

# GHANA LIVING STANDARDS SURVEY ROUND 6 (GLSS 6)



## POVERTY PROFILE IN GHANA (2005 - 2013)



GHANA STATISTICAL SERVICE  
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## **PREFACE AND ACKNOWLEDGEMENT**

This publication presents the latest analysis of the living conditions of Ghanaian households and the poverty profile based on the sixth round of the Ghana Living Standards Survey (GLSS6) conducted in 2012/2013. Five rounds of the Ghana Living Standards Survey have been conducted in the past (1987/88, 1988/89, 1991/92, 1998/99 and 2005/06) each covering a nationally representative sample of households interviewed over a period of twelve months.

The report covers three different dimensions of poverty namely: consumption poverty, lack of access to assets and services and human development. The report analyzes macroeconomic developments in the country since 2005, focusing on Growth in Gross Domestic Product (GDP), trends in inflation, balance of payments and public expenditures. It also discusses social protection interventions aimed at reducing poverty and programmes being implemented towards the attainment of the Millennium Development Goals (MDGs).

As a result of the rebasing of the Consumer Price Index (CPI) basket in 2012, the introduction of new consumer items onto the Ghanaian market and changes in household consumption, the report presents the poverty profile of households in 2012/2013 and only attempts to compare the current levels of poverty with those measured in round five of the GLSS.

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## **ACRONYMS AND ABBREVIATIONS**

CPI	Consumer Price Index
GAMA	Greater Accra Metropolitan Area
GLSS	Ghana Living Standard Survey
GDP	Gross Domestic Product
GIC	Growth Incidence Curve
GAR	Gross Attendance Rate
JHS	Junior High School
KVIP	Kumasi Ventilated Improved Pit
LEAP	Livelihood Empowerment Against Poverty
MSMEs	Medium Small and Micro Enterprises
NAR	Net Attendance Rate
MDG	Millennium Development Goal
TV	Television
SHS	Senior High School
WDI-WB	World Development Indicators-World Bank
WHO	World Health Organization

# EXECUTIVE SUMMARY

## Introduction

The Ghana Living Standards Survey is a nationally representative sample survey undertaken to measure the living conditions and well-being of the population. The survey also provides the required data for examining the poverty profile of households and the decomposition between different groupings: urban/rural, locality, region and socio-economic status.

Since 2005, the Ghanaian economy has undergone several changes and available data show that the Gross Domestic Product (GDP) recorded a growth ranging from 4.5 percent and 15.0 percent between 2005 and 2013. The country also attained a lower-middle income status during the period. Several social intervention programmes, including the Livelihood Empowerment Against Poverty (LEAP), Capitation Grant and School Feeding Programme, have been implemented with the aim of alleviating poverty among the vulnerable population.

Poverty has many dimensions and is characterized by low income, malnutrition, ill-health, illiteracy and insecurity, among others. The impact of the different factors could combine to keep households, and sometimes whole communities, in abject poverty. In order to address these, reliable information is required to develop and implement policies that would impact the lives of the poor and vulnerable.

This report is based on the sixth round of the Ghana Living Standards Survey (GLSS6) conducted in 2012/2013. Previous rounds of the survey have been conducted in 1987/88, 1988/89, 1998/99 and 2005/2003. The report does not seek to compare the results of the current survey to previous ones due to changes in the Consumer Price Index (CPI) basket, introduction of new consumer items onto the market and changes in household consumption. The report therefore provides a profile of poverty computed from the GLSS6 data and attempts to examine changes in the past 7 years by adjusting welfare levels in 2005/06 using the 2012/13 consumption basket and price levels.

## Economic Context

The annual GDP growth rates recorded in Ghana for the period 2005 to 2013 ranged from 4.0 percent to 15.0 percent with the lowest growth rate recorded in 2009 and the highest in 2011. The average annual growth rate recorded for the same period was 7.8 percent. From 2010 to 2013, the country experienced an annual average GDP growth rate of 9.7 percent, with per capita income rising above GH¢1,000.00 in 2007, which made Ghana a low-middle income country. The country's average annual growth rate of GDP per capita in constant 2006 prices was 5.2 percent for the period 2005-2012.

Regarding inflation, the non-food inflation rate has mainly been responsible for the high inflation rate in Ghana. The average annual non-food inflation rate for the period 2005-2013 was 14.9 percent and has been consistently higher than the average annual food inflation rate of 9.5 percent.

Over the period 2005 to 2013, Ghana's Balance of Payments averaged a deficit of US\$0.08 billion with the highest deficit of US\$1.46 billion recorded in 2010 while the lowest (US\$0.08) occurred in 2005. The size of government's expenditure in nominal terms, over the past eight years, increased from 2,970.62 million Ghana Cedis in 2005 to 26,277.17 million Ghana Cedis in 2013

## **Consumption Poverty, Methodology and Measurement**

The Ghana Living Standards Survey collects sufficient information to estimate total consumption of each household. This covers consumption of both food and non-food items (including housing).

In using measures of household consumption to compare living standards across geographical areas, account was taken of the variations in the cost of living across regions, as well as differences in household size and composition (children & adults and males & females).

The measure of the standard of living is based on household consumption expenditure, covering food and non-food items, including housing. The regional cost of living index is based on regional monthly food and non-food CPI weighted by region and urban-rural shares. Greater Accra is more expensive than other regions regarding food items whereas non-food items are more expensive outside Accra except in the three Northern regions.

Two key adjustments have been made to the household consumption construction based on GLSS6 to compensate for the changes in consumption patterns. These are the inclusion of the user values of VCD/DVD/mp4 player/iPad, vacuum cleaner, rice cooker, toaster, electric kettle, water heater, tablet PC and mobile phone; and relaxing the cleaning procedure, replacing the values of expenditure items above 5 standard deviations with the mean for that locality (3 standard deviations was used in the previous surveys).

### **Profile of Consumption Poverty**

This section looks at analysing Ghana's poverty profile using the most recent surveys. The survey results show that about a quarter of Ghanaians are poor whilst under a tenth of the population are in extreme poverty. In spite of the fact that the level of extreme poverty is relatively low, it is concentrated in Rural Savannah, with more than a quarter of the people fallen into this category. Overall, the dynamics of poverty in Ghana over the 7-year period indicate that poverty is still very much a rural phenomenon.

Five out of the ten regions had their rates of poverty incidence lower than the national average of 24.2 percent while the remaining half had rates higher than the national average. Greater Accra is the least poor region and the Upper West the poorest overall. Though most regions show a reduction in poverty incidence since 2005/06, the pattern of poverty by region remains the same.

### **Covariate Analysis**

The data reveal that household heads who are farmers are not just the poorest in Ghana, but they also contribute the most to Ghana's poverty. Household heads engaged as private employees and self-employed in non-agricultural sectors are less likely to be poor than those engaged in the agricultural sector. Over the period, public sector earners have, as a result of the public sector wage rationalization policy implemented in 2009, experienced a reduction in poverty.

In general, female-headed households appear to be better off than male-headed households in terms of poverty incidence. Households with uneducated household heads are also found to be the poorest in Ghana and contribute the most to Ghana's poverty incidence.

From the data, welfare distribution is more disproportionate in Ghana now than in 2005/06 which indicates an increasing inequality as measured by the Gini coefficient. While some regions showed improvement in terms of the equality in the distribution of welfare, other

regions such as Volta and Upper West experienced worsening welfare distribution between 2005/06 and 2012/13. Generally, those in the lower income brackets and the population above the 60<sup>th</sup> percentile benefited the most from the growth in consumption.

### **Household Assets**

Information was collected on household assets over the survey period. The proportions of households owning most of the durable goods covered in the surveys have shown large increases between 1998/99 and 2005/2006, and further increases in 2012/13. Both urban and rural areas experienced these increases but which have often been higher for wealthier groups, with greater disparity among urban households. Ownership of durable goods remains much lower in rural areas than urban areas, even among households of similar overall living standards

### **Access to Services**

In terms of access to services, the data show that there have been major improvements over the fifteen-year period in the number of households obtaining their drinking water from an improved source, using adequate toilet facilities and having access to electricity. Rural areas and poorer urban households benefited most from the increases in the use of adequate drinking water sources. Rural households again experienced more marked improvements in access to adequate toilet facilities.

### **Human Development**

Information from the survey show that the period 2005/06 to 2012/13 witnessed increased rates of access to a range of health services. Nevertheless, disparities remain between urban and rural areas and between quintile groups within those areas. From the data, individuals are more likely now to consult doctors and visit health facilities compared to the 1998/99 and 2005/06 period. Persons who consult pharmacists or chemical sellers when ill or injured has decreased while the percentage of individuals ill or injured who did not consult any health practitioner has declined.

Regarding education, school attendance rates in primary, JHS and SHS have improved over the period 2005/06 to 2012/13 with the savannah areas still reporting the lowest school attendance rates. Increases in net school attendance rates at the JHS level have been much higher for girls than boys, but are still below those for boys.

# CHAPTER ONE

## THE ECONOMIC CONTEXT

### 1.1 Gross Domestic Product (GDP), 2005-2013

The annual GDP growth rates recorded in Ghana for the period 2005 to 2013 ranged from 4.0 percent to 15.0 percent; the lowest growth rate was recorded in 2009 and the highest in 2011. The average annual growth rate for the same period was 7.8 percent (Figure 1.1). From 2010 to 2013, however, the country experienced an annual average GDP growth rate of 9.7 percent, with per capita income rising above GH¢1000.00 in 2007, making Ghana a low-middle income country. Currently, Ghana is one of the fastest growing economies in the world.

**Figure 1.1: Annual GDP growth rates (%), 2005 -2013**

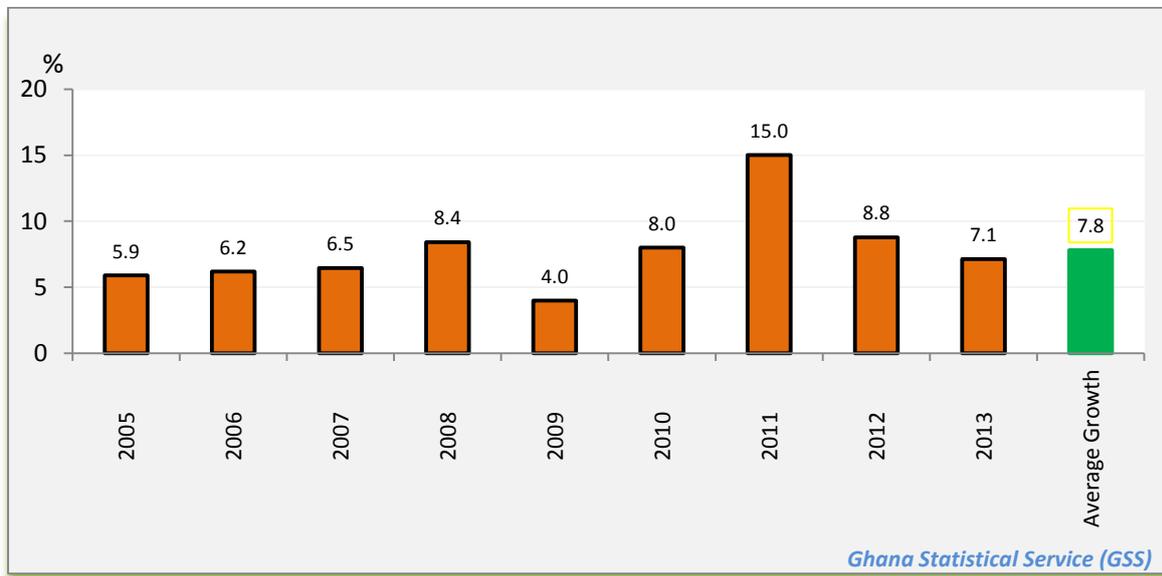


Figure 1.2 reflects the sectoral distribution of the GDP for the Agriculture, Manufacturing, Other industry (without manufacturing), and Services sectors. The graph shows that the recent growth has been significantly driven by the Services sector and other industry except Manufacturing (e.g., mineral exports, especially crude oil since 2011), Utilities and Construction while the contributions of the Agriculture and Manufacturing sectors have dwindled. The Manufacturing sector, whose share of output has greatly reduced since 2005, holds the key to sustained growth in the economy since it is the most versatile job creation sector.

Available data suggests that the GDP per capita in constant 2006 prices grew from 824.0 million Ghana Cedis in 2005 to 1,173.0 million Ghana Cedis in 2012 and further to 1,227.7 million Ghana Cedis in 2013. This puts the average annual growth rate of GDP per capita in constant 2006 prices at 5.2 percent for the period 2005-2012.

**Figure 1.2: Sectoral distribution of GDP (%), 2005-2013**

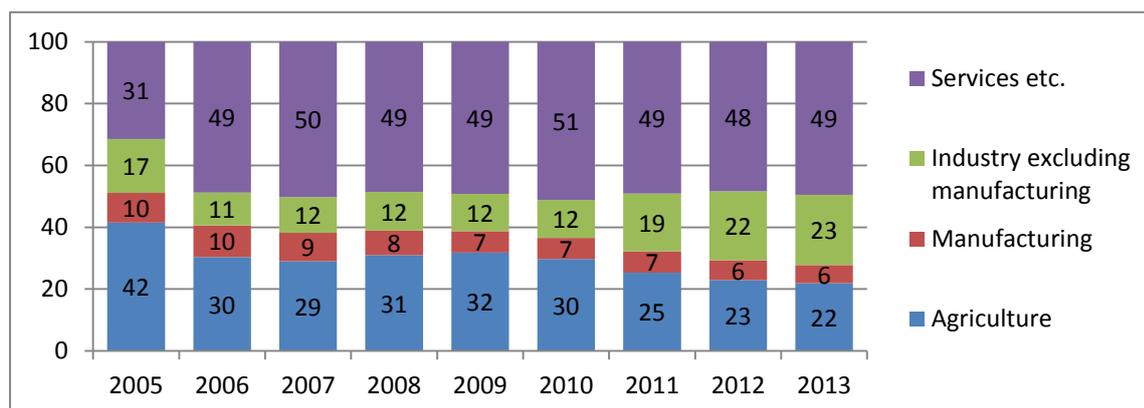
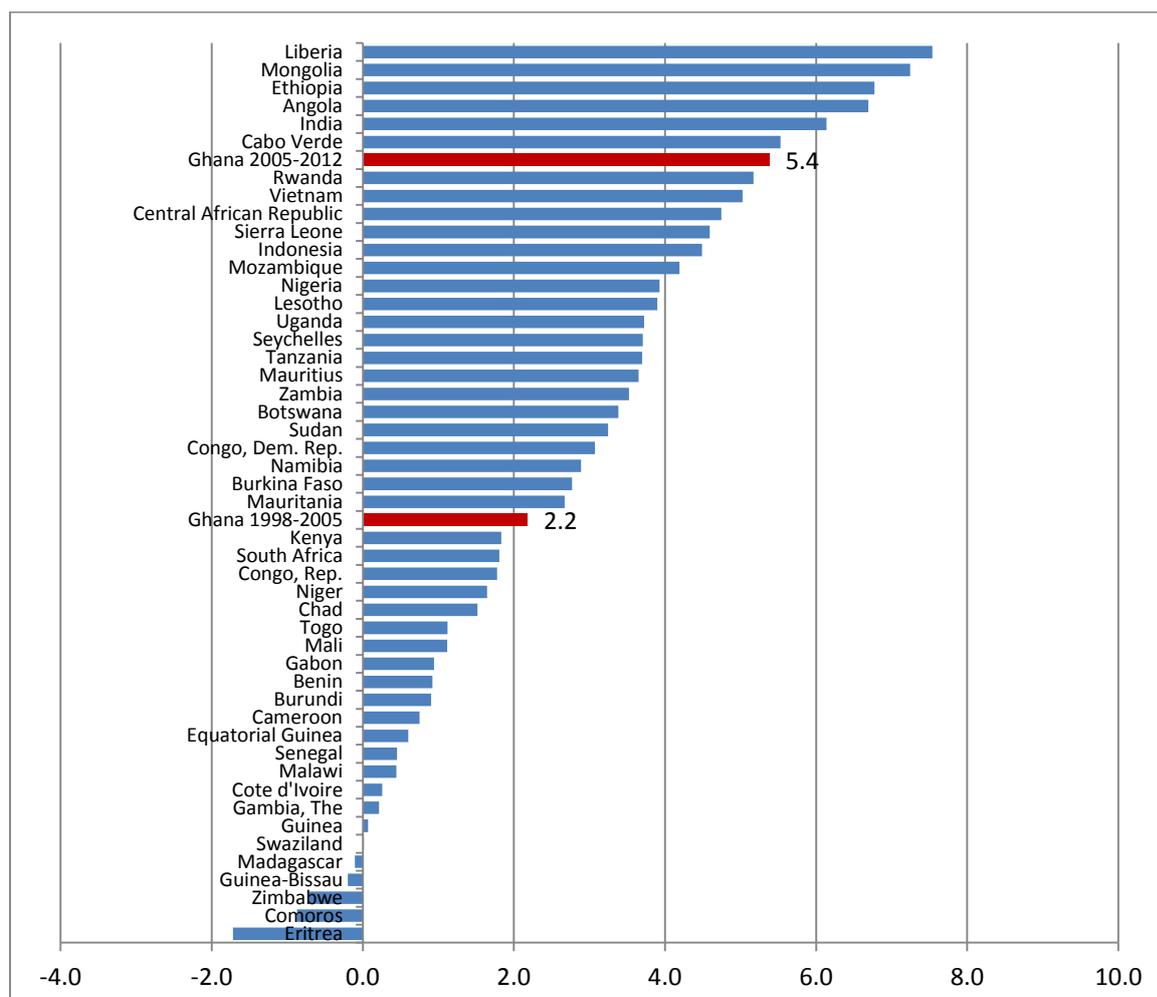


Figure 1.3 compares Ghana's average annual GDP per capita between 2005 and 2012 to 49 other countries (45 in Africa and 4 from Asia including Indonesia, Vietnam, India and Mongolia). The results indicate that Ghana's average per capita income growth of 5.2 percent was the seventh highest during the period.

**Figure 1.3: Average annual per capita growth (%) for selected countries in Africa and Asia, 2005-2012**

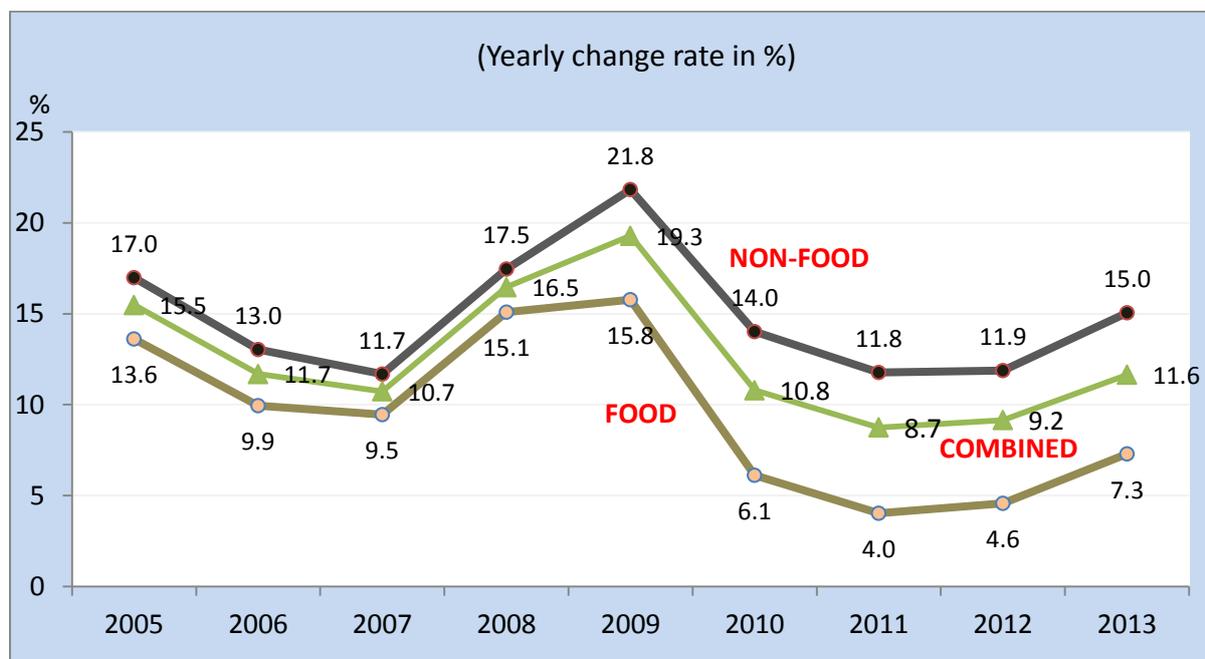


Source: World Development Indicators-World Bank, different editions

## 1.2 Trends in inflation (2005-2013)

The non-food inflation rate has mainly been responsible for the high inflation rate in Ghana. The average annual non-food inflation rate for the period 2005-2013 was 14.9 percent and has been consistently higher than the average annual food inflation rate of 9.5 percent (Figure 1.4).

