

“Operationalizing Pro-Poor Growth”

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Uganda Case Study

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Table of contents

Executive summary	7
1 Historical context of growth and poverty reduction in Uganda.....	13
1.1 Key elements of Uganda’s political history from 1962 to 2004	13
1.2 Key features of Uganda’s political economy since 1962.....	14
1.3 Uganda’s economic recovery strategy after 1986.....	15
1.4 Broad growth strategies since 1986	16
1.5 Main sources of growth since 1986	17
1.6 Welfare impacts of the recovery and growth strategies	19
1.7 Concluding remarks	20
2 Growth and its distributional and poverty impact since 1992.....	21
2.1 Sources of Uganda’s growth and poverty reduction	21
2.2 Main correlates of poverty	23
2.3 Main welfare outcomes of Uganda’s economic performance.....	24
2.4 Explaining the welfare outcomes of Uganda’s economic performance.....	27
2.5 Growth and inequality decomposition of the welfare outcomes.....	30
2.6 Sectoral decomposition of the welfare outcomes.....	31
2.7 Understanding welfare inequality in Uganda.....	32
2.7.1 Inequality by spatial and welfare subgroups.....	33
2.7.2 Inequality by household characteristic subgroups	34
2.7.3 Contributions of within- and between-group inequality	35
2.8 Growth elasticity of poverty	35
2.9 Concluding remarks	38
3 Factors affecting the participation of the poor people in growth.....	38
3.1 Macro policies.....	39
3.2 Labor market	40
3.3 Access to productive assets.....	42
3.4 Pro-poor spending	43
3.5 Policies affecting the pattern of growth	45
3.6 Concluding remarks	45
4 Trade-offs between growth and pro-poor growth	46
4.1 The growth approach	46
4.2 The pro-poor growth approach.....	47
4.4 Concluding remarks	48
5 Policy recommendations	49
5.1 Investment Choice.....	49
5.2 Macroeconomic policies	49
5.3 Sector level policies	50
5.4 Political economic environment.....	51
6 References	53
7 Appendices.....	56

List of Tables

Table 1: Growth in consumption expenditure per adult equivalent.....	27
Table 2: Growth and inequality decomposition of poverty, 1992 to 2003	30
Table 3: Real mean monthly expenditure per adult equivalent and inequality.....	33
Table 4: Regression of changes in log of poverty measure on distribution-corrected changes in the log of mean consumption	37
Table 5: Distributional trends and growth elasticities of various regular and extreme poverty measures.....	38

List of Figures

Figure 1: Per capita GDP and population growth rates	14
Figure 2: Uganda Growth in GDP, Agriculture, Industry and Services	18
Figure 3: International Prices of Coffee.....	19
Figure 4: Growth incidence curve, national, 1992-2003 national 1992-1997	Figure 5: Growth incidence curve, 26
Figure 6: Growth incidence curve, national, 1997-2000 national, 2000-2003	Figure 7: Growth incidence curve, 26

List of Appendices

Table A 1: Household survey rounds, 1988-2003	56
Table A 2: GDP at constant (in 1997/98 prices) – Growth rates	59
Table A 3: Major sectors as a percentage of Total GDP.....	60
Table A 4: Spatial and sectoral distribution of poverty, 1992 to 2003	61
Table A 5: Sectoral decomposition of poverty, 1992-2003	62
Table A 6: Inequality by spatial and welfare groups, 1992-2003	63
Table A 7: Inequality by household head’s characteristics, 1992-2003	64
Table A 8: Percentage contributions of within- and between-group inequality	65
Figure A 1: Proportion of household heads with no formal education	66
Figure A 2: Cumulative monthly expenditure per adult equivalent, 1992 to 2003.....	67
Figure A 3: Cumulative monthly expenditure per adult equivalent, 2000 and 2003	67

List of Abbreviations:

EPRC	Economic Policy Research Centre
ERC	Economic Recovery Program
ERP	Economic Recovery Program
ESAF	Enhanced Structural Adjustment Facility
FDI	Foreign Indirect Investment
FGT	Foster-
GDP	Gross Domestic Product
MoFPED	Ministry of Finance, Planning & Economic Development
MTCS	Medium Term Competitiveness Strategies
MTEF	Medium Term Expenditure Framework
PAF	Poverty Action Fund
PAPSCA	Program for the Alleviation of Poverty & Social Costs of Adjustment
PEAP	Poverty Eradication Action Plan
PMA	Plan for Modernization of Agriculture
PMAU	Poverty Monitoring & Analysis Unit
SAC	Structural Adjustment Credits
SAP	Structural Adjustment Program
TFP	Total Factor Productivity
UBoS	Uganda Bureau of Statistics
UIA	Uganda Investment Authority
UPE	Universal Primary Education
UPPAP	Uganda Participatory Poverty Assessment Project

Executive summary

This case study uses macro evidence and detailed analysis of micro data to assess the extent to which Uganda's growth experience since 1992 has been pro-poor. After reviewing the country's historical context in Section I, the distributional impact of the growth benefits of the country's recovery and reform programs are explored using nationally representative time series of cross-sectional household data in Section II. Issues affecting the participation of the poor in the growth process and the trade-offs associated with pursuit of pro-poor versus pro-growth policies are discussed in the subsequent sections before concluding with some policy recommendations. In the paper, pro-poor growth is used to mean growth that is associated with declines of a given measure of poverty. The overall objective of the study is to provide information that can help in identifying mechanisms of accelerating the rate at which growth reduces poverty.

The historical context of Uganda's political economy

Since gaining political independence from Britain in 1962 Uganda has experienced numerous political regime changes with far-reaching socioeconomic implications. In 1971 Idi Amin took over power through a military coup following which he ruled by decree up to 1979 when he was toppled by a combined military might of Tanzanians and Ugandans who had been in exile. After Idi Amin's regime, Uganda underwent six political regime changes. The numerous political episodes had a devastating toll on the country's economy and people's wellbeing as infrastructure and institutions collapsed.

During the 1970s and 1980s the public sector was characterized by inefficient state-run enterprises. This led to wastage of public resources, poor service delivery and repulsive environment for private investment. The government shifted further away from playing a regulatory role to engaging in direct control of the economy.. For example, the foreign exchange rate was fixed, as a result of which the shilling became overvalued. Marketing of agricultural products was through monopoly marketing boards. Government fixed the prices of agricultural commodities and passed on to the farmer a fraction of the international prices of the commodities. Cooperative movement was used to mobilize farmers to produce export commodities. Coupled with an efficient farmer extension service system, agricultural production increased tremendously and Gross Domestic Product (GDP) grew at 4-6% per year. Inequality was hardly an issue during the 1960s; the egalitarian policies ensured equitable agriculture-led economic growth.

The country's population increased from 6.5 million in 1959 to 9.5 million in 1969 before rising further to 12.6 million in 1980. In 2002 the population was 24.5 million, with more than 50 percent of the population comprised of those below 15 years. Uganda's population growth has broadly kept ahead of the growth of GDP per capita. Since the turn of the century, growth of GDP per capita has significantly lagged behind the rate of population growth, which could partly explain the increases in poverty observed since 2000.

Due to the political, civil and economic disorder that ensued through the mid 1980s, the economy contracted significantly as a direct result of destruction, dissaving, physical and human capital flight, and reduced productivity through disruption and diversion of expenditure. GDP declined by 40% from 1971 to 1986, which is estimated to have translated into a one percent annual decline in the economy. As the economy shrank, the welfare indicators worsened.

Following the restoration of relative political and economic order in most parts of the country in the second half of the 1980s, coupled with strong leadership commitment to reform, the country attracted substantial donor support for an Economic Recovery Program (ERP) that was launched in May 1987,

an initiative that was immediately followed by a sequence of Structural Adjustment Programs (SAP). In order to accelerate private-sector-led and investment-driven growth, government relaxed numerous constraints and introduced attractive incentives for foreign direct investment in 1991. Successful implementation of privatization of non-performing state enterprises further induced efficiency and boosted the growth of the private sector in industrial, commercial, agricultural, and hotel sectors. In addition, a Medium Term Competitiveness Strategy (MTCS) was designed to enhance overall growth of the private sector.

Current development framework

Concerns about the likely poverty impact of the reforms prompted the preparation and implementation of the Program for the Alleviation of Poverty and Social Costs of Adjustment (PAPSCA), whose focus on poverty was later observed to be narrow. In 1997, Uganda prepared the Poverty Eradication Action Plan (PEAP), which became adopted as the country's holistic development framework covering economic management, governance and security, increasing the incomes of the poor, and improving delivery of social services. To operationalize the PEAP, detailed plans of action and goals for particular sectors are developed in the respective sector development plans, the implementation of which depends on the resources (spending ceilings) provided within the Medium Term Expenditure Framework (MTEF), which is a three-year rolling spending plan that links priority public spending areas to medium-term development goals.

The PEAP targets GDP growth rate of 7% per annum to achieve its overall objective of reducing headcount income poverty to less than 10%. But according to Bevan *et al.* (2003), in order to achieve the target overall growth rate, investment as a ratio of GDP would have to jump by 6 percentage points to 27%; Per capita GDP has to grow at more than 3% per annum; and poverty headcount should respond at a more than proportionate rate of -2.49 for every percentage point rise in income.

Macroeconomic outcomes of Uganda's reforms

The overall outcome of the reform efforts was the growth of the economy at an average rate of 6.3% per annum for the fifteen fiscal years starting from 1987/88. The fastest growing sectors were the small ones such as mining and quarrying, manufacturing, hotels and restaurants, and construction. Community services (education, health and general government services), which in 2002/03 accounted for 19.1% of GDP, grew at an average rate of 6.8% during the fifteen years from 1987. This was slightly higher than the average GDP growth rate of 6.3%. The growth of community services is partly attributed to increase in donor-supported public spending on these sectors.

The growth benefits of the recovery effort were characterized by some degree of structural shifts as well, with the share of agriculture in GDP dropping from 56.1 to 41.5 between 1985/86 and 1998/99 and then declining only slightly to 40.5% in 2001/02. Relative to GDP, investment increased from 8.4% in 1985/86 to 19% in 1998/99 after which it only slightly rose to 20.7% in 2001/02. Over the same period exports share in GDP jumped from 5.8% to 11.8% before tapering off to 11.9 after 1999/2000. But the share of import has continuously risen, from 8.6% in 1985/86 to 24.2% in 1998/99 and up to 27.7% in 2001/02. Government revenue grew from 6.6% of GDP in 1985/86 to 11.6% in 1998/99, but has hardly risen beyond the 12.1% registered in 2001/02.

Uganda's economic growth has thus been driven mainly by donor support, and increased private sector investment, especially in industry and construction. The growth of monetary agriculture averaged 5.6% between 1987 and 2003, which was lower than the average GDP growth rate of 6.3%. Broadly these numbers suggest two things: first, the fast growth of the small sectors compensated the lower growth of agriculture; second, the growth of community services, whose share in GDP in

2002/03 was 19.1% seems to have been a key driver of Uganda's GDP growth between 1987 and 2003.

From 1995/96, GDP growth began declining but remained positive and reasonably high. Industrial growth was steady while the rate of growth of agriculture and services continued to decline. Despite increases in farm gate prices of agricultural prices because of liberalization, the production incentive structure favored non-farm activities. The ratio of the monetary to non-monetary agriculture has remained unchanged overtime. On the external front, rising oil prices and unfavorable international coffee prices have contributed to the economic slowdown. Some analysts emphasize that the easier part of engendering growth ended by 1998/99 after which the expected challenge of sustaining high recovery-related growth set in. Essentially, after 1998/99, structural transformation virtually stalled, investment rates plateaued well below what is estimated for realizing the national poverty goals, exports-GDP ratio tapered off to just above 11% while the reverse was true for imports, government revenue as a share of GDP stagnated well below Sub-Saharan African average, and domestic saving remained abysmally low.

Welfare outcomes of Uganda's reforms and development strategies

Analysis of consumption expenditure from the national household survey data spanning 1992/93 to 2002/03 shows that the recovery and growth strategies have impressively been pro-poor, with the headcount index of total income poverty declining from 56% in 1992/93 to 34% in 1999/00 after which it rose to 38% in 2002/03. However, poverty in Uganda remains a predominantly rural phenomenon and particularly very pronounced among crop farmers. Rural poverty headcount declined from 60% in 1992 to 37% in 2000 before rising to 42% in 2003. The corresponding figures for urban areas are 28, 10 and 12 percent. The disproportionate contribution of rural areas to the national poverty has remained unchanged at about 96%. Between 1997 and 2000 consumption expenditure per adult equivalent for the richest 10% of the population grew by 20% while that of the poorest 10% grew by only 8%. In the 2000-2003 period the richest 20% of Ugandans experienced a 9% increase in consumption expenditure while the rest of the population reported a decline in consumption expenditure. This translated into the reported increase in poverty and the rise in welfare inequality from a Gini coefficient of 0.40 in 1999/2000 to 0.43 in 2002/2003. Regional imbalance, especially between Northern and the rest of the country has persisted, with Northern being the only region where consumption expenditure declined between 1997 and 2000. Although between 2000 and 2003 the poverty headcount in Northern remain about the same while it was rising for the rest of the country, this region has maintained the highest incidence of poverty of not less than 64%.

Although the distributional pattern of growth in household consumption expenditure for the whole period of analysis (1992-2003) disfavored the poor, some specific segments of the period such as the 1992-1997 period experienced growth that was disproportionately in favor of the poorest 20%, with that fraction of the population recording above-average growth. It is noteworthy that the 1992-1997 period was also the period when agriculture recorded impressive growth rates. During this period the Gini index fell from 0.36 to 0.35. Essentially, this distributional shift favored the poor quite substantially such that the rate of pro-poor growth was higher than the ordinary growth rate. Of all the growth episodes considered in this paper, the highest mean growth rate of 6% was recorded for the period 1997-2000 during which only the richest 20% experienced above-average growth. Welfare inequality widened in this period, from a Gini coefficient of 0.35 to 0.40. For the whole period of analysis and for 1992-97 and 1997-2000 periods, growth was robust across percentiles and poverty headcount fell significantly. But as already noted, a dramatic pattern is observed for the 2000-2003 period. The mean growth rate was negative, the top quintile was the only subgroup that enjoyed positive growth, the Gini index increased from 0.40 to 0.43, and poverty headcount rose from 34 to 38 percent. It is striking to note that while only the top 20% enjoyed positive growth during this period, the real GDP growth rate was still about 5.8% per annum. Essentially, growth (much more than

redistribution) has driven the poverty reduction in Uganda during the 1990s, a period of successful macroeconomic management.

Estimated national elasticity of poverty with respect to growth indicate that a one-percent increase in real mean consumption expenditure per adult equivalent, with no change in distribution, reduces total poverty headcount index by 1.83%. At the annualize mean growth rate of 2.98% and with initial (1992/93) total poverty headcount index of 56%, poverty is calculated to fall by about 5.5% per year, or 3.1 percentage points in the first year after the initial period. Using straight line compounding, by 1997 (four years later), with no change in distribution, the headcount index is calculated to fall to about 44%, which is the actual observed level, although the Gini index fell (but only slightly) from 0.36 to 0.35 between 1992 and 1997. For the whole period 1992-2003, with no change in distribution, the headcount index would have fallen to about 31%. Considering the decomposition analysis discussed in the paper, we can roughly say that the 8 percentage-point contribution of inequality to rising poverty, indeed, brings the headcount index to 39%, which is just one percentage-point more than the actual total poverty headcount in 2002/2003. In a nutshell, the estimated elasticities provide very good predictions of poverty headcounts.

Insights on the recent reversal in the poverty trend

The distributional pattern of growth in household consumption expenditure and the corresponding changes in poverty headcount, especially after 1999/2000, is reflected in the fact that agriculture, where the bulk of the population is, has grown very slowly. In addition, the share of agriculture in the national budget has remained below 4% such that the innovative framework for modernization of agriculture has largely remained unimplemented. Furthermore, the main agricultural tradable, coffee, suffered significant price falls after the boom of the mid 1990s. Although diversification of the export base into commodities such as fish and flowers have paid off, the poverty effects are very limited given that only a small segment of the population is engaged in these commodity sub-sectors.

Between 1999/2000 and 2002/2003 internal terms of trade between agriculture on the one hand and industry and service on the other deteriorated against the former by 20%, severely affecting purchasing power of the vast majority of Ugandans. Micro-data evidence shows that food consumption per capita fell by 3% in nominal terms between 1999/2000 and 2002/2003. Consumption of home produced food fell by around 20% per capita. The median income from crop farming reported in 2002/2003 was lower than that for the 1999/2000 survey in nominal terms. The plausible explanations for declining crop yield include declining soil fertility, low utilization of productivity enhancing technologies and poor land management practices. With an annual population growth rate of 3.4 percent, and fertility rates of 6.9 children per woman of child-bearing age, the resources available for welfare improvement for each individual in agricultural-based households are likely to have dwindled.

Between 1999/2000 and 2002/2003, there were significant inter-sectoral shifts by households. The proportion of Ugandans living in households with crop agriculture as the main economic activity declined from about 68 to 52 percent. The share in non-crop agriculture and trade increased from 3 to 5 percent and 7 to 14 percent respectively, while that in manufacturing doubled to 7%. In the same period, the proportion of the population depending on government services as the main economic activity grew by half a percentage point to 6%. The observed structural shifts are correlated with the growth trends in the monetary crop and non-monetary agricultural components of GDP for the same period. These shifts, however, did not yield overall improvements in welfare. Poverty declined in households whose heads reported non-crop agriculture, mining and construction, and government services as the main economic sectors, all of which constituted only about 13% of the population in 2002/2003. In general, there has been a significant shift from agriculture to non-agricultural self-employment, a move that is consistent with: (i) low returns in agriculture prompting diversification into other activities; and (ii) failure of the wage employment sector to absorb the labor released from

agriculture. A compounding problem is the insecurity from the civil war and cattle rustling in the northern and eastern parts of the country. The cost of the civil war has been estimated at 3% of GDP.

Main correlates of Uganda's poverty outcomes

The main correlates of poverty in Uganda have been empirically identified to be economic policy environment, physical household assets, human capital accumulation, health conditions, physical infrastructure, and external shocks. The pattern of change of these factors have been mixed. Whereas the average household accumulated total physical assets at about 2.7% per annum during the 1990s, asset accumulation, at 0.3% per annum, was virtually absent among the poor compared to a 4% rate for the non-poor. Human capital has improved significantly, for example, the proportion of household heads with no formal education has consistently declined overtime, from 34 to 27 percent and from 21 to 12 percent for the poor and non-poor respectively between 1992 and 2003. While health conditions remained a problem between 1992 and 2000, with the number of adult days lost to illness by the average household rising from 8 to 12. A major burden to households is AIDS related shock, particularly because households have to sell off their assets in order to meet medical bills, plus the resulting high incidence of foster childhood associated with AIDS related deaths. In spite of all this, average household size increased from 4.7 in 1992 to 5.1 in 2003. The corresponding numbers for the poor are 5.4 and 6.0, which exert severe burdens on households.

The liberalization of the coffee sector in 1991/92, which increased the share of farm-gate prices in border prices from about 20 to 30 percent to more than 80%, together with the coffee boom in 1994/95 and easy availability of high-yielding varieties resulted in increased revenues to Ugandans in coffee production, processing and marketing. But in the absence of diversified economic base, predominantly agricultural households are highly vulnerable to volatility in the prices of commodities such as coffee. Although about 45% of Ugandan households have non-agricultural enterprises, the enterprises are quite small given that less than 15% of the households with non-agricultural enterprises employ any labor at all; reliance is on family labor.

Access to electricity is severely limited and is one of the main constraints to growth and investment of firms in Uganda. Nationally, the percentage of households living in communities with electricity remained stagnant between 1992 and 1996, but an increase from 23.5% in 1996 to 26% in 2002 was recorded. With a rapidly expanding supply of more educated workers in the wake of UPE and increased enrollment at tertiary level, supply of infrastructure, such as electricity, could easily develop into a binding constraint that might, in the extreme, reduce the scope for generation of well-remunerated employment, thereby affecting the incentives to acquire education, especially at lower levels.

Qualitative analysis by the UPPAP, which conducted field exercises in 1998/99 and 2001/02, identifies hard work, multiple income sources, access to land and other assets, and small family as the main factors for staying out of poverty. Poor access to markets, selling of assets to cope with illness, high taxes, and casual laboring were the key factors associated with falling into poverty. In both the 1998/99 and 2001/02 participatory assessment, people felt that poverty was increasing in spite of the positive growth in average consumption expenditure and the high GDP growth rates recorded around these periods.

Main poverty-related macroeconomic and investment challenges

On the public sector side, there are challenges to raising additional resources to finance the country's development process on the one hand, and to remove inefficiency in the use of financial resources on the other. There is concern about the size of the fiscal deficit and its implications for other macroeconomic aggregates particularly inflation and interest rates. It is broadly agreed that the fiscal

deficit should be reduced to give the private sector space and a favorable environment to develop. However, reduced public sector spending could adversely affect the quantity and quality of social services delivered by the public sector. Major challenges in this regard are corruption and general inefficiency in the use of public resources at all levels of government.

Private sector participation in the development process face several constraints such as limited access to productive assets, high interest rates, low level of technology, costly utilities, and inadequate public sector support. Most importantly, domestic investors face an unfavorable environment to doing business compared to foreign investors.

