years from 1992 to 1996.[2] According to the results, a household is said to have experienced persistent poverty, and is therefore chronically poor, if its consumption expenditure was below the poverty line in each of the four years of analysis. Otherwise, the household was either non-poor throughout the four years or experienced transitory poverty.

Out of the 344 households that were surveyed every year from 1992 to 1996, 13% were poor throughout the period. Throughout the same period, 30% of the households were non-poor, while 57% moved into and out of poverty from one year to another. Of the households that were always poor, 82% were in rural areas. By contrast, the poverty trend was quite positive in urban areas, which accounted for 61% of all panel households that were never poor. Regional distribution shows that the majority (41%) of those who experienced persistent poverty from 1992 to 1996 were in Eastern, followed by Northern (30%). However, for those who were never poor, the smallest proportion (17%) came from Northern while the largest proportion (34%) consisted of Central households.

The discussion of intertemporal persistence of poverty clearly indicates that the distribution of (chronic) poverty is heavily biased against rural areas and has strong regional dimensions. The evidence that the majority of the panel households had mixed statuses (moved into and out) of poverty suggests that vulnerability (the risk of slipping back into poverty) is generally high for a significant proportion of households.

5.2   Poverty transition, 1992 to 2000

In this subsection we discuss a modified version of Table 3. The transition matrix in Table 6 was constructed by ranking the consumption expenditures of the poor in 1992 and those of the non-poor in 1999 in order to determine the destination quintile of the households that moved out of poverty. The first quintile for the 1992 data represents what could be termed the poorest of the poor and the 5th quintile is the top 20% of the poor, that is, those households that were just below the poverty line in 1992. We observe that irrespective of the poverty quintile, a large proportion of the poor were stuck in poverty, ranging from 31% among those nearest to the poverty line to 47% among the poorest of the poor. But there were significant movements out of poverty given that over 60% of the households that were poor in 1992 had moved out of poverty by 1999.

Of those who were out of poverty by 1999 the vast majority ended up in the bottom two quintiles in the non-poor brackets irrespective of the initial quintile. In other words the poor generally experience tremendous constraints in propelling themselves over the poverty line into the upper welfare brackets. The implication of this remark and of the distribution pattern of those who exhibited chronic poverty is that although poor households are heterogeneous, the further below the poverty line a household is, the more difficult it is to move out of poverty, hence the poorest 20% of the population in any cross-sectional data tends to capture the vast majority of the chronically poverty, both in severity and duration.

5.3   Basic characteristics of the chronically and transitory poor

To shed light on the relationship between poverty dynamics and the characteristics of the household, we provide in Table 7 to Table 15 the distribution of poverty status by household size, widowed or female headship, head's level of education, top level of education in the household, and sector of main economic activity of the head. All this categorization is for the initial period, 1992. In addition, we highlight the distribution of poverty status by sector of main economic activity that the household head maintained throughout the period of analysis while also capturing the status of those who changed sectors.

According to Table 7, in the initial period during 1992 to 1996, the households that were observed to be chronically poor had a mean size of six persons compared to four for households that never experienced poverty and five for the transitory poor. In the same table we observe that households with widowed or female heads were more likely to be chronically poor rather than never poor or transitory poor. Although the scope of this analysis does not offer explanations, it is interesting to observe in Table 8 that the proportion of households with widowed or female heads that experienced chronic poverty is smaller than the proportion in the transitory or never poor category, according to the larger but longer-interval 1992/99 data set. Whether this suggests that during the nineties widowed or female heads have successfully benefited from some coping strategies could be an issue for empirical further study. The distribution of poverty status by household size in the 1992/99 panel, however, mirror the results for the four-year panel spanning 1992 to 1996.

The results in Table 9 suggest the importance of education in escaping poverty. Whereas in the initial year people without formal education headed 43% of the chronically poor households during 1992 to 1996, only 14% was the corresponding figure for households that never experienced poverty, besides, high school or university graduates headed none of the chronically poor households. To the contrary, people with high school or university education headed about 17% of the households that maintained their welfare above the poverty line. The equivalent distribution for the transitory poor is intermediate between those for the chronically poor and never poor. Similar patterns are observed in Table 10 for the 1992/99 panel. Descriptive statistics in Table 11 and Table 12 on the initial top level of education in the household indicate the possibility of intergenerational transmission of poverty. Specifically, households whose heads had a given level of education appeared to be unlikely to have other members whose education levels deviated significantly above that of the head. The importance of education highlighted by these descriptive results are concretized in the finding that shifting households from the current median educational level of three years to seven years (completing primary schooling) would result in additional 2.8 percentage point growth in consumption expenditure (Deininger and Okidi, 2002).