**Figure 1.4: Combined, food and non-food inflation rates (%), 2005-2013**



Source: Ghana Statistical Service, 2005-2013

## 1.3 Balance of payments (2005-2013)

The composition of Ghana's trade is dominated by the export of primary commodities such as minerals (crude oil, diamond, gold, manganese, etc.) and cash crops such as cocoa, timber and cashew while imports are mainly manufactured, industrial and capital goods. However, in recent times, export of manufactured products (mainly plastic and food products) to neighbouring countries in West Africa has been on the rise. The major export destination countries include The Netherlands, Burkina Faso, South Africa and United Kingdom. Major imports, on the other hand, originate from China, United States, Belgium, United Kingdom and France.

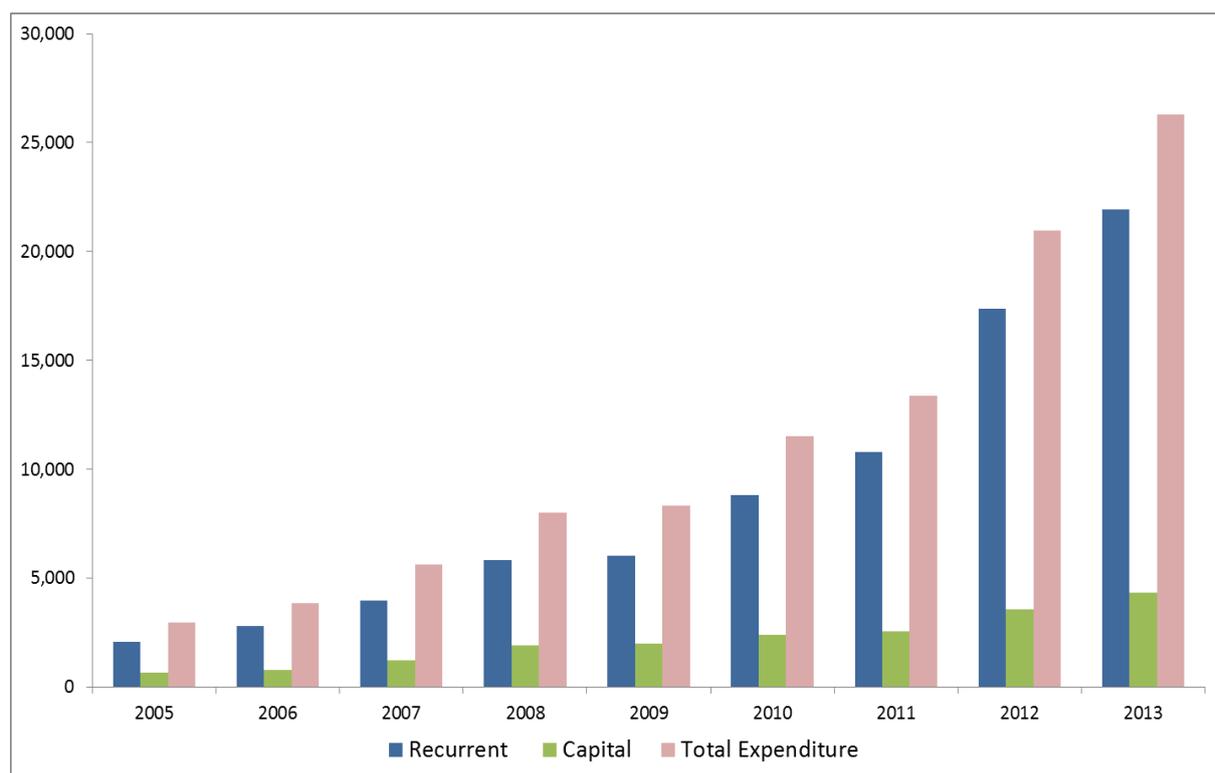
Historically, from 2005 to 2013, Ghana's Balance of Payments averaged a deficit of US\$0.08 billion; the highest deficit of US\$1.46 billion was recorded in 2010 while the lowest (US\$0.08) occurred in 2005.

From 2009, the current account deficit increased consistently and substantially to record US\$4.92 billion in 2012. The annual average Gross International Reserves (GIR) in months of imports was 3.06 between 2005 and 2013; the highest (3.5) was recorded in 2005 and the lowest (1.8) was in 2008.

## 1.4 Public expenditures (2005-2013)

Figure 1.5 shows that the size of government's expenditure in nominal terms, over the past eight years, increased from 2,970.62 million Ghana cedis in 2005 to 26,277.17 million Ghana cedis in 2013. The Figure further displays government's spending on recurrent and capital goods over time and illustrates the growing importance of recurrent expenditure vis-a-vis capital expenditure which can help sustain the current economic growth trajectory.

**Figure 1.5: Total, recurrent and capital Government budget expenditure (million Ghana Cedis)**



## 1.5 Social interventions

In the past two decades, several social intervention programmes, including the Livelihood Empowerment Against Poverty (LEAP), Capitation Grant, School Feeding Programme, free distribution of school uniforms, exercise books and textbooks, elimination of schools under trees, have been implemented with the aim of alleviating poverty among the vulnerable population in Ghana. Other projects aimed at improving health care delivery have also been implemented. These include the establishment of Community-based Health Planning Services (CHPS), national immunization against polio and indoor residual spraying against malaria carrying mosquitoes.

## 1.6 Summary

Since the last Ghana Living Standards Survey (GLSS5), the Ghanaian economy has continued to benefit from strong economic growth leading to the achievement of lower middle income status. However, it remains to be seen whether this growth has benefitted all sections of society, including the poorest.

## **CHAPTER TWO**

### **CONSUMPTION POVERTY, METHODOLOGY AND MEASUREMENT**

#### **2.1 Introduction**

A report on consumption poverty is specifically concerned with the population whose standard of living falls below a defined consumption basket, represented by a poverty line. In achieving this, two issues need to be addressed:

- The measurement of the standard of living; and
- The determination of a poverty line.

In this study, following common practice in many countries, a consumption-based standard of living measure is used. The poverty line is set at that level of the minimum consumption requirement.

#### **2.2 Data sources**

The main data source for this report is the sixth round of the Ghana Living Standards Survey (GLSS). The GLSS is a multi-purpose household survey which collects information on many different dimensions of living conditions, including education, health, employment and household expenditure on food and non-food items.

Six rounds of data have been collected starting in 1987/88 but in this report, we focus on the most recent rounds of GLSS, 2005/06 and 2012/13. The questionnaires used for all these rounds were almost identical, meaning that their results can be directly compared. By contrast, the first two rounds were based on different questionnaires, making comparison with the later rounds more difficult.

GLSS collects sufficient information to estimate total consumption of each household. This covers consumption of both food and non-food items (including housing). Food and non-food consumption commodities may be explicitly purchased by households, or acquired through other means (e.g., as output of own production activities, payment for work done in the form of commodities, or from transfers from other households). The household consumption measure takes into account all these sources in the different modules of the questionnaires (Appendix 8, Table A8.1).

#### **2.3 Construction of the standard of living measure**

In using measures of household consumption to compare living standards across geographical areas, it is necessary to take into account variations in the cost of living across regions, as well as differences in household size and composition (children & adults and males & females). The composition is taken to reflect the different calorie requirements.

As in the previous poverty profile report (GSS, 2007), the measure of the standard of living is based on household consumption expenditure, covering food and non-food items (including housing). The regional cost of living index is based on regional monthly food and non-food CPI weighted by region and urban-rural shares.

Table 2.1 shows the regional cost of living indices with regions compared to Greater Accra as the base. Accra, the capital city of Ghana, is located in the Greater Accra region. For food items, Greater Accra is more expensive than other regions; whereas non-food items are more expensive outside Accra except in the three Northern regions.

**Table 2.1: Regional cost of living indices**

Region	Price index	Food	Non-food
Western	1.0260	0.9977	1.0566
Central	0.9883	0.9596	1.0276
Greater Accra	1.0000	1.0000	1.0000
Volta	0.9998	0.9576	1.0591
Eastern	0.9757	0.9574	1.0052
Ashanti	0.9963	0.9161	1.0792
Brong Ahafo	0.9792	0.9534	1.0140
Northern	0.9799	0.9811	0.9920
Upper East	0.9366	0.9082	0.9952
Upper West	0.9591	0.9399	0.9919

Source: Computed from the Ghana Living Standards Survey, 2012/13 and monthly regional CPI

The overall cost of living index also allows for variation in prices *over time* within the survey period, based on the monthly regional Consumer Price Index. The use of regional specific CPIs allows us to take into account adjustment in relative spatial prices. In this way, each household's consumption expenditure is expressed in the constant prices of Greater Accra in January 2013.

The number of equivalent adults is calculated based on the composition of the household, using a calorie-based scale from the 10<sup>th</sup> Edition of the National Research Council's *Recommended Dietary Allowances* (Washington D.C.: National Academy Press, 1989). This scale has commonly been applied in nutritional studies in Ghana. The "Equivalent adults" measure recognizes, for example, that the consumption requirements of babies or young children are less than those of adults. The scale is based on age and gender specific calorie requirements, and is given in Table A8.2 (Appendix 8).

Each individual is represented as having the standard of living of the household to which they belong. It is not possible to allow for intra-household variations in living standards using the consumption measure, though some other indicators considered later do take account of intra-household variations.

## 2.4 Rebasing of the standard of living measurement

In this poverty profile report, the standard of living is measured per adult equivalent consumption, derived by dividing the total household consumption with the number of adult equivalents in the household. In order to measure standard of living consistently over time, the methodology of constructing household consumption must be consistent. However, periodic adjustments of consumption aggregates are needed to reflect the changes in the consumption pattern. Such an adjustment is needed between GLSS3-GLSS5 (1991-2005) and GLSS6 (2013) because new consumer goods have entered the consumption basket of Ghanaian households that were non-existent in previous surveys. Due to these changes in consumption patterns, we have made two adjustments to the household consumption construction based on GLSS6:

1. Inclusion of the user values of VCD/DVD/mp4 player/iPad, vacuum cleaner, rice cooker, toaster, electric kettle, water heater, tablet PC and mobile phone.<sup>1</sup>
2. Relaxed the cleaning procedure, replacing the values of expenditure items above 5 standard deviations with the mean for that locality (3 standard deviations was used in the previous surveys).

## 2.5 Rebasing the consumption basket and construction of the Poverty Line

Following the GLSS 5 methodology, the consumption expenditure for a minimum food basket providing 2,900 calories per adult equivalent per day was calculated. This is the extreme poverty line, which means that a household's total consumption expenditure is not even adequate to meet this minimum calorie requirement. An additional expenditure on non-food items was added to the extreme poverty line to produce the absolute poverty line (for methodology see Box1).

As consumption patterns change, it is necessary to update the minimum consumption basket deemed adequate to provide an acceptable living standard in the current Ghanaian society. For example, expenditure on mobile phones and other small electronic devices were rare in 2005, but have become more prevalent in today's society.

## 2.6 Summary

In summary, the standard of living for each individual is measured as the total consumption expenditure per equivalent adult, of the household to which he or she belongs, expressed in constant prices of Greater Accra in January 2013.

*Two nutritionally-based poverty lines are derived from this procedure:*

- ❖ *A lower poverty line of 792.05 Ghana cedis per adult per year: this focuses on what is needed to meet the nutritional requirements of household members. Individuals whose total expenditure falls below this line are considered to be in extreme poverty, since even if they allocated their entire budget to food, they would not be able to meet their minimum nutrition requirements (if they consume the average consumption basket). This line is 27.1 percent of the mean consumption level in 2012/13.*
- ❖ *An upper poverty line of 1314.00 Ghana cedis per adult per year: this incorporates both essential food and non-food consumption. Individuals consuming above this level can be considered able to purchase enough food to meet their nutritional requirements and their basic non-food needs. This line is 44.9 percent of the mean consumption level in 2012/13.*

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<sup>1</sup> User value is calculated as 20 percent of the selling value of consumer items.

## Box 1: Setting a poverty line for Ghana

Setting an absolute poverty line for a country is not a precise scientific exercise. Though an absolute poverty line can be defined as that value of consumption necessary to satisfy minimum subsistence needs, difficulties arise in specifying these minimum subsistence needs as well as the most appropriate way of attaining them. In the case of food consumption, nutritional requirements can be used as a guide. In practice, this is often restricted to calorie requirements, but even then, there are difficult issues about which food basket to choose and the expenditure required for the minimum non-food consumption basket.

In practice, the minimum expenditure to meet adequate calorie requirements is generally used as the basis for an estimated poverty line (referred to as the extreme poverty line), based on the information about quantities of foods consumed by households and the calorie contents of these foods.

Following the GLSS6, it has become necessary to recalculate new poverty lines as a result of changes in the consumption basket of the Ghanaian population. Items such as DVD/VCD, MP3/MP4 players, vacuum cleaner, rice cooker, mobile phone, tablet PCs, etc., have been included in the new basket.

In line with international practice, we calculate the average expenditure of the food consumption basket for the bottom 50 percent of individuals ranked by the standard of living measure, and derive the amount of calories in this basket. The calorie price is then calculated by dividing the adult equivalent expenditure of the food basket by the amount of adult equivalent calories provided by the basket. This calorie price is representative of the price paid by a typical household in the bottom 50 percent. This price is then multiplied by 2900 calories which was used to calculate the poverty lines for the 2012/13 survey.

Following common practice in other developing countries, expenditure on non-food consumption is added to the extreme poverty line calculated above. This non-food basket is determined by those whose total food expenditure is about the level of the extreme poverty line (10 percent individuals below and above the line). This is based on Engel's law which states that the share of food expenditure decreases as household income/expenditure increases. By selecting the population whose food consumption is around the extreme poverty line, their non-food expenditure is used as the benchmark for estimating the absolute poverty line.

The methodology used produced an extreme poverty line of 792.05 Ghana cedis and an absolute poverty line of 1,314.00 Ghana cedis per equivalent adult per year in the January 2013 prices of Greater Accra Region. In dollar terms, the absolute poverty line is equivalent to about \$1.83 per day (\$1.10 for the extreme poverty line). The absolute poverty line indicates the minimum living standard in Ghana while the extreme poverty line indicates that even if a household spends their entire budget on food, they still would not meet the minimum calorie requirement.

## **CHAPTER THREE**

### **PROFILE OF CONSUMPTION POVERTY**

#### **3.1 Introduction**

Overtime, Ghana's poverty analysis has focused on consumption poverty which has classified the poor as those who lack command over basic consumption needs, including food and non-food components. In estimating who is poor and who is non-poor, the expenditure of a minimum consumption basket required by an individual to fulfill his or her basic food and non-food needs was calculated. This expenditure is referred to as the poverty line or absolute poverty line. In addition to the poverty line, an extreme poverty line is also commonly estimated. This line indicates the expenditure required for a minimum *food* consumption basket that can provide adequate calories to a household. A household living below the extreme poverty line cannot afford this adequate calorie requirement even if it were to spend all its budget on food.

In the literature, applying these poverty lines to the distribution of the standard of living measure usually results in estimating several poverty indicators when measuring poverty. This report focuses on analysing Ghana's poverty profile using the most recent surveys.

#### **3.2 Poverty incidence and poverty gap**

The focus of this section is the analysis of two poverty indicators, poverty incidence ( $P_0$ ) and poverty gap index ( $P_1$ ), which were estimated by applying the two above-mentioned poverty lines to the distribution of the standard of living measure.

*In theory, these two indicators are defined as:*

- 1. The headcount index ( $P_0$ ), also called the poverty incidence. This measures the proportion of the population that is poor. It is popular because it is easy to understand and measure but it does not indicate how poor the poor are.*
- 2. The poverty gap index ( $P_1$ ) measures the intensity of poverty in a country, which is the average ratio of the gap to which individuals fall below the poverty line (for non-poor the gap is counted as zero). The sum of these poverty measures gives the minimum cost of eliminating poverty, if transfers were perfectly targeted. The measure does not reflect changes in inequality among the poor, but adds up the extent to which individuals on average fall below the poverty line, and expresses it as a percentage of the poverty line.*

The objective of this section is to examine the poverty situation in 2012/13 in particular and inequality in the welfare distribution since the last poverty estimates were produced (2005/06) in a bid to examine the patterns of poverty over the 7-year period. These patterns are considered across geographical location, administrative regions and various socioeconomic groups.

Considering the upper poverty line of GH¢1,314, the proportion of the population defined as poor is 24.2 percent in 2012/2013, with a poverty gap index of 7.8 percent (in other words, the mean income of the poor falls below the poverty line by 7.8%). These percentages indicate that about 6.4 million people in Ghana are poor.

Based on the new poverty line for 2012/13, the welfare levels for 2005/06 were adjusted with a deflator of 3.3 for non-food and 2.9 for food; these were estimated over the 7-year period using the consumer price index for the period under consideration. The revised welfare levels for 2005/06 indicate that overall poverty incidence for 2005/06 was 31.9 percent with a poverty gap of 11.0 percent. That is, if Ghanaians were consuming the current basket of items in 2005/06, poverty levels for Ghana for 2005/06 would have been 31.9 percent (Appendix 5).

The results from the GLSS5 and GLSS6 surveys indicate that given a poverty line of GH¢1,314, poverty reduced by 7.7 percentage points over the seven-year period (2005/2006 to 2012/13). Similarly, the 2005/06 report on poverty trends in Ghana indicates that in 1991/92, the poverty rate was 51.7 percent. Given that the rate for 1991/92 is not any different from the rate in 1990, then unless the unexpected happens in the next two years in the Ghanaian economy which may result in a slippage, the MDG 1 target, which seeks to halve poverty by 2015 from the rate in 1991/92 (51.7%) will inevitably be met by 2015, since the current (2013) poverty rate is even slightly less than half the rate recorded in 1991/92 (Table 3.1, Figure 3.1 and Table A1.1).

The contribution to poverty incidence varied across various demographic groupings. In 2012/13, the rural population comprised 50 percent of the population of Ghana, yet it accounts for 78 percent of those in poverty. This is in line with previous poverty profile reports (GSS 1998/99 and 2005/06) where above 80 percent of the total population living below the poverty line in Ghana were living in the rural areas (Table 3.1 and Table A1.1).

Among rural localities where poverty is prominent, the poverty incidence is much higher among those living in rural savannah. In the 12 month period 2012/13, the contribution to poverty incidence in rural savannah is found to be higher than in rural coastal and forest combined. Notably, rural savannah contributes more than 40 percent to the overall poverty in Ghana. This phenomenon confirms previous poverty reports which indicate that the poverty decline in Ghana (from 1998/99 to 2005/06) has not been evenly distributed geographically (Table 3.1 and Table A1.1).

