

POVERTY TRENDS IN UGANDA

Who gained and who was left behind?

Summary: Uganda had one of the best poverty reduction performances in the world since 1992, a result of a subtle structural transformation of household livelihood portfolios, rooted in strong growth of private wage and salary employment and non-farm household enterprises, and increased agricultural productivity among agricultural households. But depth and character of growth was not the same across Uganda. This triggered rising inequality throughout the country (within and between rural and urban and all regions) resulted in many households in the North and the East being left behind while the Center pulled away. The evolution of spatial inequality is tightly linked to spatial differences in public and private investments, particularly in education – a legacy of inadequate public investments and conflict in the lagging regions. Addressing this inequality in growth is Uganda’s shared growth challenge.

BACKGROUND – WELFARE IMPROVEMENTS AND POVERTY REDUCTION IN UGANDA, 1992-2010

1. **Uganda had a strong poverty reduction performance in the past two decades. Monetary poverty halved, with the poverty headcount rate declining from 56.4 percent in 1992/93 to 24.5 percent in 2009/10** (see Figure 1). Both rural and urban poverty declined. The poverty headcount declined from 60.2 percent to 29.1 percent in rural areas and 28.8 percent to 9.1 percent in urban areas between 1992/93 and 2009/10. Accordingly, Uganda has met the target of the first MDG goal of halving poverty by 2015. This conclusion is reached using poverty rates based on the national poverty line. It remains valid basing on the international poverty line of \$1.25 per person pay day as well (see Box 1 for further discussion).

2. The reduction in monetary poverty was driven by sustained economic and consumption growth. Consumption per capita (adjusted for household demographic composition) grew at an annual rate of 3 percent between 1992/93 and 2009/10. This was not a temporary phenomenon as estimated permanent consumption rose too. Trends in estimated permanent consumption show increases for all groups between 2002/03 and 2009/10 at an annualized rate of 2 percent. This strong household consumption growth was the key ingredient to shared growth, hence the high elasticity of poverty reduction to growth (of 1.4) in Uganda over this period.

Table 1: Average annual growth in consumption and permanent income, 1992/93-2009/10

Region	Real consumption growth Rate (1992/93-2009/10)	Estimated permanent consumption growth rate* (2002/03-2009/10)
National	3.0	2.0
Rural	2.9	1.9
Urban	3.4	2.2

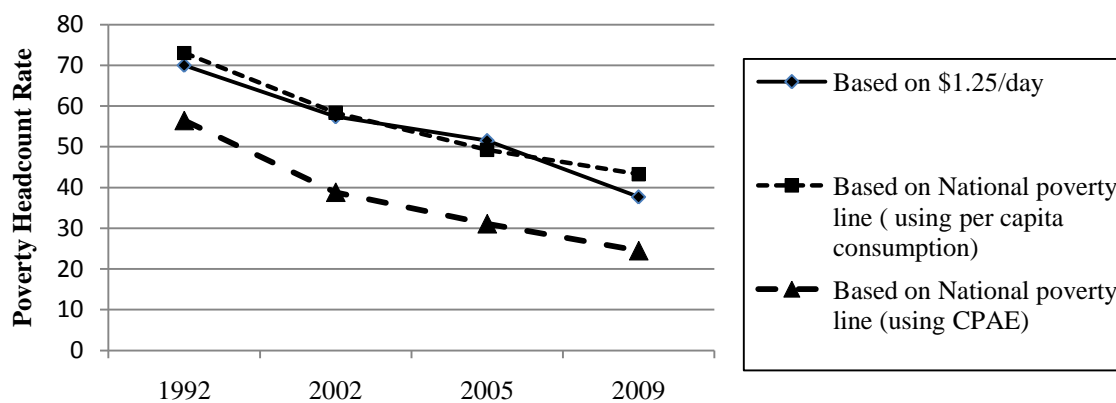
Note: growth rates are for the median household consumption per adult equivalent.

Source: Authors calculations based on IHS 1992/93, UNHS 2002/03, UNHS 2009/10

Box 1 – Time to reconsider? A closer look at Uganda’s official poverty figures

The Uganda Bureau of Statistics (UBOS), the official source of statistics in Uganda, produces the official poverty figures from its periodic Uganda National Household Surveys (UNHS). These poverty figures are based on a national poverty line derived from a 1993 consumption basket to compute the cost of basic needs in Uganda. The poverty line makes adjustments for household demographic compositions (i.e. using adult equivalents scales in place of household size). Poverty rates based on this poverty line show a steep decline in poverty from 56 percent in 1992/93 to 24 percent in 2009/10. On face value, these poverty rates appear consistently lower than poverty rates based on the international poverty line of \$1.25 per day per person, adjusted for relative prices (see Figure 1). These differences have been used to question the official poverty rates, thus overshadowing the similarity in trends irrespective of the poverty line used.

Figure 1: A comparison of poverty rates, national poverty line versus international poverty line



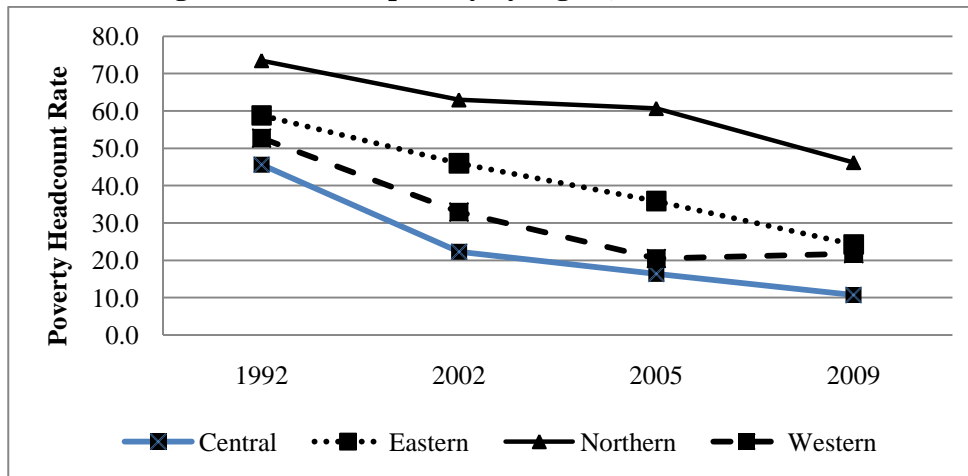
Source: POVCAL Net and Authors calculations from IHS 1992/93, UNHS 2002/03 – 2009/10

The difference is to a large extent methodological. Unlike poverty rates reported by UBOS, those based on the \$1.25 per day line do not adjust for household demographic composition. The failure to adjust for household demographic composition understates the welfare measure considerably. For example the welfare measure in 2005/06 is understated by an average of 30 percent. Computations show that poverty rates based on the national poverty line would be just as high as the \$1.25/day figures if one does not adjust for household demographic composition as well. Since the adjustment for household consumption is widely recommended (Haughton and Khandker, 2009), the criticism of the official national poverty rates on the basis that the national poverty line is lower than the widely used international poverty line is not adequately justified.

Nevertheless there is room for improvement on measuring poverty in Uganda. The country has made significant progress in development during the past two decades and consumption patterns have since changed from the 1993 pattern in line with Uganda’s economic progress. A poverty line based on 1993 consumptions basket is possibly outdated and evaluates the welfare of Ugandans on standards they have out grown in accordance with gains from the country’s impressive economic performance. In acknowledgment of this progress, it is worthwhile to reconsider the consumption basket used to compute the poverty line to reflect the present aspirations of Ugandans at this stage of development. This would entail moving to a higher poverty line based on current consumption standards, while keeping the old poverty line to measure extreme poverty.

3. **The national poverty figures hide substantial spatial variation in outcomes and rising inequality.** Until 2005, the rate of change in poverty was higher in the Central and Western regions, slightly lower in the Eastern region and lowest in the North (see Figure 2). Since 2005, the North has been catching up, as roughly half of the recent poverty reduction happened there, even though the region accounts for a fifth of Uganda’s population. But since the Northern and Eastern regions started with much higher levels of poverty than the Central and Western regions, even the recent dramatic improvement leaves the North much poorer. Poorer regions lagged behind the richer ones, and kept accumulating a higher share of the poor throughout these the past two decades.

