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Ghana: Poverty reduction over thirty years

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Abstract: Ghana is relatively rare among Sub-Saharan African countries in having had sustained positive growth every year since the mid-1980s. This paper analyses the nature of the growth and then presents an analysis of the evolution of both consumption poverty and non-monetary poverty outcomes over this period, showing improvements in almost all indicators over this period. At the same time, inequality has risen over the past 20 years and spatial inequality, in both monetary and non-monetary outcomes, remains an important concern. This increase in inequality is one reason why growth has not led to faster poverty reduction.

Keywords: Ghana, growth, poverty, non-monetary poverty, inequality
JEL classification: I32, O10, O40, O55

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1 Introduction

Ghana has by now experienced solid growth for almost 30 years. In the late 1980s and early 1990s when much of Sub-Saharan Africa saw economic decline, Ghana stood out as one of a small number of exceptions with positive growth. It undertook major economic reforms from 1984 onwards, and is regularly held up as an example of successful implementation of adjustment policies. They came with substantial aid inflows and, in recent years, growth has accelerated even further, in part with the discovery of oil and the start of its production.

While the rate of growth has varied over time, growth in per capita GDP was positive in every single year between 1985 and 2013. Per capita GDP grew at 1.7 per cent between 1985 and 1994; by 2.0 per cent between 1995 and 2004; and it reached 5.3 per cent between 2005 and 2013, in part due to the 12 per cent growth experienced in 2012. This period also saw Ghana joining the group of lower middle countries. Accordingly, Ghana has widely been seen as an African growth success story, and growth is projected to remain strong over the medium-term future.

Turning to the poverty impacts of this growth, Ghana has benefited over the years from having a variety of different sources of data. Not only have there been six different rounds of the national household living conditions survey (the last four at least being comparable), there have also been five waves of the Demographic and Health Survey (DHS). A number of insightful studies of poverty in Ghana therefore exist, starting with an analysis based on one of the very first household surveys conducted in Africa, the first round of the Ghana Living Standards Survey (GLSS), conducted in 1987/88 (Boateng et al. 1992), with many other more in-depth studies following. A consistent message of these studies is that growth has been accompanied by progress in reducing monetary poverty.

At the official level, the Ghana Statistical Service has also published important studies of poverty in Ghana. Its 2007 study (Ghana Statistical Service 2007) describes poverty developments between 1991 and 2006 in detail, and a recently published poverty report compares the situation in 2005/06 with that revealed by the latest survey in 2012/13 (Ghana Statistical Service 2014). Both reviews show impressive progress over these periods in terms of reducing consumption poverty, but also that inequality has been on the rise.

Among academic studies, Aryeetey and McKay (2007) look at the relationship between economic growth and poverty reduction in Ghana as a study carried out as part of a multi-country project analysing pro-poor growth. Coulombe and Wodon (2007) provide a thorough study of poverty, its relation to growth, and the determinants of poverty between 1991 and 2006. They note that the gross domestic product (GDP) deflator increased more than the consumer price index (CPI), which implies that poverty reduction has been further underpinned with relatively strong real consumption growth. They also decompose changes in the mean level of consumption per adult equivalent of households over time into changes due to differences in household characteristics and changes due to differences in the returns to these characteristics. The results from this exercise suggest that the reductions in poverty due to declines in household size which occurred both in rural and urban areas is important, and also that the impact was much larger in urban areas. They also calculate that, if inequality had not increased between 1991 and 2006, poverty would have fallen by 4 percentage points more than it actually did during this period.

Duclos et al. (2006) examine multidimensional poverty in three African countries, including Ghana. Their chosen indicators are consumption and children's height-for-age scores (a good measure of nutrition). For the country as a whole, such measured multidimensional poverty is greater in rural than in urban areas. It also appears that in some geographical regions this pattern

unexpectedly does not hold. Annim et al. (2012) study district-level inequality using GLSS3-5, and find that the contribution of within-district inequality to national inequality is higher than inequality between districts.

Two papers specifically focus on the linkages between inflation, an important challenge in Ghana, and poverty. Cudjoe et al. (2010) examine food price transmission between regional markets, using the 2007–08 food price crisis as an example. They combine econometric analysis of food price correlations with consumer demand system-based simulations. While they find that domestic grain prices are highly correlated with world market prices, the food crisis had only a modest impact on consumer welfare on average because of the relatively diverse consumption patterns within the country. They also argue that some subgroups of the population, namely the poorest households in urban areas, suffered considerably due to food price increases. Coleman (2012), in turn, investigates the persistence properties of inflation across regions and sectors in Ghana. He finds some regions (Ashanti, Central, and Eastern) demonstrate inflation persistence, implying that a nationwide policy shock will have longer-lasting effects in these three compared to the other regions.

This paper revisits and updates all of this evidence on growth and poverty in Ghana, taking into account the results of the most recently conducted household survey in 2012/13. Insights are also provided using different non-monetary indicators from the Demographic and Health Surveys for the four latest available rounds. While Ghana is undoubtedly an African success in many respects, we also raise a number of issues, in particular in relation to the more recent record and in terms of the inclusiveness of the growth pattern.

The paper proceeds as follows. Section 2 sets out the historical background to Ghana's period of three decades of sustained growth and outlines some of the policies and reforms related to growth and poverty reduction. Then in Section 3, we review the macroeconomic picture in terms of growth and other outcomes, looking in more detail at the composition of growth and its likely implications for changes in poverty. The record in terms of monetary poverty and inequality, and the responsiveness of these to growth is reviewed in Section 4, after which Section 5 discusses the record in terms of non-monetary dimensions of poverty. Section 6 concludes.

2 Economic developments and policies implemented to reduce poverty

At independence in 1957, Ghana had a per capita income level comparable to countries like South Korea and Malaysia, and much higher than Thailand, India, and most other African countries. The government of the time (with Kwame Nkumah as prime minister during 1957–60 and president from 1960–66) pursued several policies and programmes to enhance economic growth and to reduce poverty, focusing on removing constraints to industrialization. This included, among other things, policies to construct a modern road network, to modernize and enlarge the main ports (Takoradi and Tema), to diversify agricultural production, and to achieve significant progress in education and health.