Greater Accra (GAMA) which includes the capital of Ghana recorded the lowest poverty incidence of 3.5 percent among all the geographical areas. The 2010 Population and Housing Census results indicate that of all the measurements of migration effectiveness, Greater Accra Region had a net gain of 66.4 percent of internal migrants. Most of these internal migrants are likely to have come to Accra to seek greener pastures, but they virtually end up as self-employed in non-agricultural activities, such as the service sectors to engage in petty trading.

Juxtaposing the above with results from Figure 4.1 (Chapter 4) which reports on poverty incidence by employment status of household head, it is observed that a large proportion of individuals engaging in service sector activities are above the poverty line. One can therefore infer that households engaged in the service sector contributed to the low rate of poverty reported in Greater Accra. Indeed, the increasing number of microfinance institutions providing loans for activities in this sector may have contributed to this improvement in welfare, with Accra being the greatest beneficiary. According to the quarterly report of the Bank of Ghana, the provisional list shows that by March 2013, 61 percent of the nationwide microfinance institutions were located in Accra. This is an indication that the capital base of the self-employed without employees are improved over time, and given that the location of the establishment of the microfinance institutions are demand driven, many MSMEs would have access to credit facilities which may eventually improve the welfare of people living in Accra.

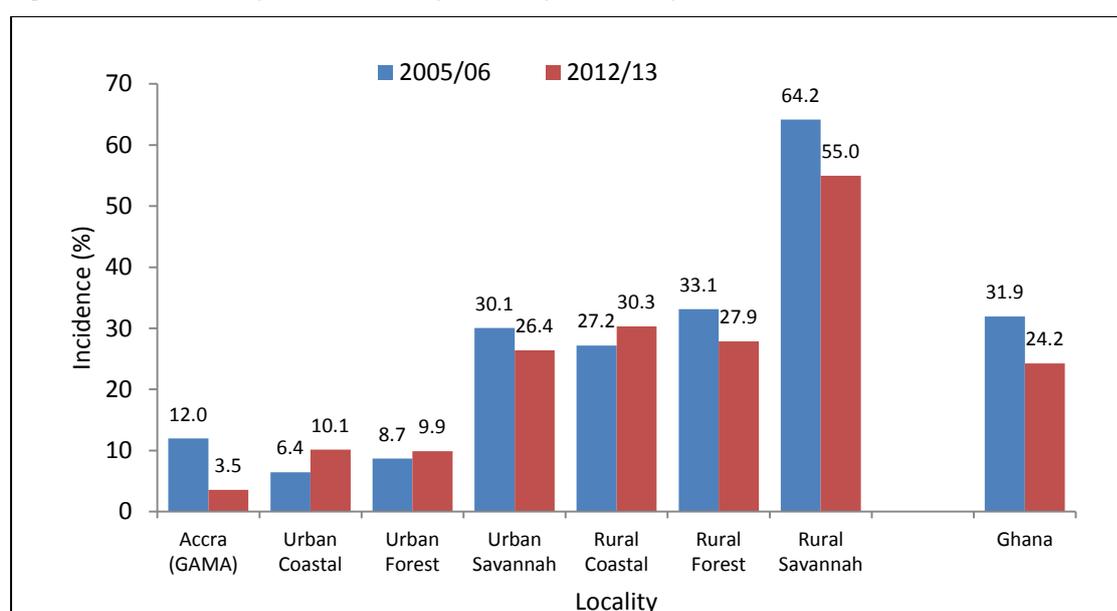
The information considered so far only relate to the numbers classified as poor, without considering the extent of poverty. The poverty depth, the proportion by which the average consumption level of poor households in Ghana falls below the poverty line, gives some indication of just how intense poverty has been in Ghana. This ratio (dividing poverty gap by poverty incidence) indicates that on average the poor population in Ghana lived 32 percent below the poverty line of GH¢1,314. Again, relative to the poverty line, the rural population accounts for more than eighty percent of the poverty gap. (Table 3.1, Figure 3.1, and Table A1.1).

Apart from the coastal and urban forest areas, where poverty increased, all other localities experienced an improvement in their poverty status. The worsening of poverty in the coastal belt is worrying and it will be important to further analyse the data to identify the determinants and to inform future policies and programmes.

**Table 3.1: Poverty incidence and Poverty gap by locality (%), 2005/06 - 2012/13 (Poverty line=GH¢1,314)**

Locality	Poverty incidence (P <sub>0</sub> )	Contri- bution to total poverty (C <sub>0</sub> )	Poverty gap (P <sub>1</sub> )	Contri- bution to total poverty gap (C <sub>1</sub> )	Poverty incidence (P <sub>0</sub> )	Contri- bution to total poverty (C <sub>0</sub> )	Poverty gap (P <sub>1</sub> )	Contri- bution to total poverty gap (C <sub>1</sub> )	
<b>2012/13</b>					<b>2005/06</b>				
Accra (GAMA)	3.5	2.2	0.9	1.8	12.0	4.4	3.4	3.7	
Urban Coastal	9.9	2.1	2.3	1.5	6.4	1.2	1.3	0.7	
Urban Forest	10.1	9.0	2.1	5.8	8.7	4.0	2.2	3.0	
Urban Savannah	26.4	8.6	6.6	6.8	30.1	5.1	10.7	5.3	
Rural Coastal	30.3	6.9	8.7	6.3	27.2	9.3	6.7	6.7	
Rural Forest	27.9	30.1	7.9	26.7	33.1	29.1	8.4	21.4	
Rural Savannah	55.0	40.8	22.0	51.1	64.2	46.9	28.0	59.4	
Urban	10.6	22.0	2.5	15.9	12.4	39.0	3.7	33.3	
Rural	37.9	78.0	13.1	84.1	43.7	136.9	15.4	140.3	
All Ghana	24.2	100.0	7.8	100.0	31.9	100.0	11.0	100.0	

**Figure 3.1: Poverty incidence by locality (Poverty line= GH ¢1,314)**



### **3.3 Extreme Poverty in Ghana**

Extreme poverty is defined as those whose standard of living is insufficient to meet their basic nutritional requirements even if they devoted their entire consumption budget to food. Table 3.2 illustrates the incidence of extreme poverty for the country as a whole and for the seven geographic localities. Given the extreme poverty line of GH¢792.05 per adult equivalent per year, an estimated 8.4 percent of Ghanaians are considered to be extremely poor. This rate indicates that fewer Ghanaians are extremely poor compared to 2005/06. Revising the extreme poverty line based on the current basket of food consumed by Ghanaians, the incidence of extreme poverty reduced by 8.1 percentage points from the 2005/06 revised extreme poverty incidence of 16.5 percent.

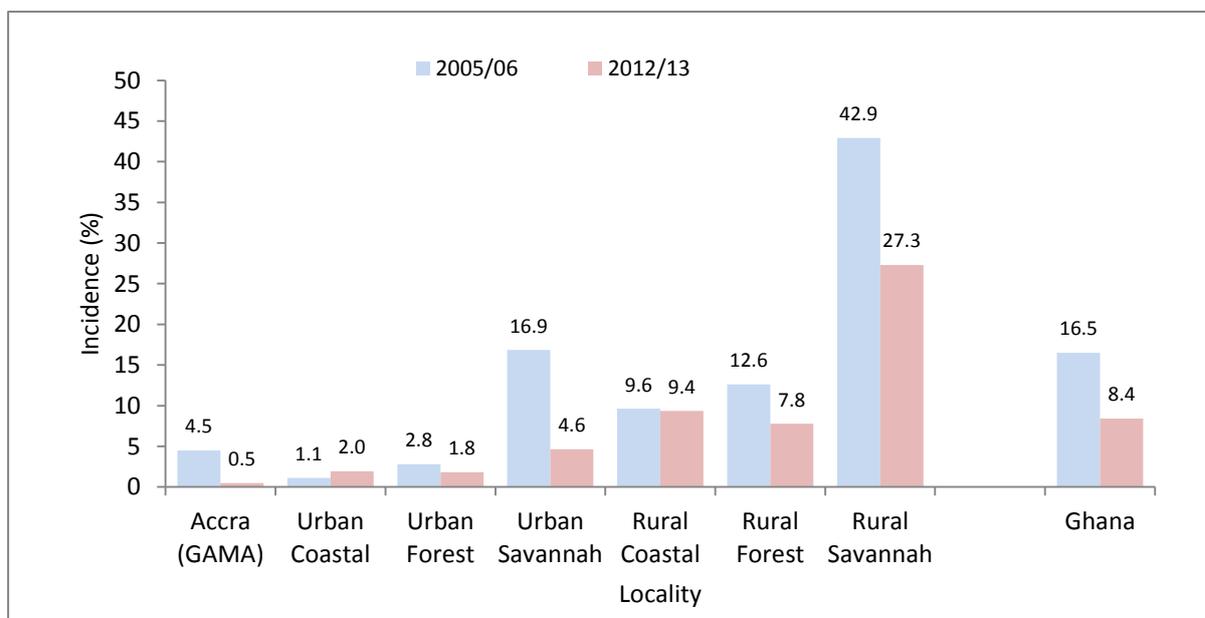
More than 2.2 million Ghanaians (based on 2010 PHC projections) cannot afford to feed themselves with 2,900 calories per adult equivalent of food per day, even if they were to spend all their expenditures on food. Although the absolute number living in extreme poverty has reduced over time, it is still quite high given the fact that Ghana is considered to be a lower middle income country.

The sharp geographic variations that characterize absolute poverty are found to be more pronounced with extreme poverty, with the incidence of extreme poverty being highest in rural Savannah. Extreme poverty is also a rural phenomenon, with as many as over 1.8 million persons living in extreme poverty in rural areas (2010 PHC projections). Extreme poverty is particularly high in rural Savannah at 27.3 percent and this locality accounts for nearly three-fifths of those living in extreme poverty in Ghana. The incidence of extreme poverty is virtually non-existence in urban localities, with Accra (GAMA) contributing only 0.9 percent to the incidence of extreme poverty. Urban localities contribute 11.2 percent to the national incidence of extreme poverty (Table 3.2 and A1.2).

**Table 3.2: Extreme Poverty Incidence and Poverty Gap by locality (%), 2005/06-2012/13 (Poverty line=GH¢792.05)**

Locality	Poverty incidence (P <sub>0</sub> )	Contribution to total poverty (C <sub>0</sub> )	Poverty gap (P <sub>1</sub> )	Contribution to total poverty gap (C <sub>1</sub> )	Poverty incidence (P <sub>0</sub> )	Contribution to total poverty (C <sub>0</sub> )	Poverty gap (P <sub>1</sub> )	Contribution to total poverty gap (C <sub>1</sub> )	
<b>2012/13</b>					<b>2005/06</b>				
Accra (GAMA)	0.5	0.9	0.1	0.5	4.5	3.2	1.1	2.5	
Urban Coastal	2.0	1.2	0.4	0.9	1.1	0.4	0.1	0.1	
Urban Forest	1.8	4.8	0.2	2.1	2.8	2.5	0.8	2.3	
Urban Savannah	4.6	4.4	1.0	3.3	16.9	5.5	5.1	5.5	
Rural Coastal	9.4	6.2	1.8	4.5	9.6	6.4	1.6	3.4	
Rural Forest	7.8	24.2	1.8	20.1	12.6	21.4	2.1	11.9	
Rural Savannah	27.3	58.3	8.7	68.5	42.9	60.6	16.0	74.3	
Urban	1.9	11.2	0.3	6.9	5.1	11.6	1.4	10.4	
Rural	15.0	88.8	4.3	93.1	23.4	88.4	7.2	89.6	
All Ghana	8.4	100.0	2.3	100.0	16.5	100.0	5.0	100.0	

**Figure 3.2: Extreme poverty incidence by locality (Poverty line=GH¢ 792.05)**



### 3.4 Poverty in Administrative Regions

Amongst the ten administrative regions, the incidence of poverty and poverty gap are not evenly distributed. Greater Accra has a very low level (5.6%) of poverty incidence, which is 18.6 percentage points lower than the national rate of poverty. The same cannot be said of the three northern regions, which comprise mainly savannah areas. More than four in every ten persons are poor in Upper East (44.4%), increasing to one in every two in the Northern region (50.4%) and seven out of every ten in Upper West (70.7%). The puzzle here is that, even among the three northern regions of Ghana, there are very wide differences between their rates of poverty incidence, irrespective of the closeness of the regions and whether the regions concerned share boundaries (Table 3.3 and A1.1).

However, even though poverty in the Upper West region is highest amongst the ten regions, the region contributes less than ten percent to the national poverty due to the fact that it is the smallest region in Ghana in terms of population. Indeed, of the 6.4 million persons who are deemed poor in Ghana, only half a million are from the Upper West region, whilst the Northern region with a poverty incidence of 50.4 percent accounts for one-fifth (20.8%) or 1.3 million of the poor in Ghana, making this region the highest single contributor to the level of poverty in Ghana. This pattern does not seem any different from 2005/06, since the northern region again was the highest contributor to national poverty (Table 3.3 and A1.1).

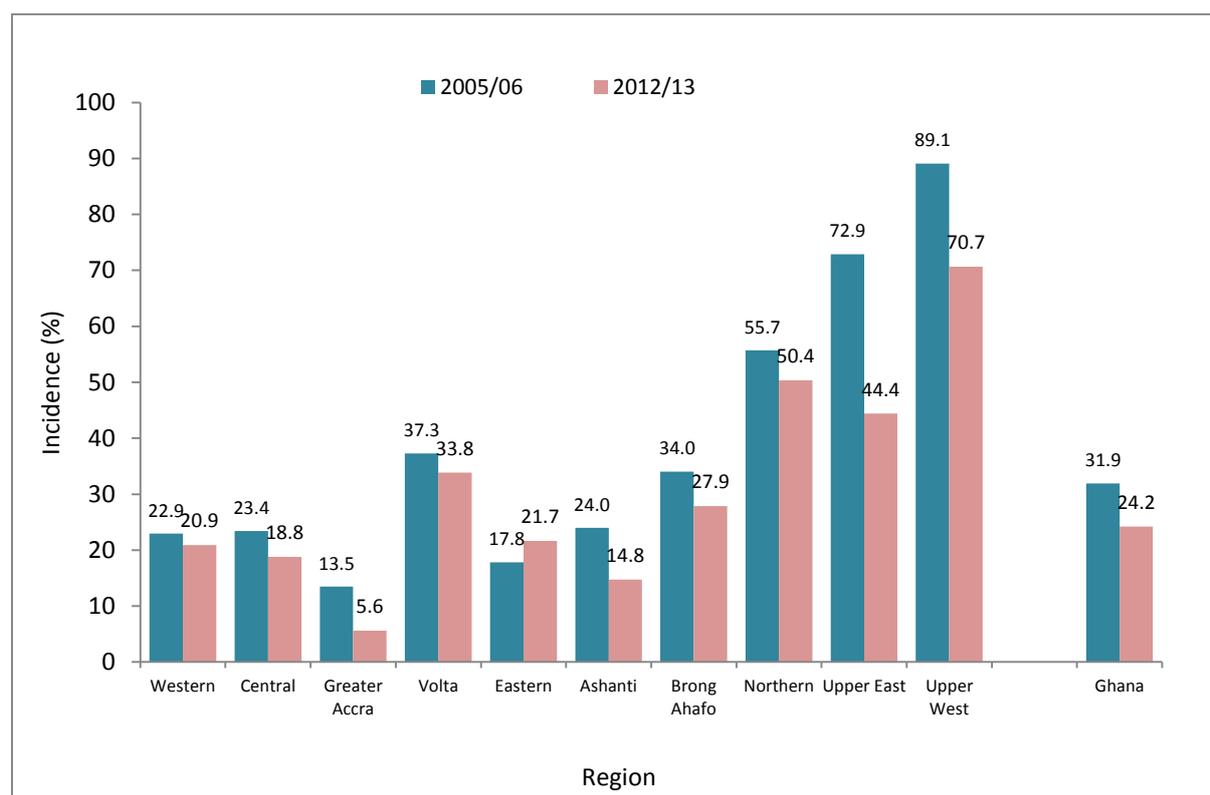
In terms of extreme poverty incidence, apart from the three northern regions, whose rates are higher than the national rate of extreme poverty, all the other regions in the coastal and forest areas have rates lower than the national average. Upper West region has the highest extreme poverty incidence of 45.1 percent, followed by Northern (22.8%) and Upper East (21.3%) (Table 3.4 and A1.2).

In terms of contribution to extreme poverty, the Northern region accounts for slightly over a quarter of the extreme poor in Ghana, far more than any other region. The three northern regions combined account for more than half of those living in extreme poverty (52.7%). The pattern is very similar to the findings in 2005/06, although the three northern regions account for slightly less of the extreme poor in 2012/13 than in 2005/06 (Table 3.4 and A1.2).

**Table 3.3: Poverty incidence and poverty gap by region (%), 2005/06 -2012/13**  
(Poverty line=GH¢1,314)

Region	Poverty incidence (P <sub>0</sub> )	Contri- bution to total poverty (C <sub>0</sub> )	Poverty gap (P <sub>1</sub> )	Contri- bution to total poverty gap (C <sub>1</sub> )	Poverty incidence (P <sub>0</sub> )	Contri- bution to total poverty (C <sub>0</sub> )	Poverty gap (P <sub>1</sub> )	Contri- bution to total poverty gap
<b>2012/13</b>					<b>2005/06</b>			
Western	20.9	7.9	5.7	6.8	22.9	7.3	5.4	5.0
Central	18.8	6.9	5.6	6.4	23.4	6.4	5.6	4.4
Greater Accra	5.6	3.8	1.6	3.5	13.5	5.9	3.7	4.7
Volta	33.8	12.1	9.8	11.0	37.3	8.7	9.2	6.2
Eastern	21.7	9.3	5.8	7.8	17.8	7.5	4.2	5.2
Ashanti	14.8	12.0	3.5	9.0	24.0	12.6	6.4	9.8
Brong Ahafo	27.9	11.4	7.4	9.4	34.0	9.8	9.5	7.9
Northern	50.4	20.8	19.3	24.9	55.7	21.0	23.0	25.2
Upper East	44.4	7.4	17.2	9.0	72.9	10.9	35.3	15.3
Upper West	70.7	8.4	33.2	12.3	89.1	10.0	50.7	16.4
All Ghana	24.2	100.0	7.8	100.0	31.9	100.0	11.0	100.0

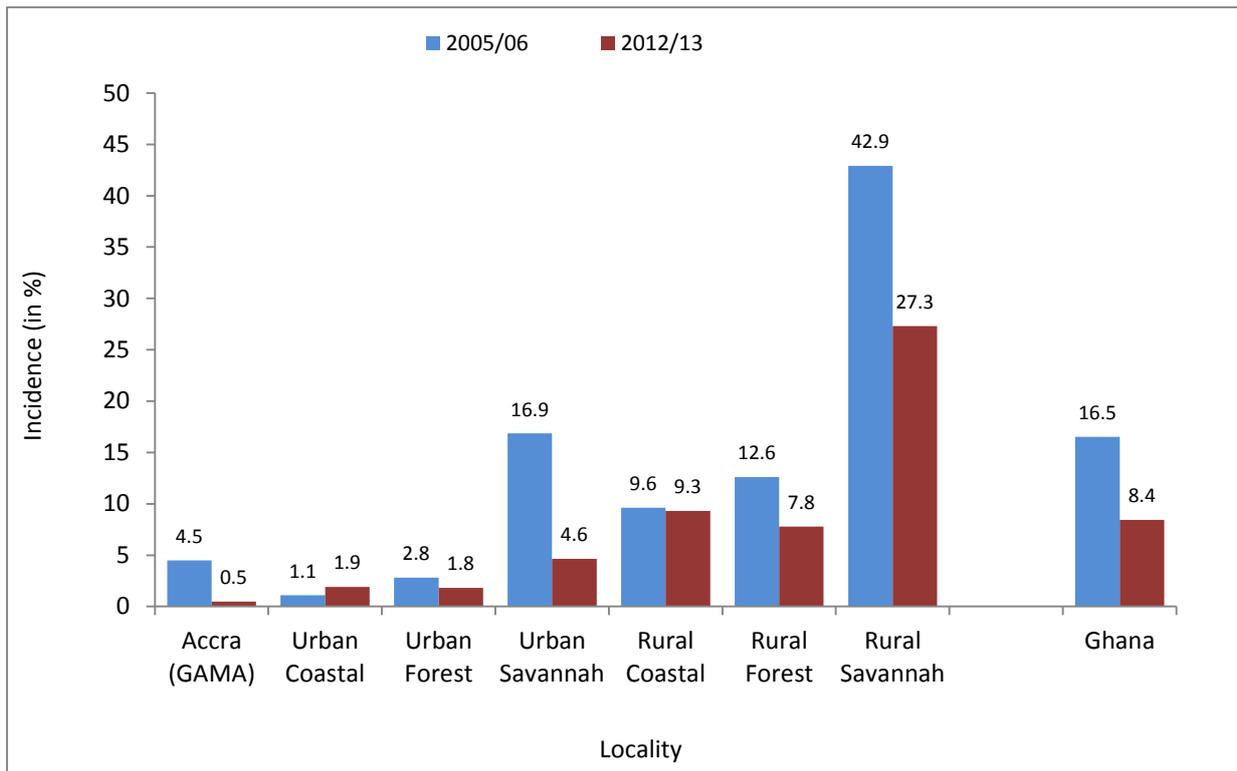
**Figure 3.3: Poverty incidence by region (Poverty line=GH¢1,314)**