Figure 2: Trend in poverty by region, 1992/93 - 2009/10



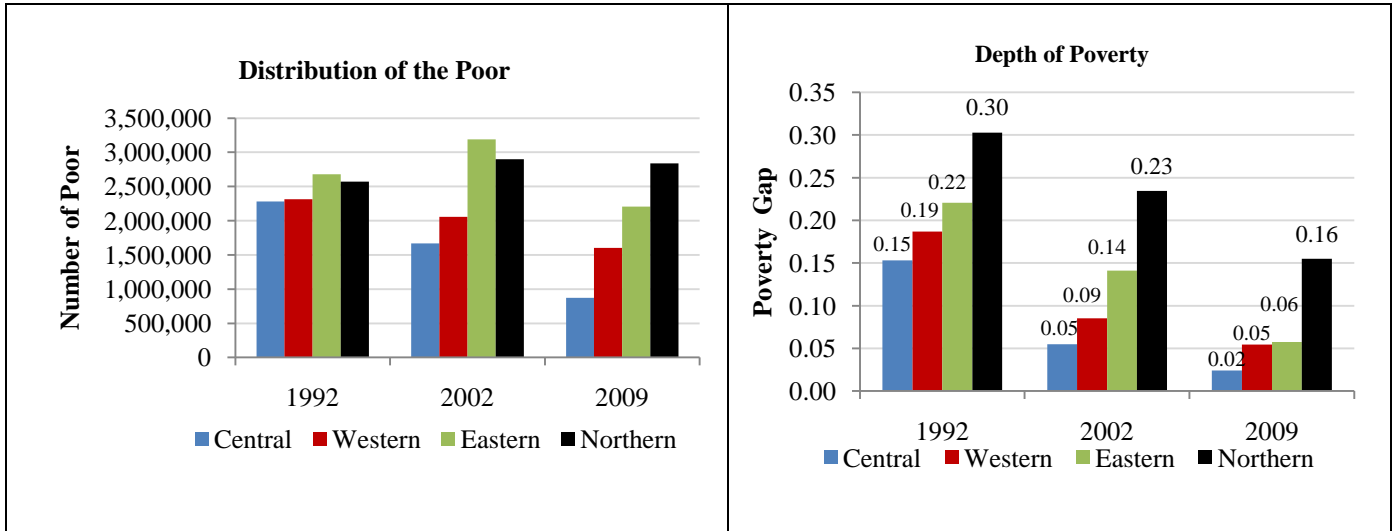
Source: Authors calculations based on HIS 1992/93, UNHS 2002/03, UNHS 2005/06, UNHS 2009/10

4. The North in particular accumulated a disproportionate share of the poor and its depth of poverty remains the highest. On the other hand, the Central region’s share of the poor declined disproportionately while its depth in poverty is an eighth of the North’s (see

5.
6.

7. **Figure 3).** The number of poor people in the Central region more than halved, while that of the North marginally increased by three hundred thousand people between 1992/93 and 2009/10. Consequently, the Central region’s share of the poor declined from 24 percent in 1992/93 to below 12 percent in 2009/10, while the Northern region’s share increased from 29 percent to nearly 38 percent during this period. The Northern region and the Eastern regions now account for two thirds of the poor in Uganda – a 14 percentage point increase from their combined share in 1992/93 yet their population share increased by less than 4 percentage points since then. The depth of poverty in the North halved since 1992/93 but it is now eight times higher than the depth of poverty in the Central region which had a steeper decline (87 percent). Thus in addition to having more poor people than the Central region, the North has deeper levels of poverty too.

Figure 3: Trends in distribution of the poor by region, 1992/93 - 2009/10



Source: Authors calculations based on HIS 1992/93, UNHS 2002/03, UNHS 2009/10

8. **While conflict is a precipitating cause of slower poverty reduction in the North, other factors drove the regional differences in poverty reduction.** The Central region simply outperformed all other regions in terms of average consumption growth during the past two decades. It also led in rising inequality. Growth incidence curves in

9. Figure 4 and

10. Figure 5 compare consumption growth of the Central region to that of all other regions at each point of the welfare distribution between 1992/93 and 2009/10. They show that consumption growth in urban areas in the Central region was above the national average at all points of the welfare distribution while consumption growth in other urban areas growth was lower than the national average for most households other than the richest 10 percent. Growth in consumption in Central urban areas was above that of all other urban areas at every point of the consumption distribution too. Consumption growth in Central rural areas was similarly higher than consumption growth in other rural areas at every point of the welfare distribution. Everyone in rural areas outside the Central region experienced a lower than national average growth in consumption and thus lost out.

Figure 4: Consumption growth in the Central Urban versus Urban in all other regions, 1992/93 – 2009/10

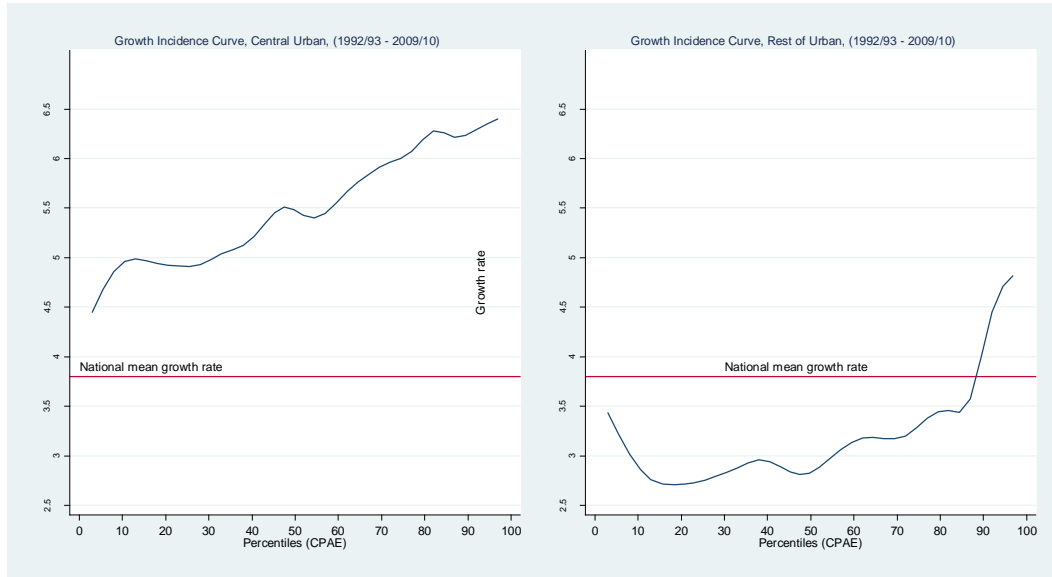
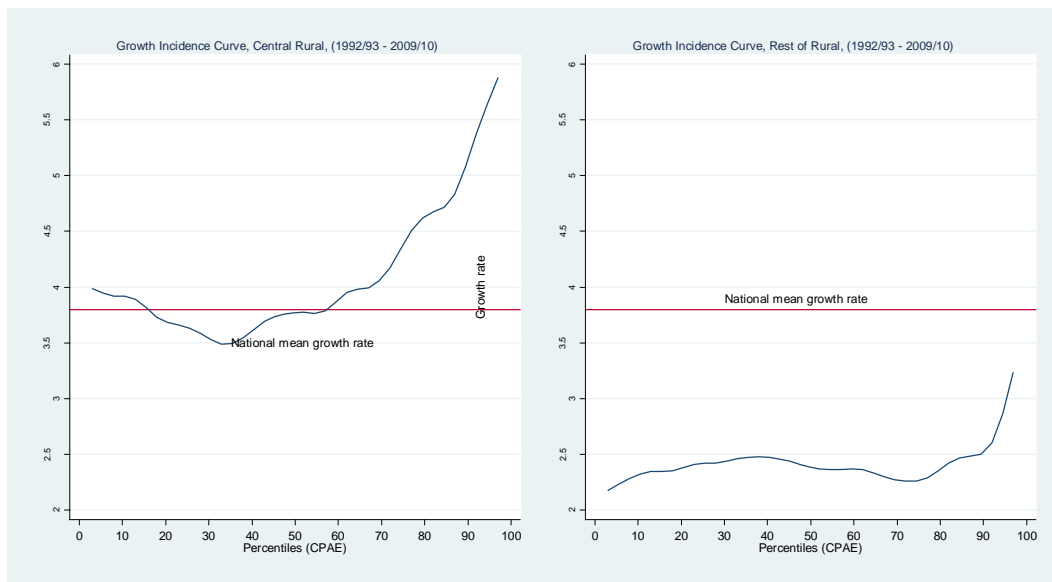


Figure 5: Consumption growth in the Central Rural versus Urban in all other regions, 1992/93 – 2009/10



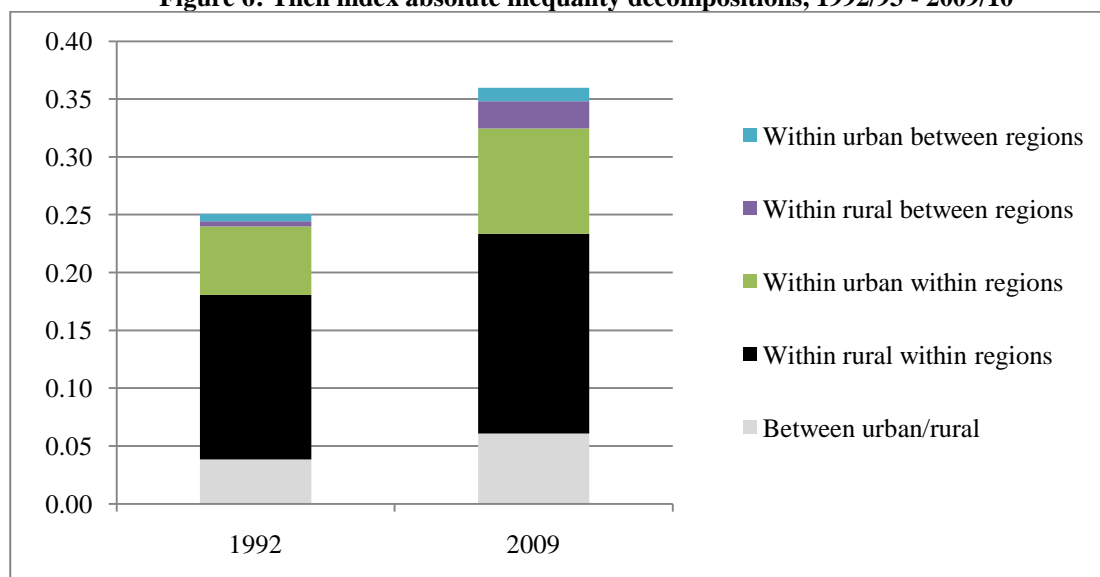
11. **The uneven pattern of consumption growth led to rising inequality as consumption grew faster in the center than all other regions and at the same time growing faster among richer households within regions.** The gini index rose by 6 percentage points from 0.37 in 1992/93 to 0.43 in 2009/10. Consistent with trends shown in

12. Figure 4 and

13. Figure 5 above, a decomposition of inequality by location shows that inequality within regions rose by 6 points between 1992/93 and 2009/10. It accounted for three quarters of inequality in 2009/10 (see

14. Figure 6). Inequality between regions which was negligible in 1992/93 rose sharply too, from 0.01 to 0.035 in 2009/10. This shows that growth has not been broad based in Uganda so that within the same regions the poor did not benefit as much as the rich, while lagging regions lost out in general.