In reality though, the history of Ghana's first 25 years of independence is a case of largely self-inflicted decline (Huq 1989). The period between the toppling of the Nkrumah government in 1966 and December 1983 when Flight Lieutenant Jerry Rawlings took power for the second time saw substantial political instability (with eight different regimes in this period, some military and many short-lived) and major inconsistencies in policy implementation. In addition, the economy was hit by several shocks including the sharp oil price rises in the 1970s, severe droughts during 1975–77 and 1981–83 and the repatriation of Ghanaians from Nigeria in 1983 (Gockel and Amu 2003). The government ended up in 1983 having no other alternative than to seek assistance from

the IMF and the World Bank through the Economic Recovery Programme (ERP) (Aryeetey et al. 2000).

The ERP is described by Aryeetey and Tarp (2000). They detail the many different market-oriented policy reform measures, which were involved, and assess the initial performance. The programme helped re-launch growth and was associated with improved fiscal performance; although the fact already noted that the ERP was accompanied by substantial aid inflows makes it challenging to disentangle the relative importance of the different factors in accounting for re-establishing growth. Furthermore, in some respects economic performance remained poor, in particular in relation to private investment and control of inflation. Political liberalization followed economic liberalization with a transition to democracy in 1992; and this process has been both popular in Ghana and successful, as demonstrated by two peaceful changes of political regime in elections in 2000 and 2008. Democracy though also creates challenges, with rising fiscal deficits associated with election periods. Effective fiscal management remains a major issue, alongside high inflation which has been a continued problem.

Concern about the poverty consequences of the reform measures being undertaken led the government to adopt its Programme of Actions to Mitigate the Social Costs of Adjustment (PAMSCAD) in 1989 as a kind of buffer for the vulnerable groups in the country (Leite 2000). More effective focus on alleviating poverty was introduced through a set of later initiatives, including Vision 2020, which sought to propel the economy to middle income status within 25 years. Its replacement, the first Ghana Poverty Reduction Strategy (GPRS I), the first phase of which accompanied Ghana's application for the Enhanced HIPC facility in 2001, followed. Concerns were nonetheless expressed that the poor did not participate actively in the growth process (Osei and Domfe 2008). Hence the second Growth and Poverty Reduction Strategy (GPRS II) was launched in 2006 to continue the poverty reduction efforts. One key poverty reduction project under GPRS II, borne out of the evaluation of the GPRS I, was the cash transfer programme called the Livelihood Empowerment Against Poverty (LEAP). GPRS II ended in 2009 and was replaced by the Ghana Shared Growth Development Agenda (GSGDA), which has now entered a second phase.

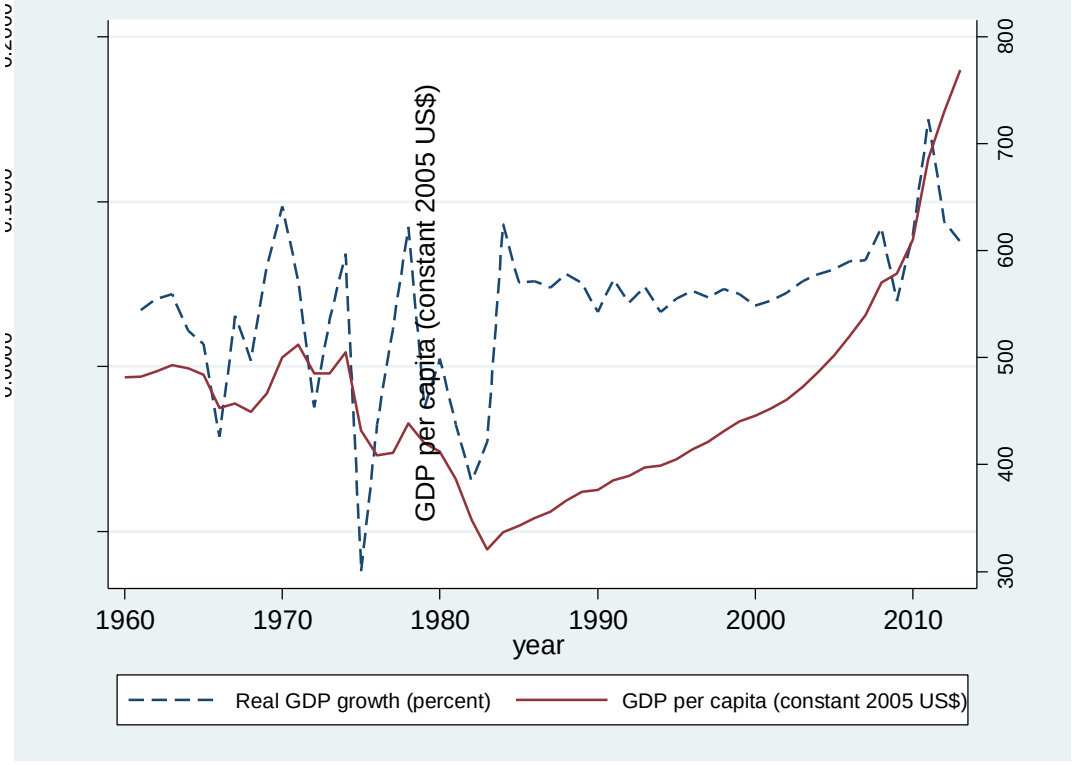
An important recent economic development in Ghana is the discovery of significant quantities of oil in 2007 with production starting on a modest scale towards the end of 2010. This has now become a significant source of export revenue for Ghana, adding to its traditional important exports of gold and cocoa. Oil production is intended to provide a source of revenue for the government; however, it is still too early to judge the impact of oil production on the economy and certainly on poverty. Recent macroeconomic difficulties caused by expenditure overshooting, which caused Ghana to approach the IMF once again, underline the importance of prudent management of natural resource income.