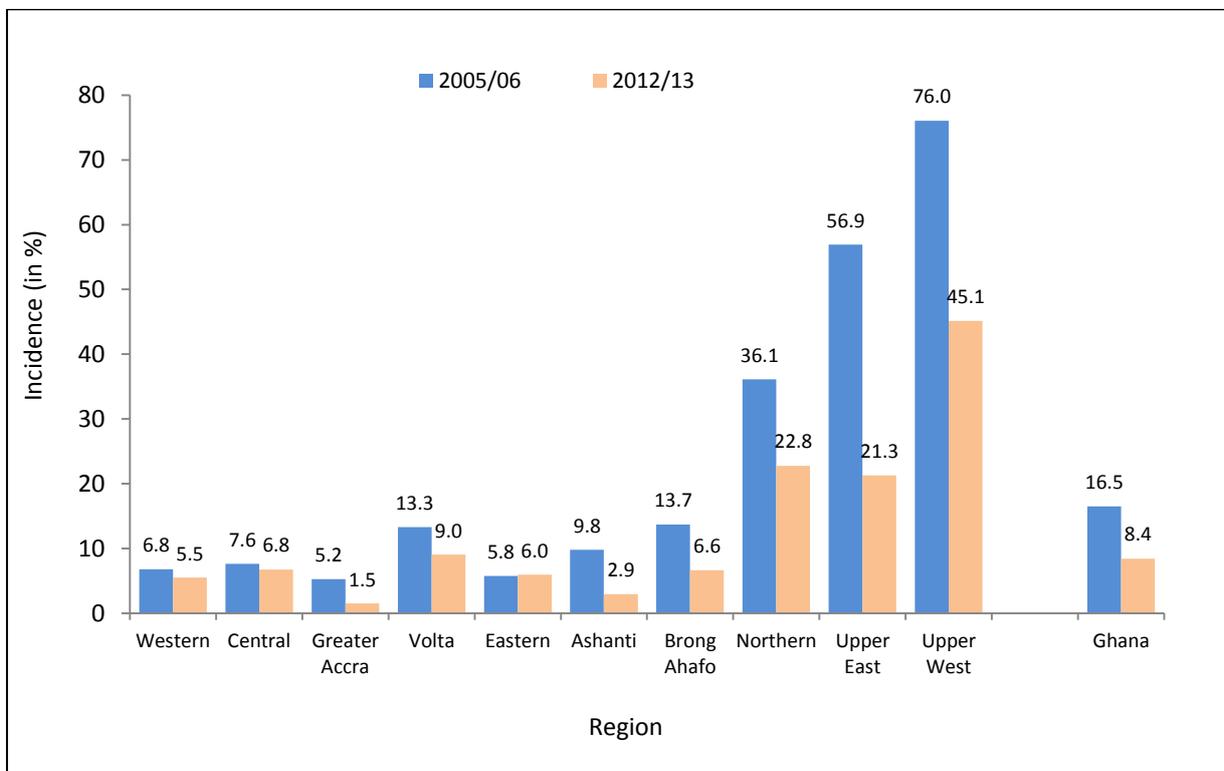
**Table 3.4: Extreme Poverty incidence and poverty gap by region (%), 2005/06 - 2012/13 (Poverty line= GH¢792.05)**

Region	Poverty incidence (P <sub>0</sub> )	Contribution to total poverty	Poverty gap (P <sub>1</sub> )	Contribution to total poverty	Poverty incidence (P <sub>0</sub> )	Contribution to total poverty	Poverty gap (P <sub>1</sub> )	Contribution to total poverty
<b>2012/13</b>				<b>2005/06</b>				
Western	5.5	6.0	1.3	5.1	6.8	4.2	1.3	2.7
Central	6.8	7.1	1.5	5.9	7.6	4.0	1.1	1.9
Greater Accra	1.5	2.9	0.3	2.1	5.2	4.4	1.1	2.9
Volta	9.0	9.3	1.9	7.2	13.3	6.0	2.2	3.3
Eastern	6.0	7.3	1.3	5.8	5.8	4.7	1.2	3.3
Ashanti	2.9	6.9	0.5	4.5	9.8	9.9	1.8	6.2
Brong Ahafo	6.6	7.8	1.5	6.5	13.7	7.6	2.9	5.3
Northern	22.8	27.0	7.2	31.5	36.1	26.3	12.1	29.1
Upper East	21.3	10.3	6.9	12.3	56.9	16.4	21.3	20.2
Upper West	45.1	15.4	15.3	19.3	76.0	16.4	35.4	25.1
All Ghana	8.4	100.0	2.3	100.0	16.5	100.0	5.0	100.0

**Figure 3.4: Extreme poverty incidence by locality (Poverty line=GH¢792.05)**



**Figure 3.5: Extreme poverty incidence by region (Poverty line=GH¢792.05)**



### **3.5 Summary**

About a quarter of Ghanaians are poor whilst under a tenth of the population are in extreme poverty. Although the level of extreme poverty is relatively low, it is concentrated in Rural Savannah, with more than a quarter of the people being extremely poor. Overall, the dynamics of poverty in Ghana over the 7-year period indicate that poverty is still very much a rural phenomenon, thus reducing rural poverty is a panacea to Ghana's poverty, if poverty reduction is to achieve the desired levels for Ghana as a middle income country.

There is a lot of variability in poverty incidence by region. Whilst half of the ten regions (Greater Accra, Western, Central, Eastern, and Ashanti) had their rates of poverty incidence lower than the national average of 24.2 percent, the remaining half had rates higher than the national average; Greater Accra is the least poor region and the Upper West the poorest overall. Though most regions show a reduction in poverty incidence since 2005/06, the pattern of poverty by region has not changed.

## CHAPTER FOUR

### COVARIATE ANALYSIS

#### 4.1 Decomposition of Poverty

For a given poverty line, changes in a poverty index can be expressed in terms of: (a) the observed change in the mean value of the standard of living measure, assuming that inequality had remained unchanged (“growth” effect); (b) the observed change in inequality, assuming that the mean value had remained unchanged (redistribution effect).

It is good to have a nation experience increases in output and therefore higher economic growth, but whether a lot of people participated in the growth process is indeed as critical as the growth itself. Growth in the average standard of living will reduce poverty, all things being equal, but where it is accompanied by an increase in inequality, the reduction in poverty will not be as pronounced. The effectiveness of growth in poverty reduction is increased where that growth is pro-poor, in other words, when it is accompanied by falling inequality. To what extent do changes in poverty in Ghana reflect changes in the average living standard, and what role have changes in inequality played? The answer to these questions can be obtained when the changes in the poverty rates are decomposed into growth and inequality effect.

To establish the source of poverty reduction, this report decomposed the poverty reduction at the national level as well as in urban/rural areas. At the national level, the 7.7 percentage point reduction in poverty incidence was found to be due to the growth effect. Indeed, but for the worsening inequality, poverty would have decreased by 8.8 percentage points, since inequality contributed to worsening poverty by 1.1 percentage points. The same argument holds for both rural and urban localities. The case is even worse for the rural localities where poverty was highest. Poverty among the rural localities would have reduced by 8.8 percentage points instead of the current 5.8 percentage points in the 7-year period if inequality did not worsen over the period.

**Table 4.1: Decomposition of change in poverty headcount by urban/rural residence (%), 2005 - 2013**

Place of residence	Total change	Share of change due to:	
		Growth	Redistribution
National	-7.7	-8.8	1.1
Urban	-1.9	-2.4	0.5
Rural	-5.8	-8.8	3.0

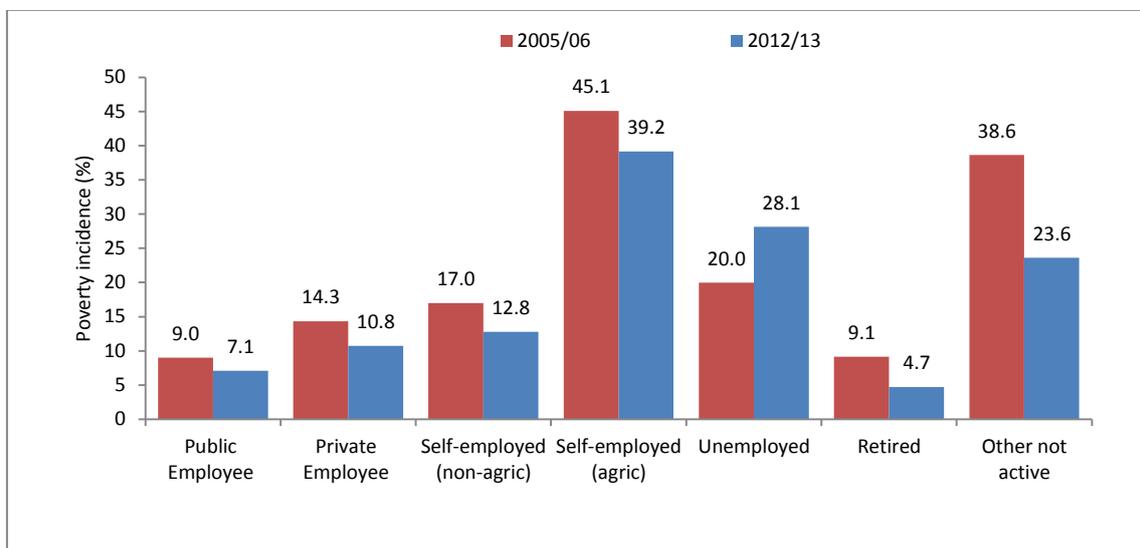
#### 4.2 Poverty by economic activity and gender of household head

In addition to the geographic pattern of poverty incidence and gap discussed earlier, it is also important to relate poverty rates to the economic activities in which households are engaged. Figure 4.1 presents the incidence of poverty by the main economic activity of the household head. The poverty incidence is highest among households where the head is engaged as self-employed in the agricultural sector. Households whose heads are paid employees, self-employed in the non-agricultural sector or retired are less likely to be poor. Even though farmers experienced some reduction in poverty over the 7-year period, they are still the

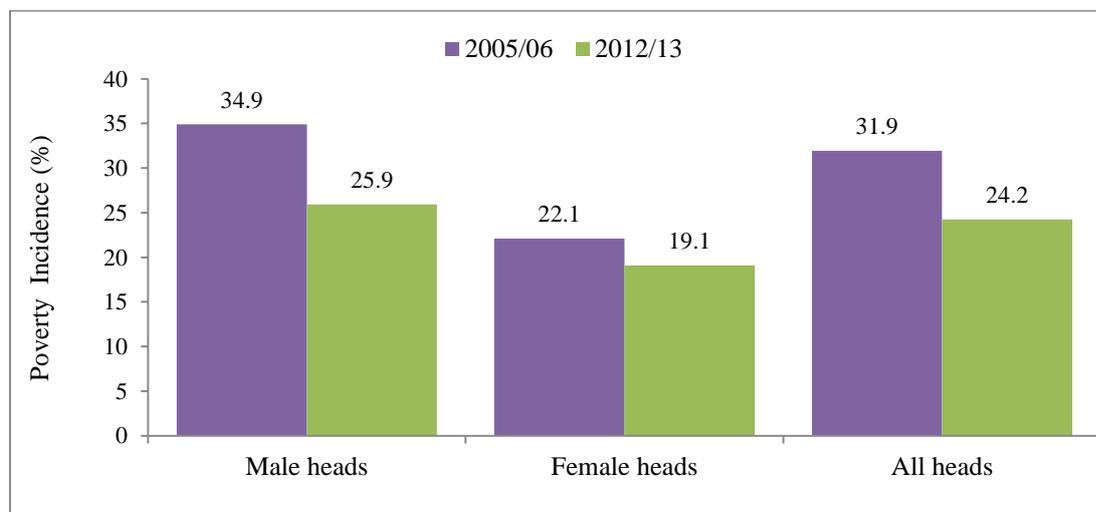
poorest. On the other hand, lower than national average poverty rates were recorded among households whose heads are engaged as self-employed in the non-agricultural sector (12.8%), private sector employees (10.8%), and public sector employees (7.1%). However, apart from the unemployed where poverty worsened, all other categories experienced an improvement since 2005/06, with a drastic reduction of about 15 percentage points among the economically not active persons.

In terms of sex of household heads, poverty incidence among male headed households is higher (25.9%) than female headed households (19.1%). This follows the same pattern found in 2005/06. Although both sexes have seen a decline in poverty, the rate is three times greater for male headed households (9 percentage points compared with 3 percentage points for female headed households).

**Figure 4.1: Poverty Incidence by employment status of household, 2005/05-2012/13 (Poverty line=GH¢1,314)**



**Figure 4.2: Poverty incidence by sex of household heads, 2005/06-2012/13 (Poverty line=GH¢1,314)**

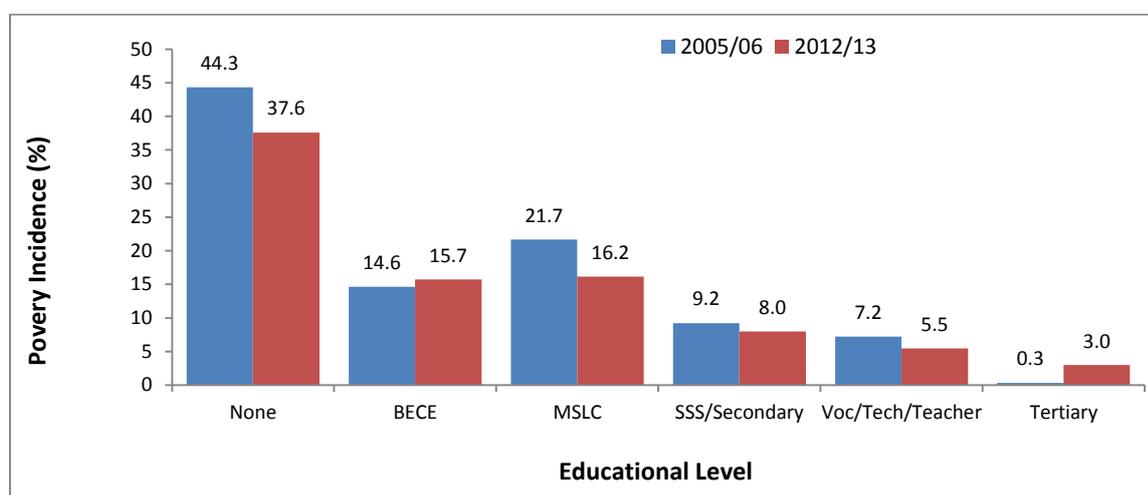


### 4.3 Poverty and educational level of household head

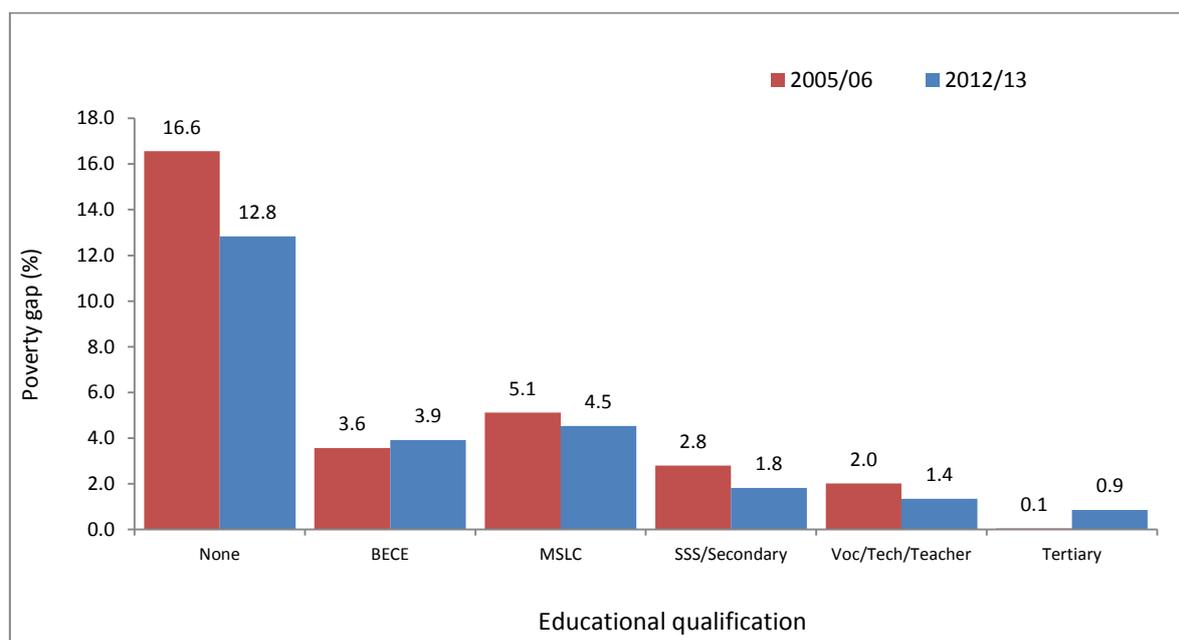
The distribution of poverty incidence and poverty gap vary by the level of education of the household head. Poverty is higher among households whose heads are uneducated than among those with some education. Figure 4.3 shows a clear trend that suggests that the level of poverty reduces as the educational level of the household head increases. More than a third of household heads with no education are poor compared with 15.7 percent of those with a BECE and 8 percent of those with a secondary education. Only three percent of heads with a tertiary education are poor.

The contribution to national poverty incidence by households headed by an uneducated person is 72.4 percent, whilst the highly educated accounts for less than one percent. The results suggest that a strong negative relationship exists between poverty and educational level, such that the more educated the household head is the less likely they are to be poor (Table A1.6).

**Figure 4.3: Poverty incidence by education level of household’s head (Poverty line=GH¢1,314)**



**Figure 4.4: Poverty gap by household head’s education level, (Poverty line= GH¢1,314)**



#### 4.4 Welfare distribution (Inequality analysis) in Ghana

The lower middle income status of Ghana, coupled with the recent oil resources available in the country, presupposes that the overall income or output levels for Ghana as a whole would increase. Over the past five years, Ghana's GDP has recorded growth rates averaging 8.6 percent. The extent to which the population has benefited from this growth can be assessed by looking at the equality in the distribution of welfare. The effectiveness of growth in poverty reduction is increased where that growth is pro-poor. Inequality analysis is thus critical in explaining the levels of poverty that characterizes sections of the population and the whole population for that matter. Whether economic growth is pro-poor or not have been a floating topic in the last few years. The question is whether the poorest households are really benefiting from the accelerated economic growth being enjoyed by Ghana. To do this analysis, the Gini indices<sup>2</sup> by locality and administrative regions are estimated and plotted on a graph.