In Table 13 and Table 14 similar distributions of initial concentration of activities are observed across the two panel data sets. The dominance of subsistence agriculture among poor Ugandans is reflected in the statistic that at least 80% of the chronically poor households had head's who earned a living from self-employment in agriculture in both panels. In panels, the distribution of households that were never poor is more spread across the sectors than the distributions of the other poverty statuses, suggesting that the non-poor started the period with a more diverse economic base that might have enabled them to exploit different welfare-improving opportunities in the economy over time.

Using the 1992/96 panel, a different look at welfare improvements over time reveals that people who maintained self-employment in agriculture as the main economic activity headed more than 70% of the households that were chronically poor (Table 15). Neither the households that had heads that were formally employed (either in agricultural or non-agricultural sector) nor those who were self-employed in non-agricultural sectors experienced persistent poverty.

Of the households that were non-poor in each of the four years, the majority (35%) changed sectors of main economic activity during the four years. Interestingly, a

large proportion (42%) of the households that experienced changes in poverty status also changed sectors of main economic activity. A similar proportion (43%) of the households that wriggled into and out of poverty were in agricultural self-employment throughout the four years.

These results strongly suggest that self-employment in agriculture is not only the main source of livelihood but it is also one of the major characteristics of the chronically poor. Changing sectors of main economic activities, presumably in line with changing opportunities in the economy, contributes to poverty alleviation but it is also likely to be associated with the risk of zigzagging into and out of poverty.[3]

6 The implication for poverty alleviation policy

This paper demonstrates the value of the available time-series of the Uganda National Household Survey data in profiling poverty dynamics with emphasis on those who remain in poverty for an extended period of time with the objective of establishing whether or not there is evidence that the chronically poor are distinctly different from the rest of the poor. The descriptive results in the paper indicate a distinct pattern in the abilities of different segments of the poor to move out of poverty.

The paper provides evidence that a more disaggregate investigation of poverty dynamics in terms of annual observations from a population where general poverty is declining yields smaller incidence of chronic poverty than when longer intervals are used. We observe that for the 1992/96 panel data set, only 13% of the households were always poor, whereas if we take the endpoints of the same period, a larger proportion (53%) are observed to be poor in both years. The question then is whether or not there is significant value addition in focusing on chronic poverty. In general, we find that the distribution pattern of the chronically poor closely mirror the distribution of overall poverty in terms of both spatial and socioeconomic characteristics but the implications of these characteristics for the potential to move out of poverty are clearly different from one section of the poor to another. Furthermore, with the high and increasing welfare inequality in the country, the chronically poor are prone to miss out on welfare improving opportunities, especially in this highly liberalized economy. This further suggests the need to bring the debate on chronic poverty to the forefront of the poverty agenda and sufficient safety nets have to be developed.

To benefit from the welfare growth opportunities in the economy, the chronically poor need the necessary physical and human assets base. Given that between 1992 and 2000 poor households accumulated assets at a mere 0.3% per annum, a rate far below the 4% figure for the non-poor, households that had a high assets endowment were guaranteed a higher subsequent income and consumption expenditure growth (Deininger and Okidi, 2002). This suggests that the chronically poor must have lacked adequate assets to enable them to also enjoy sufficiently high growth paths that could have bailed them out of poverty.

In as far as the mean Ugandan household in both the 1992 and 2000 full samples holds about 50% of its assets in the form of land[4], increasing peoples' incomes (mainly through agricultural modernization) may be elusive if, among other factors, agricultural land transfer mechanisms are not sufficiently developed. The development of a land transfer mechanism is indeed governed by a land policy that is backed by a land

legislation that is easy to implement at low cost. If Uganda's land legislation does not ensure secure land access and ownership rights for the primary producers, women, who were also observed to most likely head chronically poor households, then the returns to income-increasing land-based activities will likely be sub-optimal.