3 The macroeconomic environment

Three phases can be discerned from the economic growth trends from 1960 to 2013. The first, spanning the period 1960–83, saw growth averaging close to zero with very large variability (Figure 1). The dismal growth performance for this period has been attributed to many factors including economic mismanagement, political instability, the severe droughts referred to above, adverse shifts in the country's terms of trade, and the oil shocks of the 1970s (Killick 2010; Lloyd et al. 2001). The second phase spans the economic recovery period until the early 2000s. These years of restoration recorded positive growth on average with relatively low variability, reflecting greater economic and political stability in combination with a much stronger macroeconomic performance in general (including continued inflows of foreign aid). The last phase covers the period from the

mid-2000s to date where the beginnings of accelerated growth could be witnessed. Economic growth between 2002 and 2008 averaged about 6.1 per cent per annum. In the year 2011, the economy grew at an unprecedented rate of 14.4 per cent. This growth though, was principally driven by oil production, which started during the last quarter of 2010.

Figure 1: Trends in economic growth, 1960–2012



Source: World Bank (2015).

According to the more detailed information available from Table 1 (see also Table 2), private consumption (and investment) grew faster than the GDP during the period 1991–99, made possible through increasing deficits in the external balance. In the latest period shown, 2007–13, after the rebasing of the GDP, consumption growth has lagged behind GDP growth, while investment growth has remained high.

Table 1: Growth rates of different national accounts aggregates

	Mean growth rates per annum		
	1991–99	1998–2005	2007–13
Real GDP growth, %	4.4	4.8	8.3
GDP per capita growth, annual %	1.8	2.2	5.8
Final consumption expenditure etc., annual % growth	4.8	4.9	6.3
General government final consumption expenditure, annual % growth	7.0	8.4	18.1
Household final consumption expenditure, annual % growth	4.6	4.4	5.5
Gross capital formation, annual % growth	11.7	8.1	11.4
External balance on goods and services, annual % growth	-23.6	-12.0	1.0
Exports of goods and services, annual % growth	12.8	7.7	18.5
Imports of goods and services, annual % growth	13.3	7.7	11.1
Agriculture, real growth rate, %	3.0	5.1	3.4
Industry, real growth rate, %	12.0	4.2	14.5
Manufacturing, real growth rate, %	4.8	3.9	0.1
Services etc., real growth rate %	2.5	4.9	8.6

Source: World Bank (2015).

The sectoral decomposition of growth shows how the agricultural sector lagged behind overall growth in the 1990s then experienced a faster growth rate until the rebasing of GDP in 2006. After that, the share of agriculture in total GDP has remained fairly small, and agricultural growth has been modest. This stands in comparison with the much faster growth of the service sector and, especially non-manufacturing industries, in the period from 2007 onwards.

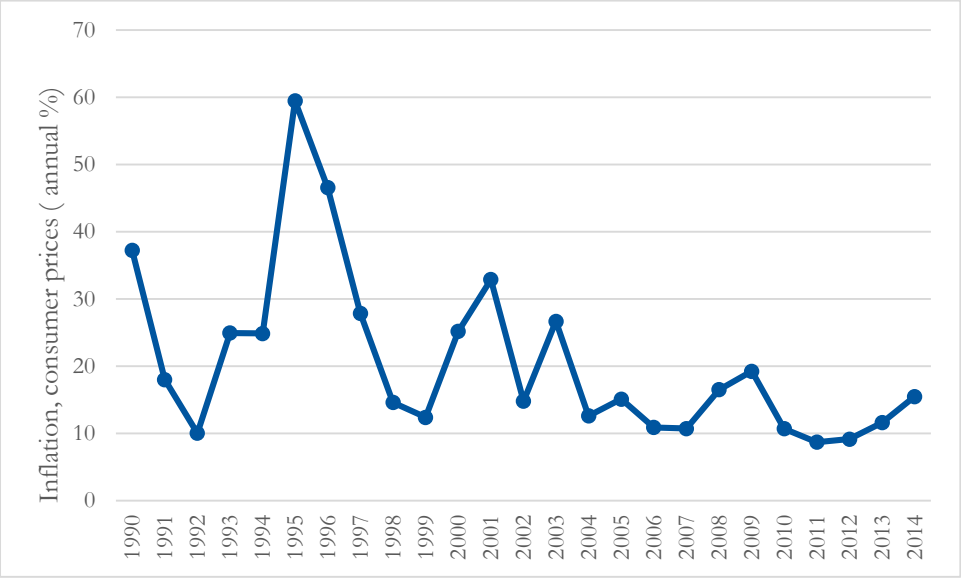
Table 2: Real GDP growth, by expenditure category and sector, 1991, 1999, 2006, and 2013

	Shares			
	1991	1999	2006	2013
Final consumption expenditure etc., % of GDP	92.7	96.5	93.9	81.0
General government final consumption expenditure, % of GDP	9.5	10.8	11.2	16.6
Household final consumption expenditure etc., % of GDP	83.2	85.7	82.7	64.4
Gross capital formation, % of GDP	15.9	21.0	21.6	24.1
External balance on goods and services, % of GDP	-8.6	-17.5	-15.5	-5.1
Exports of goods and services, % of GDP	17.0	32.1	25.2	42.2
Imports of goods and services, % of GDP	25.5	49.6	40.7	47.2
Total	100	100	100	100
Agriculture, value added, % of GDP	45.6	39.9	30.4	21.9
Industry, value added, % of GDP	17.0	28.4	20.8	28.5
Manufacturing, value added, % of GDP	9.3	10.1	10.2	5.8
Services etc., value added, % of GDP	37.5	31.7	48.8	49.6
Total	100	100	100	100

Source: World Bank (2015).

The sluggish development of the manufacturing sector stands out. Jedwab and Osei (2012) note that income changes in Ghana during 1960–2010 were mainly driven by changes in the productivity of specific sectors rather than by a shift of resources from low to high productivity areas. This was particularly the case before 1992. Nevertheless, the authors argue that Ghana has slowly transitioned into a more efficient economy, with structural change becoming a more significant factor of productivity growth. Indeed, Osei (2012) cautions that the growth enhancing type of structural change needs to be sustained particularly if the country is to avoid the oil curse. Other potential concerns that could mitigate the growth enhancing potential of structural change in Ghana are the increasingly fragile nature of the government's fiscal situation and the challenges in the country's energy sector. In terms of the fiscal policy, the country has recently again needed a fiscal rescue package from the IMF (see IMF 2015). On the energy sector the frequent disruptions to power mean that firms rely increasingly on their own power generation (mainly by use of diesel generators), which invariably makes them less competitive, limiting the scope to develop an industrial sector.