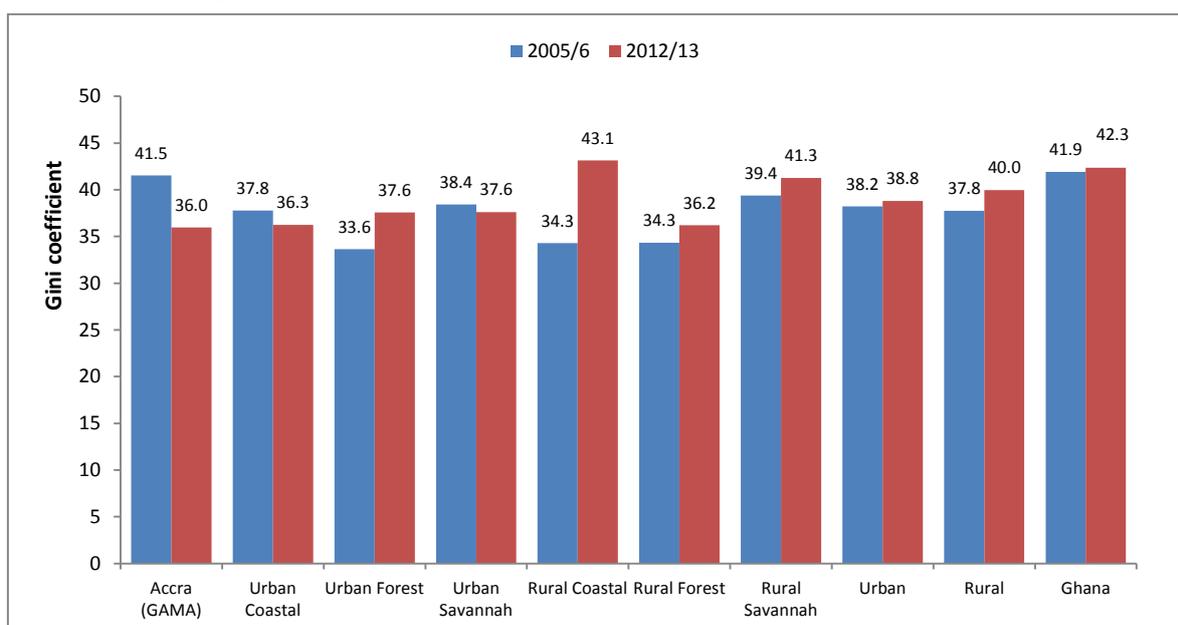
Nationally, the Gini coefficient has increased slightly from 41.9 percent in 2005/06 to 42.3 percent in 2012/13. The increase, though small, implies that overtime Ghanaians are not benefiting evenly from the growth process. If inequality had reduced over the seven-year period, poverty rates would have reduced further since the welfare levels of many more Ghanaians would have improved. The increasing inequality over the seven-year period is evident in both rural and urban localities overall, increasing for rural areas from 37.8 percent in 2005/06 to 40.0 percent in 2012/13, and in urban areas from 38.3 percent to 38.8 percent. All the rural areas experienced increasing inequality between the two periods, with the rural coastal showing the largest increase. Accra (GAMA) and urban coastal areas experienced improving equality over the seven-year period, with Accra (GAMA) showing the largest decline from 41.5 percent in 2005/06 to 36.8 percent in 2012/13 (Figure 4.5).

Figure 4.6 shows the Gini coefficient by administrative region. Inequality is highest in the Upper West and Northern regions and has increased in both regions over the period from 2005/06 to 2012/13. The worsening inequality in the rural coastal localities is largely due to worsening levels of inequality in the Volta region of Ghana which increased from 35.4 percent to 41.2 percent. Improvements in inequality rates are evident in Greater Accra (reducing from 41.9 percent in 2005/06 to 37.0 percent in 2012/13) and in the Central region (from 40.1 percent to 38.1 percent). A small decline is also evident in the Ashanti region. Generally, whilst some regions benefited from fair distribution of welfare over the period (2005/06 to 2012/13), others did not, indicating that the remarkable economic growth rate recorded in Ghana over the seven-year period benefited some regions more than others.

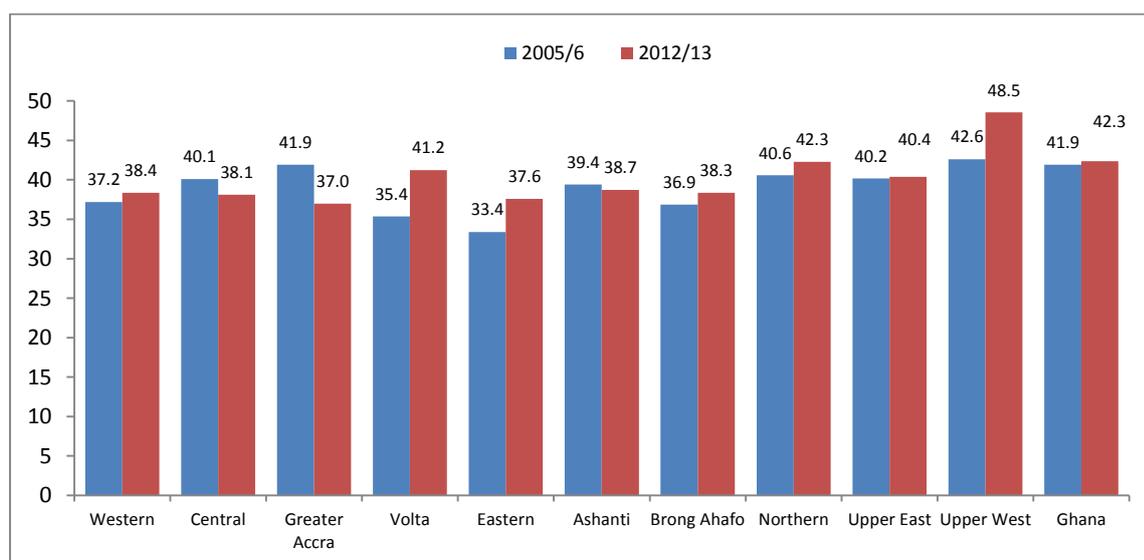
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<sup>2</sup> Gini index measures the extent to which the distribution of income or consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

**Figure 4.5: Inequality by locality: Gini coefficient, 2005/06-2012/13**



**Figure 4.6: Inequality by region: Gini coefficient, 2005/06 – 2012/13**



## 4.5 Growth incidence in Ghana: Is Ghana's economic growth pro-poor?

The growth incidence curve (GIC) plots the growth rate at each percentile of per capita income/expenditure (in this poverty report it is per adult equivalent consumption). The GIC graph allows us to compare the growth rates in poorer segments of the population with that of richer segments or with the rate of growth of the mean income (or expenditure). These curves show the growth rates in consumption at various points of the distribution of consumption, starting from the poorest on the left of the horizontal axis to the richest on the right. The growth incidence curve shows the percentage increase in consumption obtained for each percentile of the population according to their consumption level.

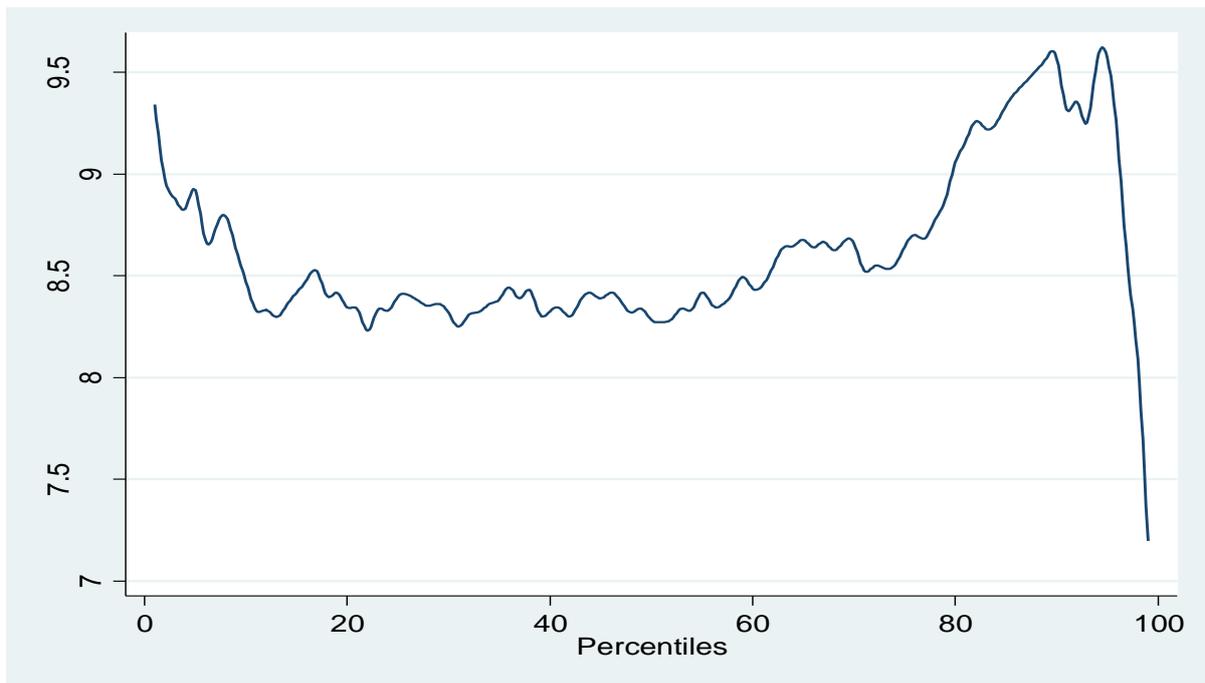
Figure 4.7 shows that growth rates in consumption (per adult equivalent) have been significantly higher in the two extreme ends of the distribution (the upper part of the population, and the very poor), indicating that both the upper echelons and below the 10th quintile of the population benefited from very large gains in consumption. Generally, however, the majority of the population between the 10<sup>th</sup> and the 80<sup>th</sup> percentile had a growth in consumption of about 8.5 percent, indicating that growth was evenly distributed as the pattern of gains was equitable for a fairly large segment of the population. Growth in consumption has been good for even those within the very extreme end of the population (95-100 quintile), since growth in consumption was higher than 7.2 percent. Every segment of the quintile population had positive growth in consumption of more than 7 percent. Figure 4.7 suggests a growing middle class in Ghana.

The GIC takes a similar shape for urban and rural areas when they are assessed separately. In both areas, the population at the 60th percentile and above enjoyed a much higher growth rate than the rest of the population. It should be noted that these households are not poor households and the high growth rates among them indicate an emergence of the middle class in Ghana.

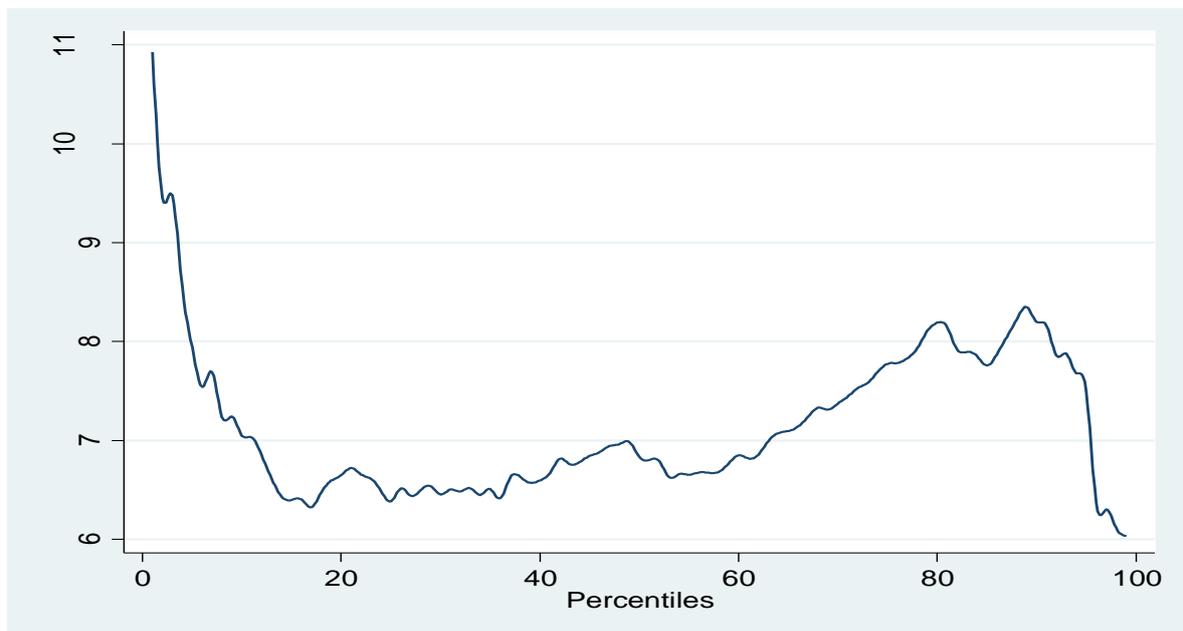
Has economic growth in Ghana over the seven-year period (2005/06 – 2012/13) been pro-poor? The economic literature does not fully agree on what should be labeled pro-poor growth. On one side, researchers want economic growth to be faster for the poor than the richer households for growth to be defined as pro-poor growth (leading to a decline in inequality); others look at whether growth has raised the welfare level of all households as measured per percentile. Based on the latter definition, Ghana has clearly experienced pro-poor growth since all percentiles benefited from economic growth even though the rates varied.

Figures 4.8 and 4.9 show the growth incidence curves for the urban and rural localities. The results indicate that the distribution has been similar for both urban and rural localities. Except in the urban localities, the poor benefited more as they experienced a higher growth in consumption, whilst households in the rural areas recorded higher growth in the upper echelons of the population.

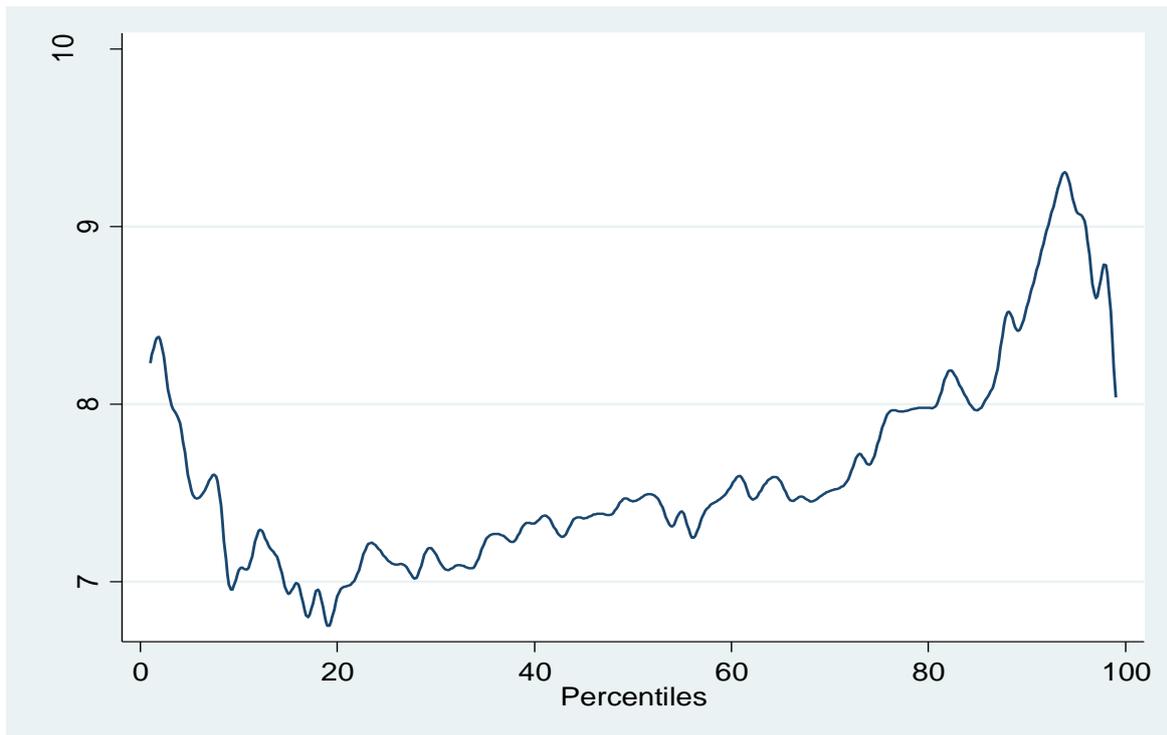
**Figure 4.7: Growth incidence curve for Ghana, 2005-- 2013**



**Figure 4.8: Growth incidence curve for urban Ghana, 2005 - 2013**



**Figure 4.9: Growth incidence curve for rural Ghana, 2005 - 2013**



#### **4.6 Summary**

Household heads who are farmers are not just the poorest in Ghana, but they contribute the most to Ghana's poverty. Household heads engaged as private employees and self-employed in non-agricultural sectors are less likely to be poor than those engaged in the agricultural sector. Over the period, public sector earners have, as a result of the public sector wage rationalization policy implemented in 2009, experienced a reduction in poverty.

Generally, female-headed households appear to be better off than male-headed households in terms of poverty incidence. Lack of education is still a hindrance to poverty reduction. Households with uneducated household heads are the poorest in Ghana and contribute the most to Ghana's poverty incidence.

Welfare distribution is more disproportionate in Ghana now than in 2005/06; this means that there is increasing inequality as measured by the Gini coefficient. However, whilst some regions showed improvement in terms of the equality in the distribution of welfare, other regions such as Volta and Upper West experienced worsening welfare distribution between 2005/06 and 2012/13. Generally, those in the lower income brackets and the population above the 60<sup>th</sup> percentile benefited the most from the growth in consumption. The growth incidence curve shows a growing middle class in the Ghanaian population.

# CHAPTER FIVE

## HOUSEHOLD ASSETS

### 5.1 Introduction

Chapter three of this report has shown that the incidence of poverty – measured in terms of consumption expenditure – has declined in Ghana between 2005/06 and 2012/13, although this reduction has not been uniformly spread across the country.

Poverty is a multi-dimensional phenomenon and consumption-based measures need to be supplemented by other welfare indicators. This section examines poverty in terms of household ownership of key consumer durable goods which can be seen as an *alternative* measure of poverty to the consumption-based measures of welfare presented in previous chapters. One of the advantages of these asset-based indicators is the ease with which they can be measured compared to the indicators based on consumption expenditure.

This chapter considers a measure that captures changes in household ownership of such assets as an indicator of changing living standards of households<sup>3</sup>. Although this measure depends on many factors outside the control of households such as whether or not they have access to electricity and other location and cultural attributes that shape lifestyles but cannot be changed easily by households, it is still a useful proxy indicator of the standard of living.