Policy focus for way forward

With the recent increase in poverty levels between 2000 and 2003, witnessed at a time when Uganda registered fair rates of economic growth of about 4 - 5%, there is need to examine the relationship between pro-poor and pro-growth policies. Poverty increased at a time when government was implementing pro-poor policies albeit with reduced participation by the poor in the growth process. What was witnessed is a likely case of concentration of opportunities and output in the hands of top firms and individuals, hence the observed deepening welfare inequality. There is thus the need for policy incentives to facilitate redistribution of opportunities for growth and welfare improvements.

In particular, a balance between investments in the production of tradable goods versus those in the production of non-tradable goods requires a close review with the objective of ensuring the sustainability of the realized progress in economic growth. Tradeoffs that arise from macroeconomic policy stances require that prioritization of macroeconomic intermediate targets (inflation, exchange rates, build-up of reserves, and interest rates) should be explicitly linked to the primary objective of pro-poor growth as a development objective. In particular, the sector where the bulk of the poor is should receive priority emphasis in the national budget. In addition, where private sector incentives are weak, the state should reconsider taking a lead and direct investor role under strict anti-corruption monitoring and evaluation mechanism.

The importance of a sound policy environment for pro-poor growth cannot be overemphasized, however, the role of initial endowments of physical and human capital, and public services as drivers of growth of household welfare, should be guaranteed if good policies are to result in sustained welfare growth. Availability of affordable credit financing for real sector growth should be given priority consideration. In a nutshell, spending on macroeconomic management and on the service sector along with public administration has to be balanced with spending on activities that have a direct impact on immediate real sector growth parameters.

Guaranteeing peace to all would make planning for household economic and demographic growth to be a realistic approach to household development. A peaceful environment does not only make planning of family size realistic but it also guarantees that returns to investment are attainable with greater certainty after controlling for the standard risks in investment. Ensuring security of life and property would also encourage the highly desirable foreign direct investment as a potential driver of growth, especially given the low levels and productivity of capital in poor countries like Uganda.

In sum, Uganda's history offers a lot to learn from. More importantly, its demonstration of economic recovery through commitment to sound economic policies, with country-owned initiatives for poverty reduction, provide a useful experience for other economies transiting from conflict to recovery. But significant challenges in sustaining growth-led poverty reduction when the dividends of recovery are exhausted provide equally important lessons for low-income countries.

1 Historical context of growth and poverty reduction in Uganda

1.1 Key elements of Uganda's political history from 1962 to 2004

Uganda became politically independent from British rule in 1962. In terms of development, the country's development indicators at that time compared favourably with those of South Korea, which has since developed enormously. Uganda opted for a mixed economy but with a heavy hand of Government in the economy. In 1969, Government "nationalized" big private businesses such as banks. Government's overarching objective in the 1960s was the improvement of welfare of Ugandans through a strong co-operative movement and state enterprises. Unfortunately, the co-operative movement became politicized, and eventually collapsed. State enterprises were inefficiently run, incurred losses, and generally became a burden on the national budget.

On the political front, Uganda held multi-party elections were held in 1962 under the 1962 Uganda Constitution, which provided for co-existence of traditional kingdoms alongside the central government. The king of Buganda Kingdom, Sir Edward Mutesa became the first honorary president of Uganda. Milton Obote was the elected Prime Minister and leader of government business. The 1962 constitution that provided for co-existence between the central government and the traditional kingdoms worked only for a short time. In 1967 Milton Obote, Uganda's Prime Minister at that time, abrogated the 1962 constitution and replaced it with the 1967 constitution that abolished kingdoms and turned Uganda into a republic. This sowed seeds for political instability, which had adverse consequences on people's livelihoods,

In 1971, Idi Amin took over the reigns of power through a military coup and declared his regime the "second republic of Uganda". Kingdoms and democracy were thus silenced. Idi Amin ruled by decree from 1971 to 1979 when a combined force of Tanzanian and Ugandan forces pushed him out of power through armed struggle. After Idi Amin, Uganda witnessed quick changes in its leadership. Yusuf Lule's short reign of 68 days followed that of Idi Amin. Godfrey Lukongwa Binaisa that came to power after Lule ruled for only one year before getting replaced by Paulo Muwanga who ruled Uganda as a Chairperson of a ruling military commission. Within a period of about one year, Paulo Muwanga handed over power to Milton Obote after elections in 1980 under the 1967 constitution.

In 1981, Yoweri Museveni who had been vice Chairperson of the military commission took up arms to fight and overthrow Milton Obote's government on account of rigging the 1980 democratic elections. Despite the armed opposition, Milton Obote persisted in power from 1980 to the time Tito Okello Lutwa overthrew him in a military coup in 1985. By that time, there were many fighting groups in Uganda and it became a daunting task for Lutwa to establish peace through out the country. The government of the day approached some of the fighting groups to negotiate for peace. The Nairobi peace talks of that time is an example. The complexity of the political situation at that time rendered such peace initiatives fruitless. In 1986 Yoweri Museveni's forces overran Kampala thus bringing Museveni into power. The war adversely affected peoples' livelihoods especially in areas like Luwero that were the epicenter of the war.

Since 1986, various armed groups have fought President Yoweri Museveni's government with the aim of overthrowing it. The Lord's Resistance Army (LRA) and the Allied Democratic Forces (ADF) are major groups that have fought Museveni's government. In war ravaged areas, especially northern Uganda, poverty increased during the last two decades, notwithstanding general decline in poverty at the national level during that period. However, since 1986, government has put in place various measures to ensure democratic and constitutional rule. Key ones include the promulgation of the 1995 Uganda constitution, and the enactment of the 1997 Local Government Act. Uganda held presidential

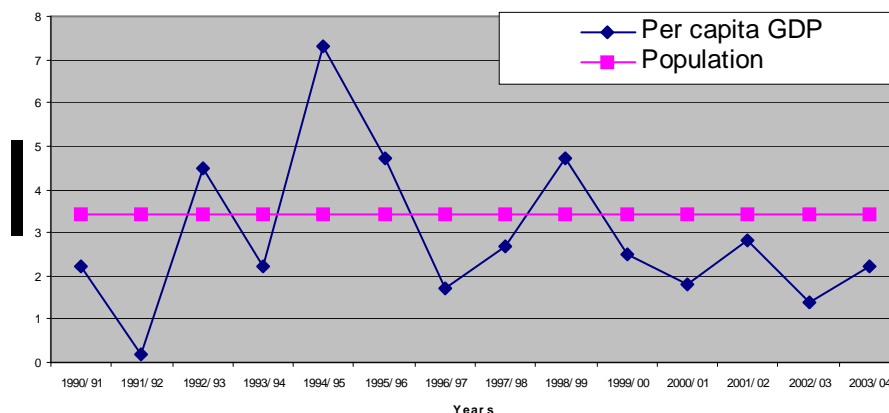
and parliamentary elections in 1986 and 2001. But the 1995 Uganda constitution limits the role of political parties, a matter that has become of great concern to many Ugandans and sections of the international community. This matter and others are being addressed through a constitution review process in the parliament of Uganda.

1.2 Key features of Uganda’s political economy since 1962

For about two decades from Uganda’s independence in 1962, controls of various forms characterized Uganda’s economy. For example, the foreign exchange rate was fixed, as a result of which the shilling became overvalued. Marketing of agricultural products was through monopoly marketing boards: there was the Lint Marketing Board for cotton; the Coffee Marketing Board for coffee; the Produce Marketing Board for agricultural food products like beans and maize. Government fixed the prices for agricultural commodities and passed on to the farmer a fraction of the international prices of the commodities. During the 1960s the Uganda government of the day used the co-operative movement to mobilize farmers to produce mainly the export commodities. Coupled with an efficient farmer extension service system, agricultural production increased tremendously and Gross Domestic Product (GDP) as a whole grew at impressive rates of 4-6% per year. Paucity of data notwithstanding, inequality was hardly an issue during the 1960s; the egalitarian policies ensured equitable agriculture-led economic growth.

Uganda’s population at the time of independence was about 7 million people. The population increased from 4.9 million in 1949 to 6.5 million in 1959. It then increased to 9.5 million in 1969 before increasing further to 12.6 million in 1980. In 1991 Uganda’s population stood at 16.7 million and was about 24.5 million in 2002. According to the Uganda Bureau of Statistics (UBoS, 2003) more than 50 percent of the population is below 15 years of age. Uganda’s population growth has been relatively high as shown in Figure 1. With this population growth trend, Uganda requires about 4% annual rate of growth of its GDP per capita in order to achieve its poverty reduction target of less than 10% headcount by the year 2017.

Figure 1: Per capita GDP and population growth rates



Economic decline characterized the Ugandan economy during the 1970s starting from the time Idi Amin took over power in 1971. The phenomenal growth and welfare improvements the country registered in the 1960s was short-lived because of the political developments and economic mismanagement during the 1970s. The 1971 military coup that brought Idi Amin to power marked the

beginning of Uganda's economic woes. Uganda suffered economic and political sanctions by the international community following the expulsion from the country of Ugandans of Asian origin, whom Idi Amin had accused of economic exploitation. Due to the political, civil and economic disorder that ensued through the mid 1980s, the economy contracted significantly as a direct result of destruction, dissaving, physical and human capital flight, and reduced productivity through disruption and diversion of expenditure (Collier and Reinikka, 2001). GDP declined by 40% from 1971 to 1986, which Collier and Ritva estimate to have translated into a one percent annual decline in the economy. As the economy shrank, the social welfare indicators worsened. Uganda's economic performance during the early 1980s was not better mainly because of political and social unrest and continued mismanagement of the economy. In 1984, the economy shrank by 4%; in 1985 it grew by only 0.2% and in 1986 by only 1.1%. Annual inflation rate rose to three digits mainly because of Government financing of the fiscal deficit through borrowing from the domestic market.

Poverty increased during the early 1980s as a consequence of a shrinking economy and political instability. Government approached the IMF and World Bank for assistance. However, no sooner had the government started implementing stabilization policies than it abandoned them in 1984, partly due to the political demand of fighting the then guerilla forces of Yoweri Museveni. Consequently, poverty rose during the first half of the 1980s.

1.3 Uganda's economic recovery strategy after 1986

Uganda embarked on implementation of economic reforms in 1987 with a view to correcting macroeconomic imbalances and removing inefficiencies in production and distribution of goods and services so as to register high rates of economic growth. Unlike in previous years, government recognized the private sector as a partner in development. The private sector was to lead the process of economic growth while the state ensured macroeconomic stability and legal and institutional frameworks that are supportive of private sector led economic growth. In government's view, foreign direct investment (FDI) was to play a lead role in private sector development.

Following the restoration of relative political and economic order in most parts of the country in the second half of the 1980s, coupled with strong leadership commitment to reform, the country attracted substantial donor support for an Economic Recovery Program (ERP) that was launched in May 1987, an initiative that was immediately followed by a sequence of Structural Adjustment Programs (SAP). The ERP that was supported by the Economic Recovery Credits (ERC) and Structural Adjustment Credits (SAC) from the International Development Association and the Enhanced Structural Adjustment Facility (ESAF) from the International Monetary Fund, plus other multi-lateral and bilateral assistance were primarily aimed at realizing economic rehabilitation, growth, domestic financial stability, and low inflation rates. An important aspect of the reform strategy was trade liberalization through extensive reduction of nontariff barriers, competitive tendering for government purchasing and a switch from export taxation to import taxation. Significant gains were realized from trade liberalization, for example, the 1991/92 abolition of coffee export tax together with overall coffee marketing liberalization increased competition among exporters, resulting in producer prices received by coffee growers as a share of border prices increasing sharply from 30% to more than 80% (Collier and Reinikka, 2001).

Concerns about the likely poverty impact of the reforms prompted the preparation and implementation of the Program for the Alleviation of Poverty and Social Costs of Adjustment (PAPSCA), whose focus on poverty was later seen to be narrow. In 1997, Uganda prepared the Poverty Eradication Action Plan (PEAP), which turned out to be the country's holistic development framework covering economic management, governance and security, increasing the incomes of the poor, and improving delivery of social services. Another dimension of improving delivery of social services was decentralization, which was implemented with a view to improving efficiency and quality in the delivery of social

services, among other things. The enactment of the Local Government Act in 1997 marked the beginning of devolution of political power to local governments, and with it the power to manage the development process including public finance at the local government level. However, the extent to which decentralization led to improvements in quality of social services and efficiency in management of public resources is still debatable.

1.4 Broad growth strategies since 1986

As noted already, maintenance of macroeconomic stability has been Uganda's immediate objective, especially from 1993. Working closely with the fiscal authorities, the central bank (Bank of Uganda) ensured that money expanded at a rate commensurate with the demands of the real sector. Excess liquidity would be mopped up by issuance of treasury bills (treasury bills were issued for liquidity management purposes only and not for short-term financing of the national budget) and/or sale of foreign exchange. The strategy led to significant growth rates averaging 6.5% per annum for the 1990s and income-poverty incidence fell from 56% in 1992 to 34% in 2000 before rising to 38% in 2003.

To operationalize the PEAP, detailed plans of action and goals for particular sectors are developed in the respective sector development plans, such as the Education Sector Investment Plan, the Health Sector Strategic Plan, the Plan for Modernization of Agriculture, the Social Development Sector Strategic Plan, and the Road Sector Development Plan. The implementation of the various sector-wide plans depends on the resources (spending ceilings) provided within the Medium Term Expenditure Framework (MTEF), which is a three-year rolling spending plan that links priority public spending areas to medium-term development goals.¹ Because of budgetary discipline, which is central to MTEF operationalization, any shortfalls in resources are met with matching within-year budget cuts except for activities under the Poverty Action Fund (PAF) (a common pool to which debt-relief funds are channelled for use on directly poverty-reducing programs).² But making within-year adjustments or cuts in the releases of funds disrupts original funding plans because it increases volatility and weakens the budget as the instrument for allocating public resources (Henstridge and Kasekende, 2001). Fortunately there have been minimal severe consequences of such fiscal disciplinary measures, partly because stable macroeconomic conditions have undoubtedly made it easier to forecast revenues and expenditures (World Bank, 2003, pp. 62).

In pursuit of private-sector-led and investment-driven growth, government reversed the investment incentive system that was biased in favor of domestic firms. The investment code of 1991 relaxed numerous constraints and introduced attractive incentives for foreign direct investment. Successful implementation of privatization of non-performing state enterprises further induced efficiency and boosted the growth of the private sector in industrial, commercial, agricultural, and hotel sectors. By the end of 1999, the government had completed 93 divestitures of enterprises, privatizing 62 firms and liquidating the remainder (Collier and Reinikka, 2001). The Uganda Investment Authority (UIA) was created to focus on promoting favorable climate for the establishment of private sector businesses, with strong emphasis on FDI and a Medium Term Competitiveness Strategy (MTCS) was produced to enhance overall growth of the private sector. Thus, the role of government and that of the private sector in the economic growth process were well delineated.

¹ Many of Uganda's development goals are to be achieved ultimately in the private sector. Accordingly, the government emphasizes the promotion of the private sector as evident in the 1999/2000 launch of a five year Medium-Term Competitiveness Strategy (MTCS) to tackle major constraints to private sector development.

² After committing to creating and protecting the Poverty Action Fund, Uganda became the first country to benefit from the September 1996 decision of the World Bank and the IMF to grant debt relief to heavily indebted poor countries (HIPC) (Mijumbi, 2001).

1.5 Main sources of growth since 1986

Growing from a low base, Uganda's economy grew at an impressive rate that averaged about 6.3% per annum for the fifteen fiscal years starting from 1987/88. The high rates of economic growth were attained on account of the good economic policies that led to increases in foreign direct investment, inward repatriation of earnings by Ugandans living abroad, and high growth of the real sector. The fastest growing sectors in descending order were mining and quarrying, manufacturing, hotels and restaurants, and construction, whose average growth during the fifteen years was 24.6%, 11.8%, 10.7%, and 10.0% respectively. However, as a proportion of GDP in 2000/03 mining and quarrying was only 0.8%, manufacturing 9.9% and hotels and restaurants 1.9%. Being relatively small sectors, their contribution to total GDP growth was limited (see Table A2).

Community services, which in 2002/03 accounted for 19.1% of GDP, grew at an average rate of 6.8% during the fifteen years from 1987. This was slightly higher than the average GDP growth rate of 6.3%. Community services include education, health and general government. The growth of community services is partly associated with increased public sector spending on these sectors, supported with donor funding. Throughout the 1990s and in the current decade, donors have given substantial support to education and health. Thus, public sector spending on community services, which donor support made possible, explains a significant part of Uganda's high economic growth between 1987 and 2003.

The transport and communication sector recorded high growth with air and support services driving this growth. The road sub-sector received substantial donor support during the period under study. And the telecommunications sub-sector has grown in the recent past without donor support. The railway was the worst performing transport sub-sector, which shrank by 3.5% in 92/93, 5.9% in 95/96, 22.6% in 96/97, and 12.6% in 97/98 mainly due to mismanagement.

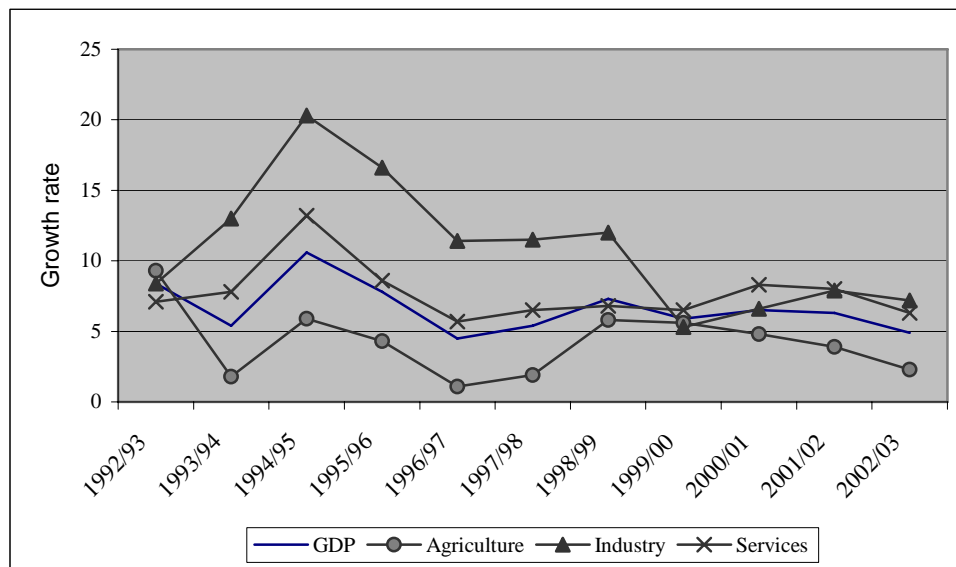
As illustrated in Bevan *et al.* (2003), the benefits of recovery efforts and the challenge of sustaining them have been experienced in Uganda. The GDP decline of the 1970s and early 1980s was reversed, with real growth peaking at about 10% in 1994/95 after which it declined to 4.4% in 1997/98 before rising to 7.4% in 1998/99. In 2002/2003 growth was at 4.9% (see Table A2). These periods of growth were characterized by some degree of structural shifts as well, with the share of agriculture in GDP dropping from 56.1 to 41.5 between 1985/86 and 1998/99 and then declining only slightly to 40.5% in 2001/02. Relative to GDP, investment increased from 8.4% in 1985/86 to 19% in 1998/99 after which it only slightly rose to 20.7% in 2001/02. Over the same period exports share in GDP jumped from 5.8% to 11.8% before tapering off to 11.9 after 1999/2000. But the share of import has continuously risen, from 8.6% in 1985/86 to 24.2% in 1998/99 and up to 27.7% in 2001/02.

Like the sectoral pattern of the economy, the structure of public revenue also remained largely unchanged after some initial shifts. For example, government revenue grew from 6.6% of GDP in 1985/86 to 11.6% in 1998/99 but has hardly risen beyond the 12.1% registered in 2001/02. The growth of monetary agriculture averaged 5.6% between 1987 and 2003, which was lower than the average GDP growth rate of 6.3%. Broadly these numbers suggest two things: first, the fast growth of the small sectors compensated the lower growth of agriculture; second, the growth of community services, whose share in GDP in 2002/03 was 19.1% seems to have been a key driver of Uganda's GDP growth between 1987 and 2003.

From 1995/96, GDP growth began declining but remained positive. Industrial growth was steady while the rate of growth of agriculture and services continued to decline (see Figure 2). Several factors explain the slowdown in the rate of economic growth that started in 1995. On the domestic front, unfavorable weather conditions (El Niño of 1997; prolonged drought in 2001/02) led to poor performance of the agricultural sector. Further more, poor access to productive assets, especially credit and land, constrained performance of firms and individuals engaged in agriculture. Despite increases

in farm gate prices of agricultural prices because of liberalization, the production incentive structure favored non-farm activities compared to agriculture. This partly explains the low growth of the agricultural sector during the past decade. Since 1999/00 real growth rates in GDP remained below the 7% rate set in the PEAP to meet poverty eradication goals by 2017. It is also observed that the ratio of the monetary to non-monetary agriculture has remained unchanged overtime. This suggests that the change to market based agriculture remains low and this has implication for the Government's PMA program.