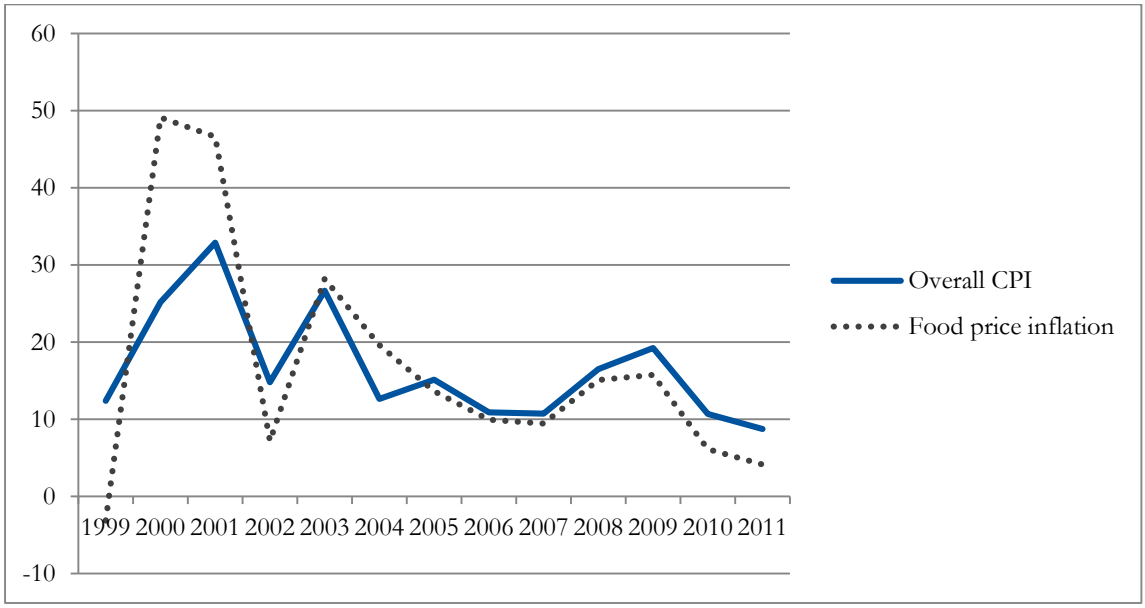
Figure 2: Inflation in Ghana, 1990–2014



Source: World Bank (2015).

A key factor lurking behind poverty estimates is inflation, especially food price inflation. Figure 2 demonstrates the large fluctuations in the inflation rate over the entire time period discussed here. In Figure 3, food price inflation is compared with overall consumer price inflation for the period for which comparable information is available. While food prices increased rapidly during the food price crisis around 2008, the overall inflation rate was also high and remained above food price inflation. In any case, the rates shown underline the need for great care when deflating nominal figures to arrive at real consumption estimates.

Figure 3: Comparison of food price inflation and overall price inflation



Source: Authors' calculations based on Ghana Statistical Service data.

4 The record on consumption poverty

The analysis of consumption poverty in Ghana is enabled by the four rounds of the Ghana Living Standards Survey (GLSS, rounds 3 to 6), concurred in 1991–92, 1998–89, 2005–06, and 2012–13. These are comparable surveys which enable total real household consumption expenditure per adult equivalent to be computed, using price data which can take account of differences across space and over time between one round and another. A national poverty line is used. The Ghana Statistical Service has published a poverty report based on the first three of these rounds (Ghana Statistical Service 2007), and more recently a poverty study based on the latest two rounds, the latter using a revised consumption measure and poverty line (Ghana Statistical Service 2014).[1]

The mean values of household consumption from the last four household surveys, expressed in the constant prices of January 2013, are summarized in Table 3. It demonstrates rising average consumption at quite fast rates over this period. Over the full period from 1991/92 to 2012/13, consumption per adult equivalent grew at a very respectable annual average rate of 3.1 per cent. While growth was faster in the periods between the GLSS3 and 4 and GLSS4 and 5 surveys than over the GLSS5 to 6 years, even in this latter period consumption still grew at an average rate of 2.5 per cent per year.

Table 3: Changes in national poverty headcount for Ghana, and elasticity calculations

	1991–92	1998–99	2005–06	2012–13
Poverty headcount	51.7	39.5	28.5	
Proportionate change in poverty		-0.236	-0.278	-0.241
Real GDP per capita (2006 values)	634.8	714	837.2	1228.2
Real consumption per capita (2006 values)	539.3	590.1	685.5	711.9
Real survey consumption per capita (est. 2006 values)	294.8	382.8	479.2	
Real survey consumption per capita (2013 values)			2511	3002
Proportionate change in per capita GDP		0.125	0.173	0.467
Proportionate change in per capita consumption (national accounts)		0.094	0.162	0.039
Proportionate change in per adult household consumption (survey)		0.216	0.272	0.192
Growth elasticity of poverty (GDP)		-1.89	-1.61	-0.52
Growth elasticity of poverty (national accounts consumption)		-2.51	-1.72	-6.26
Growth elasticity of poverty (survey consumption)		-1.09	-1.02	-1.26

Note: The levels of consumption from the third household survey in 2006 values cannot be compared with those in 2013 values because of significant revisions in the CPI data used for these calculations. But comparisons along the row to compute growth rates are valid.