### 5.2 Asset Ownership

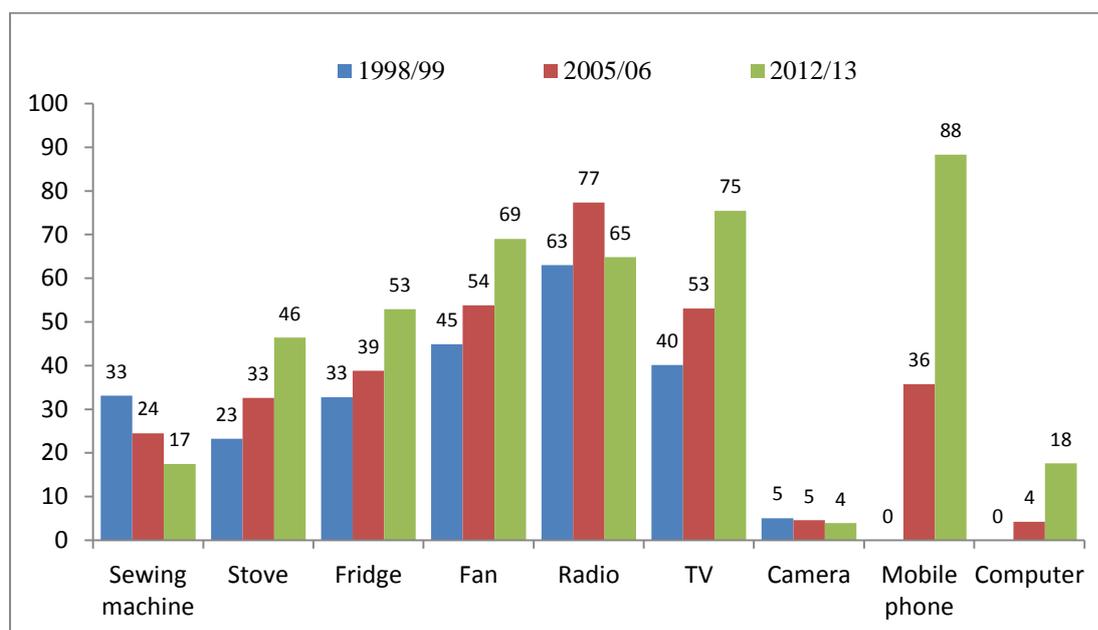
Information on the proportion of households owning different consumer durable goods in 1998/99, 2005/06 and 2012/2013 is presented in Figures 5.1 and 5.2 for urban and rural areas respectively (see Tables A2.1, to A2.4). The data presented in these graphs refer to ownership of at least one of such items and does not directly depict the total number of items that are in the possession of households during the survey periods. For most of the assets considered, there is an increase in the proportion of households owning the asset over the fifteen-year period. This is particularly the case for items like stove, fridge, television, computer and mobile phones.

Spatial analysis of the information in Figures 5.1 and 5.2 show that the proportion of households owning these assets continues to be much higher in urban areas than in rural areas. The pattern of changes between ownership of assets in the last two surveys i.e. 2005/06 and 2012/13 is also different for urban and rural households. Whereas the increases in ownership of items are relatively higher for most of the assets in both localities, the increase in stove ownership is more pronounced in urban areas than in rural areas. In urban areas, nearly nine in every ten households now own a mobile phone, an increase from just over one third in 2005/06; the increase in mobile phone ownership is more pronounced in rural areas with an increase from 6 percent in 2005/06 to 70 percent in 2012/13. After peaking in 2005/06, ownership of radio sets decreased marginally in 2012/2013 for both urban and rural areas whereas ownership of sewing machines in both localities has decreased over the last fifteen years.

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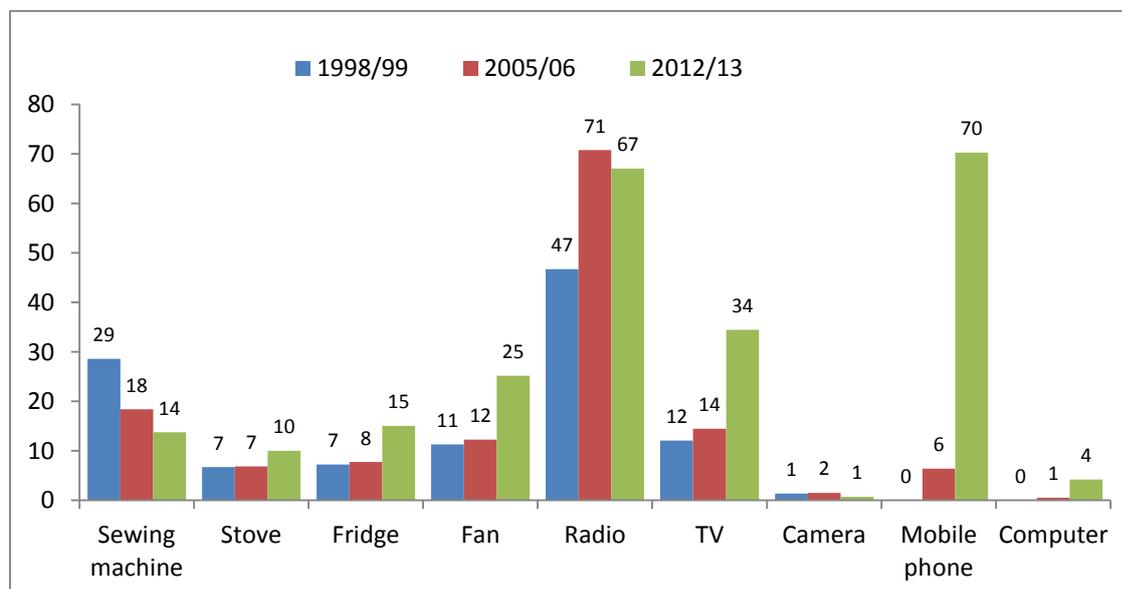
<sup>3</sup> Note that the tables presented are based on changes in the proportion of households in a given group owning an asset, rather than acquisition of assets by individual households (which is harder to measure from the questionnaire).

**Figure 5.1: Percentage of urban households owning different household assets, 1998/99-2012/13**



Source: Table A2.3

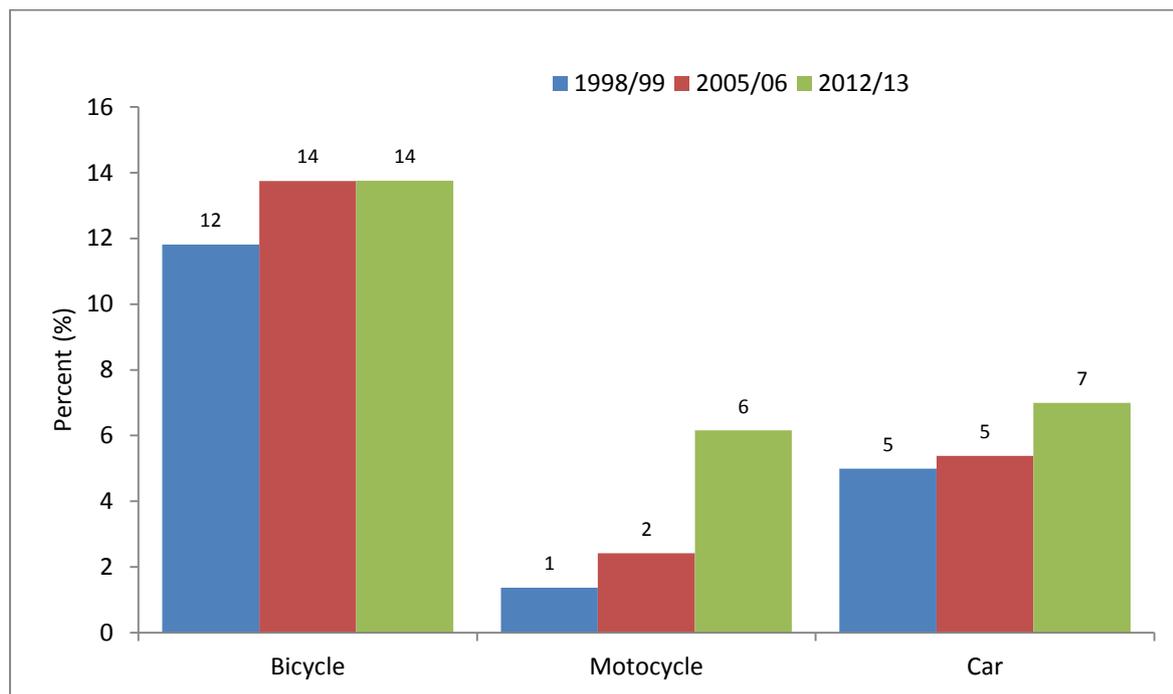
**Figure 5.2: Percentage of rural households owning different household assets, 1998/99-2012/13**



Source: Table A2.4

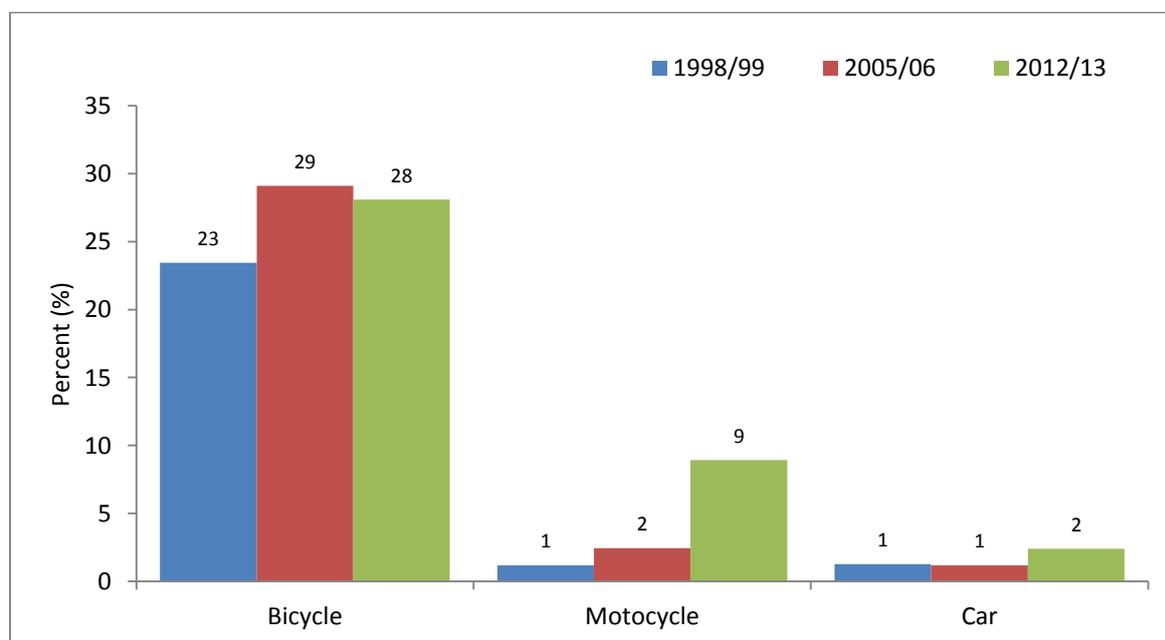
The distribution of ownership of transportation assets by locality shows marginal increases in urban and rural areas over the past fifteen years. Despite this, in urban areas 7 percent of households owned a car in 2012/13 compared to only 2 percent of those in rural areas. The increase is higher for ownership of bicycles in rural areas than urban areas (Figure 5.3 and 5.4).

**Figure 5.3: Percentage of urban households owning different transportation assets, 1998/99-2012/13**



Source: Table A2.3

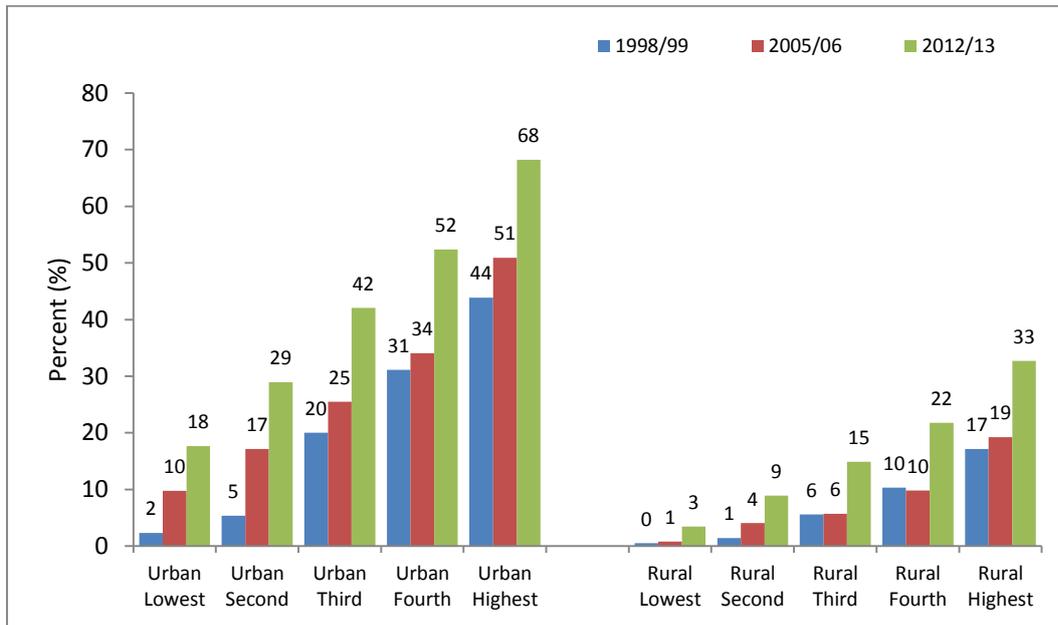
**Figure 5.4: Percentage of rural households owning different transportation assets, 1998/99-2012/13**



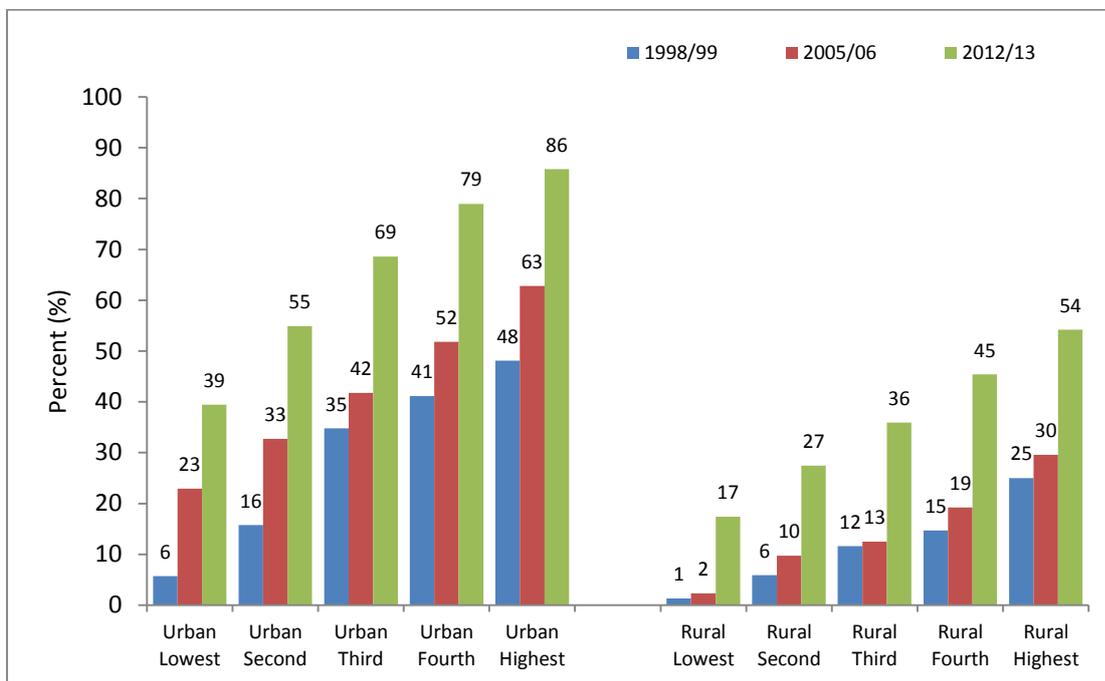
Source: Table A2.4

More information can be provided by examining specific durable goods in greater detail. Figures 5.5 and 5.6 examine ownership of two such groups, one being a useful productive asset for the household (refrigerator) while the other is more for pleasure and information (television set). Figures for all other durable goods under study can be found in the appendix.

**Figure 5.5: Percentage of households owning a refrigerator by locality and quintile, 1998/99-2012/13**



**Figure 5.6: Percentage of households owning a television set by locality and quintile, 1998/99-2012/13**



The figures present the changes in ownership of these assets for different quintile<sup>4</sup> groups of households defined according to their standards of living.

The distribution of assets among quintiles across the survey periods shows increases in the proportion of households who own durable goods. These increases are more dramatic in the last 5 years, especially for refrigerator and TV set (Figure 5.5 and 5.6) across all locality and quintile groups. The information in Appendix 2 and Tables A2.2 to A2.4 further show a reduction in the proportion of households who own sewing machines, radios and bicycles over the survey period.

### **5.3 Summary**

The proportions of households owning most of the durable goods covered in the surveys have shown large increases between 1998/99 and 2005/2006, and further increases in 2012/13. The increases were observed in both urban and rural areas but they have often been higher for wealthier groups, with greater disparity among urban households. Ownership of durable goods remains much lower in rural areas than urban areas, even among households of similar overall living standards.

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<sup>4</sup> For each of these non-monetary measures, it is valuable to look at the relationship between the variations in living conditions they reveal and those of the consumption-based standard of living measure. This is considered here based on the division of households into quintile groups reflecting their standard of living according to the consumption-based measure. The lowest quintile group represents the poorest 20% of individuals in the population, the second quintile the next poorest 20% and so on until the highest quintile which contains the richest 20%. These groups are defined at the national level throughout; whenever results are presented by quintile group for urban and rural areas separately, the quintile groups are still those defined at the national level. Therefore, for example, those in urban areas reported as being in the fifth quintile have comparable living standards to those in the fifth quintile in rural areas.

## **CHAPTER SIX**

### **ACCESS TO SERVICES**

#### **6.1 Introduction**

In previous chapters, the GLSS 6 data are used to demonstrate improvements in Ghanaian living standards based on the household's total consumption and ownership of household assets. Access to services, which is part of the MDG indicators, is another important element used to evaluate or determine whether living standards have improved, especially among households living at the bottom consumption quintiles. This chapter analyzes households' access to potable water (defined to include pipe, bottle/sachet, protected well/spring, and borehole), adequate toilet facility (a flush toilet or the KVIP toilet) and electricity.

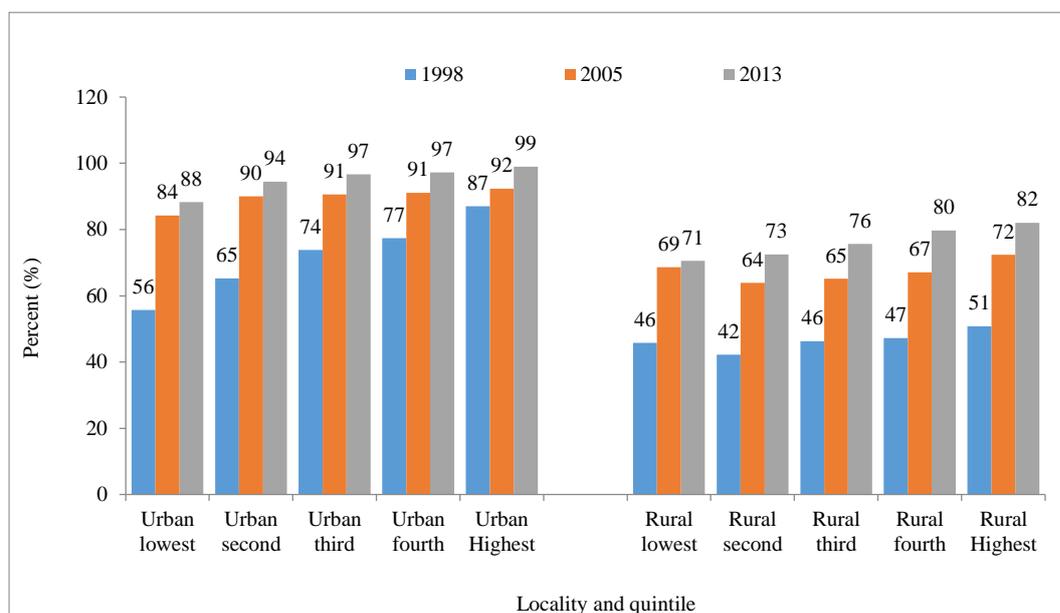
#### **6.2 Household access to utilities and sanitation facilities**

Access to services is determined both by their availability and affordability. Availability of services is largely determined by their locations because infrastructure is available within proximity. Urban areas normally have much more service availability than rural areas. For this reason, one should compare access to services interactively by locality and quintiles. Affordability is largely determined by the households' ability to pay for available services, and ability to pay is itself determined by cost and by income. Figures 6.1, 6.2 and 6.3 provide information on the proportion of households using potable water and adequate toilet facilities and having access to electricity.