Figure 6: Theil index absolute inequality decompositions, 1992/93 - 2009/10



Source: Authors calculations based on UNHS 2009/10, IHS 1992/93

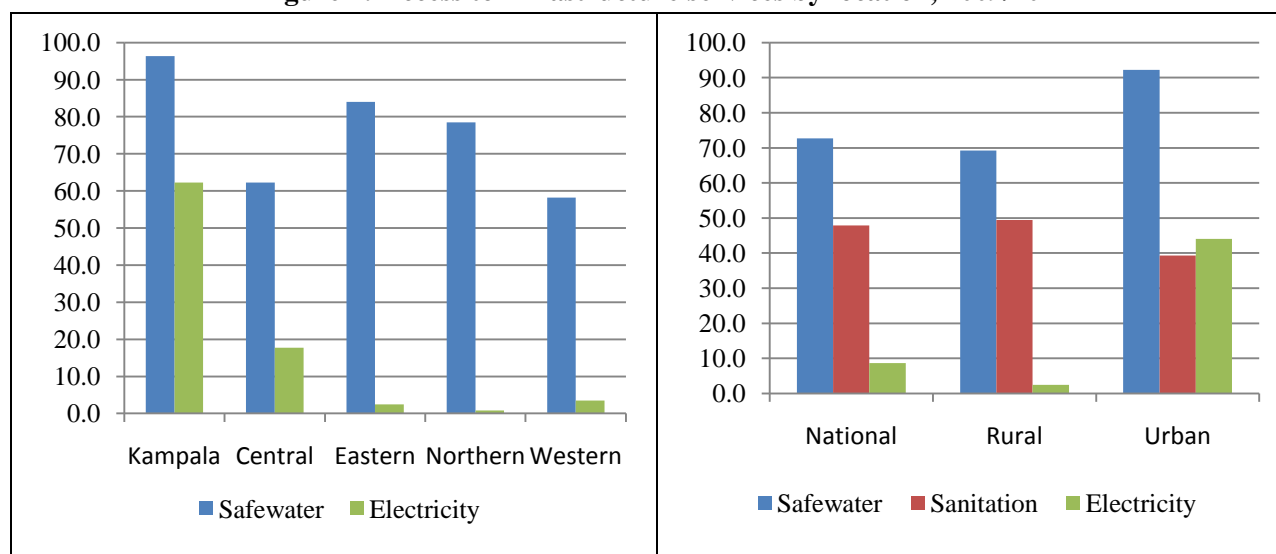
15. **The rise in inequality dampened the effect of strong consumption growth on the poverty reduction performance over the past two decades.** A decomposition of poverty changes shows that poverty would have declined by 20 percentage points more between 1992/93 and 2009/10 if income distribution had remained the same as in 1992/93 (see Table 2). This effect was greater in urban areas where the reverse effect of growing inequality on poverty reduction was half the growth effect. Growing inequality thus constrained poverty reduction by making growth less inclusive. If the trend of growing inequality could be halted, Uganda's growth could be more broad based and the pace of poverty reduction higher.

Table 2: Poverty and Inequality in Uganda, 1992/93 - 2009/10

	Poverty Headcount		Gini Index		Growth-Inequality Decomposition of Change in Poverty Headcount		
	1992/93	2009/10	1992/93	2009/10	Growth Effect	Inequality Effect	Total Change
National	56.4	24.4	0.37	0.43	-51.6	19.7	32.0
Rural	60.3	27.2	0.33	0.37	-52.6	19.4	33.2
Urban	28.8	9.1	0.40	0.45	-31.2	15.5	19.7

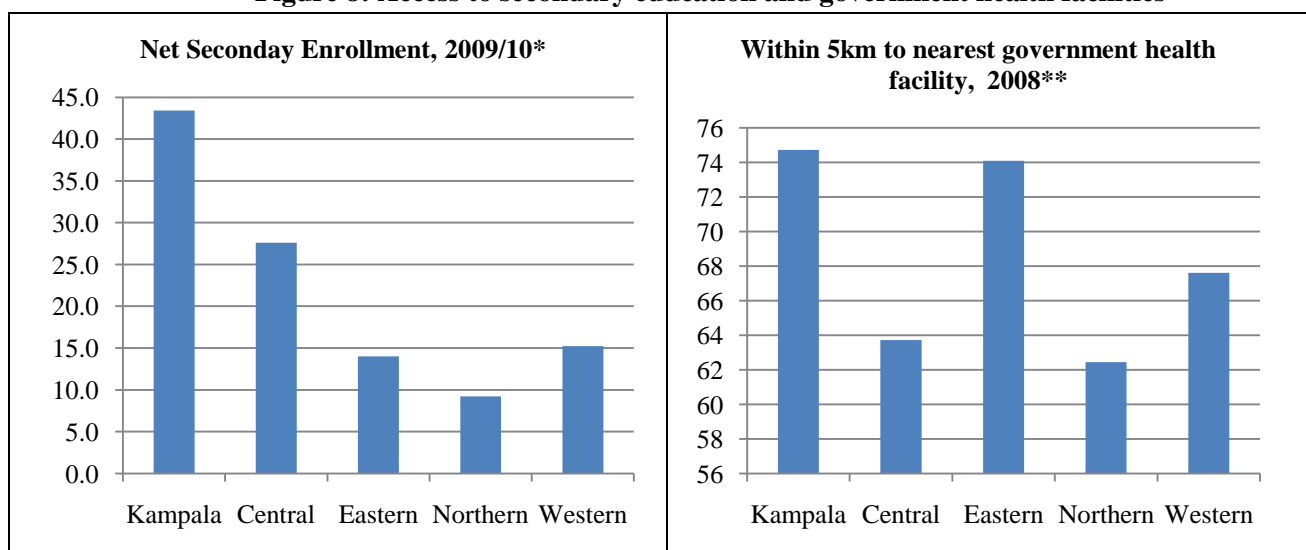
16. **Regional variation in monetary poverty mirrors the regional disparities in access and quality of services.** While access to primary education across is relatively equal across regions, the same is not true for secondary education and electricity in which access in the North and the East lags behind the Central region. About 62 percent of households in Kampala have access to electricity but a mere one and two percent in the North and East respectively have access to electricity. At 9 percent and 14 percent, the North and the East respectively have the lowest net secondary school enrollment - dwarfed by Kampala and the Central region where net secondary enrollments are 44 percent and 27 percent respectively (see Figure 8). There is a big rural-urban divide in access to services too. Urban areas have better access to all public services other than sanitation. To the extent that public investment crowds in private investment, these areas are doubly disadvantaged. It is therefore not surprising in Uganda that poverty is higher where access to public services is lowest.

Figure 7: Access to infrastructure services by location, 2009/10



Source: Authors calculations based on UNHS 2009/10

Figure 8: Access to secondary education and government health facilities

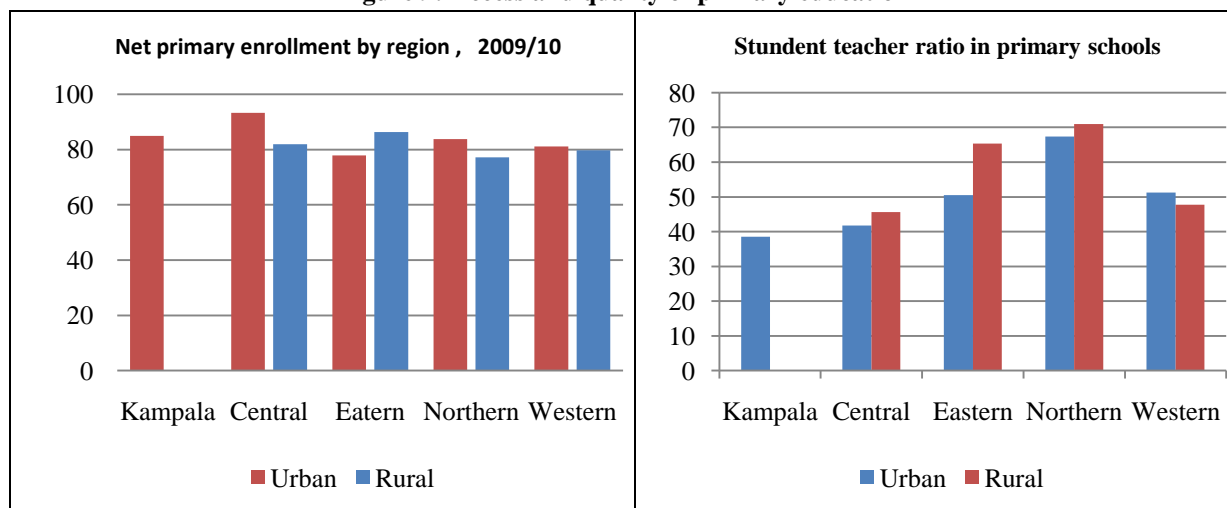


*Source: Authors calculations based on UNHS 2009/10, **Source: Authors calculations based on NSDS 2008

17. **While access to services improved and regional disparities were narrowed, quality differentials by regions still persist.** A case in point is access to primary education after the introduction of UPE. At an average of 83 percent in 2009/10, net primary enrollments are now within the same range across all regions. However, the average pupil-teacher ratio in the rural Northern region in 2008 was nearly double the average pupil-teacher ratio in Kampala – pointing to a wide variation in quality of primary school education (see

18. Figure 9) across regions. This has dampened the potential gains from increased access. The gains in access to primary education arising from UPE need to be consolidated by increasing the quality of primary education in lagging areas.