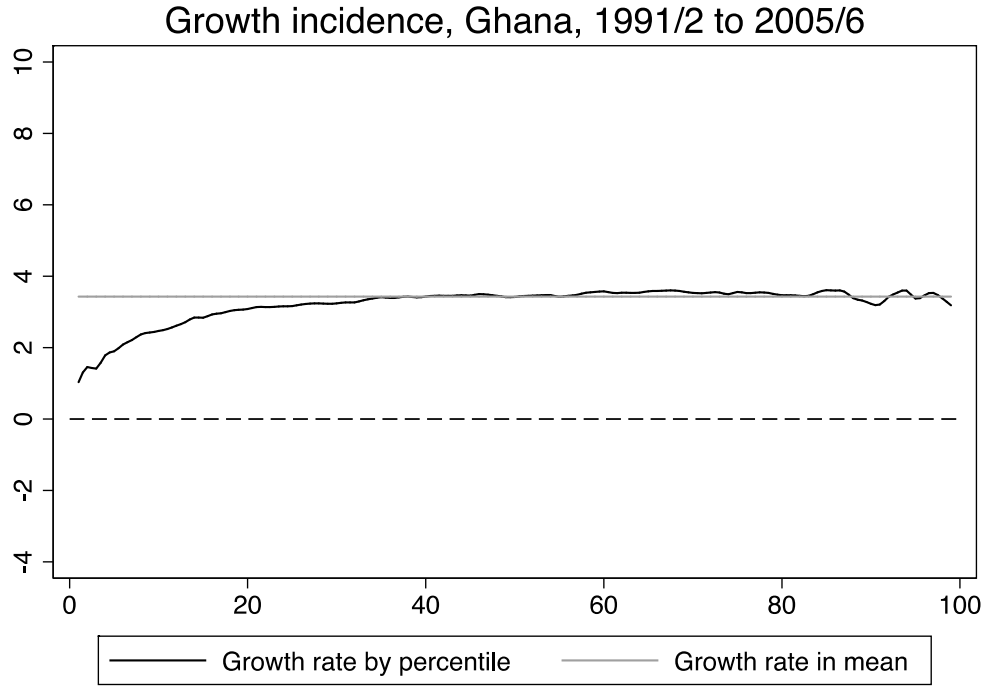
Source: Authors' computations based on data from World Development Indicators and Ghana Living Standards Survey data.

Figures 4 and 5 show the distributional pattern of this growth by plotting growth incidence curves for the GLSS3–5 and GLSS5–6 periods, respectively. These figures show the higher average rate

1 An earlier study by Coulombe and McKay (1995) compared poverty over the first three rounds of the Ghana Living Standards Survey from 1987/8 to 1991/2, a comparison which was made difficult by a significant change in the way of collecting consumption data between the second and third rounds of the survey. Nonetheless attempting to correct for the effects of this change, Coulombe and McKay estimated that poverty had fallen over this period.

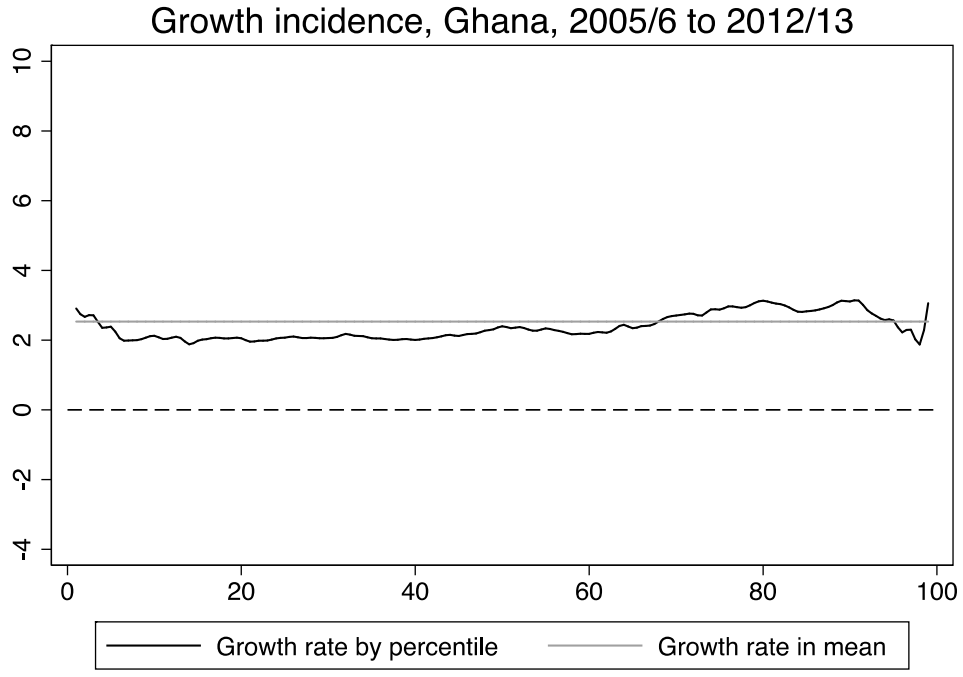
of growth in the first period compared to the second. They also show that in the first period growth in consumption was significantly higher at the top end of the distribution than at the bottom, indicating that inequality rose over this period. Growth between the GLSS5 and 6 periods was less uneven, though still slightly higher at the top end of the distribution.

Figure 4: Growth incidence curve for Ghana, 1991/2 to 2005/6



Source: Authors' computations based on Ghana Living Standards Survey data.

Figure 5: Growth incidence curve for Ghana, 2005/6 to 2012/13



Source: Authors' computations based on Ghana Living Standards Survey data.

What these growth incidence curves also indicate is a consistent history of reduction in monetary poverty over this period. Poverty headcount data from the four most recent GLSS surveys at the national level are presented in Table 3, drawing on official, published data. The data for the GLSS3 to GLSS5 surveys are directly comparable. Small revisions were made to the computation of the poverty line (and consumption aggregate) in the analysis of the GLSS6 survey, resulting in revised estimates for GLSS5, which are also presented in this table. While the revised poverty line, which took into account more recent consumption patterns, gives higher poverty numbers for the 2005/06 period, the patterns are not fundamentally different from the previous figures. The headline story remains one of a large reduction in the poverty headcount between 1991/92 and 1998/99, and again between 1998/99 and 2005/6. Poverty continued to fall between 2005/06 and 2012/13 (based on the comparable data), even if the percentage point reduction was smaller.