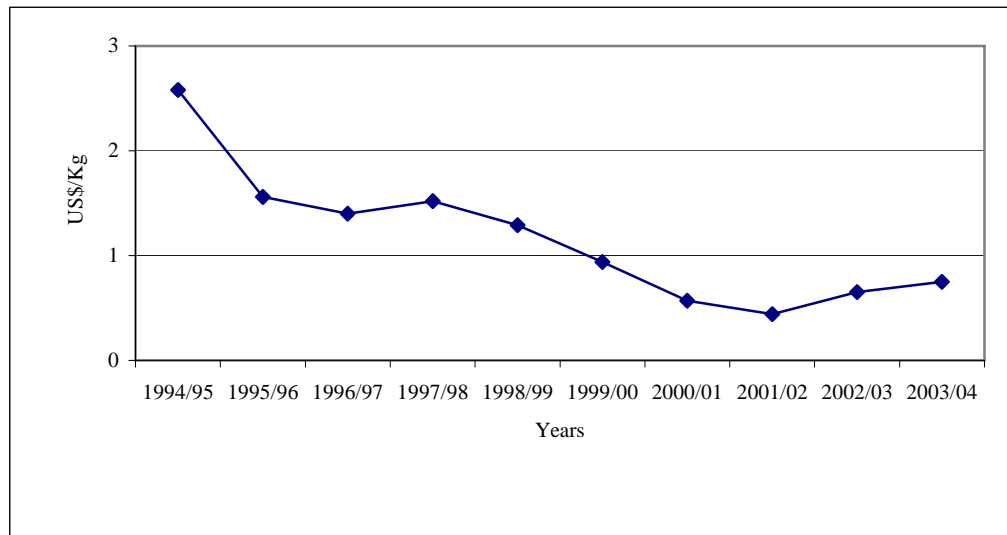
Figure 2: Uganda Growth in GDP, Agriculture, Industry and Services



Source: MoFPED

On the external front, the slowdown in global economic growth partly explains the reduction in the rate of economic growth for Uganda. Other external factors that explain the reduction in the rate of economic growth include a decline in the international price of coffee (see Figure 3), and rising oil prices (Republic of Uganda, 2003). Because of unfavorable coffee prices on the international market, proceeds from coffee exports declined almost every subsequent year from the mid 1990s.

Figure 3: International Prices of Coffee



Source: Uganda Coffee Development Authority

In the early 1990s and especially at the time of the coffee boom in 1994/95, coffee played a key role in the country's economic growth process. As the international price of coffee declined, the rate of economic growth began declining too, despite same or even higher quantities of coffee produced. Clearly, coffee played a significant role in Uganda's economic growth performance. Besides coffee, non-traditional exports played a significant role in Uganda's economic growth performance especially from the mid 1990s. The value of non-traditional exports improved significantly. From almost nothing in the early 1990s, in 2003, fish fetched about US\$40 million, flowers about US\$20 million, cobalt about US\$10 million, and cereals about US\$10 million. But annual total export receipts are likely to remain below US\$700 million despite improved performance of non-traditional exports.

1.6 Welfare impacts of the recovery and growth strategies

Since its inception the PEAP has been revised twice, in 2000 and in 2004 with a view to addressing emerging development challenges. Government put in place mechanisms for monitoring household and firm level effects of macroeconomic policies in general and the PEAP in particular.³ The Uganda Participatory Poverty Assessment Programme (UPPAP) is perhaps the most elaborate of these efforts. Also in the Ministry of Finance, Planning and Economic Development (MoFPED) is the Poverty Monitoring and Analysis Unit (PMAU), which coordinates assessment of the PEAP implementation. The Uganda Bureau of Statistics (UBOS) plays a key role in collection of household level data for poverty monitoring. Research institutes such as the Economic Policy Research Center (EPRC) analyses household data to come up with inferences about poverty trends.⁴

The recovery and growth strategies have had impressive poverty reduction impact, with the headcount index of total income poverty declining from 56% in 1992 (corresponding to 9.2 million persons, in absolute numbers) to 34% (corresponding to 7.2 million persons) in 2000 after which it rose to 38%

³ It is on the basis of analytical results from the various household and firm surveys and from other research and policy analyses that the revision of the PEAP is conducted. The key objective of the revision is usually to rationalize any prioritization of the challenges facing the PEAP. Promotion of private sector investment for job creation and poverty reduction is basically the overriding strategic focus.

⁴ The importance of the Economic Policy Research Centre in this regard has been recognized and highlighted in Uganda's successful use of knowledge and research to help set public policy priorities (Mackinnon and Reinikka, 2002).

(corresponding to 8.9 million persons) in 2003 (see Table A4).⁵ However, poverty in Uganda remains a rural phenomenon and more pronounced among crop farmers. Rural poverty headcount declined from 60% in 1992 to 37% in 2000 before rising to 42% in 2003. The corresponding figures for urban areas are 28, 10 and 12 percent. The disproportionate contribution of rural areas to the national poverty has remained unchanged at about 96%. Between 1997 and 2000 consumption expenditure per adult equivalent for the richest 10% of the population grew by 20% while that of the poorest 10% grew by only 8%. In the 2000-2003 period the richest 20% of Ugandans experienced a 9% increase in consumption expenditure while the rest of the population reported a decline in consumption expenditure. This translated into the reported increase in poverty and the rise in welfare inequality from a Gini coefficient of 0.40 in 1999/2000 to 0.43 in 2002/2003. Regional imbalance, especially between Northern and the rest of the country has persisted, with Northern being the only region where consumption expenditure declined between 1997 and 2000. Although between 2000 and 2003 the poverty headcount in Northern remain about the same while it was rising for the rest of the country, this region has maintained the highest incidence of poverty of not less than 64%.

Uganda's focus on poverty reduction notwithstanding, the country still faces several poverty reduction challenges. On the public sector side, there are challenges to raising additional resources to finance the country's development process on the one hand, and to remove inefficiency in the use of financial resources on the other. There is concern about the size of the fiscal deficit and its implications for other macroeconomic aggregates particularly inflation and interest rates. It is broadly agreed that the fiscal deficit should be reduced to give the private sector space and a favorable environment to develop. However, reduced public sector spending could adversely affect the quantity and quality of social services delivered by the public sector. Regarding inefficiency in the use of public financial resources, government has taken several measures to reduce corruption, such as putting in place an institutional framework for curbing the vice. However, corruption and inefficiency in the use of public resources at all levels of government is still enormous.

The private sector too plays a significant role in poverty reduction. However, private sector participation in the development process, particularly by the weaker segments of society faces several constraints. Poor access to productive assets, high interest rates, low level of technology, costly utilities, and inadequate public sector support are among the key constraints facing private sector development in Uganda. In short, the investment climate is still not quite supportive of local investment.

Small and micro enterprises (SMEs) face several production and marketing constraints that government has not adequately addressed. While domestic investors face an unfavorable environment to doing business, foreign investors have not come in the numbers that government initially anticipated. Furthermore, the foreign investors that came avoided long-term investments.

1.7 Concluding remarks

During the 1960's Uganda witnessed high economic growth, declining poverty and narrowing income inequality. This led to improvements in the social indicators such as infant mortality, literacy etc. The economic decline from 1971 to 1986 led to increasing poverty. The economic reforms implemented starting from 1987 produced tremendous pay offs in terms of macroeconomic stability, economic growth, and poverty reduction during the 1990s and early years of this decade. However, unlike in the 1960s when economic growth occurred along decreasing inequality, the 1990s witnessed high economic growth alongside widening inequality. Although economic growth slowed down from the beginning of the century, inequality continued to increase alongside a positive growth of the economy.

⁵ Panel data evidence shows that between 1992 and 2000 a significant proportion of Ugandans (20%) experienced chronic poverty, 30% moved out of poverty, and about 10% fell into poverty (Lawson, *et al.* 2003).

Uganda is thus faced with the challenge of ensuring that economic growth is high and broad enough to ensure pro-poor growth, a subject matter for detailed analysis in the rest of the paper.

2 Growth and its distributional and poverty impact since 1992

The growth and welfare outcomes of the history of development efforts of Uganda is subjected in this section to detailed disaggregation in order to illuminate the distributional implications and the drivers of the country's broad economic growth strategies. Extensive use is made of the series of the Uganda National Household Survey data to link growth to poverty reduction.⁶ Basically the data used are from surveys conducted during the period spanning 1992/93 to 2002/03. All the surveys were designed to cover the entire country⁷ and to provide valid national, rural/urban and regional statistical estimates with the primary objective being to help monitor the micro-level impact of the various reforms undertaken in Uganda since 1990. The 1992/93 survey was, accordingly, designed to provide baseline information given that most of the reforms took shape in the 1991/92 period. Essentially, any initial conditions of interest for analysis in this study are captured using the 1992 state of affairs.

All the surveys focus on consumption expenditure as the measure of welfare. The regular (total) poverty lines used to generate the official poverty statistics of Uganda are specific to rural/urban sub-regions.⁸ But the food (extreme) poverty line is a single number for the whole country. Accordingly, for commands (in the statistical software, stata) that require a specific number as the poverty line, the average regular poverty line (Appleton, 2001) is used. Using the single-value national poverty line instead of the variable poverty line, however, increases the poverty statistic being measured, for example, the 1992/93 absolute poverty headcount increases from 56 to 57 percent. Nevertheless, the order of magnitude in the poverty measures remains the same and the trends are also unchanged.

2.1 Sources of Uganda's growth and poverty reduction

Growth and welfare improvements during the 1990s were inevitably a result of revitalization of civil and economic order in the second half of the 1980s. Restoration of peace and stability in most parts of the country, removal of transaction costs of enforcing business contracts through institutional building, reduction of private diversion and capture of public expenditure, and reversal of capital flight through risk reduction and exchange rate realignment all eased the suppression that output capacity had long suffered. Donor supported post-conflict reconstruction of physical infrastructure and restoration of a good policy environment significantly contributed to growth and poverty reduction. Between 1992 and 1997 foreign aid contributed 31% of Uganda's growth and 29% of poverty reduction, but these are very conservative estimates given that aid has also contributed to policy reform, which have indirectly generated growth⁹ and poverty reduction (Collier and Ritva, 2001). Other than economic management, donor money has substantially funded education, health, institutional reforms and public administration. A significant portion of the national budget (about 50%) has been allocated to the above components, which, as noted in section 3, have also represented the bulk of the labor demand over the last 5 to 10 years. In as much as donor resources have substantially backed up such spending, coupled with the contribution of the main tradable (coffee), it is appropriate to say that the growth attained has been largely a result of external sources. Although such spending may have contributed to the overall growth of the economy, individual benefits for the majority of the population are likely to have been undermined by the low nominal wages and the declines in real wages given the mild but

⁶ A brief description of the welfare data is presented in the appendix.

⁷ Some parts of the country were not covered in all the surveys due to insecurity at the time of the surveys. For comparability over time, we have restricted the analysis to the same geographical coverage.

⁸ The derivation of the expenditure aggregates and poverty lines is presented in the appendix.

⁹ Keefer (2000) estimate that improved macroeconomic policies contributed an additional 2.5% growth per annum between the 1980s and 1990s.

positive rates of inflation (see survey-based evidence in a later part of this section and related discussions in section 3).

Dividend from the kind of recovery process Uganda experienced typically ends, at which point the challenge of sustainable normal growth sets in, requiring higher investment rates and continued export growth and diversification, which ought to be underpinned by increased efficiency in the employment of private and public capital (Collier and Ritva, 2001 and Bevan *et al.*, 2003). Indeed, growth can be sustained in the long run if the return to capital does not diminish as economies develop (Rebelo, 1991; Lucas, 1988; and Romer, 1986). The importance of increased investment for sustaining Uganda's growth is amplified by Dunn's (2002) estimates that due to removal of distortions and improved economic efficiency, the contribution of Total Factor Productivity (TFP) to growth rose from 1% per annum in 1986-92 to 3% in 1992-97 before falling off to 0.5%. If investment is to generate sustained growth, factor productivity has to be sufficiently high since it is productivity rather than the stock of capital that is key to economic growth (Easterly and Levine, 2001). This is illustrated by the observation that the productivity of capital in Uganda increased from 2.5 in the early 1990s to 3.7 during the 2000-2002 period with much of the increase arising from the exploitation of existing capacity rather than a change in the stock of capital (Kappel *et al.*, 2003).

The case of the agricultural sector in the Ugandan context ought to be made strongly because over 85% of the population live in rural areas, where agriculture is the major contributor to livelihoods, besides, more than 80% of the workforce is engaged in the sector. Thus, developments in the agricultural sector can perhaps shed more light than any other on the general poverty trends in the country. As long as policies do not cause fast growth in sectors that provide livelihoods to the majority of the people, overall growth is unlikely to have sustained poverty reducing impact in which case its pro-poorness is diminished. As shown in Table A3, the GDP shares of both monetary and non-monetary agriculture have declined. Whereas this could signify structural transformation in the overall economy, it may partly be attributed to productivity constraints in the sector given its declining rate of growth, coupled with the earlier observation that the structural shifts in the economy tapered off from 1999/2000. With an annual population growth rate of 3.4 percent, and fertility rates of 6.9 children per woman of child-bearing age, the resources available for welfare improvement for each individual in agricultural-based households are likely to have dwindled further and raised the poverty levels over time. With deteriorating internal terms of trade against agriculture, coupled with declining international prices of the main tradable (coffee) and insecurity effects on production in northern and eastern parts of the country, the sluggish performance in the sector suggests that agriculture was not the main source of growth.

The overall economic picture in the past decade is that, after 1998/99 growth has been slower than in the previous five years, export base has not expanded, Government revenue mobilization has stagnated, domestic saving has fallen to below 6% of GDP, private investment increased by no more than 1.5 percentage points, and structural change has (at best) been slower¹⁰ than what is likely needed to spur higher future growth. The unimpressive performance of the main sector for the majority of the people and the high population growth rates indicate that achieving national and international poverty goals through higher pro-poor growth rates requires structural transformation that builds on successful productivity enhancement in agriculture. Dunn (2002) estimates that achieving the PEAP target of 7% growth rate requires that investment expands to 27% of GDP, especially given that his projection of TFP growth is less than 0.5% per annum for the foreseeable future. Keefer (2000) emphasizes institutional reforms to improve property rights, contract enforcement, tax administration, procurement procedures and corruption, most of which would be achieved with full operationalization of the country's MTCS, which is aimed at addressing constraints to realizing private-sector led growth (Bevan *et al.*, 2003).

¹⁰ See appendix for shares of major sectors in Uganda's GDP.

2.2 Main correlates of poverty

What have been the main instruments for translating growth from the identified sources into welfare improvements? Using panel household data spanning 1992 to 2000 Deininger and Okidi (2003) put cross-country growth analysis in Uganda's perspective and establish that whereas there was strong convergence of household welfare during the 1990s, initial endowment of physical and human capital guaranteed higher subsequent welfare growth that easily counteracted any convergence effects. Specifically, inter-household difference of one standard deviation in initial physical assets translated into a two- and three percentage-point difference in growth in consumption expenditure and income respectively. In terms of human capital, a 2.8 and 3.6 percentage-point difference in the growth of household consumption and income respectively was associated with shifting the household head from having three years of formal education to completing primary education. The analysis also suggests that the growth impact of higher levels of education is convex, implying that enhanced access to secondary schools for the graduates of Uganda's Universal Primary Education Program (UPE) would have significant welfare impacts. Furthermore, both income and expenditure of households that were female-headed in 1992 grew slower, by about 1 and 1.7 percentage points respectively. Also, large households grew slower than small ones.

Deininger and Okidi (2003) further estimate that households that reported health problems in 1992 experienced slower growth in consumption and income by 1.2 and 1.8 percentage-points respectively. In terms of infrastructure, electricity had the strongest correlation with welfare growth; households with initial access to electricity experienced consumption and income growth of 6 and 3.5 percentage points higher than those without. Civil strife in the initial period of analysis was estimated to have significantly curtailed income growth by about 5 percentage points. The strong correlation between growth in household welfare and change in coffee price during the 1990s underscores the importance of policy in increasing the incomes of households. Interacting coffee price change with initial conditions reveals that even households with low initial asset endowments benefited from the successful coffee price liberalization.

Using discrete choice models, Deininger and Okidi (2003) establish that household human capital, size, physical assets and social capital, are equally important for escaping poverty or (in their absence) falling into poverty. But ill health and electricity are more significant for falling into poverty than the other way round. While good health may not convey a particular advantage, ill-health can, especially in an environment characterized by HIV/AIDS and other diseases, easily throw a household into poverty. In the case of electricity, its importance as mentioned earlier implies that where it was available, there were significant indirect impacts (for example, through higher demand for labor) that reduced the probability of households falling into poverty. Similarly, ongoing cross-sectional analysis at the EPRC for the 1992/93, 1999/00 and 2002/03 survey data confirm human capital and community infrastructure especially electricity and telephone as key determinants of well-being. The results from the ongoing work also suggest that sector of employment matters for poverty reduction.

How have the identified key drivers of welfare growth and poverty reduction changed overtime? Whereas the average household accumulated total physical assets at about 2.7% per annum during the 1990s, asset accumulation, at 0.3% per annum, was virtually absent among the poor compared to a 4% rate for the non-poor (Deininger and Okidi, 2003). Human capital has improved significantly, for example, according to Figure A1, the proportion of household heads with no formal education has consistently declined overtime, from 34 to 27 percent and from 21 to 12 percent for the poor and non-poor respectively between 1992 and 2003. While health conditions remained a problem between 1992 and 2000, with the number of adult days lost to illness by the average household rising from 8 to 12. A major burden to households is AIDS related shock, particularly because households have to sell off their assets in order to meet medical bills (MFPED, 2002) and the resulting high incidence of foster childhood associated with AIDS related deaths. Between 1992 and 2000 the proportion of households

hosting a foster child tripled from 5 to 15 percent with the average share of foster children in a household increasing from 10% to about 20% (Deininger *et al.*, 2004). In spite of all this, average household size increased from 4.7 in 1992 to 5.2 in 2000 before slightly declining to 5.1 in 2003. The corresponding numbers for the poor are 5.4, 6.2 and 6.0, which exert severe burdens on households.

The main policy poverty correlate examined in Deininger and Okidi (2003) is the liberalization of the coffee sector in 1991/92, which increased the share of farm-gate prices in border prices from about 20 to 30 percent to more than 80%. This, together with the coffee boom in 1994/95 and easy availability of high-yielding varieties resulted in increased revenues to Ugandans in coffee production, processing and marketing. To the contrary, cotton, which traditionally was the main cash crop grown in Northern Uganda, experienced a price decline of about 40% due to structural bottlenecks during 1992 to 2000, a period when world cotton prices did not fall at all (Deininger and Okidi, 2003). The analysis relating prices of tradables and welfare suggests that in the absence of diversified economic base, predominantly agricultural households are highly vulnerable to volatility in the prices of commodities such as coffee. Although about 45% of Ugandan households have non-agricultural enterprises, the enterprises are quite small given that less than 15% of the households with non-agricultural enterprises employ any labor at all; reliance is on family labor. Ongoing related analysis at the EPRC find that there was an increase from 45% in 1999 to 61% in 2002 of Ugandan households owning non-crop enterprises. This increase cuts across all income quintiles.

Access to electricity is severely limited and is one of the main constraints to growth and investment of firms in Uganda (Svensson and Reinikka, 2001). Nationally, the percentage of households living in communities with electricity remained stagnant between 1992 and 1996, but an increase from 23.5% in 1996 to 26% in 2002 was recorded. Worth noting is the disparity that in 2002 more than 90% of the urban households lived in communities with electricity compared to only 13% of their counterparts in rural areas. In fact, with a rapidly expanding supply of more educated workers in the wake of UPE and increased enrollment at tertiary level, supply of infrastructure, such as electricity, could easily develop into a binding constraint that might, in the extreme, reduce the scope for generation of well-remunerated employment, thereby affecting the incentives to acquire education, especially at lower levels. Such a phenomenon often leads to a rushed conclusion that the education system is not oriented to the demand of the labor market, yet their might as well be no significant labor demand to talk of in the first place.

2.3 Main welfare outcomes of Uganda's economic performance

Having reviewed the key aspects of Uganda's growth experience and the main correlates of poverty we now explore the micro-level features of the distributional and poverty outcomes of some growth episodes in the 1992-2003 period. In particular, this sub-section presents the poverty incidence of growth using the growth incidence curves, Ravallion-Chen pro-poor growth index (Ravallion and Chen, 2003) and growth elasticity of poverty.

The distributional pattern of growth in household consumption expenditure, nationally and for rural/urban subgroups are presented in Table 1, Table 3 and in Figures 4 to 7 (where the horizontal axis is the mean percentile growth rate). For the whole period of analysis (1992-2003) there was overall growth in consumption expenditure with the mean of the percentile growth rates estimated at about 3% per annum. But growth was skewed towards the top 20%, which was the only segment of the population that enjoyed higher-than-average growth. The Gini index of inequality increased from 0.36 in 1992 to 0.43 in 2003. Relative mean expenditure for the bottom quintile dropped from 0.34 to 0.31 while that of the top quintile rose from 2.18 to 2.50. Although the distributional shift disfavored the poor, its growth impact was not bad given that the rate of pro-poor growth for this entire period of analysis was only slightly lower than the ordinary rate of growth.

The downward sloping incidence curve for the period 1992-1997 shows that growth was disproportionately in favor of the poorest 20%, with that segment recording above-average growth. This coincides with the period when agriculture recorded impressive growth rates. During this period the Gini index fell from 0.36 to 0.35 (see Table 3). Essentially, this distributional shift favored the poor quite substantially such that the rate of pro-poor growth was higher than the ordinary growth rate. Of all the growth episodes considered, the highest mean growth rate of 6% was recorded for the period 1997-2000 during which only the richest 20% experienced above-average growth. Welfare inequality widened in this period, from a Gini coefficient of 0.35 to 0.40. For the whole period of analysis and for 1992-97 and 1997-2000 periods, growth was robust across percentiles and poverty headcount fell significantly. But a dramatic pattern is observed for the 2000-2003 period. The mean growth rate was negative, the top quintile was the only subgroup that enjoyed positive growth, the Gini index increased from 0.40 to 0.43, and poverty headcount rose from 34 to 38 percent. It is striking to note that while only the top 20% enjoyed positive growth during this period, the real GDP growth rate was still about 5.8% per annum.