Figure 9: Access and quality of primary education



Source: Authors calculations from the UNHS 2009/10, National Service Delivery Survey, 2008

19. **The story of Uganda in the past two decades is therefore one of significant but spatially unequal poverty reduction performance.** Some, rural areas and the North in particular, lagged behind in both monetary poverty, access and quality of public services, while the Central region pulled away. This resulted in increased inequality and compromised the poverty reduction performance in Uganda. Addressing these inequalities is Uganda's inclusive growth challenge which requires an appreciation of the drivers of poverty reduction and underlying sources of inequality in Uganda.

DRIVERS OF POVERTY REDUCTION IN UGANDA

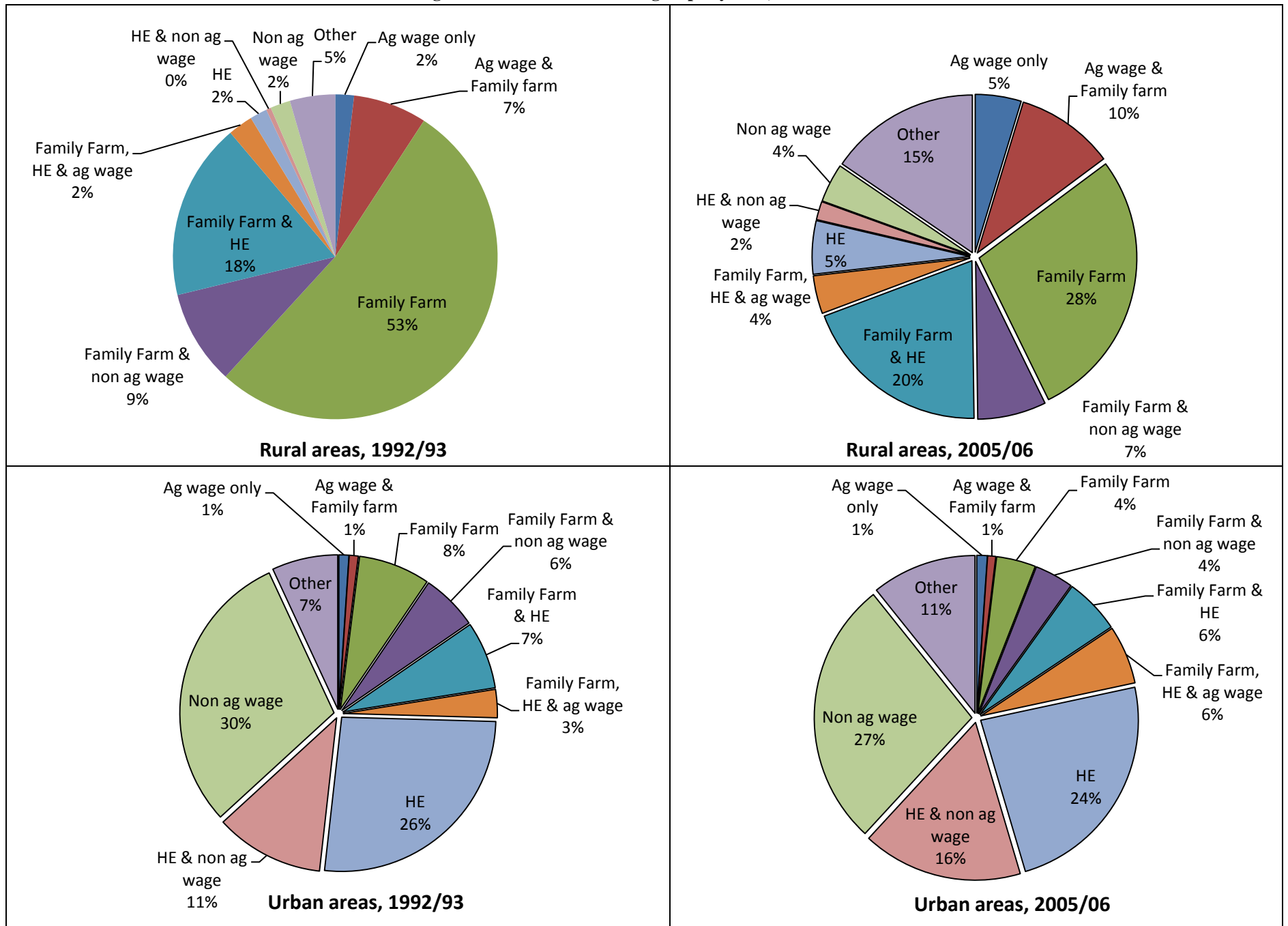
20. **The key question is what were the main channels of poverty reduction in Uganda during the past two decades? The answer lies mainly in changes in employment.** Key elements of these changes are diversification of household livelihood portfolios rooted in strong growth of private wage and salary employment and non-farm household enterprises, and increased agricultural productivity among agricultural households. These changes were made possible by the expansion of education which is the strongest predictor of success, but also by the construction of infrastructure which improved access to markets. This triggered the necessary private investment to raise productivity and create strong local economic development.

21. **Income diversification away from subsistence agriculture was a major driver of poverty reduction in Uganda.** A comparison of livelihoods in 1992/93 and 2005/06 in Figure 10 shows that the proportion of rural households relying solely on family farming nearly halved from 53 percent in 1992/93 to 28 percent in 2005/06¹. Over this period, the proportion of all households relying only on farm income declined by a third, from 54 percent in 1992/93 to 36 percent in 2005/06. Thus while agriculture remains a source of income for 75 percent of households in Uganda, many supplement it with income from other activities which are often more productive. *This represents a subtle structural transformation in the livelihood sources of Ugandan households, from a predominantly agricultural portfolio to a more diversified one.*

¹ The livelihood analysis is based on trends up to 2005/06 due to data comparability issues and inconsistencies within the UNHS 2009/10 labor data.

22. **This diversification increased household incomes, directly through an expansion of the income base and indirectly by boosting agricultural income.** Evidence from the UNHS 2005/06 shows that agricultural households with other sources of income report higher income from agriculture on average. They are also more likely to buy other fertilizers, seeds and other marketed inputs. This implies that instead of substituting agricultural income, households with a diversified livelihood portfolio use their various income sources to compliment farm incomes by providing working capital for their farms. This raises yields on their farms thus increasing their incomes further.

Figure 10: Share of livelihood groups by area, 1992/93 - 2005/06



Source: Authors calculations based on HIS 1992/93 and UNHS 2005/06

23. **The phenomenal growth in non-farm household enterprises (HEs) significantly contributed to income diversification by households. This helped to reduce poverty and provide a source of cash income to households, especially rural households, many of whom had reached their limits to growth in agricultural incomes.** About 40 percent of rural households operated a non-farm household enterprise (HE) in 2009/10 (see Table 3) compared to 24 percent in 1999/00. The number of HEs has been rising at an annual average rate of 6 percent in the past decade. *By 2009/10, Uganda had over 6 million HEs as more and more households are operating more than one enterprise.* Between 1999 and 2005/06, 35 percent of the increase was accounted for by the increase in number of enterprises per households.

Table 3: Prevalence of Non-Farm Enterprises, 1999/00 to 2009/10

	Urban	Rural	All
1999/00			
No Non-Farm Enterprises	45	68	64
At least One Non-Farm Enterprise	54	32	36
- One Non-Farm Enterprise	43	28	30
- Two Non-Farm Enterprises	10	4	5
- Three or more Non-Farm Enterprises	1	0	0
Total	100	100	100
2005/06			
No Non-Farm Enterprises	44	62	59
At least One Non-Farm Enterprise	56	38	41
- One Non-Farm Enterprise	41	30	32
- Two Non-Farm Enterprises	13	6	8
- Three or more Non-Farm Enterprises	2	1	1
Total	100	100	100
2009/10			
No Non-Farm Enterprises	51	62	60
At least One Non-Farm Enterprise	49	38	40
- One Non-Farm Enterprise	40	31	33
- Two Non-Farm Enterprises	8	6	6
- Three or more Non-Farm Enterprises	1	1	1
Total	100	100	100

Source: UNHS 1999/2000, 2005/2006, 2009/10

24. **Most economic activities in non-farm enterprises are household based, use low capital and rudimentary technology thus labor productivity growth in this sector has limits. The risk of failure is also high.** A typical HE has no separation of ownership from control and the enterprise is not a legal entity independent of its owner. HEs are therefore highly susceptible to family shocks. Although some hire external labor, many heavily depend on family labor input. Nearly 80 percent did not have a hired worker in 2005/06 while only 6 percent had three or more workers. HEs are often started as a secondary source of income therefore employment in non-farm enterprises is not always full time. Around 44 percent of HEs (in operation for at least one year) reported operating HEs for less than 12 months in a year, with 21 percent operating for less than six months in 2005/06 for example. In rural areas, it is common for households with non-farm enterprises to devote some weeks entirely to agriculture. About half of household enterprises fail within 3 years of operation owing to risks and various challenges faced by the informal sector.