The rest of the table examines the responsiveness of poverty to growth by computing the growth elasticity of poverty reduction, based on different definitions of growth. The first calculations are done relative to per capita GDP, the growth rate of which increased over time. The figures suggest that the growth elasticity with respect to GDP falls from -1.9 between 1992 and 1998/99 (a respectable figure) to a much less respectable -0.5 between 2005/6 and 2012/13. In other words, the recent faster growth in GDP would not appear to have been associated with significant poverty reduction. Monetary poverty is, however, more directly linked to private consumption; the elasticity with respect to the national accounts estimate of private consumption is -2.5 in the first period, -1.7 in the second period, and -6.3 in the third period. The last figure would seem to be an anomaly and raises questions about the reliability of the associated private consumption estimate in the national accounts. Its growth rate may well have been underestimated. We now finally turn to the estimated growth elasticities of poverty computed using the household-based consumption measure, which shows significantly faster growth between 2005/06 and 2012/13 than does the national accounts aggregate. Here the growth elasticities of poverty are both more stable and more modest: -0.8 between 1991/92 and 1998/99; -1.1 between 1998/99 and 2005/06; and -1.2 between 2005/06 and 2012/13. This is perhaps the best measure of the responsiveness of poverty to growth and shows disappointing progress in poverty reduction given the consumption growth rate achieved. As will be seen, rising inequality over much of this period will be part of the explanation.

While the above review concerns national-level poverty, a disaggregated analysis of the poverty headcount is presented in Table 4. Significant diversity is evident in both levels and trends. Poverty levels are much higher in rural than in urban areas; yet both show falling levels of poverty. In both urban and rural areas poverty reduction was less over the 1991/92 to 2005/06 period in the savannah ecological zone compared to the forest and coastal zones. The savannah is also the zone with the highest poverty levels by far in both urban and rural areas.

There are some differences though in the patterns of change between 2005/06 and 2012/13 compared to the earlier period. In this period the poverty reductions in percentage point terms are higher in the savannah zone than elsewhere, and poverty in fact increases in the coastal zones outside of Accra (as well as in the urban forest zone). What is clear is that over this latest period the urban poverty reduction is completely accounted for by Accra, while poverty in other urban areas in fact rises. It is also the case that measured poverty in Accra has been exceptionally volatile over time, falling sharply between 1991/92 and 1998/99 before rising to a significant extent between then and 2005/06, and falling again from then to 2012/13. Whether this volatility reflects something about the data collection or is a real phenomenon is difficult to confirm from the available data.

Table 4: Disaggregated poverty headcount data for Ghana

	1991–92	1998–99	2005–06	2005–06	2012–13
All Ghana	51.7	39.5	28.5	31.9	24.2
Urban	27.7	19.4	10.7	12.4	10.6
Rural	63.6	49.5	39.3	43.7	37.9
Accra (GAMA)	23.1	3.8	10.6	12	3.5
Urban coastal	28.3	24.2	5.5	6.4	10.1
Urban forest	25.8	18.2	7.0	8.7	9.9
Urban savannah	37.8	43.0	26.9	30.1	26.4
Rural coastal	52.5	45.2	23.9	27.2	30.3
Rural forest	61.6	38.0	27.9	33.1	27.9
Rural savannah	73.0	70.0	60.3	64.2	55
Western	59.6	27.3	18.6	22.9	20.9
Central	44.3	48.4	19.9	23.4	18.8
Greater Accra	25.8	5.2	11.8	13.5	5.6
Eastern	48.0	43.7	31.7	37.3	33.8
Volta	57.0	37.7	14.7	17.8	21.7
Ashanti	41.2	27.7	20.5	24	14.7
Brong Ahafo	65.0	35.8	29.7	34	27.9
Northern	63.4	69.2	52.2	55.7	50.4
Upper West	88.4	83.9	70.5	72.9	44.4
Upper East	66.9	88.2	87.9	89.1	70.7
North	68.8	76.6	62.7	65.6	52.4
South	47.9	31.3	19.8	23.3	18.5
Male	54.9	41.0	31.5	34.9	25.9
Female	43.1	35.2	19.0	22.1	19.1

Source: Authors' computations based on Ghana Living Standards Survey data.

In rural areas, poverty in the savannah zone fell slowly between 1991/92 and 1998/99, and then more quickly between 1998/99 and 2005/06 and again between 2005/06 and 2012/13. Savannah remains the zone where poverty levels are by far the highest in Ghana. This zone only accounted for 20.5 per cent of the population in 2012/13 but 40.8 per cent of national poverty according to the headcount measure. Poverty in the rural forest zone fell very quickly between 1991/92 and 2005/06 and it continued to fall between 2005/06 and 2012/13. As noted above, poverty rose in the rural coastal zone between 2005/06 and 2012/13, in contrast to the sharp falls seen in the years leading up to this. This increased poverty in the coastal zone is the most striking finding of the analysis of the latest round of the GLSS surveys, a point acknowledged though not explained in the government's official poverty report.

An analysis by the ten main regions of Ghana covering the 1991/92 to 2005/06 period shows a pattern of generally significantly better progress in the seven southern or transition regions compared to the three northern regions; these are grouped together as 'south' and 'north' in the table. The poverty headcount for the three northern regions increased between 1991/92 and 1998/99, and by 2005/06 poverty here was only 6.1 percentage points less than it had been in 1991/92. By contrast the seven regions in the south had reduced their collective poverty headcount

by 28.1 percentage points. In 2005/06 the poverty headcount for the three northern regions was more than three times that for the seven southern regions. Between 2005/06 and 2012/13 poverty fell faster in the north than in the south, narrowing this gap, but it remains very large. The north–south gap in Ghana, a characteristic shared by other West African countries including Côte d'Ivoire and Nigeria, stands out as an important policy challenge in Ghana and a continually sensitive political issue.

Looking at the specific regions shows some diversity. In the north, sharp reductions in poverty between 2005/06 and 2012/13 happened predominantly in the Upper West and especially the Upper East region, with poverty reduction being less in the Northern region. While the poverty headcount is much higher in the Upper West compared to the other regions in the north, in terms of accounting for the numbers in poverty, it is the Northern region which contributed much more, reflecting its higher population. Nearly 18 per cent of the poor in Ghana in 2012/13 were located in the Northern region. Similar diversity exists regarding poverty reduction in the south. The Ashanti and Brong Ahafo regions have shown consistent progress in poverty reduction over all the periods considered here. In other regions there has been a bit more variability. The Western and Volta regions showed impressive poverty reduction between 1991/92 and 2005/06, but much slower progress or slight regress respectively between 2005/06 and 2012/13. Poverty decreased much more slowly in the Eastern region, which from 2005/06 onwards was the poorest among the seven regions outside the north.