Figure 6.1 shows the percentage of households using potable water by locality and standard of living quintiles. It indicates that, overall, about 95 percent of urban households and 75 percent of rural households use potable water (pipe, borehole and bottled water). The proportionate changes in access between the survey years are relatively small for all the quintile groups for the periods 2005/06 to 2012/13 following high increases between 1998/99 and 2005/06. By 2012/13, at least 97 percent of the two top quintiles in urban areas used potable water compared to 88 percent and 94 percent in the first and second quintiles respectively. The period 2005/06 to 2012/13, however, saw higher increases in the proportion of urban households using potable water with increasing wealth. Access increased in all quintiles in urban areas. A similar pattern is seen in rural areas, with the largest increases in access to potable water between 1998/99 and 2005/06. Overall, there has been a reduction in the urban-rural gap in the number of households using potable water from 2005/06 to 2012/3. Detailed analysis indicates that over the last seven years there have been marginal decreases in access for most of the sources of water with the exception of water from a vendor (defined as sachet or bottled water and pipe-borne water from a neighbour's house) and borehole which saw significant increases (Appendix Table A3.1).

The information on access to an adequate toilet facility is provided in Figure 6.2. The period 1998/99 to 2005/06 saw the proportion of households with access to adequate toilet facilities increasing across all consumption quintiles and in both rural and urban localities, although the improvement was quite marginal for the poorest 40 percent of households living in rural areas. Even though rural areas experienced increases across all the consumption quintiles in the use of adequate toilet facilities between 2005/06 and 2012/13, the same cannot be said about the sub-rural localities (rural coastal, rural forest, and rural savannah) where public and other facility (bush, beaches etc.) usage has increased significantly. Rural savannah recorded a percentage point drop (5.3% to 4.3%) in usage of flush or KVIP (Table A3.5).

**Figure 6.1: Percentage of households using potable water by locality and standard of living quintile, 1998/99-2012/13**



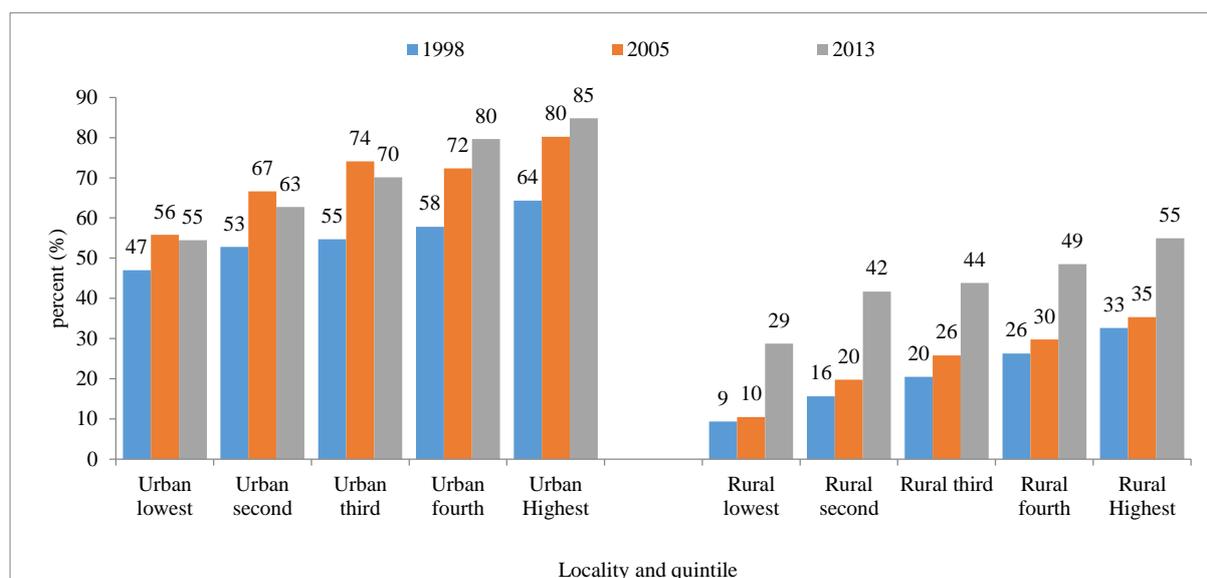
Note: potable water includes pipe, bottle/sachet, protected well/spring, and borehole

The gap between rural and urban access to an adequate toilet facility is still quite pronounced. Additionally, the gap between the poor and non-poor households is also substantial. In rural areas, by 2012/13, just over one quarter of households in the lowest quintile had access to an adequate toilet facility (27%) compared to 43 percent in the middle quintile and 57 percent in the highest quintile. Between 2005/06 and 2012/13, the proportion of households using adequate toilet facilities in urban areas reduced among the first three quintiles. Across localities, however, the changes in use of adequate toilet facilities seemed marginal between 2005/06 and 2012/13. (Table A3.5).

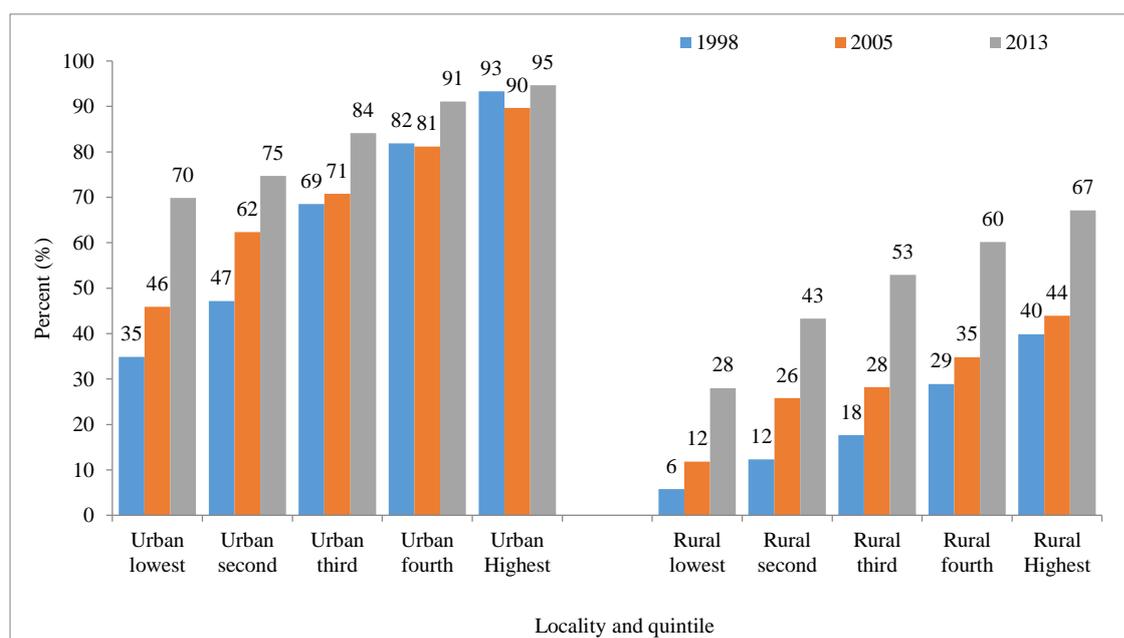
By 2012/13, access to electricity had increased across all localities and among all quintiles. In urban areas, the largest gain in access to electricity is observed in the two lowest consumption quintile groups between 1998/99 and 2012/13. The middle quintile also experienced a rise of more than 10 percentage points between 2005/06 and 2012/13 (Figure 6.3).

The rural areas witnessed sharp increases in access to electricity in each quintile between 2005/06 and 2012/13. However, the proportion of households with access still varies by quintile, with the lowest quintile having the least access (28%) and the highest quintile the most access (67%). Overall, 70.7 percent of households in Ghana now have access to electricity compared to 45.3 percent 7 years ago. For urban areas, the observed figure is 88.5 percent and for rural, 48.6 percent (Appendix Table A3.6).

**Figure 6.2: Percentage of households using flush or KVIP toilet by locality and standard of living quintile, 1998/99-2012/13**



**Figure 6.3: Percentage of households using electricity by locality and standard of living quintile, 1998/99-2012/13**



### 6.3 Summary

There have been significant improvements over the fifteen-year period in the number of households obtaining their drinking water from an improved source, using adequate toilet facilities and having access to electricity. Increases in the use of adequate drinking water sources have been most pronounced in rural areas and for poorer urban households. Improvement in access to adequate toilet facilities have also been more marked for rural households. However, the gaps between urban and rural households and cross consumption quintiles remain significant.

# **CHAPTER SEVEN**

## **HUMAN DEVELOPMENT**

### **7.1 Introduction**

Along with access to services which were examined in the previous section, education and health are also considered “basic needs” and should be seen as complementary to the consumption-based welfare indicator. They have some of the characteristics of public goods and are conceptually difficult to measure in monetary terms.

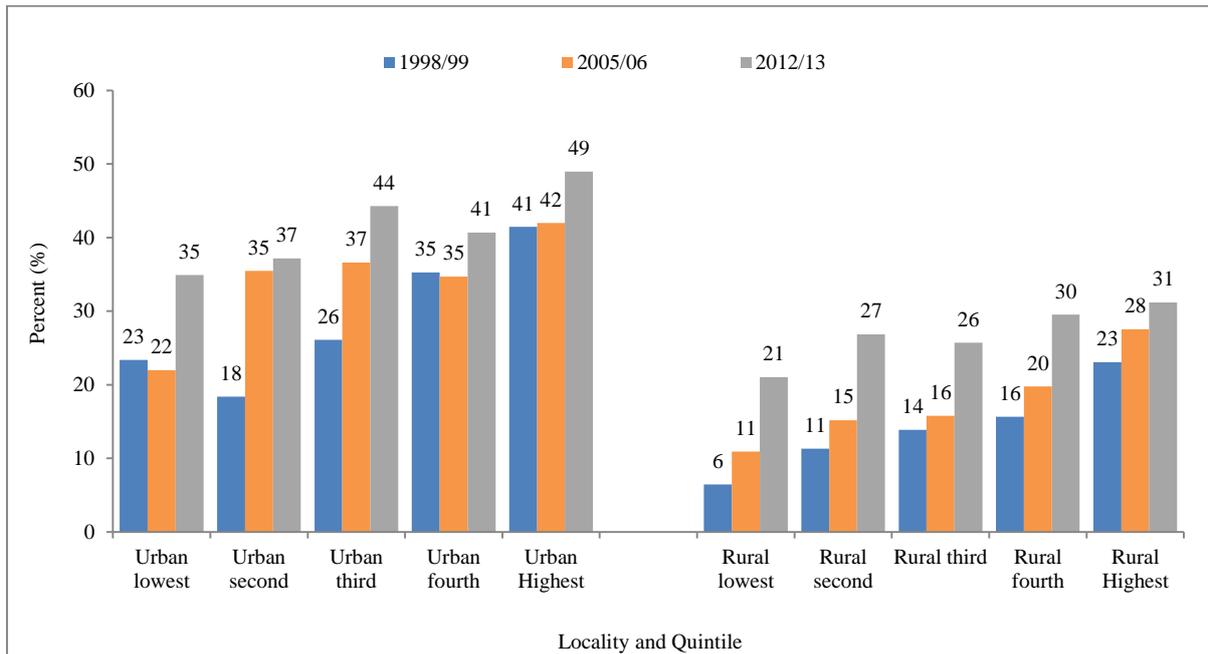
The health status of people is a strong determinant of their quality of life, level of productivity and longevity. According to the World Health Organization (WHO), health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Education has been identified as an important tool in providing people with the basic knowledge, skills and the competencies to improve their standard of living and quality of life. Thus, the health and the educational status of the people are directly linked to the general state of development of a country. It is, therefore, not surprising that health and education issues have featured prominently in the UN Human Development Index as well as in the Millennium Development Goals. In the GLSS, information on the utilization of health and education facilities was collected from the sampled households.

### **7.2 Access to health services**

The information presented here covers the use of health facilities by individuals who considered themselves to have been ill or injured in the two weeks preceding the interview. Respondents were asked whether they consulted a health practitioner when ill or injured. Figure 7.1 shows the percentage of individuals ill or injured who consulted a doctor by locality and standard of living quintile. The percentage of ill or injured that consulted a doctor has risen over the period 2005/06 to 2012/13 across all localities and quintiles. In the lowest urban quintile the percentage who consulted a doctor rose to 34 percent from 22 percent over the 7-year period; among the middle quintile this increased from 37 percent to 44 percent and among the two top quintiles from 35 percent to 41 percent and 42 percent to 49 percent respectively. In rural areas, the percentage who consulted a doctor increased systematically over the 15 years from 1998/99, though the percentage change within quintiles between 2005 and 2013 was more noticeable, benefiting both the rich as well as the poor. Nationally, the percentage of ill or injured individuals who did not consult any health personnel has also declined (40.6% to 33.8). Across localities, however, the proportion of such individuals was observed to have increased in urban savannah (Table A4.1).

Consultation with a pharmacist/chemical seller increased sharply between 1998/99 and 2005/06 for both urban and rural areas and all quintiles. However, in the last 7 years the proportion consulting this group of health workers declined across rural and urban areas and all quintiles. This may, to some extent, reflect the increased consultation with doctors over the same period (Figure 7.2).

**Figure 7.1: Percentage of ill or injured individuals that consulted a doctor by locality and standard of living quintile, 1998/99-2012/13**



**Figure 7.2: Percentage of ill or injured individuals that consulted a pharmacist/chemical seller by locality and standard of living quintile, 1998/99-2012/13**

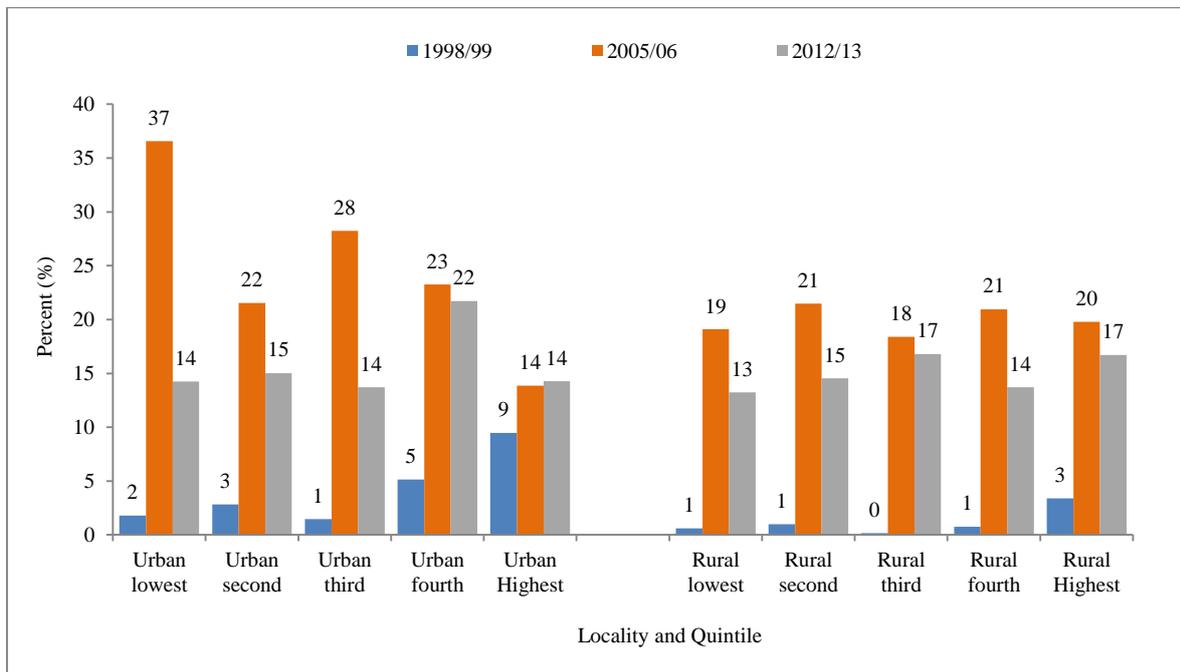
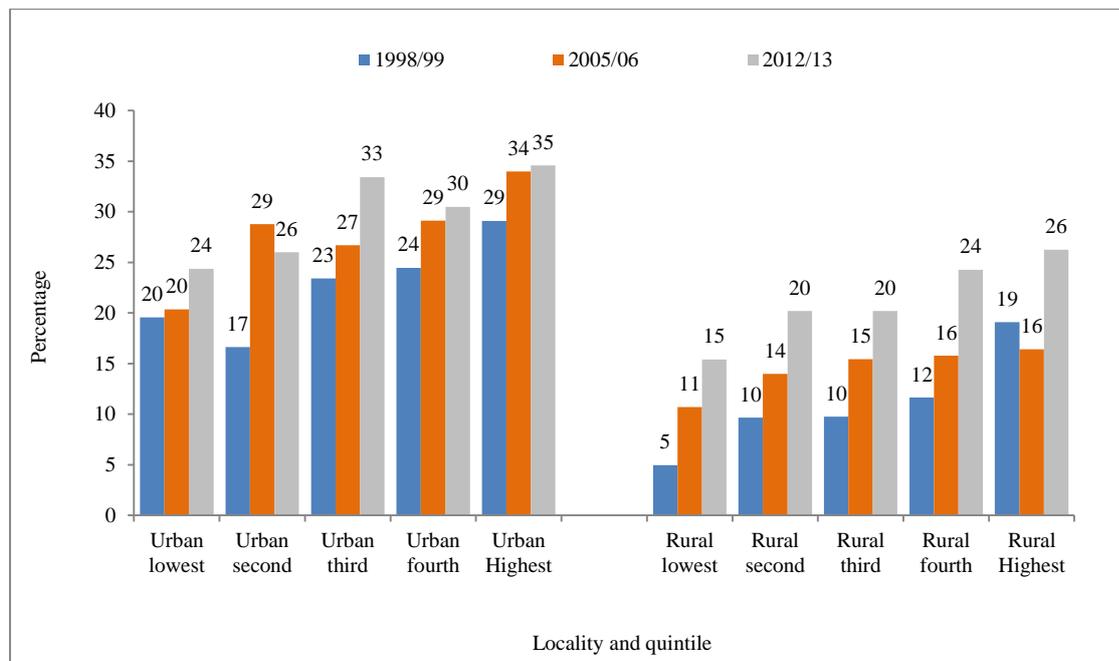


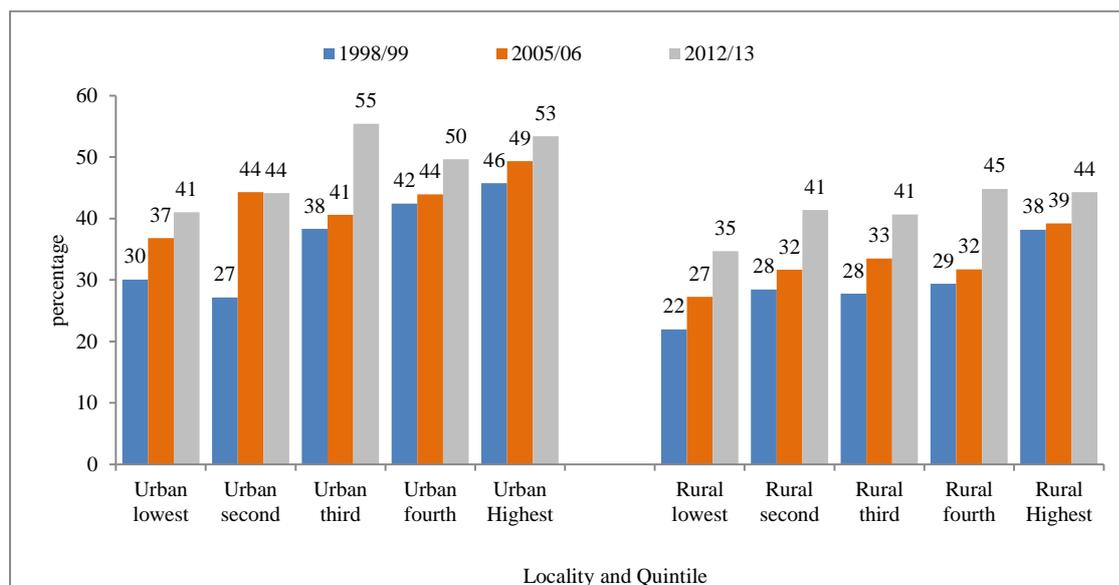
Figure 7.3 shows the percentage of ill or injured individuals who consulted in a hospital. The Figure reveals that by 2012/13, 24 percent of the poorest urban households consulted in hospital when ill or injured, an increase from 20 percent in 2005/06. Apart from the second quintile in urban areas, all groups showed increases in consultation since 2005/06. Despite these increases, there still remain large differences in the proportions consulting at a hospital between the lowest and highest quintiles (24% and 35% respectively in urban areas; 15% and 26% in rural areas).