25. **However, the potential of non-farm household enterprises in the informal sector in raising household incomes and providing gainful employment in Uganda cannot be overlooked.** The sector is the

second largest source of livelihood in a country where over 80 percent of the population can only sell labor to their households. It accounted for 62 percent of net primary non-agriculture jobs created between 1992/93 and 2005/06, absorbing the majority of new labor markets entrants with incomplete primary education which cannot get them into formal wage employment. It also offers higher earnings and better opportunities than subsistence agriculture. With an average annual growth rate of 8 percent in the past decade, HEs in the formal sector were pivotal in the household livelihood portfolio diversification that underpins Uganda's poverty reduction. Reducing the risk of failure in this sector is therefore crucial in raising household incomes and improving the quality of employment as envisaged in the NDP.

26. **The sector unfortunately continues to receive inadequate support owing to misconceptions and myths about its contribution to government revenue generation and local economic development.** About 58 percent of HEs already operate in some formal way – they are either registered with the local authorities or have a trading license. Nearly 55 percent pay for license, user fees and/or permit fees to the local government, contributing close to two thirds of local governments' locally generated revenues. These payments are also regressive, with fees paid by the lowest earning HEs amounting to an effective tax rate of 52 percent (i.e. more than twice that paid by corporations). The perception that HEs operate illegally and do not contribute to local government revenues is therefore not supported by evidence. Instead, HEs play an important role in local economic development. The misconceptions about HEs are obstacles to the effective engagement of the sector in policy formulation as greater attention is aimed at regulating, formalizing and taxing the sector (see NDP, p. 62) and less on supporting the growth and sustainability of the sector.

27. **Uganda should embrace this sector and expand its limits through policies and programs directed towards household enterprises as part of an improved policy framework for local economic development.** A joint World Bank and Ministry of Tourism Trade and Industry, Uganda country study of the sector (Bakeine, 2010) revealed three main challenges faced by HEs, namely i) lack of adequate capital due to limited access to credit and financial services, ii) poor technical and business skills and iii) poor working environment characterized by lack of worksites, frequent harassment by law enforcers and a regressive tax/fee structure. The study concluded that most policies and programs meant to alleviate these challenges fail to reach the sector. It concluded that effective support of the sector requires: i) improving their access to reliable financial services, ii) supporting informal skills training, iii) local governments which facilitate the productivity of household enterprises (including access to workspaces) as part of local economic development programs, and iv) a new tax base for local governments and reform of tax enforcement so that the tax rate on the smallest enterprises is not higher than the tax rate on corporations.

28. **Growth in wage employment, especially in urban areas, was another driver of household income diversification.** Between 1992/93 and 2005/06, employment in private wage and salary employment in agriculture and non-agriculture sectors grew at an annual average rate of 6.6 percent and 7.3 percent respectively (see

29. Table 4). The growth rate in wage employment was much higher in the past decade, with private-non agriculture wage employment increasing by around 12 percent per annum between 2002/03 and 2005/06, while the growth in private agriculture jobs grew by 13 percent. This was one of the fastest growth rates in private wage jobs in Africa, second only to Ghana (World Bank, 2009a). At 1.1 percent private wage job growth per percentage growth in GDP between 1992/93 and 2005/06, the employment intensity of growth in Uganda was fairly high.

Table 4: Employment (primary job) growth by job type, 1992 and 2005

	Share of all workers		Annual rate of growth
	1992/93	2005/06	1992/93-2005/06
Private wage employment - agriculture	2.8	4.5	6.6
Private wage employment - non-agriculture	5.2	8.9	7.3
Wage employment - government	4.7	3.0	-0.6
Family Farm (Self-employed and unpaid family workers)	80.7	70.3	1.8
Home-based Enterprise	6.6	13.3	8.6
All economically active	100	100	2.9

Note: Sample includes only usual members present in the household. Labor force is 15+

Source: UNHS, 1992/93 and 2005/06

30. **However, the high population growth in Uganda masked the high rate of non-agriculture job creation that took place in the past two decades.** The share of private wage employment in total primary employment increased by less than 4 percentage points despite the number of private wage jobs growing at an annualized rate of 7.3 percent between 1992/93 and 2005/06. This is attributable to a low base of private wage jobs that Uganda started from and the high population growth it has experienced. An average of one hundred thousand non-agriculture wage jobs were created per year between 2002/03 and 2005/06, but an average of four hundred thousand people entered the labor market each year – outnumbering the net private wage jobs created by a factor of four. Absorbing these in non-agriculture wage jobs would have required more than doubling non-agriculture wage jobs in three years (i.e. requiring an astronomical non-agriculture wage growth rate of 31 per annum). And still the majority of the labor force (i.e. those already in the labor force) would have been outside the wage and salary sector. Thus given Uganda’s population dynamics, a complete structural transformation to a labor market dominated by private wage employment will take several decades at least. Many labor market entrants will continue to be absorbed in self-employment in agriculture and HEs in the medium to long term even with continued high growth in non-agriculture wage employment.

31. **Rising real wages augmented the effect of high wage job creation.** The median real wage in the private non-agriculture sector increased by an average annual rate of 5 percent between 1992/93 and 2005/06, while it rose at an annualized rate of 13 percent in the public sector over the same period. The agriculture wage has however increased at a much slower rate of close to 3 percent per annum. This implies that average labor productivity was rising in this period so that new entrants in wage employment could be accommodated without lowering the median earnings per person employed in wage employment.

32. **The type of employment is a major determinant of household welfare. Controlling for other factors, there is a significant positive correlation between consumption and non-farm household enterprise ownership and wage income.** The per capita consumption of a rural household whose head’s primary activity is running a non-farm enterprise is between 11 – 30% higher than that of household headed by a subsistence farmer, controlling for education and other factors that usually influence income. In urban areas other than the Central region, the difference is at least 18%. Consumption regressions based on data from previous UNHS all show that type of employment is a significant independent predictor of household welfare (World Bank, 2006). Thus the relationship between type of employment and household welfare is a robust one.

33. **These findings show that changing livelihoods from predominantly subsistence agriculture to non-farm enterprises and wage employment was an important channel for poverty reduction in Uganda.** The significance of this effect should not be underplayed. *The result further suggests that household’s*

livelihoods in Uganda are best understood by looking beyond the main employment activities and taking the approach that household incomes come from a portfolio of several economic activities.

34. **The transformation of household livelihood portfolios was facilitated by gains in education, which is an important determinant of the type of employment. Returns to education in wage employment and non-farm enterprises in Uganda are high.** The country made significant progress on education since 1992/93. Three quarters of Ugandans out of school and aged 10 years or above had less than complete primary education in 1992/93, 36 percent did not have formal education and less than six percent had at least complete secondary education. The proportion of similarly aged, out of school Ugandans with no formal education had declined to 22 percent in 2009/10 and those with at least complete secondary education increased to 24 percent. These improvements made it possible for people to engage in more gainful employment and raise their productivity. An analysis of determinants of occupational choice show that more education makes men less likely to work in subsistence agriculture and that people with less than complete secondary education are unlikely to be employed in non-agriculture wage and salary jobs – the employment type that offers the highest earnings. Within occupations, more education is correlated with higher wage and HE earnings. The earnings of a HE run by a person with complete primary education are 46 percent higher than the average earnings of similar HEs run by entrepreneurs without any formal education for example. Thus improved education empowered people to take opportunities in more gainful forms of employment and raised productivity within employment types.

35. **Local economic development played an equally important role in household income diversification by presenting better opportunities for households to improve their welfare.** Indeed Denninger and Okidi 2003 show that poverty reduction benefits of access to basic education depend on complimentary investments in electricity and other infrastructure.² Analysis of net profits of HEs from the 2005 UNHS data shows that even after controlling for the enterprise owner's characteristics such as education, community fixed effects remain a significant determinant of turnover - increasing the amount of variation in HE net profits explained by the regressions by at least 20 percent. In addition, average earnings of HEs with access to electricity are 38 percent higher than the average earnings of similar enterprises in communities without access to electricity. Investments in infrastructure provide opportunities for enterprises to grow thereby raising household incomes.

36. **Poverty among households engaged only in agriculture halved, suggesting that gains in agriculture also played a significant role in poverty reduction.** The poverty headcount among households solely depending on family farming income declined from 64 percent in 1992/93 to 33 percent in 2005/06. This could only be achieved if agriculture labor productivity increased over the past two decades. But the available evidence is at best indicative. Despite doubts over the comparability of agriculture from the UNHS 1999 and 2005/06, trends from these data point to significant improvements in agriculture yields. Increased exports of agricultural commodities (e.g. maize) and relatively lower than regional average food inflation in Uganda also point to improved agricultural productivity (World Bank 2011a).