Similar results are observed in Table 1. The mean growth rate and rate of pro-poor growth were positive except in 1999/00 through 2002/03. Growth favored the poorest 20% only when the rate of pro-poor growth was well above the mean growth rate.

Figure 4: Growth incidence curve, national, 1992-2003 **Figure 5: Growth incidence curve, national 1992-1997**

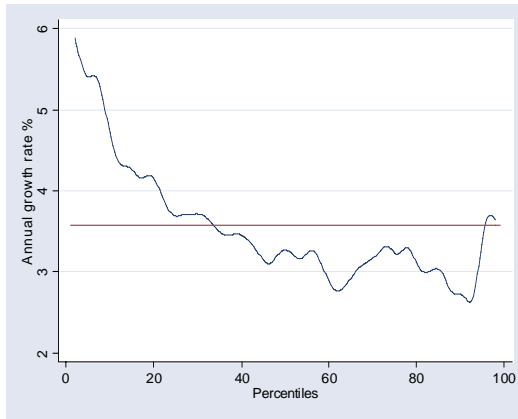
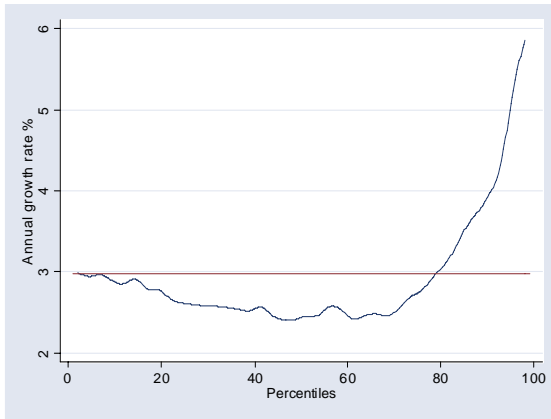


Figure 6: Growth incidence curve, national, 1997-2000 **Figure 7: Growth incidence curve, national, 2000-2003**

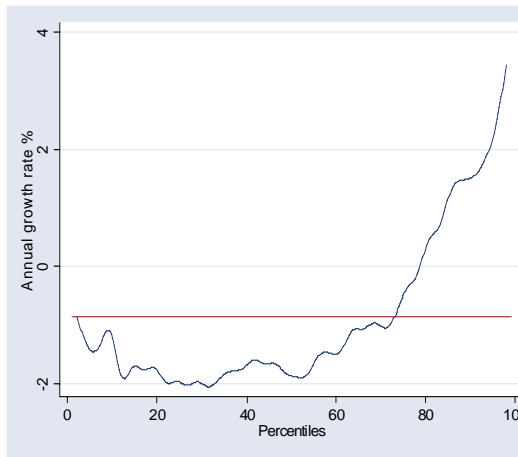
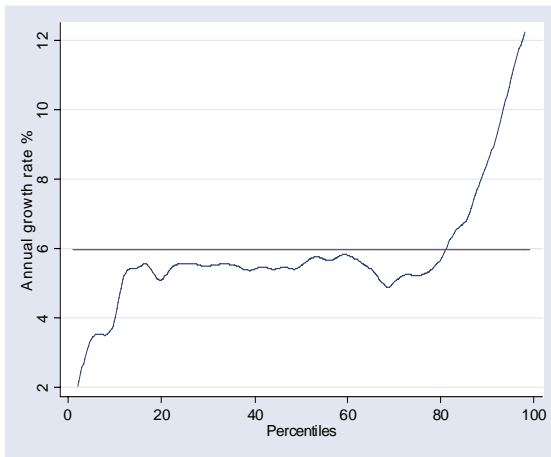


Table 1: Growth in consumption expenditure per adult equivalent

	<i>Regular poverty line</i>		<i>Extreme poverty line</i>	
	Mean of growth rates	Rate of pro-poor growth	Mean of growth rates	Rate of pro-poor growth
1992 - 2003				
National	2.98	2.66	2.98	2.77
Rural	2.72	2.57	2.72	2.70
Urban	4.05	3.45	4.05	3.30
1992 - 1997				
National	3.57	3.94	3.57	4.36
Rural	3.41	3.83	3.41	4.28
Urban	3.88	5.07	3.88	5.02
1997 - 2000				
National	5.96	4.87	5.96	4.37
Rural	5.25	4.75	5.25	4.28
Urban	10.94	7.58	10.94	7.60
2000-2003				
National	-0.86	-1.67	-0.86	-1.39
Rural	-0.83	-1.64	-0.83	-1.34
Urban	-1.80	-4.16	-1.80	-5.23

Source: Authors' computation from the Uganda National Household Survey data

2.4 Explaining the welfare outcomes of Uganda's economic performance

To understand the above-outlined poverty outcomes, we start by recognizing that growth (much more than redistribution) has driven the poverty reduction in Uganda during the 1990s. Second, earlier discussions of the macroeconomic growth patterns of Uganda can be directly linked to these poverty outcomes. Third, the correlates of poverty identified in household growth regressions and their evolution since 1992 can provide useful insights.

Rising from the doldrums in the second half of the 1980s into the early 1990s, Dunn's (2002) TFP illustration strongly suggests that the dividend of removal of distortions and improved economic efficiency had been exhausted by 1998/99. Emphasizing that this was the easier part of engendering growth, Bevan *et al.* (2003) concludes that the slowdown in growth (to below the 7% PEAP target) after 1998/99 was the expected challenge of sustaining high recovery-related growth. Essentially, after 1998/99, structural transformation virtually stalled, investment rates plateaued well below what is estimated for realizing the national poverty goals, exports-GDP ratio tapered off to just above 11% while the reverse was true for imports, government revenue as a share of GDP stagnated well below Sub-Saharan African average, and domestic saving remained abysmally low.¹¹

¹¹ See Bevan *et al.* (2003) for a full discussion of the implications of failure to achieve the structural benchmarks necessary for attaining Uganda's growth and poverty goals.

Agriculture, where the bulk of the population is, has grown very slowly (at a rate much lower than the overall growth rate). The share of agriculture in public expenditure has previously been very low.¹² But in the 2005/06 – 2007/08 Medium-Term Expenditure Framework the share of agriculture in the budget is projected to grow from the 3.4% in 2004/05 to 4.4% in 2007/08 (Republic of Uganda, 2005). If the projected growth in the share of agriculture in the national budget is realized, then the average annual growth in the sector's budget will be higher than that of the overall budget, reflecting increased efforts to modernize the agriculture. The importance of agriculture in the Ugandan economy, indeed, requires that its productivity be raised in order to achieve rapid overall growth by increasing aggregate output and releasing labor for other sectors that have to expand in line with the pattern of structural transformation that some middle-income countries experienced (Bevan *et al.*, 2003). But the implementation of the innovative framework of a multi-sectoral approach for modernizing agriculture (PMA) has several institutional constraints that inhibit the expansion of both the supply and demand sides of Uganda's agricultural sector.¹³

The main agricultural tradable, coffee, suffered significant price falls after the boom of the mid 1990s, prompting systematic efforts to increase the export shares of other commodities such as fish and flowers. Although the effort has paid off as highlighted in Section 1, the poverty effects are very limited given that they engage only a small segment of the population, unlike the coffee sector. Simple simulations by Deininger and Okidi (2003) suggest that had coffee prices been 10% higher during the 1990s there would have been an additional six-percentage point decline in poverty by 1999/2000. Restoration of the price of cotton (which declined by about 40% during the 1990s due to structural constraints) would have significantly narrowed the regional welfare gap between the poorest Northern region and the rest of the country. To date, cotton sector liberalization has not succeeded due to low incentives for private sector middlemen to supply seeds and to invest in revamping cotton-ginning facilities. Overall, between 1999/2000 and 2002/2003 internal terms of trade between agriculture on the one hand and industry and service on the other deteriorated against the former by 20%, severely affecting purchasing power of the vast majority of Ugandans.

Inferring food production from the consumption data (given the subsistence nature of Uganda's agriculture and the limited imports and exports of food) Appleton and Ssewanyana (2003) conclude that food crop production may have not kept pace with population growth between 1999/2000 and 2002/2003,¹⁴ a finding that also comes out of the UPPAP II. Specifically, food consumption per capita fell by 3% in nominal terms between the years. Consumption of home produced food fell by around 20% per capita. The median income from crop farming reported in the 2002/2003 survey was also lower than that for the 1999/2000 survey in nominal terms. The limited progress in the crop sub-sector could be attributed to low utilization of productivity enhancing technologies and poor land management practices (Nkonya *et al.*, 2003; Pender *et al.* 2004; Obwona *et al.*, 2004). Furthermore, the planned modernization of Uganda's agriculture has not been widely implemented mainly due to resource constraints as exemplified by the share of agriculture in public expenditure having been limited to no more than 4% of the national budget for several consecutive years, coupled with the high cost of borrowing, among other factors, that inhibit effective realization of the private public partnership that characterizes the design of the PMA.

Between 1999/2000 and 2002/2003, there were significant inter-sectoral shifts by households. The proportion of Ugandans living in households with crop agriculture as the main economic activity declined from about 68 to 52 percent. The share in non-crop agriculture and trade increased from 3 to

¹² It is commonly argued by policymakers that where direct public expenditure share in agriculture is quite low, it is compensated by spending in areas that support agriculture – the traditional pro-poor spending areas such as education, health, water and sanitation, and roads and connectivity.

¹³ See Bevan *et al.* (2003) for a summary of the institutional and operational challenges facing the PMA.

¹⁴ National accounts statistics show that Uganda's population increased from 22.2 million in 1999/2000 to 25 million in 2002/2003.

5 percent and 7 to 14 percent respectively, while that in manufacturing doubled to 7%. In the same period, the proportion of the population depending on government services as the main economic activity grew by half a percentage point to 6%. The observed structural shifts are correlated with the growth trends in the monetary crop and non-monetary agricultural components of GDP in Table A2. These shifts, however, did not yield overall improvements in welfare. Poverty declined in households whose heads reported non-crop agriculture (mainly livestock farming), mining and construction, and government services¹⁵ as the main economic sectors, all of which constituted only about 13% of the population in 2002/2003. The survey data reveal a significant shift from agriculture to non-agricultural self-employment, a move that is consistent with: (i) low returns in agriculture prompting diversification into other activities; and (ii) failure of the wage employment sector to absorb the labor released from agriculture (Appleton and Ssewanyana, 2003).

Table A5 suggests that trade and manufacturing are the main candidate sectors for exit from agricultural, but have offered limited opportunities for shifters to shake off the poverty that presumably characterized their main sector of origin, which has largely been crop-agriculture. Increased numbers of traders and small producers in non-agricultural sectors is likely to have raised competition and weakened profitability. This situation can lower incomes and increase poverty among the non-agricultural self-employed unless there is strong corresponding growth in demand. But growth in demand is expected to be associated with growth in real wages. According to the surveys, between 1999/2000 and 2002/2003 mean real monthly wages rose by 12%, the median wage fell by an equal proportion, real wages for employees with primary education or less fell by about one third, and for those with secondary education the fall was by 6% only. On the whole, the pattern of change suggests that nominal wages have not kept pace with inflation (Appleton and Ssewanyana, 2003).

A compounding problem is the insecurity from the civil war and cattle rustling in the northern and eastern parts of the country. The cost of the war to the economy is estimated at 3% of GDP. As cited earlier, civil strife significantly reduces household growth. Another important correlate of poverty identified earlier is electricity, which increases opportunities for job creation to absorb the increasingly better educated Ugandans and hence reducing their vulnerability to poverty (Deininger and Okidi, 2003).¹⁶ Uganda is, indeed, abundant in unskilled labor. Although the proportion of household heads without formal education continues to decline, about 55% of them have no higher than primary education.¹⁷ Low level of education/skill in an environment of slower macroeconomic growth could have contributed to the unchanged proportion (77%) of household heads engaged in self-employment as the main source of livelihood from 1992 to 2003. In essence, the poverty reduction of the 1990s occurred without job creation in the formal sector as a major driver.

Qualitative analysis by the UPPAP, which conducted field exercises in 1998/99 and 2001/02, identifies hard work, multiple income sources, access to land and other assets, and small family as the main factors for staying out of poverty (MoFPED, 2002). Poor access to markets, selling of assets to cope with illness, high taxes, and casual laboring were the key factors associated with falling into poverty. In both the 1998/99 and 2001/02 participatory assessment, people felt that poverty was increasing in spite of the positive growth in average consumption expenditure and the high GDP growth rates recorded around these periods (see Table 1, and Table A1 in the appendix). But it should

¹⁵ Whereas private sector real wages fell by about a fifth between 1999/2000 and 2002/2003, government sector real wages increased by about the same proportion, contributing to the improved welfare of government workers.

¹⁶ Estimates from the National Household Survey data series show that less than 10% of households have electricity in their homes. The proportion of non-poor households with electricity in homes fluctuated from 13% in 1992 to 17 and 14 percent in 2000 and 2003 respectively. For the poor, access to electricity has consistently decreased from 6% in 1992 to 2 and 1 percent in 2000 and 2003 respectively.

¹⁷ Estimates from the Uganda National Household Surveys show that it was only the expenditure of households headed by people with primary education or lower that fell relative to the national average.

be noted that growth in average income tends to be associated with higher absolute income disparities, which is what registers vividly in people’s perception (Ravallion, 2004).

The qualitative approach through participatory assessment also brings out voices from a few specific villages (national household survey enumeration areas), which are usually averaged out when poverty is analyzed using quantitative approaches due to lack of representative small area samples. But where the qualitative and quantitative analyses cover similar topics, their results generally confirm or complement each other (Lawson *et al.*, 2003). In particular, using multinomial logit to model changes in poverty status between 1992 and 2000, it is found that factors that are responsible for moving households out of poverty are basically the same factors, which participatory assessment also identify as the key causes of poverty in communities where members report increasing poverty, and vice versa (Lawson *et al.*, 2003, Deininger and Okidi, 2003).

2.5 Growth and inequality decomposition of the welfare outcomes

Decomposing the above-described poverty changes into growth and redistribution components,¹⁸ we observe in Table 2 that for each of the constituent episodes in the 1992-2003 period, growth consistently induced poverty reduction while deterioration in inequality undermined some of the positive impacts of growth on poverty such that the net change in poverty depended on the magnitudes of the growth versus inequality components of the changes. In the 1992-1997 period when total poverty headcount declined by 10.7 percentage points, almost the whole of the decline (10.3 percentage points) was attributed to growth and the rest was due to improvement in redistribution. Similar orders of magnitude were observed in rural areas for this period. In urban areas, improvement in inequality from a Gini coefficient of 0.4 to 0.35 accounted for half (5.6 percentage-point) of the fall in poverty headcount.

During 1997-2000 high growth rates contributed to large reductions in poverty that more than offset the dampening effects of rising inequality in both rural and urban areas as well as in the different regions and economic sectors (Table 2). The period 2000-2003 saw a reversal in the poverty trends. Growth was confined to the richest quintile and poverty increases in rural and urban areas were wholly attributed to worsening inequality. Regionally, it was only Eastern that experienced poverty-increasing slow-down in growth meaning that had there been distribution-neutral growth, poverty would have fallen in each of the regions other than Eastern. Exploring the same survey datasets, we observe that it was in Eastern only where household size increased in the 2000-2003 period,¹⁹ directly impacting our welfare measure (consumption expenditure per adult equivalent). Regarding economic sectors, crop farming, where the vast majority of households belong, experienced slow-down in growth and worsening inequality, both of which contributed to rising poverty within the sector between 2000 and 2003. During this period, poverty-reducing effects of growth in non-crop agriculture and government services were substantial enough to more than offset the negative impact of rising inequality in these sectors. Overall, 1992-2003 was a period of significant poverty-reducing growth that more than offset the poverty increasing effects of the rise in inequality experienced during the period.

Table 2: Growth and inequality decomposition of poverty, 1992 to 2003

	1992-1997	1997-2000	2000-2003	1992-2003
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¹⁸ The decomposition applies the *gidecomposition* Stata routine written by Michael Lokshin and Martin Ravallion based on the methods developed by Datt and Ravallion (1992).

¹⁹ From 2000 to 20003 average house size in Central was constant at 4.8, decreased in Northern and Western from 5.3 to 5.0 and 5.6 to 5.2 respectively, but increased in Eastern from 5.3 to 5.5.

	Growth	Inequality	Growth	Inequality	Growth	Inequality	Growth	Inequality
National	-10.3	-0.4	-16.3	5.0	-1.4	5.3	-26.3	8.3
Rural	-10.9	0.4	-13.3	1.5	-0.4	4.7	-23.1	5.1
Urban	-5.6	-5.5	-14.7	7.6	-1.3	3.8	-22.8	7.2
Central	-13.7	-4.0	-14.1	5.8	-2.6	5.1	-31.1	7.7
Eastern	-6.7	2.2	-21.8	2.5	8.7	2.3	-18.7	5.9
Northern	-9.1	-2.2	2.6	0.2	-1.4	1.1	-8.6	-0.2
Western	-10.5	0.1	-20.9	4.3	-0.1	5.3	-27.9	6.2
Crop agriculture	-10.5	-0.2	-17.3	3.3	9.2	2.2	-18.1	4.8
Non-crop agriculture	-10.6	-4.8	-1.4	6.2	-10.6	2.3	-23.2	4.4
Mining/construction	-0.7	-10.5	-1.3	1.7	-2.3	-0.5	-5.5	-8.1
Manufacturing	-8.2	0.2	-22.3	9.2	8.4	-3.3	-18.1	2.2
Trade	-3.6	-2.4	-12.9	5.1	8.2	-3.4	-10.2	1.2
Transport/comm.	-7.2	0.7	-15.3	1.1	0.6	4.0	-21.4	5.2
Government services	-12.2	-2.6	-15.2	8.6	-5.5	2.7	-32.0	7.8
Other services	-0.5	1.8	-20.2	5.7	0.9	6.8	-21.7	16.3
Not working	-16.1	2.1	-12.1	2.9	-2.1	-1.4	-34.1	7.5

Note: All residual components are zero, hence they are omitted from the table.

2.6 Sectoral decomposition of the welfare outcomes

Table A4 presents changes in poverty headcount decomposed into intra-sectoral, inter-sectoral and interaction effect (Ravallion and Huppi, 1991) based on place of residence, region and main sector of economic activity of the head of the household. The proportion of Ugandans living in rural areas has remained almost constant at about 87% during the 1992-2003 period. Regionally, the population share of Central and Eastern increased by 1 and 1.4 percentage points respectively. The share of Western declined by 0.5 percentage points while that of Northern declined by 2 percentage points, most likely due to out-migration associated with the 18-year old guerrilla war in the region.

Irrespective of whether we use total or extreme (food) headcount measure of poverty, results of analysis show that over 98% of the change in poverty during any given period and for any of the population sub-groups in Table A5 was due to within group change in the proportion of those living in poverty. The contribution of inter-sectoral population shifts to the total change in poverty has been relatively small but rising over time. Because the vast majority of the population is in crop agriculture, it is not surprising that the sector is the overwhelming contributor to total intra-sectoral change in poverty for each of the periods considered. Crop farmers particularly performed well in the 1997-2000 period when they contributed about 80% of the poverty reduction during the period, a proportion much higher than their population share at the beginning of the period. The performance of crop farmers during the entire 1990s was primarily underpinned by good performance in the coffee sector as already discussed. Table A5 shows that the rise in poverty between 2000 and 2003 was largely attributable to deterioration within crop agricultural sector. This deterioration more than offset the welfare improvements that occurred due to population shifts, especially to sectors where conditions for poverty reduction were more favorable.

2.7 Understanding welfare inequality in Uganda

This subsection draws from the analysis and discussion in Ssewanyana *et al.* (2004). We start by highlighting the intertemporal, spatial and socioeconomic profile of inequality in Uganda. Table 3 shows that average welfare level increased consecutively throughout the period of analysis, both in rural and urban areas, although it is the 1992-1997 and 1997-2000 growth that are statistically significant, with the respective calculated t -ratios of 10.75 and 15.94 at the national level. These results, especially for the period 1992-1997, are corroborated by the stochastic dominance depicted in Figure A2, which illustrates that welfare levels in 1992/93 were strictly first-order dominated by those in the subsequent years. In other words, irrespective of the choice of a plausible poverty line, an improvement in poverty would have definitely been observed after 1992/93. The statistically insignificant change in average household expenditure between 1999/00 and 2002/03 during which poverty and inequality were increasing suggests that growth at the mean over this period was not sufficient to stave off the unfavorable poverty impacts of rising inequality. Because the welfare dominance results in Figure A3 show that the 1999/00 distribution crosses that of 2002/03 from below and within the range of consumption expenditures that are above the Uganda poverty lines, it is expected that any standard calculations based on these lines should return poverty statistics that portray a reversal of the downward trend that the country experienced throughout the 1990s.