Computation of the P_2 Foster–Greer–Thorbecke poverty index (not presented here), which places much more emphasis on the depth of poverty, highlights even more sharply the north–south differential in Ghana. In 2005/06 the P_2 value for the three regions in the north collectively is .176 compared to .020 in the south. While the ratio of these two figures had narrowed by 2012/13 there was still a difference of a factor of 5.6. The P_2 indices for the Upper West region were .328 in 2005/06 and .188 in 2012/13. These values highlight that the relatively remote Upper West region is by far the poorest in Ghana.

Looking at poverty by the economic activity status of the household (Table 5) shows that the highest levels of poverty by far are among those reliant on agriculture for their primary economic activity. In all years this is consistently the group among which poverty levels are the highest. At the same time, the level of poverty in this group (as in most others) fell significantly over each of the sub-periods. Poverty levels are much lower among those self-employed in non-farm activities, and they too experience significant reductions in poverty over these periods. The group among which poverty seems to be falling less or even increasing in recent years is some of the households in which no-one works. This group can be disaggregated in more detail for the last two rounds. This shows that the non-active and unemployed are the second poorest groups in 2005/6 and 2012/13, and poverty among the unemployed group increases quite sharply over this period.

Table 5: Poverty headcounts by main economic activity

	1991–92	1998–99	2005–06	2005–06	2012–13
Public employees	34.7	22.7	7.8		
Private formal employees	30.3	11.3	10.2		
Private informal employees	38.6	25.2	17.1		
Export farmers	64.0	38.7	24.1		
Food crop farmers	68.1	59.4	45.7		
Non-farm self-employed	38.4	28.6	16.7		
Non-working	18.8	20.4	13.0		
Public employee				9.0	7.1
Private employee				14.3	10.8
Self-employed (non-agriculture)				17.0	12.8
Self-employed (agriculture)				45.1	39.2
Unemployed				20.0	28.1
Retired				9.1	4.7
Other non-active				38.6	23.6

Source: Authors' computations based on Ghana Living Standards Survey data.

Summary inequality indices are presented for Ghana for the same period in Table 6. The Gini coefficient at national level was 0.397 in 1991/92, and this rose in each following year to 0.407 in 1998/99, 0.411 in 2005/06, and 0.418 in 2012/13. This pattern is as expected from the growth incidence curves seen above. The two members of the generalized entropy inequality indices presented here, the relative mean deviation, and the Theil Index, show the same pattern of change over time. Given the apparent importance of the north–south differential seen above, this table presents values of the inequality indices for the north and the south of the country separately. What is clear from this is that the north of Ghana is not only much poorer, it is also more unequal, except perhaps in 1998/99. These decomposable generalized entropy indices can be used to identify the relative share of between and within locational inequality. It is clear that in 1998/99 and 2005/06, more than 10 per cent of national inequality is accounted for by the difference in average consumption between the south and north of the country. This share had fallen by 2012/13, but the contribution of the north–south differential to national inequality remains substantial. At the same time substantial inequality within each of these groups continues, and that inequality is especially high within the north.

5 Progress in non-monetary indicators

Table 7 reports various non-monetary indicators for the country as a whole, from 1993 (1988 for some indicators) to 2008. The indices reveal a similar pattern: infant and under-five mortality rates have declined remarkably well (although the level for a country with Ghana's GDP per capita is still on the high side); and secondary school attendance rates increased at the same time when income poverty went down. Access to services has also improved. The only indicator where progress is not so clear is the weight-for-height indicator for children. This measure captures short-term deficiencies in nutrition, and its development may have been influenced by improvements in child survival.

Table 6: Measures of inequality in Ghana, with a focus on south–north differences

	Gini	GE0	GE1
1991–92	0.373	0.231	0.249
North	0.382	0.243	0.255
South	0.363	0.216	0.237
Share of between group inequality	..	0.045	0.038
1998–99	0.388	0.255	0.259
North	0.375	0.230	0.269
South	0.362	0.219	0.226
Share of between group inequality	..	0.135	0.111
2005–06	0.406	0.286	0.301
North	0.424	0.303	0.312
South	0.378	0.237	0.265
Share of between group inequality	..	0.126	0.102
2012–13	0.409	0.288	0.296
North	0.423	0.306	0.330
South	0.391	0.257	0.270
Share of between group inequality	..	0.079	0.066

Source: Authors' computations based on Ghana Living Standards Survey data.

Table 7: Trends in some headline non-monetary indicators in Ghana

		1988	1993	1998	2003	2008
Infant mortality rate		77	66	57	64	50
Under-5 mortality rate		155	119	108	111	80
% with HFA < -2sd		33.6	32.3	30.3	35.0	26.8
% with WFH < -2sd		8.9	13.7	9.9	8.4	8.7
% with WFA < -2sd		22.6	23.3	19.5	17.7	13.5
Education level completed secondary or higher	Male		10.8	45.7	40.6	47.7
	Female		5.7	33.4	32.5	38.1
Has electricity: Yes			30.6	42.6	48.3	60.5
% with adequate drinking water source			67.0	73.7	79.7	80.0
% within 15 minutes of water source			60.9	56.6	61.8	67.4
% with flush or pit toilet			69.4	79.4	78.2	80.5
% having received all vaccinations			54.8	62.0	69.4	79.0

Source: Demographic and Health Survey (various years).

Heterogeneity in child mortality developments is examined in Table 8. The drop in both infant and under-five mortality has been especially pronounced in the rural areas, although the levels remain higher in the rural areas and in the poorer administrative regions. Regions where child mortality rates are high include Upper Western and Northern regions, and also the Central region, despite it being located not too far from Accra.

A similar picture emerges from the differences between child mortality when classified based on mothers' education. Children with more educated mothers face a lower risk of death, but the situation has also improved for children of uneducated mothers.