DRIVERS OF SPATIAL INEQUALITY IN UGANDA

37. **Inequalities in drivers of growth and poverty reduction explain Uganda's growing inequality of outcomes. Spatial inequality in Uganda can therefore be traced to regional differences in household**

² Van de Walle 2003 show a similar result for Vietnam where they found strong complementarities between household education and irrigation expansion.

endowments (assets) and opportunities (economic climate, created by infrastructure investments) - whose evolution tells the story of the evolution of spatial inequality, and what needs to be done to bring up incomes of the poor and excluded households. The effect on poverty of the major improvement in the economic climate of the North shows the strong impact a reduction in spatial inequalities has on poverty reduction. This demonstrates that addressing sources of regional inequalities will be critical for continued poverty reduction in Uganda.

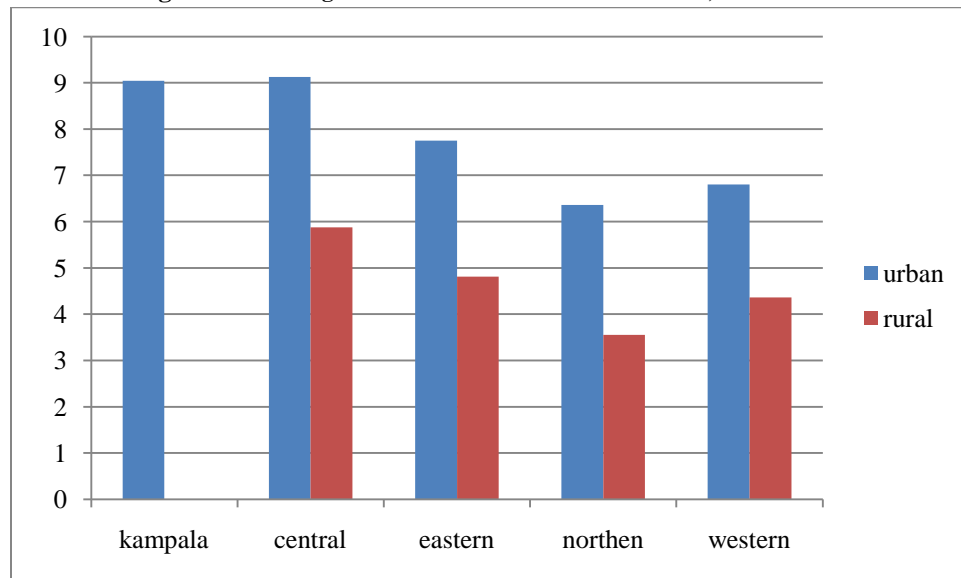
38. **Ten years ago, insecurity slowed down growth and poverty reduction in the North. Growth in the region however rebounded after the conflict, reflecting some peace dividend.** Between 2002 and 2005, when the conflict in the North was still full-fledged, growth in real per capita consumption was below the national average. Consumption per adult equivalent grew at an annualized rate of 1.5 compared to the national average rate of 3.6. In urban areas, per capita consumption actually declined. The region lagged behind in public services expansion too. It still has the lowest access to education, sanitation and electricity (see Figure 7 - 9) - a fact attributable to poor public investment during the period of insecurity (World Bank, 2011b). The economic climate improved with the advent of peace resulting in a 14 percentage point decline in poverty in the Northern region between 2005/06 and 2009/10. This constituted half the decline in poverty reduction in Uganda during that period. Despite recent improvements, consumption levels and growth in the region remains below the national average for all but the richest 10 percent in the rural North. This suggests that owing to the lack of public and private investment during the period of conflict, the North is yet to catch up in other key factors which significantly influence income, and may lag behind for some time.

39. **Beyond conflict, regional differentials in education attainments and returns to it, in land quality, structure of employment, access to electricity and roads³, are key drivers of inequality in household consumption across regions.** Thus even outside the North, other regions (especially rural areas) lacking in these also experienced slower consumption growth than the national average. The impact of these factors on the evolution of spatial inequality worked through 3 main channels: i) The endowment effect – i.e. inequality in the endowments of the households in the region, ii) inequality in economic opportunities such as access to public services or markets, and iii) the price effect – i.e. inequality in returns to the endowments caused by inequalities in economic opportunities, controlling for endowments.

i) **Endowments - Educational attainment is the most important predictor of income and welfare in Uganda yet this important factor is inequality distributed across regions.** Household surveys consistently show wide regional variations in educational attainment in Uganda, with the Central region leading and the North lagging while rural areas generally lagging behind urban areas (see Figure 11). The average level of education in the Central urban region is nearly three years higher than the Northern urban areas and twice that of the rural North for example. At 8.2, the average years of education in urban areas (among people aged at least 15 years) is 78 percent higher than the average years of education (4.6 years) in rural areas. Only 11 percent of people aged 15 and above outside the Central region have at least complete secondary education compared to 29 percent in the Central region. The Central region also has the lowest proportion of people with less than complete primary schooling (39 percentage), while the North has the highest proportion (67 percent). Because education determines employment activity and hence earnings, the regional variation in educational attainment inevitably led to regional inequality (see World Bank, 2009a).

³ Other studies have shown that differences these factors explain regional inequality in Uganda (Deininger and Okidi, 2003; MFPED/EPRC 2008; World Bank, 2009b) and other countries (see Escobal and Torero 2005. Christiaensen, Demery and Paternostro 2005).

Figure 11: Average Years of Education of Labor Force, 2009/10



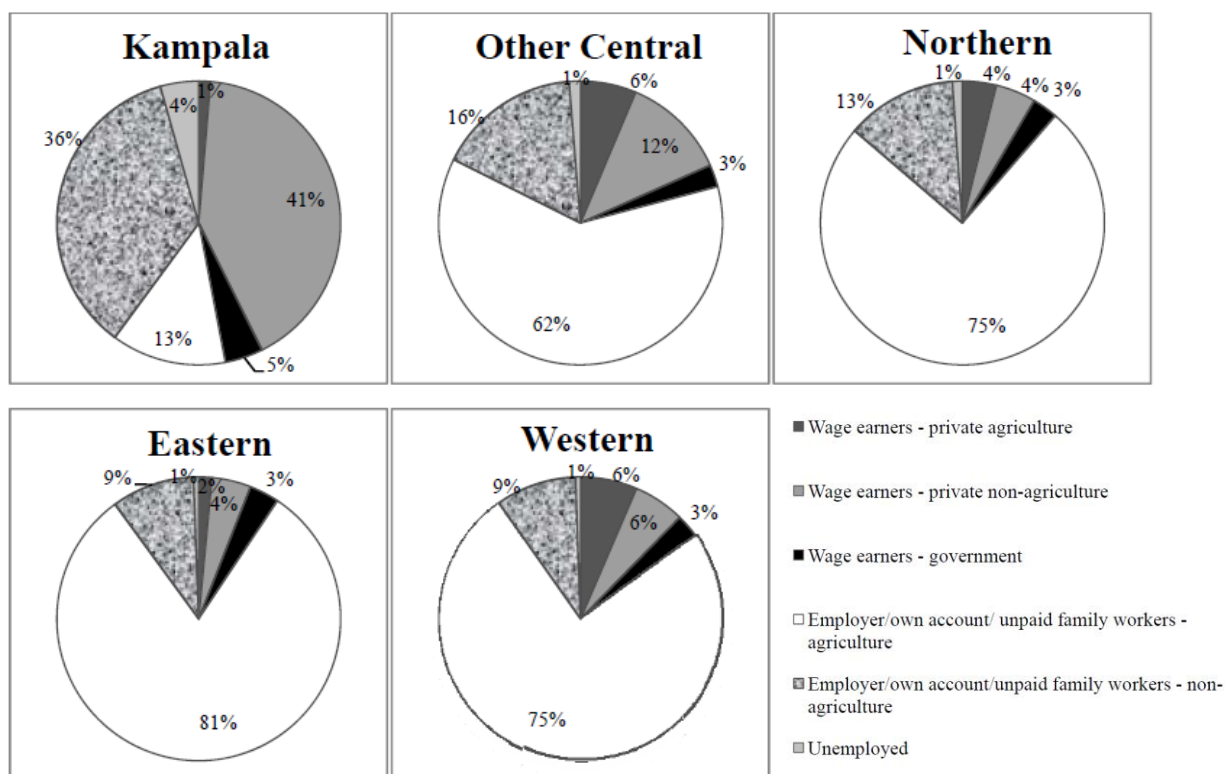
Note: Restricted to people aged 15 years and above,

Source: Author calculations based on UNHS 2009/10

ii) **Opportunities –The high level of public infrastructure and publicly provided services in Kampala and the Central region led to the creation of better employment opportunities there in the last decade.** Growth in wage and salary employment and that of non-farm enterprises has been concentrated in the Kampala – Entebbe area. About 40 percent of all wage and salary jobs in 2005/06 were located in Kampala yet it accounted for only 10 percent of the labor force.

Figure 12 shows that the employment structure is skewed towards better employment opportunities in regions with better access to public infrastructure (i.e. Kampala and the Central region). One is 19 percentage points less likely to be in agriculture activities of any kind (subsistence or commercial) in the Central region than in the Eastern region for example. On the other hand, a labor market participant in Kampala is 35 percentage points more likely to be in private wage employment than in all other regions. In both urban and rural areas, those who primarily work in non-farm jobs tend to work more hours because they are least likely to have seasonal employment. Employment opportunities are therefore best in the Central region than elsewhere in the country. Poverty is consequently lower.