Table 3 shows that by any measure of inequality, welfare distribution was at the best level in 1997 after which it increased significantly. The Generalized Entropy indices ($GE(\alpha)$ where $\alpha = 0,1,2$) reported in Table 3 indicates that the observed increases in inequality are mainly attributed to widening disparities in the upper segment of the welfare distribution.²⁰ Accordingly, the estimated large changes in $GE(2)$ imply that growing differences in the upper portion of welfare distribution in Uganda, especially in urban areas, has been a driver of the worsening overall inequality.

²⁰ Basically, the higher the value of α the more sensitive the inequality measure is to the welfare differences at the top of the distribution.

Table 3: Real mean monthly expenditure per adult equivalent and inequality

	Survey period				Percentage change		
	1992/93	1997	1999/00	2002/03	1992-1997	1997-2000	2000-2003
<i>National</i>							
Expenditure p.a.e.	24,262	28,155	35,706	36,433	16	27	2
Gini coefficient	0.36	0.35	0.40	0.43	-5	14	8
GE(0)	0.22	0.20	0.26	0.31	-11	32	17
GE(1)	0.25	0.22	0.32	0.41	-13	46	29
GE(2)	0.42	0.32	0.62	1.59	-24	95	157
<i>Rural</i>							
Expenditure p.a.e.	21,420	24,873	29,782	29,952	16	20	1
Gini coefficient	0.33	0.31	0.33	0.36	-5	7	9
GE(0)	0.18	0.16	0.19	0.22	-10	17	17
GE(1)	0.19	0.17	0.20	0.25	-8	14	28
GE(2)	0.27	0.24	0.39	0.41	-9	60	5
<i>Urban</i>							
Expenditure p.a.e.	44,335	50,158	75,051	77,812	13	50	4
Gini coefficient	0.40	0.35	0.43	0.48	-12	23	12
GE(0)	0.27	0.20	0.30	0.41	-24	49	34
GE(1)	0.29	0.20	0.30	0.53	-30	45	79
GE(2)	0.46	0.26	0.51	2.05	-43	95	304

Note: p.a.e. stands for per adult equivalent.

2.7.1 Inequality by spatial and welfare subgroups

A comparison of rural and urban Uganda unsurprisingly indicates that welfare inequality is substantially higher in urban than in rural areas. Whereas the Gini for the urban population was 0.40 compared to 0.33 for rural in the 1992/93 period, the coefficients declined to 0.35 and 0.31 in 1997 before rising to 0.48 and 0.36 respectively in 2002/03, increases that are statistically significant at the 1% level.²¹ Table A6 shows that according to the relative mean measure of inequality, the welfare of the average rural household dropped over time from being 88% of the national average welfare in 1992/93 to 82% in 2002/03. In contrast, the average urban household was better off than the average Ugandan household by about 1.8 times in 1992/93, a scale factor that increased to 2.1 by 2002/03.

Regionally, it is Central, with the highest rate of urbanization that has maintained the highest index of inequality in each of the four survey periods. But the inequality trends are similar across regions – falling between 1992 and 1997 and then rising by statistically significant magnitudes to new heights in 2002/03. In terms of relative means, the average household in the poorest (Northern) region of Uganda experienced declining relative welfare from being 0.76 times that of the average Ugandan household in 1992/93 to a low of only 0.58 times by 2002/03. This is in stark contrast to what was observed for Central where the average household expenditure continuously rose from 1.3 to 1.5 times the national average in 1992/93 and 2002/03 respectively. The corresponding figures for Western and Eastern regions fluctuated over the period, with Western having the same relative welfare level in the 1992/93

²¹ A complete table of bootstrap standard errors and calculated *t*-ratios can be obtained from the authors.

and 2002/03 survey periods. But Eastern experienced a fall in relative mean expenditure from 0.89 in 1992/93 to 0.78 in 2002/03.

In terms of welfare quintiles, Table A6 shows that inequality levels are very low (with Gini coefficients of less than 0.10) within each of the three middle sub-groups of the population. Overall, the Gini coefficients for quintiles one, two, three and four have remained virtually the same since 1992. But among the richest 20% of Ugandans there was a statistically significant increase of the Gini coefficient from 0.22 in 1997 to 0.33 in 2002/03. It is evident from the relative mean statistics in Table A6 that it is the richest 20% of Ugandans that has been driving the national average welfare growth. Specifically, the average household in the top 20% enjoyed sequential increases in relative mean expenditure from 2.12 in 1997 to 2.28 in 1999/2000 to 2.50 in 2002/03. In effect, whereas in 1997 the welfare level of the richest 20% was about six times that of the poorest 20%, by 2002/03 the disparity had risen to a scale factor of eight in favor of the former. The largest concentration of wealth at the upper end of the distribution is consistent throughout the survey rounds considered and could be the main cause of relatively high inequality in Uganda.

2.7.2 Inequality by household characteristic subgroups

In addition to being location specific, inequality is as well specific to household characteristics. With respect to the gender of the head of the household, inequality has not followed a uniform pattern of differentials during the period of analysis (Table A7). Although the Gini coefficient for female-headed households is higher than for male-headed households in virtually each of the four survey periods, the difference is statistically significant (at the 5% level) in 1997 and 2002/03 only. The relative mean statistics show that the average female-headed household was better off than the average Ugandan household in the 1992/93 and 2002/03 periods. But in the intervening survey periods, the male counterparts had higher-than-average household expenditure.

Table A7 also contrasts the welfare levels associated with different educational attainments of the heads of households. Evidently, higher level of education is associated with higher subgroup Gini coefficient. As it is with the spatial categories considered earlier, the intertemporal changes in the Gini coefficients for education subgroups are statistically significant, notably the change between 1997 and 2002/03. Using the relative mean approach to provide an alternative perspective, we observe that elevating a household's head from having no formal education to completing primary education would raise the household's welfare and move it to the national average level. If instead the household's head were effectively moved into the subgroup of secondary school graduates, *ceteris paribus*, the household would experience at least a threefold leap in its expenditure. At the extreme, moving a household from the no-formal education group to the postsecondary-education group would have scaled up the household's welfare by about five times according to the 2002/03 estimates. Relative to the average Ugandan household, a household headed by a postsecondary school graduate was three times better off in 2002/03.

When households are categorized according to the head's main sector of economic activity we observe in Table A7 that the low welfare in the country is largely as a result of the crop-farm sector dragging the welfare average downward. Except for those not working, it is the crop-farming households that have consistently stayed below the national average welfare throughout the survey periods. Although the non-crop sectors are individually small, in total they are currently the economic mainstay of about 48% of Ugandan households. Throughout the period of analysis the average household in each of the non-crop and non-farm sectors maintained welfare levels that were higher than the national averages.

In terms of household size as a measure of dependency burden, the relative means in Table A7 confirm the expected result that smaller households are significantly much better off than larger ones. Specifically, households with a size of four or smaller, on the average, enjoy a higher standard of living than the overall average Ugandan household. But it is also within these household size brackets,

particularly the subgroups of fewer than four members, that the Gini coefficient remained statistically unchanged from one year to the next between 1992 and 2000. For the subgroups characterized by at least four household members, the increases in inequality were statistically significant between 1997 and 2000 after which the level remained statistically unchanged.

2.7.3 Contributions of within- and between-group inequality

Table A8 presents the percentage contributions of different inequality components to the national Theil index. For all the spatial and household-specific subgroups the contribution to national inequality of within-group inequality is several-fold higher than that of between-group inequality. Nevertheless, the between-group contribution is distinctly higher for quintiles and for education and rural/urban subgroups. In essence, the rising inequality in Uganda is primarily driven by within-group disparities. The lowest contribution of between-group inequality, which is almost at zero percent, is observed when female- versus male-headed decomposition is applied. The largest between-group contribution to national inequality comes from quintile subgroups, but this contribution has declined from 79% in 1997 to 64% in 2002/03. Conversely, the within-quintile contribution to inequality has risen from 21% in 1997 to 36% in 2002/03. Differences in head's education level exhibit the second highest between-group inequality with a rise in the corresponding percentage contribution from 15% in 1997 to 27% in 2002/03.

In brief, this subsection illustrates that during the last ten years when Uganda's economy maintained relatively high growth rates, the distribution of the benefits of growth improved from 1992/93 to 1997 after which it became increasingly skewed. Using the relative mean measure of inequality, we show that: (i) rural-urban development dichotomy has deepened over time; (ii) the crop-farm sector has systematically lagged behind the average welfare level; (iii) the richest 20% became relatively richer overtime – currently eight times better off than the poorest 20%; (iv) education appears to be an important factor for explaining inter-household welfare disparities; (v) the gender of the household head does not contribute significantly to overall inequality in Uganda; and (vi) family size of five and above, in general, has the effect of moving a household to a welfare level that is below the national average. But for each of the inequality decomposition sub-groups (except for quintiles) it is the within- rather than the between-group inequality that contributes at least 70% of the total inequality. Furthermore, the descriptive results provide evidence that although growth is fundamental for poverty reduction, there is need for policy adjustment such that inequality, among other factors, does not undermine the poverty reducing impact of growth. The fall in Uganda's poverty headcount from 44% in 1997 to 34% in 1999/2000 when GDP growth rate was about 6% per annum accompanied by rising inequality suggests that there was a trickle-down growth process that led to poverty reduction.

2.8 Growth elasticity of poverty

Okidi *et al.* (2003) estimated growth elasticities of poverty using rural-urban sub-regional pseudo panel data constructed from five rounds of the Uganda National Household Survey, yielding a pooled dataset of 40 observations. Applying OLS to the pooled data by regressing the log of poverty headcount on the log of mean consumption expenditure and log of Gini coefficient they estimate a growth elasticity of 1.67 for distribution-neutral growth and elasticity of 1.39 when distribution shifts are allowed to affect the impact of growth on poverty. In this study, however, we adopt Ravallion's (1997) method to estimate the elasticity of each of the three FGT measures and the watts index with respect to “distribution corrected” growth in consumption expenditure.²² The distribution correction uses the 1992 Gini coefficient as the initial inequality index because that is the year when reforms in

²² Ravallion's (1997) method has been modified in his 2004 paper, *Pro-poor growth: A primer*, by introducing a parameter, θ , to adjust for possible non-linear relationship between the growth elasticity of poverty and the initial level of inequality. Ravallion (2004) recommends using $\theta = 3$, which he estimates using cross-country data from two surveys in 62 countries. But because we are not sure about the criterion of choosing θ in country specific analysis, we let it take on the value one.

Uganda fully got underway. In effect, the conditions prevailing around 1992 determined the growth paths of households in subsequent years (Deininger and Okidi, 2003). Seven rounds of surveys are used in estimating the growth elasticity. The rates of change in the poverty measures and the consumption expenditure for the period 1996/97 – 1999/2000 and 1999/2000 – 2002/2003 are annualized since the surveys did not have a one-year interval between them. Accordingly, we adjust for this unevenness in spells by introducing a trend variable capturing the interval between successive surveys thereby suppressing the conventional constant term in the estimation (Ravallion and Chen, 1997).

Table 4 shows that the responsiveness of the FGT measures of total or extreme poverty to growth, adjusting for initial inequality, increases with the sensitivity of the poverty measure to large poverty gaps, indicating that growth does not only benefit those just below the poverty line but actually alleviates the depth and severity of poverty. The Watts measure is more responsive to growth than the poverty gap index but less responsive than the poverty gap squared index. Overall, the results indicate that there was no underlying trend independently of growth in the poverty dynamics in Uganda during the 1990s. This means that on the average, after adjusting for initial inequality, growth was statistically responsible for the entire changes in poverty during 1992 to 2003 irrespective of the poverty measure used. Extreme poverty is, however, more responsive to growth than total poverty. Using the estimated elasticities, Table 5 illustrates that initial inequality is important in determining future poverty trends; sub-regions with lower initial inequality experienced higher responsiveness of poverty to growth.

The estimated national elasticity implies that a one-percent increase in real mean consumption expenditure per adult equivalent, with no change in distribution, reduces total poverty headcount index by 1.83%. At the annualized mean growth rate of 2.98% (Table 1) and with initial (1992/93) total poverty headcount index of 56%, poverty is calculated to fall by about 5.5% per year, or 3.1 percentage points in the first year after the initial period. Using straight line compounding, by 1997 (four years later), with no change in distribution, the headcount index is calculated to fall to about 44%, which is the actual observed level, although the Gini index fell (but only slightly) from 0.36 to 0.35 between 1992 and 1997. For the whole period 1992-2003 with no change in distribution the headcount index would have fallen to about 31%. Considering the decomposition in Table 2, we can roughly say that the 8 percentage-point contribution of inequality to rising poverty, indeed, brings the headcount index to 39%, which is just one percentage-point more than the actual total poverty headcount in 2002/2003. In a nutshell, the estimated elasticities provide very good predictions of poverty headcounts.

Table 4: Regression of changes in log of poverty measure on distribution-corrected changes in the log of mean consumption

	Coefficient	P-value
Regular poverty measure = headcount index		
Distributional trend	0.011	0.471
Distribution corrected growth	-2.882	0.000
R-squared = 0.60		
National growth elasticity = 1.83		
Regular poverty measure = poverty gap index		
Distributional trend	0.011	0.601
Distribution corrected growth	-3.655	0.000
R-squared = 0.55		
National growth elasticity = 2.32		
Regular poverty measure = squared poverty gap index		
Distributional trend	0.014	0.605
Distribution corrected growth	-4.412	0.000
R-squared = 0.51		
National growth elasticity = 2.81		
Regular poverty measure = watts index		
Distributional trend	0.011	0.379
Distribution corrected growth	-3.928	0.000
R-squared = 0.61		
National growth elasticity = 2.50		
Extreme poverty measure = headcount index		
Distributional trend	0.014	0.582
Distribution corrected growth	-3.963	0.000
R-squared = 0.45		
National growth elasticity = 2.52		
Extreme poverty measure = poverty gap index		
Distributional trend	0.021	0.489
Distribution corrected growth	-5.365	0.000
R-squared = 0.49		
National growth elasticity = 3.41		
Extreme poverty measure = squared poverty gap index		
Distributional trend	0.029	0.445
Distribution corrected growth	-6.566	0.000
R-squared = 0.45		
National growth elasticity = 4.18		
Number of observations = 48		

Note: The national growth elasticities are calculated based on the initial (1992) national gini coefficient of 0.36414. Sub-regional elasticities can be calculated based on their respective initial gini coefficients.

Table 5: Distributional trends and growth elasticities of various regular and extreme poverty measures

	Initial inequality	Regular poverty measure				Extreme poverty measure		
		P0	P1	P2	Watts	P0	P1	P2
National	0.364	1.832	2.324	2.805	2.497	2.520	3.412	4.175
Central rural	0.329	1.935	2.454	2.963	2.637	2.661	3.603	4.409
Central urban	0.394	1.746	2.215	2.674	2.380	2.402	3.252	3.979
Eastern rural	0.321	1.957	2.482	2.996	2.668	2.692	3.644	4.459
Eastern urban	0.319	1.964	2.491	3.007	2.677	2.701	3.656	4.475
Western rural	0.309	1.992	2.527	3.050	2.715	2.740	3.709	4.539
Western urban	0.352	1.867	2.368	2.858	2.544	2.567	3.475	4.253
Northern rural	0.330	1.930	2.448	2.955	2.631	2.655	3.594	4.398
Northern urban	0.394	1.747	2.216	2.675	2.381	2.403	3.253	3.980

Note: Initial inequality is the 1992 Gini coefficient

2.9 Concluding remarks

The analysis in this section illustrates that whereas peace and stability are fundamental prerequisites for development, good policies and consistent pursuit of the policies are the ultimate drivers of growth. However, the extent to which the growth is pro-poor is determined by household initial conditions and community-based characteristics. Such characteristics include physical and human capital, physical infrastructure, avoidance of civil strife, and sustained progress in addressing HIV/AIDS.

Dividends from the restoration of economic and civil stability usually taper off such that the challenge of normal growth sustainability sets in, with implications that growth tends to slow down and inequality widens. In the case of Uganda, public and private partnership in developing agriculture, which is the economic mainstay of the population, should receive initial priority in order to achieve and maintain higher pro-poor growth rates. Primarily, post-recovery structural transformation that builds on successful productivity enhancement in agriculture is key to sustaining pro-poor growth that Uganda initially enjoyed as a result of removal of distortions using sound reform programs. To do this, high growth with some degree of redistribution is crucial, given the evidence that growth favored the poorest segment of the population only when the rate of pro-poor growth was well above the mean growth rate. This is further confirmed by the standard decomposition and elasticity analysis of changes in poverty measures.

3 Factors affecting the participation of the poor people in growth

In light of the Total Factor Productivity (TFP) argument, the best way for the poor to contribute to growth in a way that offers them benefits is to increase the productivity of their assets (e.g. through improvement of the status of their health and education) on the one hand and ensuring deployment of such assets on the other. The poor have to be facilitated to participate both in the factor and product markets. The policies for improving the quality and value of such assets, therefore, have got to be

complemented by policies that ensure utilization of these assets and distribution of the proceeds based on Euler's product exhaustion theorem.²³

This section, therefore, looks at the policies that have been put in place to allow the poor to contribute more to growth and assesses the effectiveness of such policies in meeting their objectives. The key sets of policies include: (a) macro policies that affect the value of assets, price levels; (b) labor market and rural development policies that affect wages/remittances price for cash crops and inputs, transaction costs; (c) pro-poor spending to raise growth as well as productivity of assets; and (d) policies designed to affect the pattern of growth.

3.1 Macro policies

The major macro policies include price stabilization and trade policies. Price stabilization may be looked at in terms of consumer prices, foreign exchange rates and interest rates. Since 1992 Uganda has controlled inflation in single digits and kept it below 5% per annum for most years. The shilling depreciated significantly from Ug.Shs 966 per dollar in January 1992 to Ug.Shs 1,940 per dollar in March 2004. The depreciation of the shilling has raised concerns of possible negative effects on revenue collection and external sector competitiveness. However, real interest rates, which were negative turned positive from 1994, rising to over 25% per annum, and have remained that high.

Liberalisation, and privatisation are the major trade policies Uganda has implemented in the last decade or so. These policies were intended to maximise economic growth through efficiency gains in resource allocation, production and distribution of goods and services. The Uganda Investment Authority (UIA) was established to assist business startup, especially by foreign investors. The thinking was that foreign investment would create jobs and thereby increase the participation of Ugandans in the economic growth process. The stable macroeconomic environment was perceived as a necessary condition for both foreign direct investment and domestic investment, which would lead to job creation and participation of the poor in the growth process.

While Uganda should be applauded for macroeconomic stability, there are concerns that trade policies especially in the 1990s favoured foreign investment at the detriment of domestic investment. Although foreign direct investment increased, it did not increase to the anticipated level and hardly created jobs. Thus, the macroeconomic policies that were implemented did not have participation by the people in the economic growth process as one of the priorities. Efficiency in resource allocation, production and distribution was the priority. Accordingly, the policies encouraged use of capital and new technologies at the expense of job creation.

Analysis by Gauthier (2001), based on survey data for 1995-97 showed that all levels of productivity greatly favored exporting firms and those with a component of foreign ownership. Efficiency levels for exporters were 0.23 compared to 0.18 for non-exporters. Even when measures of technical efficiency were used, Gauthier reported that exporters on un-weighted cumulative basis were more efficient with levels of 7.3 percent compared to -5.3% for non-exporters. Recent evidence by Kappel et al (2004) sheds some light on the effect of trade liberalization and the high degree of openness on competition, efficiency, and growth of firms. Using the business register of UBOS (2003), the study reported that 60% of the medium to small enterprises (MSEs) grew substantially because of operating in a competitive market environment. This is an indication that competition might have increased efficiency and growth for a number of firms. However, this conclusion should be taken with caution because UBOS survey only dealt with existing firms and did not capture firms that had closed.

²³ The theorem states that total physical (real) payments to factors of production would exhaust the total physical output, as each factor receives the value of its physical contribution.

There is evidence²⁴ therefore to suggest that the macroeconomic environment has been more favorable to foreign direct investment compared to domestic investment. Domestic investors face other production constraints, especially the cost of credit, which is of lesser concern to foreign investors. In recent years, the investment incentive structure has become relatively more favorable to categories of investment that do not lend themselves to participation by a wider section of Ugandans in the economic growth process. The categories of investment include investment in financial instruments (especially treasury bills) and/or investment in non-tradables (such as transport services). These are more attractive to investors because of the returns and fewer risks compared to investment in tradables (e.g. agriculture, manufacturing of export commodities). Yet, investment in tradables offers higher chances of participation by a wider section of society.

3.2 Labor market

Workforce participation, which we crudely define as workforce²⁵ divided by the total population aged 10 years and above, declined from 64% in 1992 and stabilized at about 59% through 1999 to 2003. In other words, the series of the Uganda National Household Survey data show that the decline in poverty in the early 1990s has been accompanied by a fall in workforce participation and rise in per capita consumption expenditure.

Microanalyses based evidence suggests that the share of agriculture in rural employment is on decline with workers shifting to non-agricultural sectors. This finding is consistent with the overall changes in the composition of GDP. However, the rate of diversification is much slower for female compared to male workers. Nationally, employment growth increased by 2.7 percent and 2.8 percent over the period 1992 through 1999 and 1999 through 2002 respectively. The corresponding figures for rural areas were 2.5 and 2.3 and for urban areas they were 4.6 and 5.7 over the same period. These figures suggest that the rate of growth in employment has been positive overtime, but well below GDP growth. During the period 1999 through 2003, employment trends in the rural areas were consistent with the GDP growth rates.