The distinct disparities in education attainment between the chronically poor on the one hand and the transitory and the never poor on the other, indicate that education is crucial for empowering the chronically poor to improve their welfare. Although the Universal Primary Education program should improve on the education status of the chronically poor, since returns to education are non-negative (Deininger and Okidi, 2002), Universal Secondary Education or targeted education financing system for the chronically poor is necessary if this sub-group should succeed to move out of poverty into the higher welfare brackets above the poverty line.

The results in section seven indicate that there are location-specific factors that drive the observed poverty dynamics in Uganda in which case spatially targeted interventions are required. Programs such as the social fund for the reconstruction of the Northern region and the equalization grants for local governments are therefore crucial for tackling the distributional concerns regarding the growth-led poverty reduction strategy of the country. Such programs should further be disaggregated to ensure proportionate targeting of the severity and duration of poverty in the different segments of the poor.

The basic discussion of the potential importance of certain sectors in the prevalence of chronic poverty suggests the importance of policy incentives and empowerment programs in facilitating household entrepreneurial diversification into off-farm activities. With the evidence of meager asset bases of the poor, there is need to innovatively extend affordable credit financing to the poor. The results that transitory poverty is as likely to occur among predominantly agricultural households as it is among households that change main economic sectors could imply that diversification is associated with risks that require a good understanding if diversification should successfully promote a shift out of subsistence agriculture. The strong evidence on persistent poverty among the self-employed in agriculture and its absence among the formally employed as well as among the self-employed in non-agricultural sectors suggest the need for temporarily transferring inherent diversification risks from the chronically poor to the state. This could be done by initially extending some less-market oriented assistance programs in agriculture in conjunction with strong policy incentives for the desired diversification to take root, especially into off-farm activities.

Further analysis of chronic poverty and its implication for development approaches are required. This paper simply provides some descriptive information on the persistence of poverty at the household level. An important component of future research on chronic poverty in Uganda should comprise a more comprehensive chronic poverty analysis of the 1992 to 2000 panel household survey data. The four-year panel data from 1992 to 1996 could also be further exploited to investigate the pattern of prevailing transitory poverty, for example, the during of staying in or out of poverty and whether or not these phenomena occur in consecutive years. Although some results on growth and poverty in general are cited in the paper for the period 1992 to 2000, in-depth analysis of the panel data for the period needs to be done with specific emphasis on chronic poverty. Such further analyses should shed light on the impact of the various government policies

and programs on the welfare-improving capabilities of the population that has experienced poverty for several consecutive ye ars. Efforts should be made to investigate the determinants of the various characteristics of the chronically poor.

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Table 1: Mean monthly real household consumption expenditure

	Panel households	Panel households excluded	*P*-value for test of differences in mean
1992/93	28873.88	27455.17	0.44
1993/94	34927.63	31759.59	0.10
1994/95	36971.74	33779.48	0.14
1995/96	38812.90	36182.13	0.22

Source: Authors'computation

Table 2: Mean monthly household consumption expenditure

	Panel households	Panel households excluded	*P*-value for test of differences in mean
1992/93	27037.97	27575.23	0.59
1999/00	43717.71	41660.36	0.20

Source: A uthors' computation

Table 3: Poverty dynamics by distance from poverty line

Deviation below Poverty line in 1992	Poverty status in 1996…				
	*Moved out***			*Remained poor*	*Total*
	< 50%	*>= 50%*	*Total*		
<= 5%	53.53	14.29	67.86	32.14	7.87
5 – 10%	34.49	37.93	72.41	27.59	8.15
10 – 15%	31.04	20.69	51.72	48.28	8.15
15 – 20%	34.80	13.04	47.83	52.17	6.46
20 – 25%	1.00	35.00	45.00	55.00	5.62
25 – 30%	28.00	16.00	56.00	44.00	7.02
30 – 35%	25.91	22.22	48.15	51.85	7.58
35 – 40%	27.27	24.24	51.52	48.48	9.27
40 – 45%	25.03	9.38	34.38	65.63	8.99
45 – 50%	15.40	15.38	30.77	69.23	7.30
>= 50%	15.47	15.48	30.95	69.05	23.6
Total	26.69	19.38	46.07	53.93	100

Source: Authors' calculation from 1992, 1996 two year panel household data

Note: Household consumption expenditure per adult equivalent and poverty lines are Appleton's (1999) calculations