Figure 12: Employment Structure by Region, 2005/06

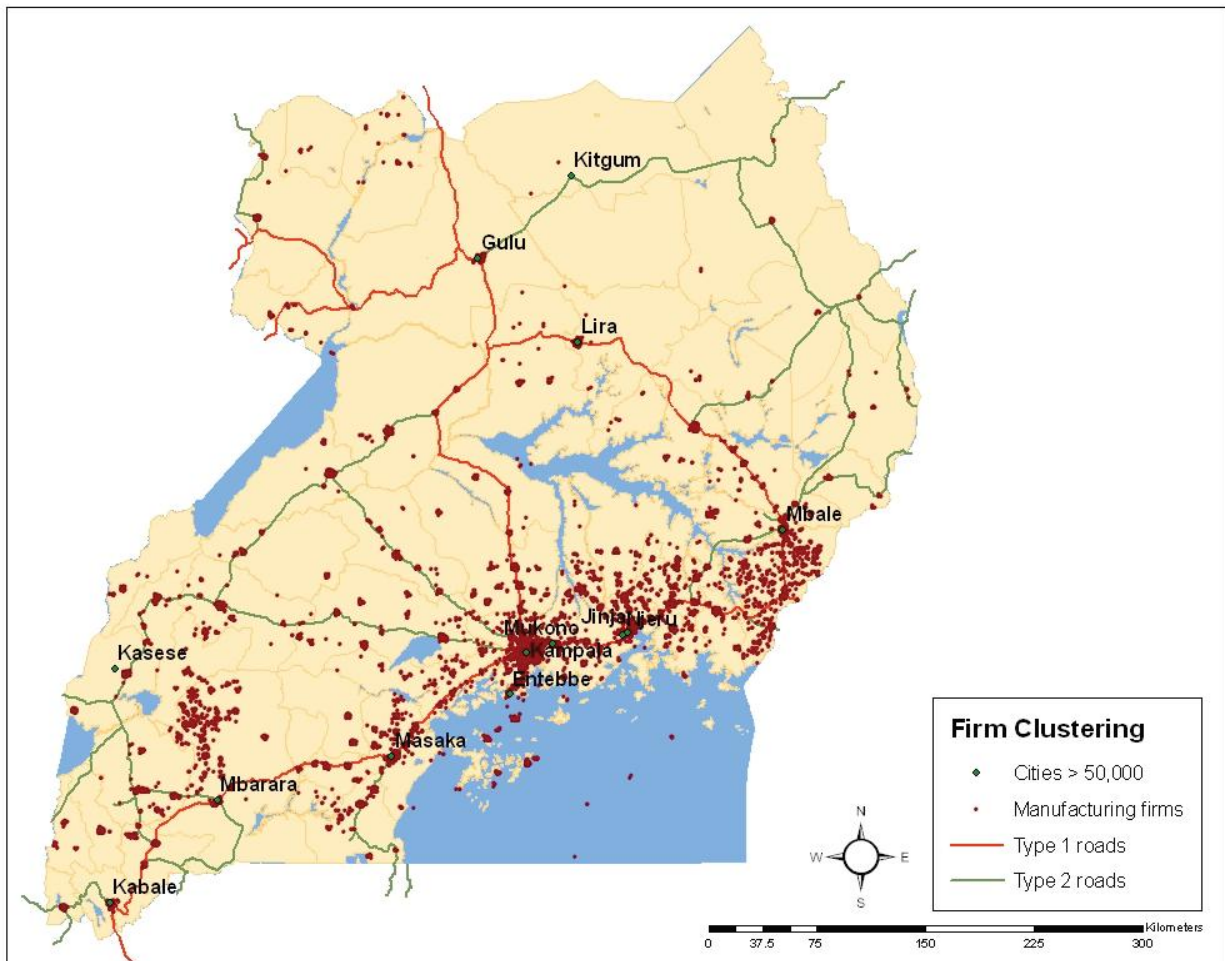


Source: World Bank, 2009b

iii) **Returns – Better opportunities offered in the Central region, the Kampala-Entebbe corridor in particular, and in urban areas as opposed to rural areas, result in higher returns in these areas.** Enterprises in the center have a high turnover, about twice as much as the East (which is the second highest) and ten times higher than the North in 2005/06 for example. As a result of better job opportunities in the center, returns to assets are higher in the center than other regions. Thus in addition to having higher productive assets (human capital in particular) than elsewhere, the center provides higher returns to these assets. This further increases spatial inequality.

40. **Public investments attract private investment, creating better employment opportunities in the process. Welfare is therefore higher in regions with higher access to public infrastructure due to better opportunities and returns provided in those regions.** In Uganda, better public infrastructure in the Central region attracted private investments there. This is evidenced by the high concentration of firms and household enterprises in the region. The map of businesses presented in Figure 13 shows that firms are indeed concentrated in areas with greater access to physical infrastructure. Furthermore, regional fixed effects are statistically significant in regression analysis of occupational choice, determinants of wage earnings, earnings of household enterprises and household welfare in Uganda (World Bank 2006, 2009a,b) – even after controlling for education and other household endowments. *This confirms the critical role of the local economic environment, and hence local economic development in shaping opportunities and consequently poverty reduction. The local economic environment is to a large extent determined by access to public infrastructure.*

Figure 13: Location of businesses in Uganda, 2008



Source: UBOS 2008

41. **Equalising endowments, opportunities and returns of other regions with the Central region would significantly reduce poverty in all regions (Gaddis, 2010).** This is gotten from analysis done to understand the effect of spatial differences in endowments, opportunities and returns, which estimated how household incomes and hence poverty, might change if the inequalities were reduced. The Northern and Eastern regions would benefit the most (see Table 5). A disaggregation of the sources of inequality shows that education and access to public infrastructure (i.e electricity and roads) are the key drivers of spatial inequality in Uganda. The pace of poverty reduction in lagging areas would have been faster, if these regions had a greater access to public infrastructure and if households in these regions had higher levels of education. These results confirm that both human capital and physical infrastructure can play a role in poverty reduction.

42. **Equalizing educational endowments would significantly reduce spatial inequality. Raising the level of education in lagging regions to that of the Central region is projected to reduce poverty by 9 percent and 26 percent in rural and urban areas respectively.** UPE has equalized access to primary education but dropouts are high so completion rates vary substantially by area. Transition to secondary education is also low outside of the Central region. Equalizing educational attainment should therefore build on equalized access to primary education under UPE and focus on (i) ensuring a much higher completion rate, and (ii) raising the transition from primary to secondary school, particularly in lagging regions. This requires

equalizing the quality of primary education and addressing other constraints that influence primary dropouts and affect progression to secondary schools. These include physical access to secondary schools and affordability of both secondary and primary schooling among the chronically poor.

43. **Equalizing access to electricity across urban areas is projected to significantly reduce poverty in other regions and narrow regional inequality.** The poverty headcount rate is projected to fall by 4 to 7 percentage points in rural areas⁴ and *at least 30 percent* in urban areas if all urban areas across the country have the same access to electricity as the Central region. The fall is slight in rural areas as rural access is still quite low, and this is a long term problem. But urban access gaps are clearly disadvantaging the other cities in Uganda. Regional differences in infrastructure services account for some of the regional divergences in returns to employment. Equalizing the returns to employment of other regions to the Central region (even controlling for lower education levels) would reduce poverty in all regions except for urban areas in the West. Poverty would decline by between 9 and 16 percent in rural areas. It would decline by between 14 and 43 percent in urban areas other than the Western region. In both rural and urban areas, the Eastern regions would benefit the most from equalized returns to employment. Targeted provision of infrastructure services to other regions with therefore reduce regional inequalities.

44. **Spatial inequalities in Uganda are to a large extent explained by regional differences in human capital and public infrastructure. Thus while conflict played a role, under investment in public services in lagging regions significantly contributed to regional inequalities by restricting opportunities and returns to employments in these areas.** Redressing spatial inequalities would entail creating better opportunities for households through (i) provision of better human capital services to all households (i.e. increasing their endowments) and (ii) increased access to markets and capital through selected and targeted provision of infrastructure services to other regions.

CONCLUSIONS

45. **Poverty reduction in Uganda was driven by household livelihood portfolio diversification away from a predominantly agriculture portfolio. This diversification was rooted in growth in private wage employment and non-farm household enterprises. For continued poverty reduction, Uganda will need to keep creating wage jobs while supporting the household enterprise sector as part of an improved policy framework for local economic development.** This requires i) improved access to reliable financial services; ii) local governments which facilitate the productivity of household enterprises as part of local economic development programs; iii) reform of the tax structure and revenue sources for local governments to make the tax rate progressive for the smallest enterprises.

46. **Nevertheless agriculture remains a significant source of income for many households in Uganda. Increased agriculture productivity remains an important driver of poverty reduction whose role cannot be neglected.** As illustrated in the sister note on agriculture for inclusive growth, data issues notwithstanding, available evidence suggests household farms, small scale in their nature, managed to increase productivity. Transformation in agriculture should not abandon these small scale household farms, but rather encourage their growth and commercialization.

⁴ Note that simulations for the effect of equalizing access to electricity in rural areas use the central rural region, which also has low access to electricity, as a benchmark. The lower poverty impact of equalizing access to electricity in rural areas could therefore be attributable to the smaller differential in access to electricity between the Central rural region and other regions.