Table 8: Child mortality by regions and education

	Infant mortality				Under-5 mortality			
	1993	1998	2003	2008	1993	1998	2003	2008
Residence								
Urban	54.9	42.6	55	49	89.9	76.8	93	75
Rural	82.2	67.5	70	56	149.2	122	118	90
Region								
Western	76.3	68.0	66.0	51	131.8	109.7	109.0	65*
Central	71.6	83.8	50*	73*	128	142.1	90*	108*
Greater Accra	58.4	41.4	45	36*	100.2	62	75	50*
Volta	77.8	53.8	75	37*	116.4	98	113	50*
Eastern	55.9	50.2	64	53*	93.2	89.1	95	81*
Ashanti	65.2	41.9	80	54	97.6	78.2	116	80
Brong Ahafo	48.7	77.3*	58	37*	94.6	128.7*	91	76*
Northern	113.7	70.1	69	70	237	171.3	154	137
Upper West	84.5*	70.6	33	97	187.7*	155.6	208	142*
Upper East	105	81.6	105	46*	180.1	155.3	79	78*
Mother's education								
No education	87.1	69.3	66	61	165.7	130.8	125	102
Primary	85.8	45.4	76	55	141.2	112.5	120	88
Middle/JSS	55.4	39.9	60	46	89	91.3	92	68
Secondary/higher	28.2*	36.8*	29*	49*	40.7*	59.8*	34*	64*
Total	74.7	61.2	64	50	132.8	110.4	111	80

Note: *Figures are based on 250-499 births

Source: Demographic and Health Survey (various years).

Educational attainment has increased across all regions (Table 9), and if one looks at, for example, the age group 16–18, where there was more variance in the first period, some backward areas have done exceptionally well: attendance increased by 77 percentage points in the Upper East region. While gender gaps have declined, they still persist, for example in the Northern region, but also in Accra. One needs to remember, however, that improvements in the male–female ratio among older students take some time to materialize.

Table 9: School attendance by regions

Age range 12-15 years								
Survey	1991/92		1998/99		2005/06		2012/13	
Sex	Male	Female	Male	Female	Male	Female	Male	Female
Western	83.2	75.5	93	84.3	98.9	94.5	98.6	96.9
Central	83.3	71.4	89.1	81.6	99.6	97.7	96.9	96.6
Greater Accra	93.2	77.7	87.3	85.4	98.1	97.4	99.7	98.3
Eastern	90.4	81.1	87.1	77.4	98.6	96.8	98.8	98
Volta	82.7	81.5	84.6	82	97.6	85.5	94.9	96.9
Ashanti	94	76	85.4	78.3	98	94.1	98	96.9
Brong Ahafo	83.3	82.5	88.7	82.3	95.3	91.8	96.2	95.8
Northern	63.3	31.5	71.9	46.1	63.7	57.9	74.6	73.1
Upper West	30.8	35.5	62.6	71.6	68.9	69.3	88.9	93.2
Upper East	44.8	34.1	60.2	47.2	58.3	67.7	93.1	90.4
All	81.5	70.8	83.8	76.8	90.4	88.5	95.1	94.7
Age range 16-18 years								
Survey			1998/1999		2005/2006		2012/13	
Sex	Male	Female	Male	Female	Male	Female	Male	Female
Western	60.3	47.3	50.1	41.1	95.5	92.2	98.2	94.7
Central	61	51.7	49.2	32.5	100	96.5	93.9	97.8
Greater Accra	65.9	52.5	68.4	43.4	97.7	93.7	99.2	92.1
Eastern	57.1	36.5	46.1	42.8	94.8	95.5	99.1	98
Volta	63.5	31.8	57.9	50.1	93.7	89.3	92.9	89.6
Ashanti	55	36.3	40.1	43.4	97.4	94.4	97	97.8
Brong Ahafo	65.9	53.6	55.6	37.9	87.3	92.8	94.3	91.5
Northern	40.9	22.6	38.6	32.1	52.7	54.8	78	65.4
Upper West	42.1	33.3	62.9	68.7	65.5	66.7	90.3	93.1
Upper East	14.3	15	59.9	18.5	64.9	56.4	91.9	92.3
All	56.9	41.1	51.9	41.8	87.6	87.3	94.2	92.1

Source: Authors' computations based on Ghana Living Standards Survey data.

All in all, the monetary poverty developments and non-monetary indicators convey a similar story: while poverty has decreased and well-being increased, the differences across the country continue to be large. The same regions, predominantly in the north, where monetary poverty is persistent also fare worse in terms of the non-monetary indicators.

6 Conclusions

In many ways Ghana stands out as one of the most impressive success stories in Sub-Saharan Africa. It has had consistent growth in per capita GDP for 30 years; it has managed a successful, popular, and peaceful democratic transition; it has maintained political stability; and it has achieved impressive progress in monetary and non-monetary poverty reduction over the past 25 years. In many ways it is an impressive model.

While all this remains true, there are a number of important concerns in both the past record and perhaps especially in terms of risks for the future. Ghana has continually struggled with effective macroeconomic and fiscal policy management, the recent IMF loan being testament to this. Ghana

has always struggled in managing inflation; it has not had a particularly strong record in private investment. Its manufacturing sector performance has been poor and it has made slow progress in transforming the economy. Oil has contributed to faster recent growth but may carry significant risks for the future performance of the Ghanaian economy.

And while Ghana has consistently reduced monetary and non-monetary poverty, the rate of responsiveness of the former to growth has not been very fast and inequality has consistently risen over the past 20 years. Poverty levels are much higher among those working in agriculture, the agricultural sector has also shown significantly slower growth. It has not been seen as a sufficient policy priority.

One aspect of this inequality has been the significant spatial diversity in the achievements in both monetary and non-monetary poverty. One dimension of this has been the significant disadvantage of the north of the country compared to the transition zone and the south, and this despite different policy measures to try to address this. There is a tension between this and the need to develop an effective manufacturing sector (McKay and Perge forthcoming), which is more likely to be located in the south to take advantage of transport links and agglomeration benefits. But a stronger policy focus on agriculture and enabling freer trade should benefit the north. However there is also quite a high level of inequality within the north, and the spatial diversity has other aspects than just the north–south difference. Recent years show increasing poverty in the coastal zone and increasing urban poverty; some of this is linked to those without work. The limited employment creation in Ghana has been another important deficiency.

Thus while there is much to applaud, Ghana will face increasing challenge in sustaining its poverty reduction record over the coming years.

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