At sector level, smaller sectors have experienced higher growth rates and increasing share of the labor force over time. In the initial period (1992/93) crop agriculture, manufacturing, trade and government services contributed significant shares of employment. Apart from mining and public utilities, other non-agricultural sectors experienced positive employment growth rates during the 1990s. The sectors that experienced high employment growth rates include manufacturing, trade, hotels and transportation and communication. Although crop agriculture remains a key sector in terms of employment, it is one of the sectors with the weakest economic growth. While the participation of the poor in sectors that experienced high employment growth increased with the exception of government services, their shares are relatively lower than that of the non-poor individuals. In other words, the rural poor continue to rely on agriculture, which, as an economic sector, is growing slowly as already pointed out. This has negative implications for the livelihood of the rural population.

The share of female workers in the workforce increased from 49.8 in 1992/93 and stagnated at 52.2% between 1999 through 2003. Female participation in the workforce remains concentrated in agriculture although the trend has been declining overtime. However, females' share is declining at a much slower pace than that of males, and shifting mainly to non-tradable sectors.

²⁴ The apparent decline in the work force could be attributed to the Universal Primary Education program that has enrolled a significant fraction of the originally non-school going family child labor.

²⁵ Individuals in the workforce were derived based on their usual main activity status, which UBoS defines as an activity where an individual spends more time.

As already discussed diversification is taking place when agricultural growth is on a decline and earnings lagging behind those from the non-agricultural sectors. Restricting the analysis²⁶ to paid employment it is found that a significant fall in the growth rates of earnings during 1992-99 compared to 1999-02. Real earnings increased in all sectors during the period 1992 through 1999, however, some sectors recorded negative growth either at mean or median over the period 1999 through 2002. More importantly to note is the high growth in the manufacturing and trade sector during 1999-02, which was followed by a decline in the real wages over the same period. This would suggest that the influx of people into these sectors suppressed the returns. Related studies such as Obwona *et al* (2003) reported rural wages for non-agricultural activities to be significantly higher than those offered for agricultural activities, which is indicative of the competitive nature between these activities. In addition, there was a gender wage gap with female being paid less than men in both activities. Noticeably, EPRC tables suggest the earnings gap between government and private employment is widening, with government workers receiving a higher pay than their counterparts in private employment. Other surveys conducted by UBoS report similar trends in earnings/wages. The recent survey of the manufacturing industries indicated that, though the number of employees has increased over the years, the wage bill has not increased relatively at the same rate. Even with inflation rates of 5 percent per annum, trends in nominal wages imply that real wages have been on the decline and must have had an adverse effect on remittances.

Apart from knowing the sectors where the poor are employed, we provide more insights on their employment status. The microanalyses suggest a decline in the self-employment in agriculture and an increasing share in the self-employment in non-agriculture among the rural population, which more than doubled between 1999 through 2003. While the share of urban population in government employment followed a declining trend that of the rural population followed a U-shape. Although the share of government employment remains below than realized in 1992/93. On the other hand, the share of the private employment recorded an increasing trend but remains below 10%. Both private and government employment seem to be moving from urban to rural areas. The recruitment of teachers partly explains the increase in government employment. Despite the observed move out of self-employment agriculture the rural population remain reliant on agricultural.

Education is among the initial conditions required to increase one's opportunities in the workforce. Here we discuss how education is related to labor participation. There is demand for more educated workers across sectors including crop agriculture. Noticeably, the move from crop agriculture to non-agriculture requires a more educated workforce. Education comes out strongly as a key variable influencing earnings, the returns increasing with increasing education level (Ssewanyana, 2004b). It is further a key factor in influencing the observed increasing income inequality in Uganda (see Ssewanyana *et al.* 2004a). Thus the potential for rural workers to get into better paying employment is extremely limited given their low education levels. This, in turn, limits their participation in high employment growth sectors. More so, the argument that openness of the economy would promote demand for unskilled labor is likely to have been counteracted by the poor performance of the export sector. Besides, authors such as Berry *et al.* (1997) and Owens and Wood (1997) have argued that successful export production requires a combination of basic education among others, which is absent among the majority unskilled rural poor.

Industrial growth has largely been in the manufacturing sector among the large companies in the formal sector, which, apart from a few like tobacco and sugar, have little or no linkages with small scale producers in the rural sector. Even then, UNDP (1997) indicated that liberalization made it easier for firms to adopt capital-intensive technologies, increased productivity and returns to owners of capital assets, and increased demand for skilled labor thereby worsening income distribution. This is in line with the observation that the distribution between incomes from labor and capital in industry

²⁶ . Earnings in 2002/03 were collected for only those individuals in paid employment.

shifted in the direction of capital, which led to changes in consumption patterns and lifestyles and worsened inequity (Pieper, 1997; Amsden and van der Hoeven, 1996; and ILO, 1996).

So far the analysis suggests that structural transformation has been sluggish both at macro and micro levels. Growth in the volume of employment did not translate into better earnings and in turn better welfare. The rural population remains locked up in crop agriculture, which has grown the least in the last few years. Even those in paid employment in agriculture receive wages well below their counterparts in other sectors. With the current conditions in the rural areas, we should not expect more people to be employed in crop agriculture. Little progress is made in increasing the value chain of agricultural production via agro-processing. This poses a challenge of creating jobs in non-agricultural sectors especially in those with higher potential and at the same time investing in improving the skills of the rural population. This calls for interventions that ensure not only adequate growth in the volume of employment but also that ensure a sufficient growth in better paying employment. The structural transformation process has been partly slowed down by lack of access to productive assets as discussed in the next section. More importantly, the improvements in the provision of rural infrastructure, the existence of employment in rural areas remains limited.

3.3 Access to productive assets

Broadly speaking, access to infrastructure that allows the poor to respond to opportunities in the production of tradables has improved over time. Retrospective survey data on community characteristics indicate that households were closer to rural infrastructure such as roads, electricity, schools and health facilities in 2002/03 than in 1992. This finding is consistent with the UPPAP II. However, issues of quality have been raised especially for schools and health facilities. As discussed in section 2, such improvements partly contributed to poverty reduction among the panel households in the 1990s. However, further improvements in these services since 2000 have not translated into poverty reduction. The existing inequality in the distribution of infrastructure may also influence participation. The central region has the best infrastructure to benefit from a liberalized marketing system (see Obwona *et al.*, 2004).

There is empirical evidence that crop yields at the farm level are far below those attained at research stations (see, for example, MoFPED, 1996; Republic of Uganda, 2003). Farming households covered in 1999/00 reported their crop yields to have declined or stagnated compared to the situation in 1992 (Obwona *et al.*, 2004). The poor in UPPAP II also report similar trends. The increases observed in crop production, are mainly a result of increases in cultivated land. Although with the liberalization of the input markets one would have expected such increases to come from higher application of agricultural inputs. Some studies such as Obwona *et al.* (2004) and Pender *et al.* (2004) find agricultural productivity to be influenced by other factors beyond physical infrastructure. Despite the benefits that come with application of productivity enhancing technologies, the adoption remains limited due to supply and demand constraints. The markets for these inputs are fragmented, characterized by seasonality in demand, small rural markets, low returns in relation to other investments and low household incomes. These factors combine to make agricultural input marketing a financially risky investment for the private sector.

The trends in the use of these technologies have been disappointing. For instance, there was a decline in the use of improved seeds between 1992 and 1999; the application of fertilizers remain very low and where fertilizers are said to have yielded positive economic returns, such returns have not translated into widespread adoption (see Nkonya *et al.* 2003). The plausible explanation could be linked to the capacity (in terms of financial capital and human capital) of these households to purchase and adopt such technologies. Even when farming have such capacity, the rural marketing channels seem not to have improved after liberalization.

While there is empirical evidence indicating that past efforts by Government to provide extension services were effective in increasing production of field crop and livestock (see MoFPED, 1996), according to the 1999/00 National Household Survey, access to extension services are skewed towards the richer households.

While the microfinance sector has been able to grow fast and cater for the financial needs of the micro enterprises that the larger financial institutions have traditionally failed to address, it remains characterized by smaller loans, with very short repayment cycles which are definitely not suitable for agricultural production, and biased towards urban areas. Where such institutions exist in the rural areas they favor the richer farming households and are biased towards non-agricultural activities (Obwona *et al.*, 2004). A survey conducted by MoFPED found these institutions to play a significant role in supporting small enterprises and enhancing the economic potential of women. Past efforts by the Government to provide formal financial services to the rural population have been abused. To date, informal credit remains a common source of credit in the rural areas. In the absence of rural credit, the rural population would be expected to resort to their savings to finance long-term investments in agriculture, however, the level of savings is still low. All this suggests that improved access to social services is necessary but not sufficient to ensure increased productivity of the rural population.

There is no doubt that agricultural market information helps in minimizing farmers' risks when it is incorporated in the planning process of crop and animal production. Only 30% of the farming households in Uganda receive market information. While the private sector is active in this area, the government plays a key role. Besides market information, dissemination of weather information is still weak. Timely dissemination of such information is growing in importance given the increasing unpredictable changes in weather conditions.

The land reform undertaken in 1997 is yet to yield the expected results. Access to land is limited by the land tenure system. The tenure system has remained intact. This has to a great extent influenced land management practises.

The quality of environment and natural resources on which people depend is declining, which in turn results into reduced incomes. Poor people identify environmental degradation to be among the factors that continue to contribute to the poor performance of the agricultural sector (Republic of Uganda, 2003). Related studies such as Nkonya *et al.* (2004) provide empirical evidence on the extent of land degradation in the country and warn that agricultural development will be affected if nothing is done in the near future. Environmental degradation is also reported around the fishing points caused by fish processing companies, leading to a reduction in the fish catch. By extension, there are laws that are anti-poor because they influenced the participation of the poor in the fishing industry under the guise of environmental protection. Unable to increase the productivity from their limited resources, the rural people are often forced to adopt environmentally unfriendly practices that tend to aggravate poverty. Such as the utilization of wetlands and gazetted forest areas.

It remains debatable whether liberalization and macro economy stabilization have so far led to lower transaction costs in agriculture. For a landlocked country like Uganda, the international transaction costs remain too high to attract the participation of the private sector. The performance of the rail transport, a key to reducing such costs is not encouraging. By extension, the domestic transaction costs remain high in the rural areas especially those with low population densities. According to UPPAP II the poor identified market dues as a key hindrance to the development of the non-farm activities.

3.4 Pro-poor spending

The policy of pro-poor spending has been aimed at raising growth as well as the level of productivity of assets of poor people. The share of the PAF within the medium term expenditure framework (MTEF) for poverty related activities increased from 16 percent in 1997/98 to 33 percent in 2001/02.

This was deemed to be substantial progress in terms of poverty orientation of public expenditure. Pro-poor spending has dominated spending under the pillar of improving the quality of life including spending on health, education, and water and sanitation. The government more than doubled its spending on education and health in the 1990s. Over the medium term, spending on education and health alone, as a percentage of total budget spending is only expected to decline slightly from 32.6 percent in 2001/02 to 31.9 percent and 29.6 percent in 2003/04 and 2005/06 respectively. Other programs aimed at improving productivity of assets include land reform. It is worth noting that Uganda does not have a large component of social spending in terms of income transfers and other related benefits.

The immediate outputs of most of these policies have been commendable as attendance of both schools and hospitals have increased following the introduction of UPE in mid 1990s and the removal of user fees in 2001. The primary net enrolment rates have been on the rise even for the bottom 20% in the rural areas. Among the bottom 20% in the rural areas enrolments increased from a low base of about 45% in 1992 to 71% in 1999 and 75% percent in 2003. Although the enrolment gap persists between the rural and urban areas, the magnitude of the gap continues to decline. The primary enrolment rates depict a regional dimension, with the northern region (the poorest area of the country) lagging behind other regions. Within the northern region, access to basic education remains limited with all quintiles recording a decline in enrolment between 1999 through 2002. Although these rates are well above those observed in 1992/93. The decline is attributed to insecurity in the area. The policymakers are now faced with a challenge of quality vis-à-vis quantity and ensuring secondary education for UPE graduates. There are improvements in the student-teacher ratio as well as increases in the number of qualified teachers, though all these efforts still favor the urban areas. Progress is also reported in the provision of instructional materials (Republic of Uganda, 2004).

On the whole, Ugandans are more educated today. However, gaining entry into the labor market remains a challenge. On the other hand, there has been increased access to health facilities especially by the rural population due to the abolition of cost sharing in public facilities. Communities are now closer to these facilities. The number of adult lost days due to ill-health declined for all quintiles but the number of children reporting ill-health increased especially in the bottom 20%. However, more need to be done to ensure that the expansion in health infrastructure matches the number of trained health personnel.

However, the growth impact of such policies can be elusive largely because of the inclination of such spending towards long-term impacts on the economy. Thus, in the current short to medium-term, only a little impact on growth would be expected.

In an economy characterized by a large government and a slow rate of economic growth, the private sector is likely to be crowded out, thereby shifting resources from productive investment into unproductive ones. The contraction or slow growth of the private sector will result in under- or unutilized assets such that the general productivity of assets, especially those of the poor, will be very low. Such a development will raise the potential for social spending to have a negative relationship with growth and poverty reduction.

Recent work by Kraay (2004) suggests that government consumption is negatively correlated with both growth and distributional change.²⁷ The recent increase in the Gini coefficient in Uganda from 0.38 in 1998/99 to 0.43 in 2003 is an indication of worsening distributional change. Though this does not suggest a reduction in government consumption, the message is clear that some forms and/or the pattern of government spending may not deliver the desired goal of growth and poverty reduction.

²⁷ Kraay, Aart (2004), "When is Growth Pro-Poor? Cross-Country Evidence"., **IMF Working Paper** No. WP/04/47. Washington D. C.

The likely channels of transmission may be based on the argument that government consumption raises the general level of consumer prices thereby reducing real private consumption and welfare. The reduction in private consumption effectively reduces general aggregate demand and hence mitigates the demand-driven aspects of the growth process. As noted elsewhere, this is one of the trade-offs of continued use of restrictive monetary policy.

3.5 Policies affecting the pattern of growth

Over the last two decades, Uganda has implemented a number of policies aimed at revamping and stimulating industrial growth including privatization and, to a large extent, establishment of the Uganda Investment Authority (UIA). In addition, there were policies designed to stimulate structural transformation, with a view of reducing the relative role of the agricultural sector. The pattern of growth, therefore, was to follow an increasing share of the role of industry and service sectors resulting in some form of rural-urban migration, which in due course would increase the productivity in the agricultural sector. In addition, the country has also sought to pursue an export-led growth strategy with emphasis on the promotion of non-traditional export crops.

The strategy of promoting non-traditional exports has been largely successful since they account for over 50 percent of export earnings. However, as noted in section 2, sectoral transformation has not occurred and agriculture continues to dominate the economy, with its share of GDP only declining marginally over the last decade. There is a strong possibility that the decline has partly been a result of low growth rates in the sector rather than absolute increases in the other sectors.

The level of success attained by these policies aimed at altering the pattern of growth may partly be explained by the nature of implementation and possible structural rigidities in the economy. The realization of the goal of achieving sustained growth requires that programs be implemented in an efficient and effective manner. Quite often, government has taken bold policy decisions to stimulate economic growth but the implementation of such policies has been hampered by an inefficient and ineffective government service.

There appears to be so many agencies of policy formulation and implementation that the net effect on the economy may be minimal partly due to lack of harmony, competition and spreading of resources to cover overhead costs. There is a potential that the pattern of growth will be affected by the cost of policy formulation processes and running of institutions, rather than the actual implementation of the policy in a manner that would improve performance of the real sector. According to MFPED (2002), most sector programs were predominantly focused on inputs and implementation processes rather than the end results of policies, programs and projects.²⁸

Secondly, though there has been an increase in the urban population, the less than proportionate response in industrial growth means that the shift is likely to deliver minimal benefits to the economy, as this will only raise urban unemployment levels. Growth in the service sector, both formal and informal may have helped to provide employment options to the increasing urban population but appear not to have been adequate given the magnitude of the migrations.

3.6 Concluding remarks

In order to optimize resources, there is need to clearly define the roles and responsibilities of the various government ministries and agencies involved in policy formulation and implementation. This will avoid duplication, reduce bureaucracy and red tape in obtaining services, and facilitate planning and capacity building in the different organs. As reported in Bevan *et al.* (2003), though there are several sources of market and other forms of imperfections, interventions aimed at dealing with them

²⁸ MFPED (2002), Uganda's Poverty Reduction Strategy Paper (PRSP) Progress Report 2002, 1st Draft for January 2002.

must be carefully considered, clearly defined and justified both in terms of capacity to reduce the identified problem and impact on incentives elsewhere in the economy.

4 Trade-offs between growth and pro-poor growth

This section explores the possibility of potential trade-offs between policies biased towards growth and those designed to maximize the participation of the poor people in the growth process. Basically one may consider an option of focusing on continued growth within a framework that will ensure that, overtime, growth occurs with poverty reduction as more poor people get absorbed into the growth process or increase immediate spending on the poor to improve their immediate welfare and quality of life. The former (growth approach) takes a more macro inclination and would, therefore, not focus on any specific needs of micro level units.

It is worth noting that the two options are not entirely divorced from each other but too much inclination towards one option could act against the other. In Uganda, policies focused on addressing the immediate poverty concerns would include UPE and free health services while the medium term competitive strategy (MTCS) would be in the category of opportunity creating policies. As noted, focus over the last five years or so has largely been on the former set of policies giving the implication that immediate improvement in peoples' welfare may have sacrificed growth concerns.

4.1 The growth approach

The option of focusing directly on the growth process would largely assume that the poor will eventually improve their plight by taking up employment and business opportunities created by a growing economy such that the policies would be more inclined to creation of such opportunities. This is likely to be dominated by macro policies such as exchange rate reforms, stabilization and fiscal management (Henstridge and Kasekende, 2001)²⁹. These were the policies Uganda followed particularly up to 1997 when UPE was introduced. Although macroeconomic stability continued as the country's priority, after 1997 there was increased focus on government spending on the social sectors – health and primary education. The growth approach was more adherently followed before 1997. From 1997, while retaining policies geared to growth Uganda increased its focus on social sector policies that were intended to improve the quality of life of the poor through delivery of social services. Whether Uganda's focus on social services after 1997 affected the country's economic growth performance is the question explored further here.

Notwithstanding the special focus on delivery of social services after 1997, Uganda maintained almost the same policy package throughout the 1990s and in the new millennium. Emphasis was on short-term fiscal adjustments and a more proactive use of monetary policy with a view to maintaining macroeconomic stability, which was perceived as the key to economic growth and poverty reduction. The private sector, especially foreign direct investment, was expected to play a key role in the economy. As Uganda accessed increasingly more aid from external sources, government spending increased, translating into the country's better economic growth performance.

The thrust of the growth approach is that the private sector leads the process of economic growth through increased investment. Foreign direct investment was perceived as a key element of the strategy. The role of the state was limited to providing an environment favourable to private sector led economic growth and provision of social services, especially to the poor. On a practical basis, the growth approach entailed maintenance of macroeconomic stability through good conduct of monetary

²⁹ Henstridge Mark and Louise Kasekende (2001), "Exchange Reforms, Stabilization, and Fiscal Management", in Reinikka Ritva and Paul Collier (eds), *Uganda's Recovery: The Role of Farms, Firms and Government*, Kampala, Fountain Publishers.

policy. The following are some of the trade-offs or policy dilemmas associated with Uganda's growth and poverty reduction strategy pursued from the early 1990s.

- Macroeconomic stability seems to have been achieved at a cost of high interest rates. Commercial bank lending interest rates in Uganda as of 2004 were about 30% per annum. The primary cause of high interest rates is government's issuance of treasury bills, which is done to absorb excess liquidity so as to control inflation. The widening fiscal deficit has been identified as the primary cause of excess liquidity. There is therefore thinking that by gradually decreasing the fiscal deficit, interest rates would fall. Individuals and firms criticize high interest rates for choking off domestic investment through reduced access to credit. Although private sector credit has been increasing, credit seems to be getting concentrated in hands of a few firms and individuals.
- Aid inflow, which is important in financing of Uganda's development process, seems to be causing appreciation of the Uganda shilling, thereby adversely affecting growth of exports. There is the thinking that as a measure to reverse exchange rate appreciation, government should reduce the fiscal deficit by reducing its expenditure (possibly by cutting on foreign aid). However, this is contrary to the thinking that Uganda being a poor country needs more resources from external sources to finance its infrastructure development and other development programmes that are geared to poverty reduction. Indeed, with a view to enabling poor countries to meet the MDGs, the UN system has in the recent past mobilized donors to extend additional aid to poor countries.
- Un-anticipated inflows of foreign exchange especially from offshore investors and private capital inflows are complicating the exchange rate appreciation challenge. Liberalization of the capital account of the balance of payments enabled uncontrolled inflow and outflow of foreign exchange. How to apportion the causes of exchange rate appreciation between foreign aid inflows and these other inflows is one of Uganda's macroeconomic management challenges. Blocking off some of these inflows would entail reducing interest rates to remove the incentive to foreign portfolio investors to bring capital into the country for investment in the money market.

4.2 The pro-poor growth approach

Pro-poor growth has been defined as that growth that is associated with poverty reduction. This could happen in two ways: Either through implementation of policies that maximize economic growth (private sector led economic growth), coupled with public sector policies that ensure increased access by the poor to social services especially education, health, security, and water and sanitation, or through increased participation of the poor in the growth process, which would entail their increased access to productive assets particularly land, credit, and production enhancing technologies. The option of dealing with immediate poverty concerns would largely assume that the private sector will provide the opportunities, following creation of a supportive business environment, such that the policy focus is on improving the skills and health condition of the poor people for gainful participation. Other policy objectives include increasing access to and security of assets.