47. **Educational attainment is a major predictor of success in Uganda. The regional variation in education was therefore a major source of spatial inequality.** Raising educational attainment, particularly in lagging regions, is pivotal to reducing poverty and narrowing regional inequalities. Although UPE brought equal access to education, it has yet to bring equal access to quality primary education, and has created increased demand for secondary education. Thus raising educational attainment will require going beyond UPE to improve transition to secondary school by i) making education accessible to the chronically poor and the vulnerable, ii) addressing issues affecting households demand for investment in human capital, ii) improving the quality of education in lagging areas.

48. **Underinvestment in public services outside the Central region is the major source of spatial inequality. Achievement of shared growth therefore requires targeted investments in public infrastructure in lagging areas while preserving opportunities offered in the center.** Of key importance are i) human capital investments and ii) investments in electricity in urban areas outside the Central region, and (iii) carefully targeted infrastructure investments , particularly targeting underinvested North, which has lagged due to conflict.

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Tables and Figures

Table 5: Simulated poverty headcount, 2005/06

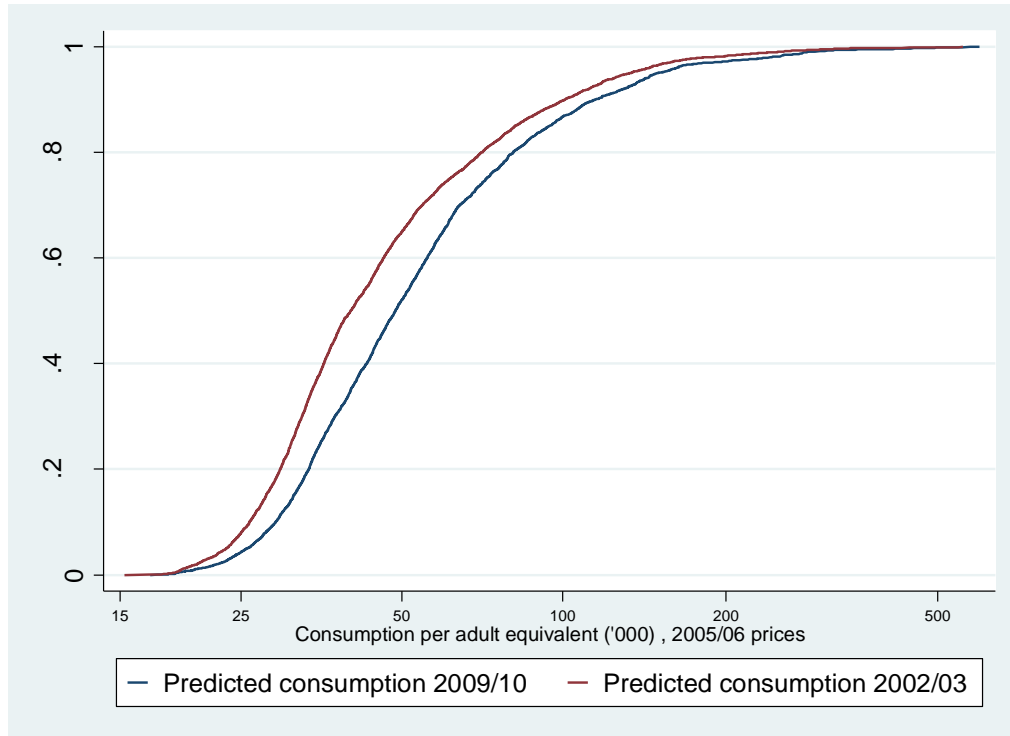
	rural			urban			
	Eastern	Northern	Western	Eastern	Northern	Western	
<i>Observed poverty headcount</i>							
This region	37.2	64.1	21.4	17.3	40.5	9.5	
Base region (Central)	21.0	21.0	21.0	4.8	4.8	4.8	
	$\Delta\%$	-44%	-67%	-2%	-72%	-88%	
<i>Poverty headcount for simulations equalizing endowments and opportunities</i>							
Electricity	P_0	34.7	61.7	20.4	11.5	24.7	6.6
	$\Delta\%$	-7%	-4%	-5%	-33%	-39%	-30%
roads (rural)	P_0	37.2	63.6	20.6	<i>na</i>	<i>na</i>	<i>na</i>
	$\Delta\%$	0%	-1%	-4%			
education	P_0	34.2	58.3	19.6	13.0	30.1	7.0
	$\Delta\%$	-8%	-9%	-9%	-25%	-26%	-26%
land (rural)	P_0	38.6	64.6	22.2	<i>na</i>	<i>na</i>	<i>na</i>
	$\Delta\%$	4%	1%	4%			
employment	P_0	38.1	64.0	21.2	14.2	40.4	9.7
	$\Delta\%$	2%	0%	-1%	-18%	0%	2%
<i>Poverty headcount for simulations equalizing returns</i>							
electricity	P_0	37.2	64.1	21.4	18.7	40.5	9.5
	$\Delta\%$	0%	0%	0%	8%	0%	0%
roads (rural)	P_0	37.0	63.1	19.3	<i>na</i>	<i>na</i>	<i>na</i>
	$\Delta\%$	-1%	-2%	-10%			
education	P_0	26.6	62.7	18.6	16.3	41.3	12.1
	$\Delta\%$	-28%	-2%	-13%	-6%	2%	28%
land (rural)	P_0	38.6	65.2	21.9	<i>na</i>	<i>na</i>	<i>na</i>
	$\Delta\%$	4%	2%	3%			
employment	P_0	43.0	69.7	24.7	24.8	46.2	8.5
	$\Delta\%$	16%	9%	15%	43%	14%	-10%

Source: computations based on UNHS 2005/06.

Note: P_0 is the simulated poverty headcount rate with the equalization of the endowments or returns of a given region to that of the reference region while $\Delta\%$ denotes the percentage change in the poverty headcount rate from observed in the particular region in 2005/06.

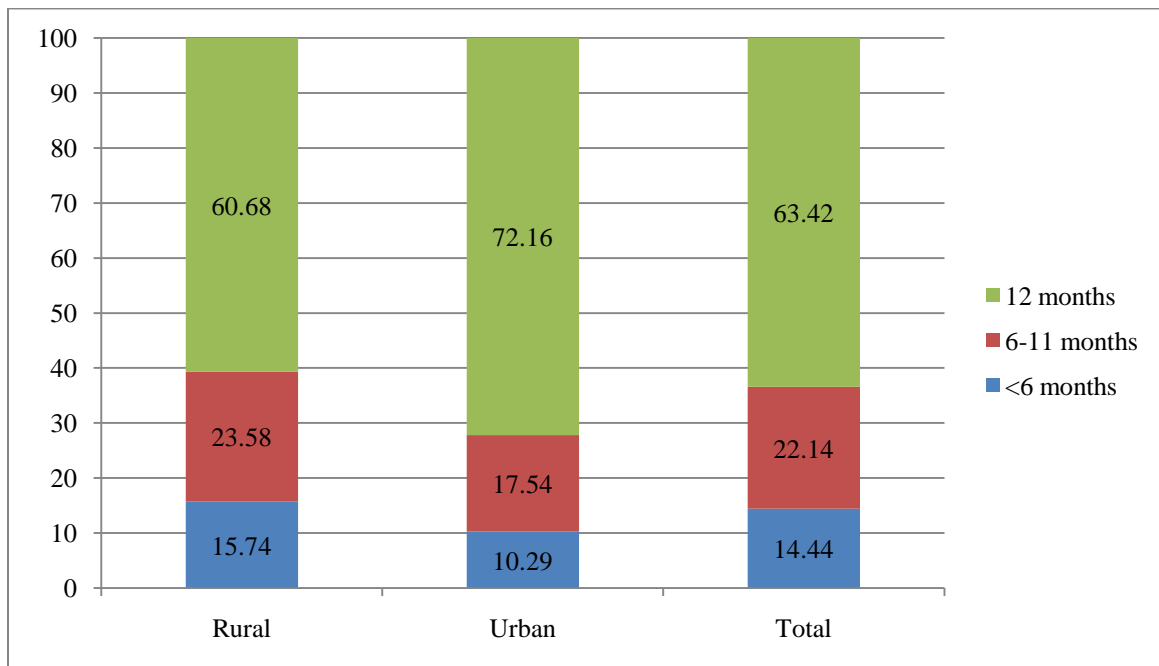
The results are the work of Isis Gaddis 2010, based on the approach of Bourguignon, Ferreira & Leite (2007) to estimate the contribution of various sources of regional inequality in poverty outcomes. This is done by first regressing household consumption per adult equivalent in each of the regions separately, then simulating consumption distribution of a particular region if endowments, opportunities, and or rates of returns in that region are equalized with the reference region. Simulations of endowments and opportunities adjust the distribution of the relevant explanatory variables to match that of the reference region and use the new distribution to predict household consumption using regression coefficients of the region of interest. Simulations of rates of return use the coefficient of the relevant variable from the reference region regression to predict consumption in the region of interest using that region's observed allocation of endowments and opportunities. The simulated consumption is then used to calculate the poverty headcount rate under the given scenario. The analysis used the Central region as the reference region. Therefore simulations apply regression parameters and endowment allocations observed in Central rural/urban to the other region also rural/urban.

Figure 14: Comparison of permanent income 2002/03 - 2009/10



Source: Authors calculations from UNHS 2002/03 and UNHS 2009/10

Figure 15: Months of the Past Year that Non-Farm Enterprises have been Operational, 2005



Source: UNHS 2005/2006. Notes: Sample excludes NF household enterprises that have been in operation for less than one year.