** The range < 50% and >= 50% indicate whether 1996 consumption expenditure is within or beyond 50% above the poverty line

Table 4: Poverty transition by location, 1992 – 1996

	Rural			Urban			Central			Eastern			Northern			Western		
	Non-poor 96	Poor 96	Total	Non-poor 96	Poor 96	Total	Non-poor 96	Poor 96	Total	Non-poor 96	Poor 96	Total	Non-poor 96	Poor 96	Total	Non-poor 96	Poor 96	Total
Non-poor in 1992	65.80	34.20	48.3	85.71	14.29	67.94	80.92	19.08	64.53	73.91	26.09	54.25	58.44	41.56	46.67	82.01	17.99	58.40
Poor in 1992	39.27	60.73	51.6	61.47	38.53	32.06	62.50	37.50	35.47	37.11	62.89	45.75	27.27	72.73	53.33	59.60	40.40	41.60
Total	52.09	47.91	100	77.94	22.06	100	74.38	25.62	100	57.08	42.92	100	41.82	58.18	100	72.69	27.31	100

Source: Authors' calculation from 1992, 1996 two year panel household data

Note: Household consumption expenditure per adult equivalent and poverty lines are Appleton's (1999) calculations

Table 5: Distribution of poverty persistence by location

	Rural	**Urban**	Total	**Central**	**Eastern**	**Northern**	**Western**	Total
Poor all four years	81.82	18.18	12.79	4.55	40.91	29.55	25.00	12.79
Non-poor all four years	38.83	61.17	29.94	33.98	22.33	16.50	27.18	29.94
Mixed status	61.93	38.07	57.27	26.90	34.52	16.75	21.83	57.27
Total	57.56	42.44	100.00	26.16	31.69	18.31	23.84	100.00

Source: Authors' calculation from 1992/93 to 1995/1996 four year panel household data

Table 6: Poverty transition matrix, 1992/1999 2-year panel

	Remained poor in 1999	1999 non-poverty quintile				
		1	2	3	4	5
1992 poverty quintile						
1	47.39	26.07	10.9	10.9	4.74	0
2	36.23	28.26	16.67	11.59	5.07	2.17
3	35.09	29.82	18.42	8.77	7.89	0
4	34.34	23.23	27.27	7.07	6.06	2.02
5	31.03	25.29	22.99	13.79	5.75	1.15
Total	38.67	26.66	17.57	10.48	5.7	0.92

Source: Authors' calculation from 1992/93 to 1999/2000 two-year panel household data

Table 7: Initial (1992) household size and headship, 92/96 4-year panel

	Household size	Widowed head %	Female head %
Poor all four years	5.77	15.91	36.36
Non-poor all four years	4.46	9.71	25.24
Mixed status	5.41	13.71	21.83
Total	5.17	12.79	24.71

Source: Authors' calculation from 1992/93 to 1995/1996 four -year panel household data

Table 8: Initial (1992) household size and headship, 92/99 2-year panel

	Household size	Widowed head %	Female head %
Poor both years	6.20	7.57	18.73
Non-poor both years	4.82	11.56	23.51
Mixed status	5.45	11.87	25.79
Total	5.35	10.92	23.53

Source: Authors' calculation from 1992/93 to 1999/2000 two-year panel household data

Table 9: Initial (1992) level of education of the head of household, 92/96 4-year panel, %

	No education	Primary	Ordinary level	High school	University degree
Poor all four years	43.18	50.00	6.82	0.00	0.00
Non-poor all four years	13.59	38.83	31.07	14.56	1.94
Mixed status	29.44	51.78	15.74	3.05	0.00
Total	26.45	47.67	19.19	6.10	0.58

Source: Authors' calculation from 1992/93 to 1995/1996 four-year panel household data

Table 10: Distribution of initial (1992) level of education of the head of household, 92/99 2-year panel, %

	No education	Primary	Ordinary level	High school	University degree
Poor all four years	31.87	56.57	10.76	0.80	0.00
Non-poor all four years	21.00	52.60	20.62	5.01	0.77
Mixed status	35.81	49.17	13.17	1.67	0.19
Total	29.18	51.95	15.66	2.83	0.38

Source: Authors' calculation from 1992/93 to 1999/2000 two-year panel household data

Table 11: Initial (1992) top level of education in the household, 1992/96 4-year panel %