Whereas some commentators see no trade off between growth maximizing and pro-poor policies, it has been argued that there is a trade off between the two sets of policies. That increasing public sector spending on social sectors and/or participation of the poor in the growth process leads to lower rates of economic growth. There is also the contrary view that there are synergies to reap by implementing pro-poor policies concurrently with pro-growth policies. Uganda's experience suggests a trade-off between the two sets of policies. As noted, prior to 1997 Uganda followed the growth approach and the country witnessed high rates of economic growth. Thereafter the country prepared the Poverty Eradication Action Plan (PEAP) in 1997, and the rate of economic growth moderated somewhat.

However, even after 1997, macroeconomic policies still remained pro-growth with the control of inflation being Uganda's overarching macroeconomic policy objective.

The political and changing policy environment, which focused on involvement of the masses in both political and social economic decisions, increased spending on decision-making process including consultations at various levels of government. One could refer to it as the 'cost of democracy' and participatory planning. Such trends clearly affected the spending trends in the country with a greater inclination to provision of social services as the people, especially the poor, wanted immediate relief and improvement of welfare but, at the expense of real sector investments, which, though not offering short-term benefits, have a bigger likelihood of providing a more stable growth path.

Pro-poor spending was partly institutionalized through the PAF structure, which, accounted for 23.3 percentage of the total budget in 2002/03, and is projected to increase slightly to 23.5 percent in 2003/04. Though this was a good innovation aimed at protecting expenditures with direct impacts on poverty reduction, the practice tended to focus budget cuts to the other activities but which were complementary as far as growth was concerned. The implication is that pro-poor spending may not have been holistic in implementation since it lacked counterpart funding of other related activities.

4.3 Sector budgetary allocations

The Medium Term Expenditure Framework (MTEF), which Uganda is employing as a budget management tool, requires that an increase in resource allocation to one sector is possible only at the expense of budget cuts of at least one different sector. Increased expenditure on defense and security has in the recent past entailed cutting expenditure of other sectors. The PAF areas are protected from budget cuts with a view that budget cuts should not lead to missing poverty reduction targets. However, non-PAF expenditure also contributes to poverty reduction or the attainment of PAF objectives. Consequently, budget cuts even of non-PAF expenditure adversely affect realization of poverty reduction targets.

From a broader perspective, increased expenditure on social sectors (education and health) has meant reduced expenditure on economic investments such as agriculture, industrial development, economic infrastructure etc. It is argued that economic investments pay back in a relatively short time and the poor could pay for their education and health following increased incomes. However, some people have argued that investment in education and health improves the productivity of people. Investment in education and health is normally criticized on account of the long pay back period, if any. When resources are borrowed from external sources and there is a need to service the accrued debt, economic investment that enable the country to earn the much-needed foreign exchange looks very appealing. Thus a trade off between economic investments and investment in health and education seems to exist. The tradeoff could also be in terms of long-term development aspirations (made possible by economic investment) and short-term considerations (education and health) especially when the electorate exerts a lot of pressure on government.

4.4 Concluding remarks

With the recent increase in poverty levels between 2000 and 2003, witnessed at a time Uganda registered fair rates of economic growth of about 4 - 5%, there is need to examine the relationship between pro-poor and pro-growth policies. Poverty increased at a time government was implementing pro-poor policies albeit with reduced participation by the poor in the growth process. What was witnessed is a likely case of concentration of opportunities and output into the hands of top firms and individuals. Furthermore, it is probable that the policy packages adopted in Uganda have both reduced

the tempo of economic growth and increased poverty as well. It is, therefore, not a question of a trade off between one of the two but rather readdressing both in the context of new or revised development strategies.

5 Policy recommendations

The challenge of recovery-based pro-poor growth for Uganda is immense. Given the record of growth and poverty reduction during the nineties into the new millennium and the underlying drivers, it is inevitable that the country continues strong macroeconomic stability in order to promote high rates of savings, investments, exports, domestic revenue, and factor productivity. Long-term sustainability of pro-poor growth requires a shift in the investment incentives structure away from non-tradable to tradable goods, a delicate balance between pursuit of macroeconomic stability and public financing to achieve non-income poverty goals, and alleviation of household and public resource constraints to increasing the incomes of the poor.

5.1 Investment Choice

Investment plays a crucial role in economic growth, employment creation, and poverty reduction. However, different categories of investment create varying employment and poverty reduction opportunities. We distinguish between three categories of investment with a view to linking investment to employment creation and poverty reduction. First is investment in tradable goods such as manufactured goods, and agricultural products. Second is investment in financial assets such as treasury bills. And third is investment in non-tradable goods such as construction of personal dwelling houses, and services such as restaurants and transportation.

The investment that should be emphasized is that in the production of tradable goods that involve sectors where the majority of the poor is. In this way, more jobs that are accessible to the poor can be created, thereby ensuring the participation of the poor in the economic growth process – promoting pro-poor growth. To achieve this, there is need to revisit Uganda's incentives structure that has favored investment in non-tradable goods and in financial assets, which employ relatively smaller numbers of people and have hardly any linkages with rural based economic activities.

5.2 Macroeconomic policies

As noted already, there are several tradeoffs that are associated with macroeconomic policies. This calls for prioritization of macroeconomic intermediate targets (inflation, exchange rates, build-up of reserves, and interest rates) based on clear development objectives. Furthermore, there should be clear differentiation between short- and long-term impacts of macroeconomic policies. High interest rates that have characterized Uganda's economy for over a decade will need immediate attention especially as they are the key incentive to portfolio investment, which is contributing to exchange rate appreciation. In the short run, the war against high interest rates could lead to further appreciation of the shilling, which should not worry anybody since it is likely to be short-lived; the shilling should depreciate once interest rates have declined. On a practical basis, this would mean that Bank of Uganda would avoid using sale of treasury bills as a means of absorbing excess liquidity but instead rely on the sale of foreign exchange to do so.

Reduction of the fiscal deficit and better efficiency in the use of budgetary resources are critical for reducing the cost of credit financing as a source of capital for boosting household asset bases that are vital for poverty reduction and attainment of the MDGs. Reduction of the fiscal deficit requires that the country must explore mechanisms to increase her revenue to GDP ratio while at the same time cutting down on its expenditure to GDP ratio.

5.3 Sector level policies

The analysis in this report emphasizes the importance of policies, initial endowments of physical and human capital, and public services as drivers of growth of household welfare. Long-run pro-poor growth can therefore result from consistently and patiently investing in people, physical infrastructure, and appropriate policies to ensure efficient links to international markets for commodities produced by the poor.

Spending on the service sector along with public administration has got to be balanced with spending on activities that have direct impacts on immediate real sector growth. This includes affordable access to improved animal and crop varieties, and improved availability of animal and crop disease control programs. In brief, increased financing of program implementation under the National Agricultural Advisory Services (NAADS) and sustained feedback mechanisms are essential for modernization of agriculture, the mainstay of the poor. Unfortunately, because of relatively limited share of agriculture in the national budget, NAADS has only been implemented in less than half of the 56 districts of Uganda. With the earlier reported rise in the share of agriculture in the national budget for the 2005/06 -2007/08 period, it will be critical that the NAADS programs be rolled out quickly to the other districts. It is also critical that institutional issues such as harmonization of NAADS with National Agricultural Research Systems and other area-specific rural development projects be hasten if synergies are to be exploited.

Since small-scale farmers cannot maximize economies of scale, efforts to support progressive and medium scale farmers in general, which fall outside the PMA strategy, have got to be intensified. Actors at this scale of production tend to operate as agents of transformation and technological development and adaptation and would, therefore, be vital for the rural transformation process.

The dominance of cash crop in the livelihoods of the poor calls for the development of options for crop and portfolio diversification by rural producers. Basically, it is vital that the environment for the development of marketing channels and processing infrastructure in the country's different agro-ecological zones be developed through incentives to private investors. Practically, investing in the sector that is the mainstay of the bulk of the population is ultimately the surest way of sustaining pro-poor growth. Essentially, emphasis on agricultural modernization should be the starting point on the trajectory to long-term sustainable economic growth and development. In addition, where private sector incentives are weak, the state could periodically review the incentive packages that are aimed at promoting private public partnership in unlocking growth potentials in the agricultural sector. In cases where important potentials exist but incentive packages do not attract the desired levels of growth momentum, the state may, in the short-run, take a lead and direct investor role with a well designed exit strategy. Whichever strategy is taken, it is vital that political interest and public resources be invested in agriculture as the initial pathway out of mass poverty. To this end, it is encouraging to note that the 2005/06 – 2007/08 Medium-Term Expenditure Framework provides for unprecedented increases in direct funding of the agricultural sector. However, annual reviews to ensure high rates of performance of the agricultural sector budget will be vital to realizing the budgetary commitments.

The regression results discussed in the paper suggest that smaller initial income shares tend to be associated with smaller subsequent shares in the gains from growth. This implies that there is a strong likelihood of persistent poverty in certain segments of the population. In such segments of the population intensification of relevant infrastructure development and the delivery of other pro-poor services should be a priority in order to attract private sector investments. Where possible, area-specific incentive systems that entice large gainers from the national growth process to invest, side by side with the public sector, in pro-poor service delivery and productivity enhancing ventures could be a viable strategy. At the extreme, the chronically poor should be identified and targeted with short-term government financed intervention programs of a safety net nature, but which are relevant for enhancing the growth capabilities of the households.

The preceding paragraphs suggest that on the whole, there is a need for continuous refinement of agricultural development policy and strategies, particularly because of its current central place in growth and poverty reduction. Apart from spending on activities that facilitate agricultural sector activities such as roads, research and development, and establishment of a macroeconomic environment for private sector participation, the sector could benefit from a more pro-active approach from government. Private actors alone cannot solve a number of farm- and firm-level constraints in the sector. Such a situation has either perpetuated stunted growth for agents operating in the sector or has motivated private sector actors to shy away from participation in agricultural activities. Evidently, it is the small sectors that have largely driven the growth process in Uganda.

Regarding human development, in as far as Uganda's health problems are primarily on the supply side (Deininger, 2001), the removal of user fees relaxes demand side constraint, but without sufficient supply side response to the demand shift, quality inevitably suffers. This calls for scrutiny of the service system to ensure that revenue shortfall is compensated from alternative sources and that incentives are put in place for private service provision to continue growing in urban areas while public preventive and curative systems are strengthened in rural areas where the bulk of the poor is.

The other major aspect of human capital formation is education. In as far as education has been demonstrated to be an important driver of household economic growth, and hence poverty reduction, plus the fact that returns to education are non-negative, it is crucial that the UPE program is made more effective so that its objectives of education for all and equity in access to education are achieved. Accordingly, the remaining costs structures that inhibit access to education should be comprehensively identified and appropriate remedial measures taken.

Nevertheless, the attainment of a healthy and educated population without appreciation of manageable family size could perpetually keep per capita income growth rates below population growth rates, hence undermining the poverty reduction effects of growth. Government interventions in strong partnership with the private sector are required for promoting population control strategies.

Because of rising inequality and the associated undermining effects for poverty reduction, there is need to address regional and socioeconomic between-group inequality that pertain to, for example, access to productive resources and public infrastructure.

5.4 Political economic environment

The domestic and international political economic arrangements that characterize a country are crucial determinants of the magnitude and quality of growth in that country. The key issues in this regard include internal and regional security, and trade policies and constraints.

Guaranteeing peace to all would allay the fears of death due to insecurity, which oftentimes provide incentives for high birthrates. A peaceful environment does not only make planning of family size realistic but it also guarantees that returns to investment are attainable with greater certainty after controlling for the standard risks in investment. Ensuring security of life and property would also encourage the highly desirable foreign direct investment as a potential driver of growth, especially given the low levels and productivity of capital in poor countries like Uganda.

Global institutions such as those under the World Trade Organization and other bilateral arrangements could be made to yield more pro-poor outcomes if the poorer countries were able to increase their capacities to negotiate better terms on such forums. Furthermore, South-South cooperation that can strengthen the negotiation power of poorer countries could ensure that international prices of commodities such as coffee would not collapse so hopelessly to the extent of near reversal of the export-led growth and poverty reduction that Uganda experienced in the mid 1990s. In this regard,

consolidation of regional integration initiatives, while avoiding proliferation of such initiatives could be helpful. In connection with this, the high costs of accessing seaports for Uganda could be addressed through regional integration that removes transaction costs of cross-boarder transshipment of imports and exports, and via regional cooperation on transport infrastructure development.

In a nutshell, the dividends from market liberalization in terms of the economic growth of the 1990s appear to have tapered off, calling for a reaffirmation of commitment to periodically review, deepen and strengthen instruments of economic transformation to match emerging challenges.

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7 Appendices

WELFARE MEASUREMENT FOR UGANDA'S INCOME-POVERTY ANALYSIS

Data Sources

There is reasonable stock of both quantitative and qualitative data that can, and have been used for the purposes of poverty analysis and monitoring. The data are equally rich enough to be employed in monitoring the PEAP and the MDGs. These include a series of the Uganda Household Surveys (see Table A1) conducted by UBoS that have continued to be the major source for poverty analysis. The survey program revived in 1989 has since then conducted 8 nationally representative household surveys with 1992/93 Integrated Household Survey acting as the baseline for subsequent surveys. While these surveys have been diverse in nature and objectives, they have had a critical role to play in poverty analysis and monitoring.

The list of the Enumeration Areas (EAs) prepared for 1991 Population and Housing Census, along with maps and data on number of households and their corresponding population served as the sampling frame for all surveys with the exception of the UNHS-2. The sampling frame for UNHS-2 was derived from the list of EAs based on the cartographic work for the 2002 Population and Housing Census. A two-stage stratified sampling design has been common to all survey rounds with the exception of a three-stage design for the unmapped districts done for the survey rounds 1992/93 to 1999/00. The districts were treated as the stratum with some further sub-stratification including rural, urban and other urban. However, some modifications in the design were made in relation to the core objectives of each survey. Through the survey rounds the EA has consistently been the primary sampling unit and household as the final sampling unit. In general fresh EAs have been selected with the exception of those survey rounds where a panel element was included. Simple random sampling is employed to select 10 households from each of the selected EA. A household will only be replaced if after repeated visits no eligible respondent is found at home. In this regard, the Bureau has done a good job of minimizing the number of replacements, for instance for the 2002/03 survey round less than 6% of the households were replaced and only 4% replaced in the 1999/00 round.

Table A 1: Household survey rounds, 1988-2003

Survey Round	Dates	Duration in months	Sampled Households
Household budget survey (HBS)	Apr. 1989 – Mar. 1990	12	4,595
Integrated household survey (IHS)	Mar. 1992 – Mar. 1993	13	9,925
Monitoring survey 1 (MS-1)	Aug. 1993 – Feb. 1994	7	4,925
Monitoring survey 2 (MS-2)	Jul. 1994 – Jan. 1995	7	4,925
Monitoring survey 3 (MS-3)	Aug. 1995 – Jun. 1996	11	5,515
Monitoring survey 4 (MS-4)	Mar. 1997 – Nov. 1997	9	6,654
Uganda National Household survey 1 (UNHS-1)*	Aug. 1999 – Jul. 2000	12	10,696
Uganda National Household survey 2 (UNHS-2)*	May. 2002 – Apr. 2003	11	9,711

Notes: a) HBS has not been used in monitoring poverty in Uganda due to its incomparability with other surveys (see Appleton, 1997).

b) *indicates some districts were not sampled due to insecurity at the time of survey.

Main data adjustments

The use of the available Ugandan household survey data by various researchers to monitor changes in living standards has relied on household consumption expenditure as a measure of welfare. We use adjusted household consumption expenditure generated by Appleton during the 1990s and Appleton & Ssewanyana (2003) for UNHS-2 in all calculations that involve a measure of welfare. Precisely, after data cleaning, the adjustments made ensured that the expenditure data reported by households are comparable across surveys, time and geographical regions.

The first set of adjustments was with regard to sampling. Due to insecurity the districts of Bundibugyo, Kasese, Gulu and Kitgum were not covered in 1999/00. For consistency, these districts – which comprising about 6% of the country's population- were excluded from the analysis.

The household surveys capture information on value of food items consumed out of own production in farm gate prices. The food items and those obtained as gifts/free collection are re-valued into market prices. Because food prices vary markedly between regions, especially between urban and rural areas, unit values of purchases of major food items (computed from the values and quantities reported in the survey) were used to construct rural/urban regional food price indices for each survey, which were, in turn, used to adjust the consumption expenditure data for spatial price variation. Non-food prices were assumed to be constant across regions.

The consumption expenditure data is measured in 1997/98 shillings to adjust for intertemporal nominal price changes. The adjustment used the composite national Consumer Price Index (CPI) as the price deflator. Using the national household budget survey data and the 1992/93 integrated household survey data Appleton (1996) demonstrates that the deflator derived from the survey data largely corroborated the CPI. Previous poverty analysis monthly or annual average of CPI in accordance with whether the reference period for a given expenditure item was “the last 30 days” or “the last one year.” are used.

To make poverty comparison across households with different household size and composition in terms of sex and age, the consumption aggregate is adjusted using the World Health Organization's adult equivalence scale. The adjusted household size is then used to generate household consumption expenditure per adult equivalent as the welfare measure for generating the widely quoted Uganda poverty trend statistics. Given that the last-stage sampling unit in the Uganda surveys is the household, for grossing up purposes, the household size was multiplied by the survey weight to obtain estimates of various poverty statistics for the population.

Derivation of poverty lines

The absolute poverty line as derived by Appleton *et al.* (1999) is widely used as the “official” poverty line by the Uganda Government. It is anchored on the cost of meeting the basic needs. The basic needs approach, what Appleton *et al.* (1999) use the method of Ravallion and Bidani (1994) to generate the widely quoted poverty statistics for Uganda.³⁰ Appleton's application of the cost of basic needs approach in the context of the Uganda can be described as follows.

One of the initial steps in the calculation of a poverty line via the basic needs approach is the adoption of a daily food energy requirement for a given age group by sex. For the Uganda poverty lines, Appleton does not control for variation in energy requirement by sex. He uses WHO's adult male (18<=age<=30) energy requirement to calculate the value of the per-adult-equivalent daily calorie intake. Using the household consumption expenditure per adult equivalent, together with the cost of meeting the required per-adult-equivalent daily calorie intake (3000 calories per day) as the food

³⁰ Appleton (2001a) establishes that the resultant national poverty line roughly corresponds to the “dollar a day” line commonly used when making cross-country comparisons.

poverty line, the non-food basic needs are inferred and the total poverty line is computed³¹. Households are then categorized as poor or non-poor depending on whether their total consumption per adult equivalent is below or above the total poverty line.

Because of the absence of some prior meaningfully derived poverty line for Uganda, Appleton ranks households by their consumption per adult equivalent and identifies 28 major food items that are consumed by the poorest 50% to serve as the reference food basket. Because the food items were reported in various measurement units, Appleton focuses on observations with metric measurements to obtain the unit value in the respective metric measurement (reported value divided by reported quantity). Appleton then gets the median unit value in the respective metric unit, and converts the median unit values into per-kilogram unit values (adopted as the per-kilogram price now). A new set of quantities consumed is then generated by dividing each reported quantity (converted into kilogram) by the per-kilogram price. Finally, the mean daily quantity consumed of each item per person in the household is calculated and multiplied with the corresponding calorific value per kilogram times a scientifically determined retention rate to get the corresponding number of calories taken per person per day by the poorest 50%. The ratio of this number of calories to the WHO recommended 3000 calories is then used to scale the reference food basket in order to get the respective quantities required to provide 3000 calories. The total cost of the resulting food basket (where items are consumed in the same proportion as in the reference food basket) is then obtained and adopted as the food poverty line.

Using a standard procedure, the non-food requirements are derived using the food poverty line. Basically, the non-food expenditure of those households whose total expenditure is equal to the food poverty line is considered to be an expenditure towards meeting other basic needs since at their level of welfare, spending on non-food items occurs at the expense of food energy requirements. In brief, the process of obtaining non-food requirements involves regressing the share of food in household total expenditure on the log of the ratio of consumption expenditure per adult equivalent to the food poverty line, relevant location dummies, and basic demographic characteristics. The estimated equation is then evaluated at the value of consumption expenditure per adult equivalent equaling the food poverty line (i.e. to deal with those on the food poverty line only). The share of non-food expenditure for those on the poverty line is therefore obtained and taken as the non-food component of the total poverty line. The sum of the food and non-food requirement for a given geographical location is then calculated to generate location-specific poverty lines corresponding to the location dummies included in the regression equation. The justification for adopting location-specific poverty lines is that the estimated non-food shares (evaluated at the food poverty line) are significantly different between rural and urban areas for every region, arguably because urban residents may have to spend more on non-food requirements such as house rent and travel because of higher prices for those items.

³¹ According to the WHO's recommended calorific requirements, an adult male who is in the age range from 18 to 30 years and is a subsistence agricultural worker should have a daily intake of 3025 calories. However, Appleton *et al.* (1999) uses 3000 instead of 3025. The resulting poverty lines are the ones that Uganda's official poverty statistics are based on. This paper does not attempt to reconsider the choice of this requirement but instead uses the expenditure aggregates generated by Appleton (2001) to investigate various welfare distributive issues.