	Primary	Ordinary level	High school	University degree
Poor all four years	79.55	15.91	4.55	0.00
Non-poor all four years	44.66	35.92	17.48	1.94
Mixed status	75.13	20.81	4.06	0.00
Total	66.57	24.71	8.14	0.58

Source: Authors' calculation from 1992/93 to 1995/1996 four -year panel household data

Table 12: Initial (1992) top level of education in the household, 1992/99 2-year panel, %

	Primary	Ordinary level	High school	University degree
Poor all four years	80.08	17.93	1.99	0.00
Non-poor all four years	62.24	28.90	7.71	1.16
Mixed status	77.18	19.85	2.78	0.19
Total	71.81	23.07	4.58	0.53

Source: Authors' calculation from 1992/93 to 1999/2000 two-year panel household data

Table 13: Initial main economic activity of the head of household, 92/96 4-year panel, %

	Agricultural self-employment	Non-agricultural self-employment	Non-agricultural employment	Agricultural employment
Poor all four years	81.82	6.82	9.09	2.27
Non-poor all four years	28.16	37.86	30.10	3.88
Mixed status	60.41	20.81	15.74	3.05

Source: Authors' calculation from 1992/93 to 1995/1996 four-year panel household data

Table 14: Initial main economic activity of the head of household, 92/99 2-year panel, %

	Agricultural self-employment	Non-agricultural self-employment	Non-agricultural employment	Agricultural employment
Poor all four years	80.48	8.37	9.56	1.59
Non-poor all four years	63.01	14.84	20.04	2.12
Mixed status	75.88	8.53	12.80	2.78
Total	71.66	11.00	15.05	2.29

Source: Authors' calculation from 1992/93 to 1999/2000 two-year panel household data

Table 15: Poverty persistence and inter-sectoral shifts

	Main economic activity maintained throughout the four years				Changed sectors	Total
	Agricultural self-employment	Non-agricultural self-employment	Non-agricultural employment	Agricultural employment		
Poor all four years	70.45	0.00	0.00	0.00	29.55	12.79
Non-poor all four years	17.48	25.24	21.36	0.97	34.95	29.94
Mixed status	42.64	8.12	7.61	0.00	41.62	57.27
Total	38.66	12.21	10.76	0.29	38.08	100.00

Source: Authors' calculation from 1992/93 to 1995/1996 four year panel household data

Note: Household consumption expenditure per adult equivalent and poverty lines are Appleton's (1999) calculations

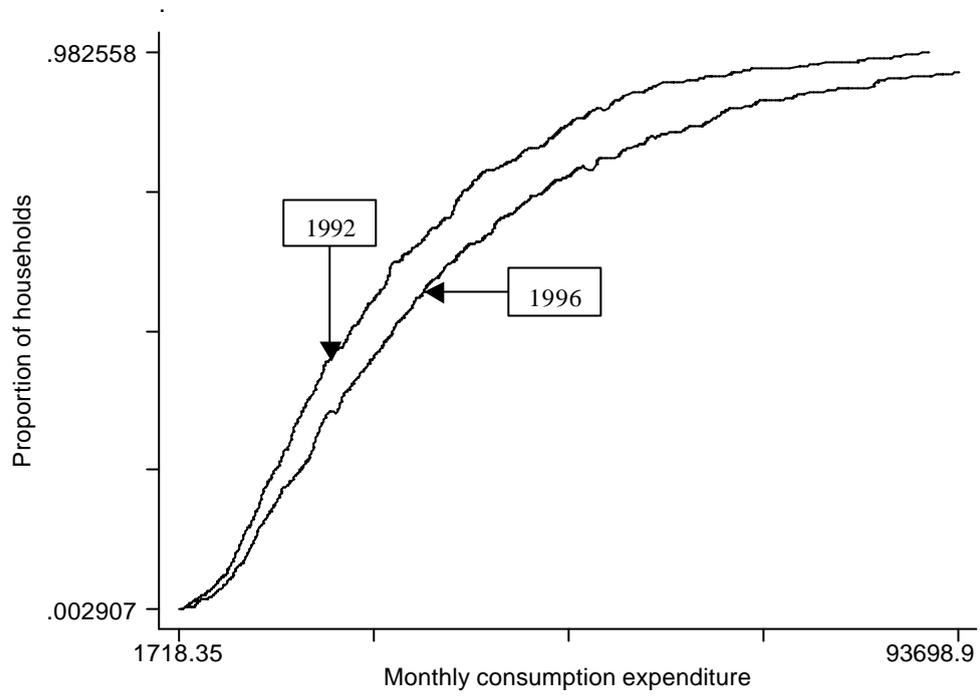**Figure 1:** **Cumulative distribution functions of consumption expenditure – Panel households**

Figure 2: **Cumulative distribution functions of consumption expenditure – Full sample**

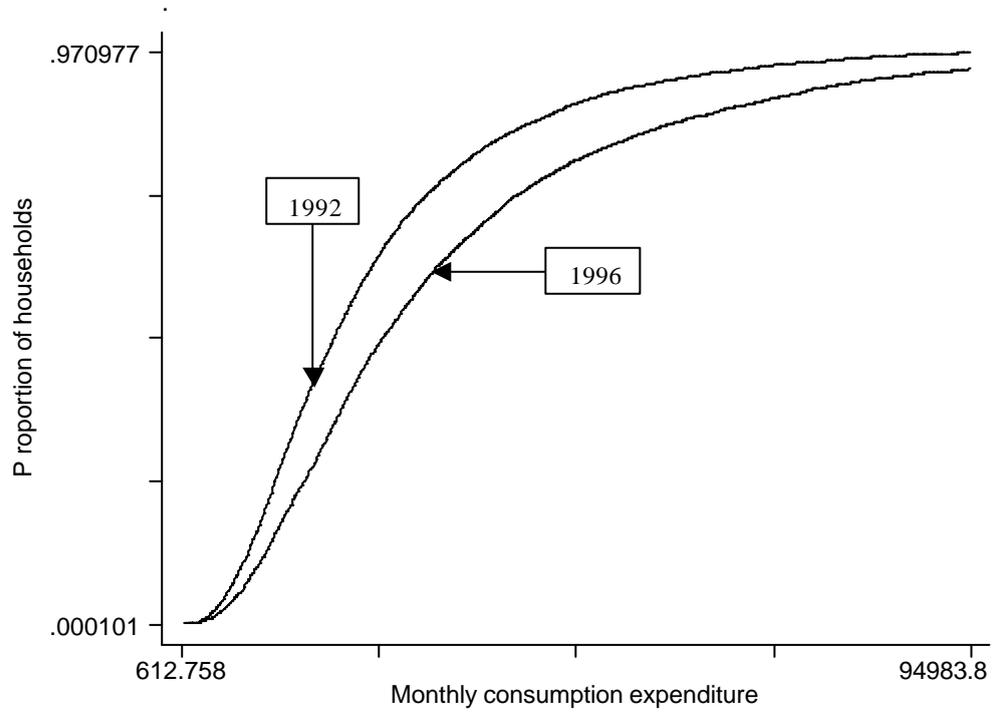**Figure 3:** **Cumulative distribution functions of consumption expenditure – Panel households**
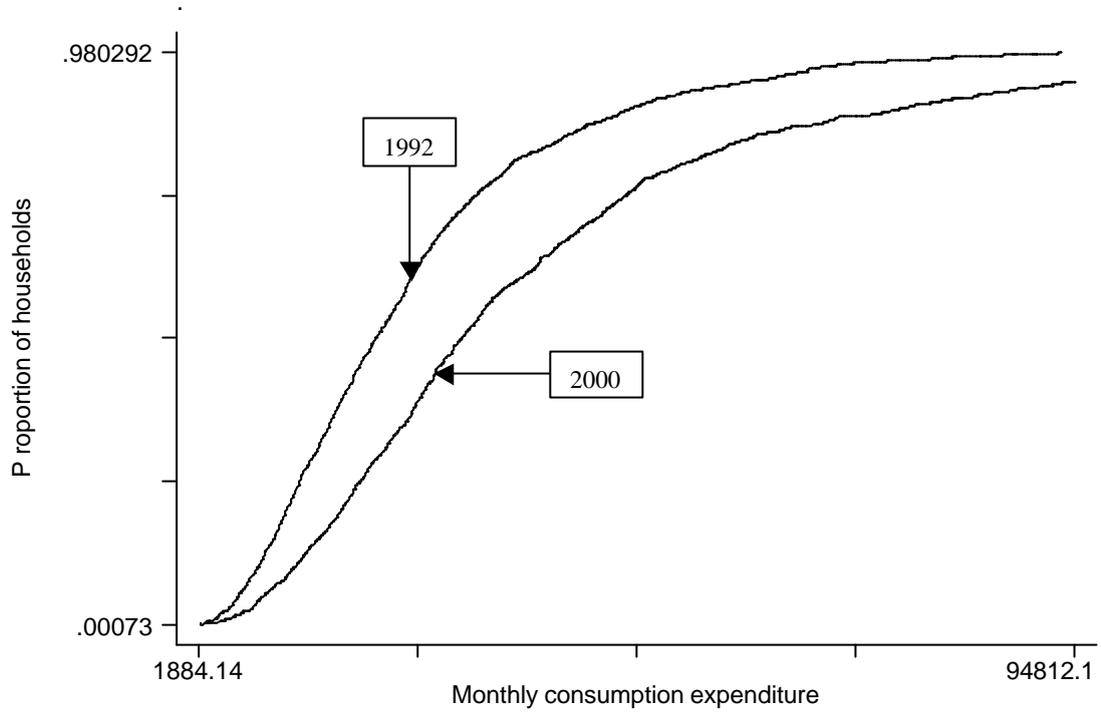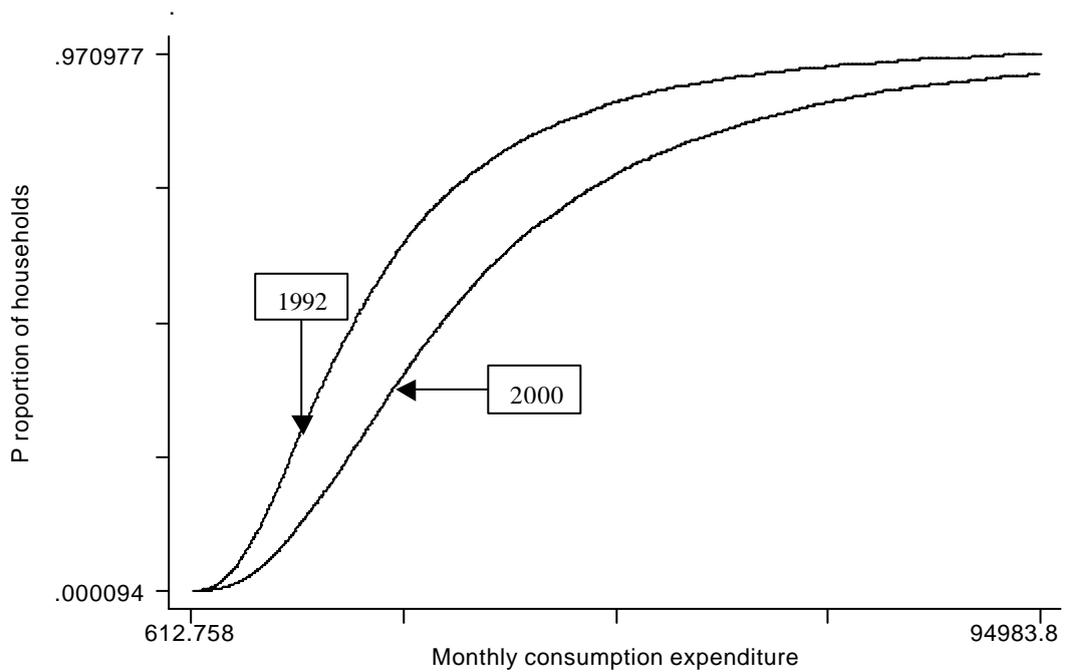

Figure 4: **Cumulative distribution functions of consumption expenditure – Full sample**

[1] Using distance to municipality as a proxy to overall access to infrastructure, panel data analysis by Deininger and Okidi (2002) illustrates that remote rural areas are very likely to experience extended duration of poverty.

[2] The term persistence is used here to refer to chronic poverty as defined in terms of duration of stay in income poverty.

[3] See Deininger and Okidi (2001) for detailed analysis of household enterprise startups in non-farm sectors.

[4] Although the mean share of land in household total assets is higher for the poor than for the non-poor, the difference is only by about ten percentage points.