Table A 2: GDP at constant (in 1997/98 prices) – Growth rates

Industry Group	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04
Monetary Agriculture	5.4	1.3	-2.9	-0.1	1.8	5.4	6.6	7.5	5.8	2.5	10.1	4.7	7.9	8.4	3.9	2.2	6.6	5.2	4.5	5.7	3.9	5.6
Cash Crops	1.2	2.5	2.4	-3.7	-1.0	0.4	5.8	8.4	3.8	7.3	0.3	10.5	8.0	22.6	13.9	-2.8	9.3	7.0	-4.9	7.4	4.6	1.8
Food Crops	10.1	-0.7	-7.1	4.3	3.4	7.0	8.7	9.0	6.2	0.6	17.3	5.3	11.7	4.4	-0.2	3.0	7.5	5.9	8.2	5.7	3.7	7.7
Livestock	0.7	-0.6	-3.0	-4.2	-0.2	6.0	5.6	3.5	3.7	2.1	3.5	2.8	-4.9	12.2	5.5	4.0	4.1	3.3	3.8	5.1		
Fishing	1.3	11.8	7.7	-2.7	2.3	3.3	1.0	7.0	9.3	3.9	4.1	-3.5	8.8	2.5	4.5	5.0	0.9	-0.1	4.0	6.2		
Non-Monetary Agriculture	6.0	0.3	-3.6	4.8	2.3	5.3	5.8	3.8	0.7	-3.9	8.8	-0.9	5.0	0.1	-1.9	1.2	4.9	6.1	5.0	3.8		
Mining & Quarrying	17.1	-2.2	-16.8	-12.2	-9.7	-11.5	4.4	73.7	106.1	10.4	10.4	3.7	9.1	35.7	50.2	27.7	14.5	6.3	10.1	11.1	2.7	-1.2
Manufacturing	13.2	-3.7	-6.3	-4.0	6.0	19.6	12.3	-0.9	11.0	21.7	1.9	15.4	11.6	29.5	14.2	4.4	14.1	3.6	8.9	5.3	4.0	4.0
Electricity & Water	-1.3	0.4	7.2	5.7	4.4	6.5	4.4	2.2	6.4	10.0	5.7	7.3	11.4	10.5	10.1	7.0	6.0	8.7	8.2	5.4	4.7	6.8
Construction	3.1	-5.1	-6.1	-8.0	36.3	27.0	-0.5	5.1	7.3	1.1	11.2	13.5	28.1	14.4	7.7	8.0	10.9	7.3	1.8	12.5	12.2	7.8
Trade	9.2	0.8	-3.8	-2.7	2.6	12.0	7.2	6.2	7.1	5.8	6.0	8.1	22.0	10.9	2.3	6.3	10.5	1.8	6.0	5.9	4.1	4.8
Hotels & Restaurants	12.2	-2.4	-12.8	-0.1	10.8	12.7	9.5	12.2	14.6	14.1	14.9	19.5	18.9	9.4	9.1	4.4	7.3	5.3	7.1	18.1	7.5	7.9
Transport/Communication	6.9	1.0	-2.6	0.0	4.9	7.2	5.7	6.4	7.4	5.4	7.3	10.0	13.4	10.6	10.8	9.6	7.0	7.3	9.6	12.4	14.9	14.4
Community Services	5.1	3.0	0.6	1.2	3.2	4.1	6.6	7.1	8.4	8.8	7.4	6.0	7.0	6.0	6.3	5.8	4.5	8.6	3.5	6.4	5.0	4.5
Total GDP	6.1	0.7	-2.6	1.0	3.8	7.3	6.2	5.5	5.5	3.7	8.0	5.4	10.0	8.3	4.8	4.4	7.4	5.8	5.6	7.0	4.9	5.8

Source: Ministry of Finance, Planning and Economic Development (MFPED)

Table A 3: Major sectors as a percentage of Total GDP

Industry group	97/98	98/99	99/00	00/01	01/02	02/03
Monetary Agriculture	23.4	23.2	23.1	22.8	22.7	22.5
Non-monetary Agriculture	18.6	18.2	18.2	18.1	17.7	16.9
Manufacturing	9.1	9.7	9.5	9.8	9.8	9.9
Construction	6.3	6.5	6.6	6.3	6.4	6.7
Wholesale & Retail Trade	10.7	11.0	10.6	10.7	10.8	11.0
Transport & Communications	4.7	4.7	4.8	5.0	5.2	5.4
Community Services	19.2	18.6	19.1	19.1	19.1	19.1
Owner-occupied dwellings	3.4	3.4	3.5	3.6	3.6	3.7

Source: MFPED

Table A 4: Spatial and sectoral distribution of poverty, 1992 to 2003

	Poverty headcount				Poverty Gap				Poverty gap squared			
	1992/93	1997	1999/00	2002/03	1992/93	1997	1999/00	2002/03	1992/93	1997	1999/00	2002/03
National	55.7	45.0	33.8	37.7	20.3	14.0	10.0	11.3	9.9	6.0	4.3	4.8
Rural	59.7	49.2	37.4	41.7	22.0	15.4	11.2	12.6	10.8	6.7	4.8	5.4
Urban	27.8	16.7	9.6	12.2	8.3	4.3	2.1	3.0	3.5	1.7	0.7	1.1
Central	45.6	27.9	19.7	22.3	15.3	7.6	4.4	5.5	7.0	3.0	1.5	1.9
Eastern	58.8	54.3	35.0	46.0	22.0	18.3	9.3	14.1	10.9	8.2	3.6	6.0
Northern	72.2	60.9	63.6	63.3	28.6	21.4	24.6	23.4	14.6	10.0	12.3	11.6
Western	53.1	42.8	26.2	31.4	18.7	11.0	6.1	7.9	9.0	4.0	2.1	2.9
Crop agriculture	63.6	53.0	39.1	50.4	23.7	16.9	11.3	15.5	11.7	7.4	4.7	6.7
Non-crop agriculture	52.4	37.0	41.9	33.6	20.7	11.5	14.4	9.8	10.6	4.9	6.6	4.1
Mining/construction	36.5	25.3	25.7	23.0	11.2	5.3	8.9	4.6	4.5	1.8	4.3	1.5
Manufacturing	44.4	36.4	23.3	28.4	15.8	8.0	5.2	8.0	7.5	2.8	1.7	3.0
Trade	26.5	20.5	12.7	17.4	7.6	5.8	2.6	4.3	3.2	2.3	0.9	1.6
Transport/comm	34.5	28.0	13.8	18.3	12.4	7.6	2.6	3.7	5.9	2.8	0.7	1.0
Government services	36.8	22.0	15.4	12.6	10.5	6.1	3.9	3.4	4.5	2.3	1.5	1.4
Other services	29.5	30.8	16.4	24.1	9.9	9.0	5.3	6.4	4.4	3.7	2.6	2.6
Not working	65.6	51.6	42.4	38.9	25.0	17.5	16.8	14.7	12.1	7.4	9.1	7.5

Source: Authors' computation from the Uganda National Household Survey data

Table A 5: Sectoral decomposition of poverty, 1992-2003

	Population share				Contribution to change in total poverty				Contribution to change in extreme poverty			
	1992	1997	2000	2003	1992-97	1997-2000	2000-2003	1992-2003	1992-97	1997-2000	2000-2003	1992-2003
Rural	87.6	87.0	86.9	86.5	85.4	91.5	94.8	87.4	91.0	95.8	96.8	92.7
Urban	12.4	13.0	13.1	13.5	12.9	8.2	8.7	10.8	7.7	4.0	6.5	5.9
<i>Total Intra-sectoral effect</i>					98.3	99.7	103.4	98.1	98.7	99.8	103.4	98.7
<i>Population-shift effect</i>					1.7	0.3	-3.2	2.0	1.6	0.3	-3.1	2.0
<i>Interaction effect</i>					0.0	-0.1	-0.2	-0.2	-0.2	-0.1	-0.3	-0.7
Central	30.6	29.3	29.0	31.6	50.6	21.4	18.9	39.7	39.2	21.8	32.1	31.7
Eastern	27.9	27.8	26.6	29.3	11.8	47.7	74.8	19.9	14.5	58.7	92.3	24.0
Northern	17.3	18.7	19.0	15.3	18.2	-4.5	-1.4	8.5	20.6	-9.1	-13.0	10.9
Western	24.2	24.3	25.4	23.7	23.4	35.9	34.2	29.1	29.1	29.6	20.9	30.7
<i>Total Intra-sectoral effect</i>					104.1	100.5	126.5	97.1	103.4	100.9	132.4	97.3
<i>Population-shift effect</i>					-3.3	0.2	-33.9	2.1	-3.3	0.7	-45.9	2.2
<i>Interaction effect</i>					-0.8	-0.7	7.4	0.8	-0.1	-1.6	13.5	0.5
Crop agriculture	66.6	63.3	67.6	52.2	66.2	78.8	197.4	48.9	70.5	85.1	194.4	60.9
Non-crop agriculture	5.0	3.3	3.2	5.4	7.2	-1.4	-6.7	5.3	6.8	-1.7	-9.9	5.6
Mining/construction	1.5	1.9	2.0	2.0	1.6	-0.1	-1.4	1.1	1.5	-1.7	-6.2	1.0
Manufacturing	4.0	5.1	3.0	7.1	2.9	5.9	3.9	3.5	4.9	3.5	5.5	3.4
Trade	7.4	8.9	7.2	14.2	4.1	6.2	8.7	3.7	2.9	5.2	6.9	2.9
Transport/comm	1.7	1.9	2.2	2.6	1.0	2.5	2.5	1.5	1.7	1.7	3.5	1.4
Government services	8.1	6.2	5.6	6.0	11.1	3.6	-4.0	10.8	6.3	3.2	2.6	5.6
Other services	2.6	3.1	4.5	4.7	-0.3	4.0	8.8	0.8	0.7	2.5	3.5	1.2
Not working	3.3	6.3	4.9	5.7	4.4	5.1	-4.3	4.9	3.8	6.1	-0.7	4.2
<i>Total Intra-sectoral effect</i>					98.2	104.6	204.9	80.4	98.9	103.9	199.5	86.2
<i>Population-shift effect</i>					3.9	-6.9	-69.1	20.9	2.1	-6.9	-63.7	17.4
<i>Interaction effect</i>					-2.2	2.3	-35.8	-1.2	-1.0	3.0	-35.9	-3.6

Source: Authors' computation from Uganda National Household Survey data

Table A 6: Inequality by spatial and welfare groups, 1992-2003

	Relative mean of expenditure				Gini coefficient			
	1992/93	1997	1999/00	2002/03	1992/93	1997	1999/00	2002/03
National	1.00	1.00	1.00	1.00	0.36	0.35	0.40	0.43
Rural	0.88	0.88	0.83	0.82	0.33	0.31	0.33	0.36
Urban	1.83	1.78	2.10	2.14	0.40	0.35	0.43	0.48
Central	1.28	1.37	1.41	1.45	0.40	0.36	0.42	0.46
Eastern	0.89	0.84	0.89	0.78	0.33	0.33	0.35	0.36
Western	0.93	0.92	0.96	0.95	0.32	0.28	0.32	0.36
Northern	0.77	0.76	0.58	0.58	0.34	0.31	0.34	0.34
Central rural	0.99	1.12	1.02	1.06	0.33	0.32	0.33	0.37
Central urban	2.11	1.98	2.36	2.50	0.39	0.33	0.41	0.48
Eastern rural	0.85	0.79	0.83	0.72	0.32	0.31	0.32	0.34
Eastern urban	1.25	1.43	1.57	1.51	0.32	0.34	0.43	0.40
Western rural	0.90	0.89	0.90	0.88	0.31	0.27	0.29	0.33
Western urban	1.64	1.57	2.07	1.64	0.35	0.36	0.39	0.44
Northern rural	0.75	0.74	0.55	0.55	0.33	0.30	0.32	0.32
Northern urban	1.11	1.17	1.13	1.12	0.39	0.33	0.39	0.41
Quintile 1	0.34	0.37	0.34	0.31	0.14	0.12	0.15	0.14
Quintile 2	0.57	0.59	0.56	0.51	0.06	0.06	0.07	0.06
Quintile 3	0.79	0.80	0.76	0.69	0.05	0.05	0.07	0.05
Quintile 4	1.11	1.11	1.04	0.98	0.06	0.06	0.08	0.07
Quintile 5	2.18	2.12	2.37	2.50	0.23	0.22	0.30	0.33

Source: Authors' computation from the Uganda National Household Survey data

Table A 7: Inequality by household head's characteristics, 1992-2003

	Relative mean of expenditure				Gini coefficient			
	1992/93	1997	1999/00	2002/03	1992/93	1997	1999/00	2002/03
<i>Headship</i>								
Male-headed households	0.99	1.00	1.01	0.98	0.36	0.34	0.39	0.42
Female-headed households	1.02	0.98	0.95	1.06	0.36	0.36	0.41	0.46
<i>Head's education level</i>								
No formal education	0.79	0.77	0.72	0.63	0.33	0.31	0.34	0.35
Some primary education	0.91	0.91	0.87	0.78	0.33	0.31	0.34	0.35
Completed primary	1.00	1.02	0.91	0.93	0.34	0.29	0.32	0.35
Some secondary education	1.15	1.18	1.26	1.21	0.33	0.35	0.37	0.38
Completed secondary	1.71	1.54	1.70	1.74	0.41	0.36	0.44	0.46
Post secondary education	2.28	1.98	2.74	3.28	0.38	0.38	0.48	0.51
<i>Head's economic sector</i>								
Crop-farming	0.83	0.82	0.81	0.70	0.32	0.29	0.32	0.34
Non-crop-farming	1.07	1.11	0.91	1.08	0.37	0.33	0.40	0.42
Construction/Mining	1.49	1.32	1.09	1.16	0.42	0.33	0.37	0.35
Manufacturing	1.17	1.15	1.22	1.04	0.35	0.32	0.39	0.37
Trade	1.66	1.53	1.65	1.33	0.38	0.35	0.43	0.40
Transport/communication	1.40	1.46	1.55	1.50	0.36	0.35	0.37	0.42
Government services	1.40	1.46	1.59	1.82	0.38	0.36	0.45	0.46
Other services	1.63	1.44	1.80	1.74	0.40	0.39	0.45	0.55
Not working	0.84	0.99	0.98	1.00	0.34	0.38	0.47	0.44
<i>Head's age group</i>								
Below 25 years	1.13	1.23	1.17	1.09	0.33	0.34	0.38	0.38
25 to 34 years	1.13	1.09	1.03	0.99	0.38	0.34	0.38	0.40
35 to 44 years	0.98	1.01	1.01	0.94	0.36	0.37	0.41	0.40
45 to 54 years	0.88	0.91	0.96	1.14	0.37	0.33	0.40	0.51
55 to 64 years	0.90	0.84	0.93	0.97	0.36	0.30	0.37	0.45
65 plus years	0.89	0.85	0.98	0.89	0.32	0.31	0.40	0.41
<i>Household size</i>								
1 person	1.80	2.03	2.00	2.25	0.36	0.38	0.42	0.44
2 persons	1.45	1.49	1.42	1.75	0.36	0.35	0.36	0.46
3 persons	1.14	1.36	1.20	1.46	0.33	0.34	0.36	0.48
4 persons	1.05	1.15	1.11	1.14	0.32	0.31	0.39	0.43
5 person	0.99	0.99	1.01	0.97	0.34	0.30	0.40	0.40
6 persons or higher	0.90	0.85	0.91	0.85	0.37	0.33	0.39	0.39

Source: Authors' computation from the Uganda National Household Survey data

Table A 8: Percentage contributions of within- and between-group inequality

	1992/93	1997	1999/00	2002/03
Rural/urban				
<i>Within-group</i>	83.9	82.4	77.1	80.5
<i>Between-group</i>	16.1	17.6	22.9	19.5
Regional				
<i>Within-group</i>	92.5	87.1	86.4	87.4
<i>Between-group</i>	7.5	12.9	13.6	12.6
Quintiles				
<i>Within-group</i>	24.5	21.3	30.7	35.8
<i>Between-group</i>	75.5	78.7	69.3	64.2
Male/Female headship				
<i>Within-group</i>	100.0	100.0	99.9	99.9
<i>Between-group</i>	0.0	0.0	0.1	0.1
Head's education level				
<i>Within-group</i>	83.8	85.0	79.7	75.2
<i>Between-group</i>	16.2	15.0	20.3	24.8
Head's economic sector				
<i>Within-group</i>	85.0	84.2	84.4	84.8
<i>Between-group</i>	15.0	15.8	15.6	15.2
Head's age group				
<i>Within-group</i>	97.7	97.1	99.5	99.3
<i>Between-group</i>	2.3	2.9	0.5	0.7
Household size group				
<i>Within-group</i>	93.9	88.1	95.3	91.7
<i>Between-group</i>	6.1	11.9	4.7	8.3

Source: Authors' computation from the Uganda National Household Survey data

Figure A 1: Proportion of household heads with no formal education

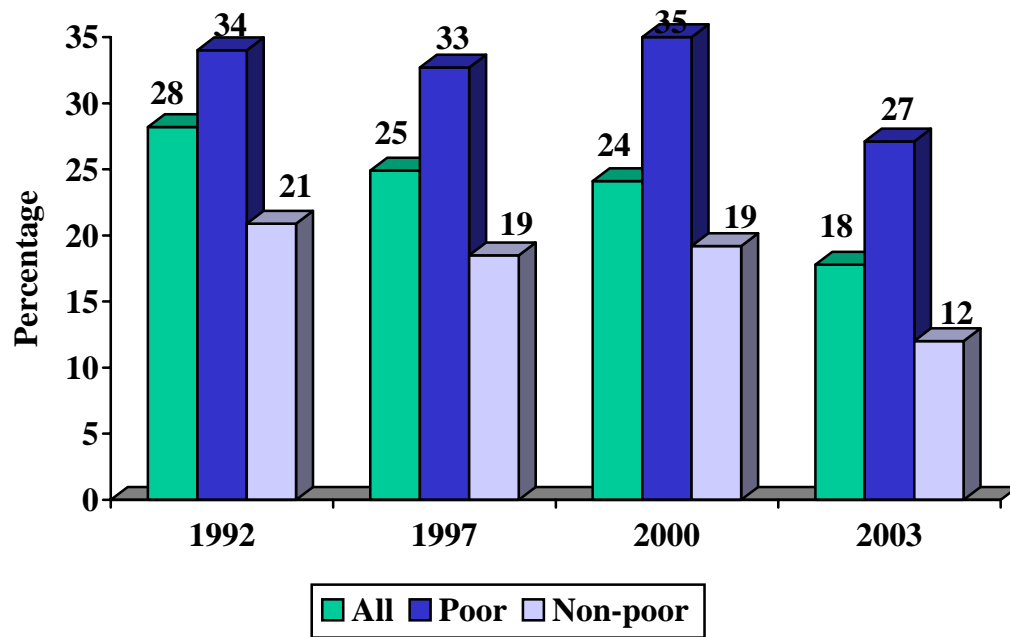


Figure A 2: Cumulative monthly expenditure per adult equivalent, 1992 to 2003

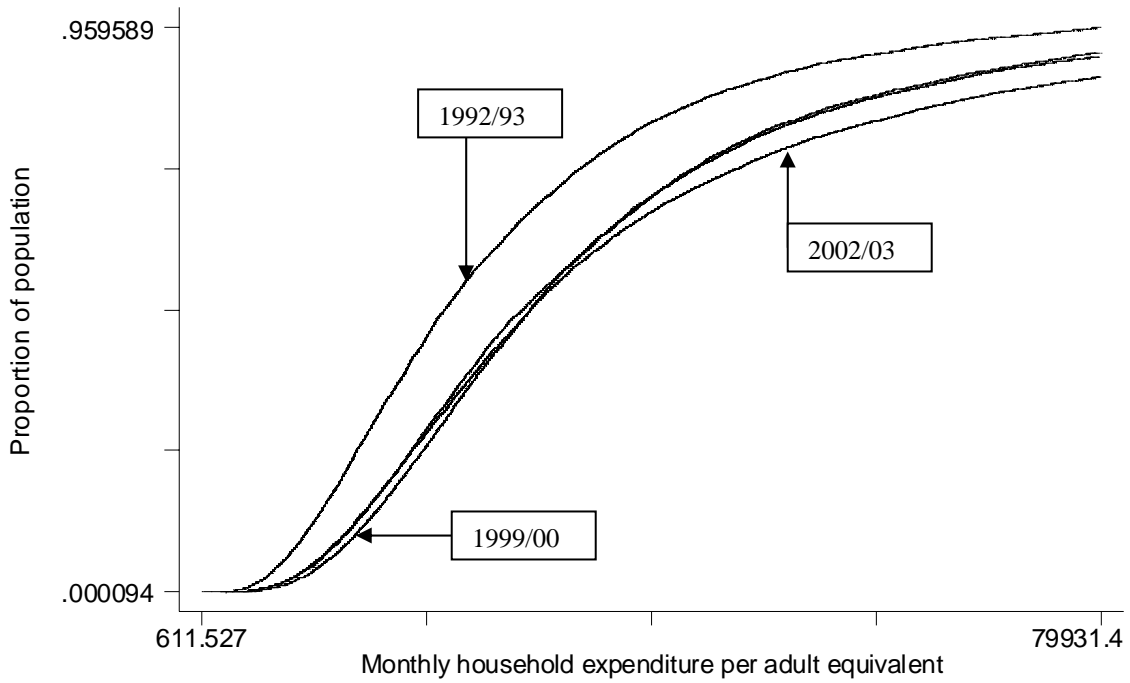


Figure A 3: Cumulative monthly expenditure per adult equivalent, 2000 and 2003