The trend in the proportion of individuals who were ill or injured who consulted in a health facility (hospital, clinic and health centres) is not very different from that observed in Figure 7.3, where there are increases between 2005/06 and 2012/13 across all localities and also in each quintile group apart from the second urban quintile (Figure 7.4). For urban areas, consulting with a health facility is highest among the middle quintile group (55%) and, in rural areas, it is highest among the top two quintiles (45% and 44% respectively).

**Figure 7.3: Percentage of ill or injured individuals that went to a hospital by locality and standard of living quintile, 1998/99-2012/13**



**Figure 7.4: Percentage of ill or injured individuals that went to a health facility by locality and standard of living quintile, 1998/99-2012-13**



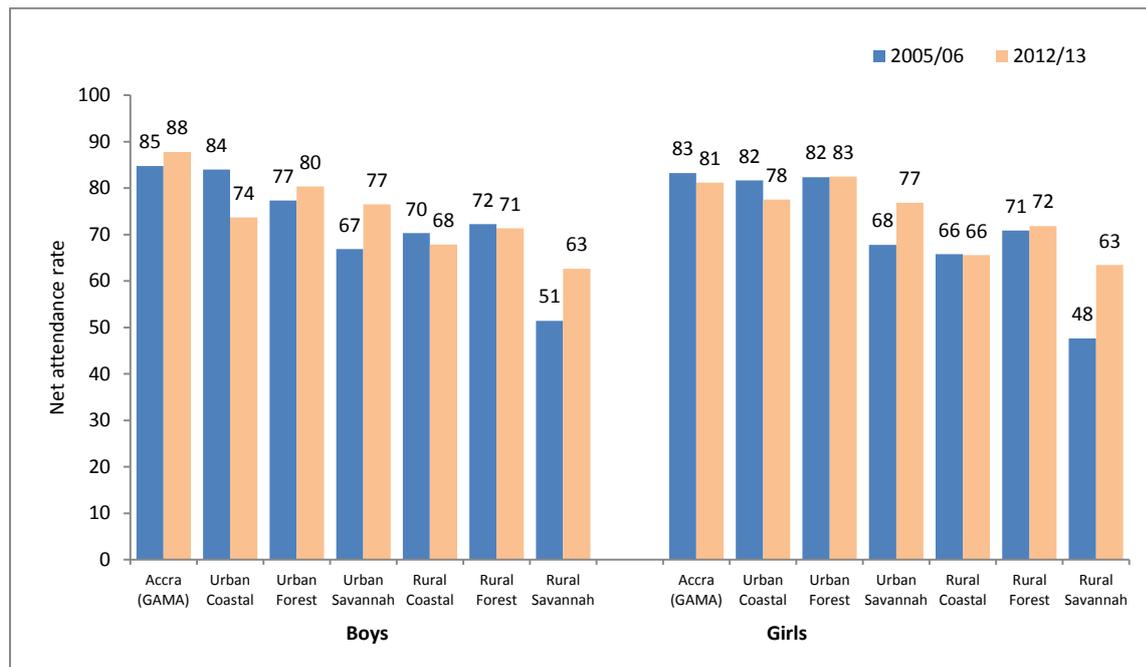
\*Health facilities including hospitals, clinics, health centres, excluding MCH clinic and CHPS

### 7.3 Access to education

School attendance rates are input indicators used by stakeholders nationally and internationally to measure performance in the educational sector. In Ghana, school attendance has increased consistently and appreciably over time, although it has stagnated in recent years. The focus of this chapter is to assess school attendance at three levels: Primary, Junior High School (JHS) and Senior High School (SHS). They were examined in terms of net and gross school attendance rates, quintiles and localities.

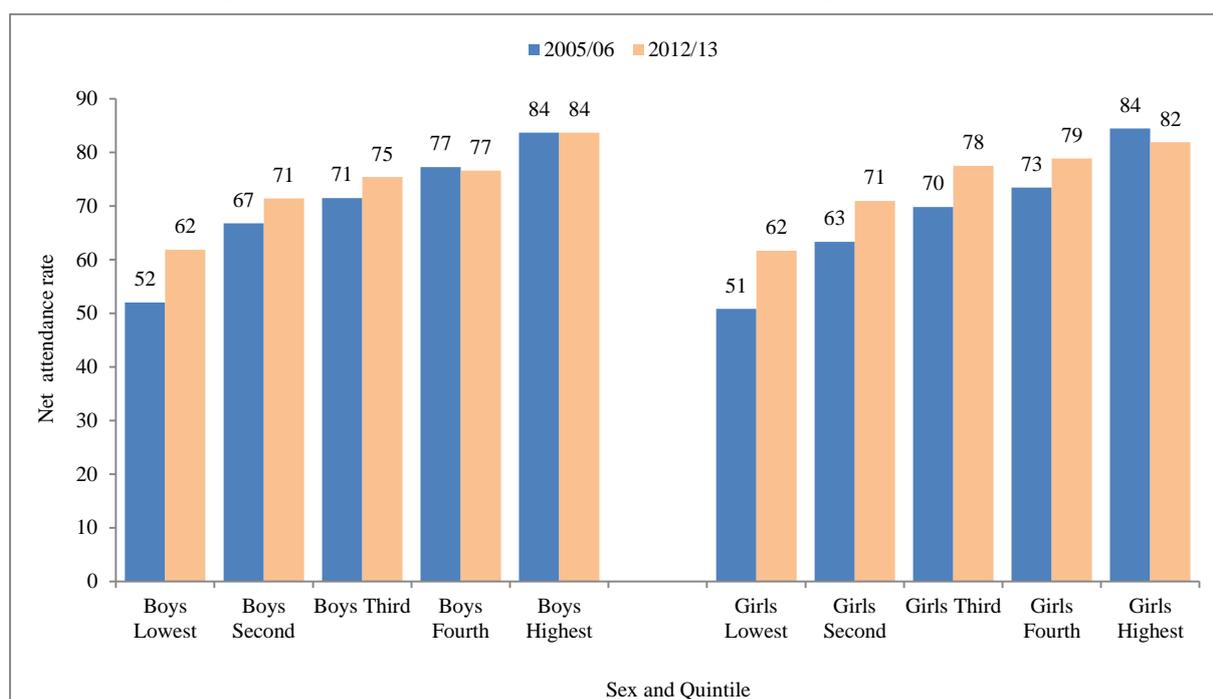
Figure 7.5 shows the Net Attendance Rate (NAR<sup>5</sup>) for primary school by locality and sex. It is generally high with marginal fluctuations across the localities except in the rural Savannah where the rates are much lower. There is little difference in NAR between 2005/06 and 2012/13, with some areas experiencing a marginal increase and others a marginal decrease. While NAR remains the lowest among the rural savannah, the largest increases in NAR occurred in this area (15% points for girls, 12% points for boys). Figure 7.6 shows NAR by quintile and sex. For both boys and girls, NAR increases with rising quintile, from 62 percent in the first quintile to 84 percent for boys and 82 percent for girls in the fifth quintile. The rate is almost at parity for both sexes and the quintile groups over the period 2005/06 and 2012/13. The largest increases in NAR over the 7 year period are seen in the lowest quintiles for both boys and girls, whereas NAR has stagnated in the higher quintiles.

**Figure 7.5: Net primary school attendance ratio by sex and locality, 2005/06-2012/13**



<sup>5</sup> **Net Attendance Rate (NAR)** Net attendance rates of children at Primary, JHS and SHS is the number of children of official schooling age (as defined by Ghana Education Service) who are attending Primary, JHS and SHS as a percentage of the total children of the official school age population.

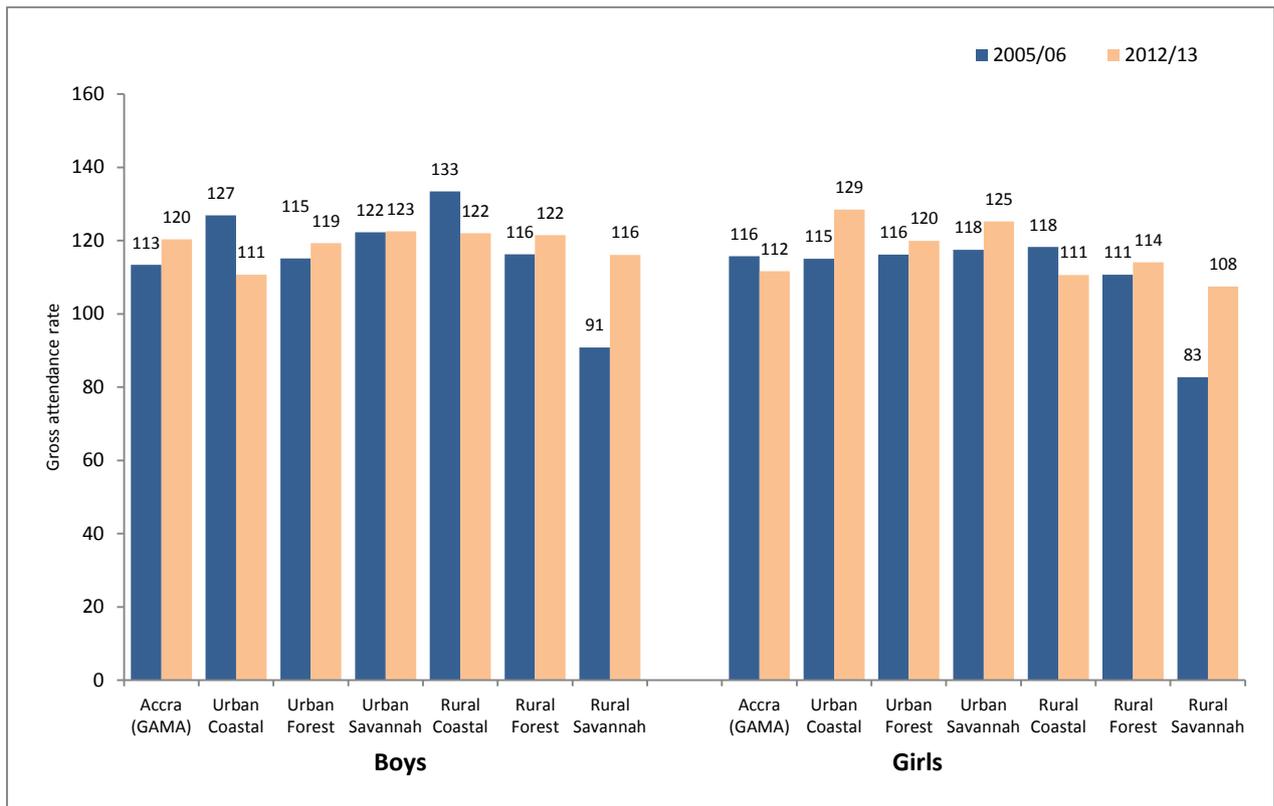
**Figure 7.6: Net primary school attendance rate by sex and quintile, 2005/06-2012/13**



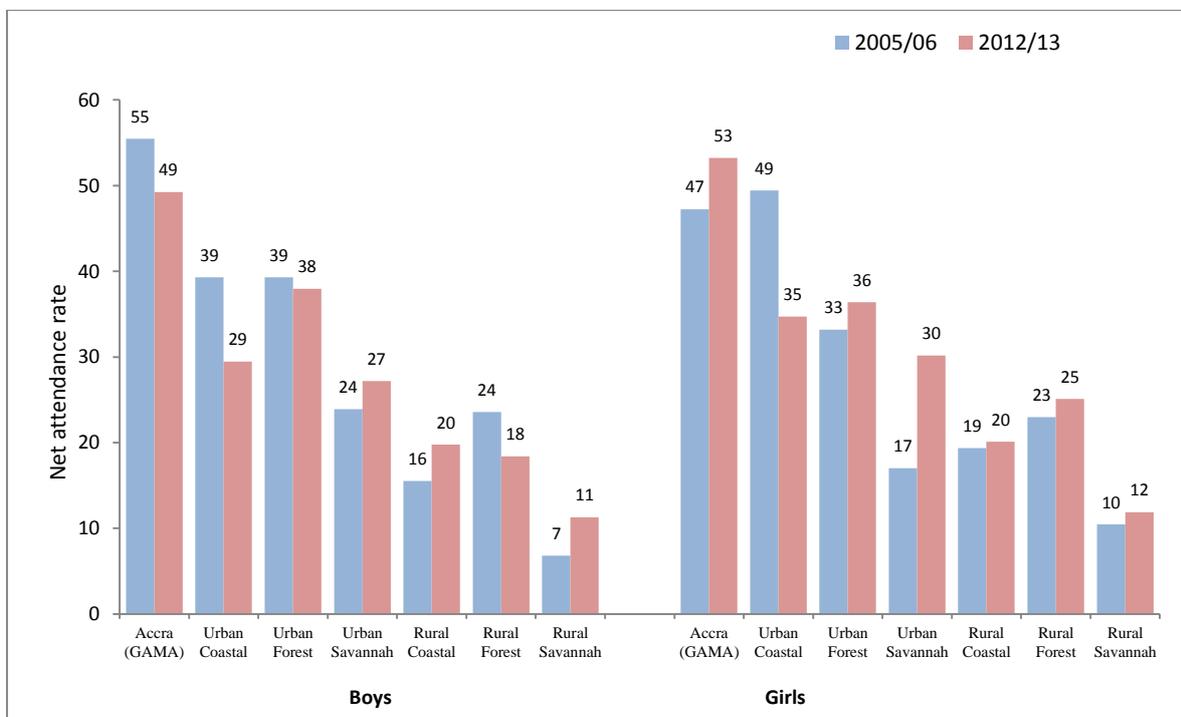
As at 2012/13, the Gross Attendance Rate (GAR) for all localities, including the rural Savannah, is above 100 percent for both sexes (Figure 7.7). The introduction of the Capitation Grant, Free School Feeding and Free School Uniforms in primary school could be contributory factors in the high primary GAR. While the NAR in JHS increased between 2005/06 and 2012/13 for girls in Accra that for boys showed a decline (Figure 7.8). Boys in urban households in the fourth quintile also witnessed a drop in NAR in JHS from 41 percent to 29 percent for the period 2005 and 2013 (Figure 7.9). The rate decreased slightly for girls in urban coastal zone, and for boys in the forest zone between 2005 and 2013. Unlike the low NAR in JHS for both boys and girls in rural savannah, the GAR was high for both sexes, an indication of increased over age school attendance in that area (Figure 7.10). The GAR for JHS by sex and quintile groups increased successively for both boys and girls between 2005 and 2013 with the exception of boys in the fourth quintile group where there was a 3 percent decline in 2013 (Figure 7.11). The GAR for girls in the top quintile is significantly high.

The NAR for SHS varies significantly across localities with the lowest attendance rates being recorded for both boys and girls in rural Savannah (Figure 7.12). Examination of the net attendance rates by standard of living shows an increase over time across all the localities for both boys and girls (Figures 7.13). The GAR shows a steady rise over the last 7 years across quintile groups but for girls only in the highest quintile (Figures 7.14). The government policy on waiving school fees, the Capitation Grant and also the Free School Feeding Programme at the basic school level are likely to continue to act as catalysts in accelerating school attendance at the lower levels. When this happens, it may have a positive spill over effects at the higher levels. In addition, with the Free SHS policy which government announced would commence in 2015/2016 academic year, it is expected that school attendance at the SHS level would improve tremendously in the next few years.

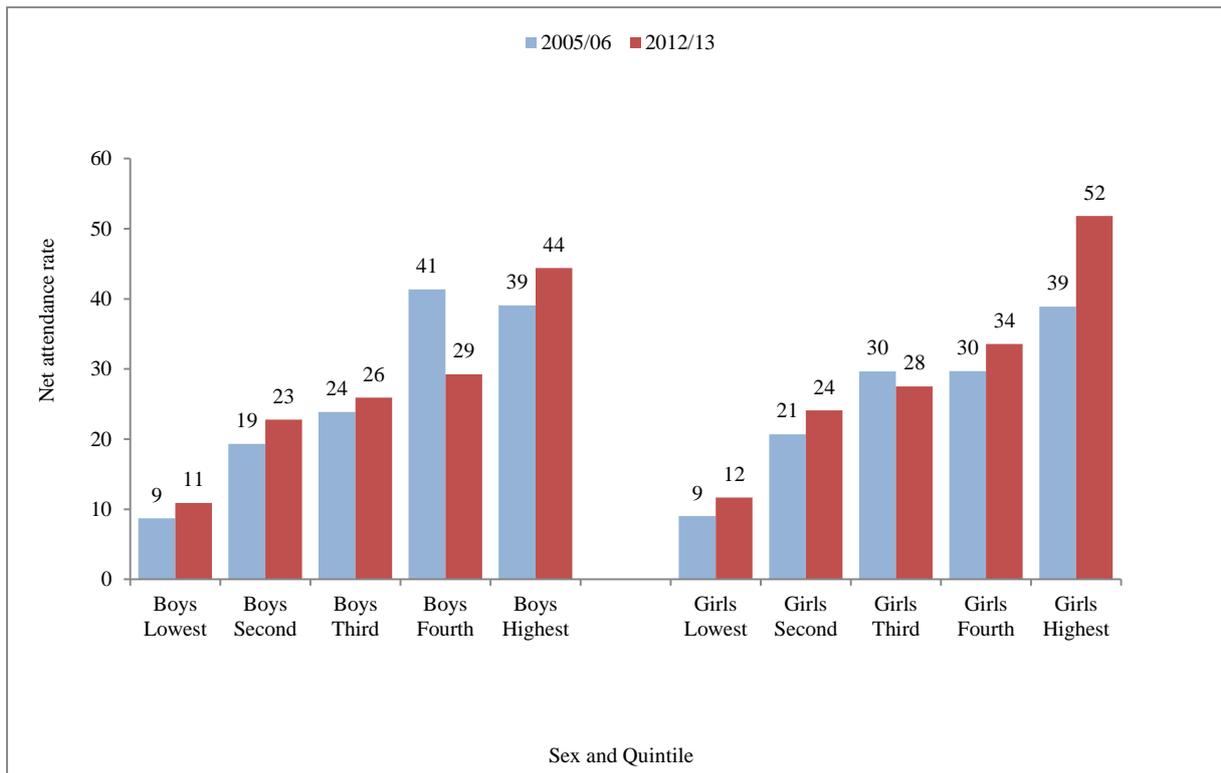
**Figure 7.7: Gross primary school attendance rate by sex and locality, 2005/06-2012/13**



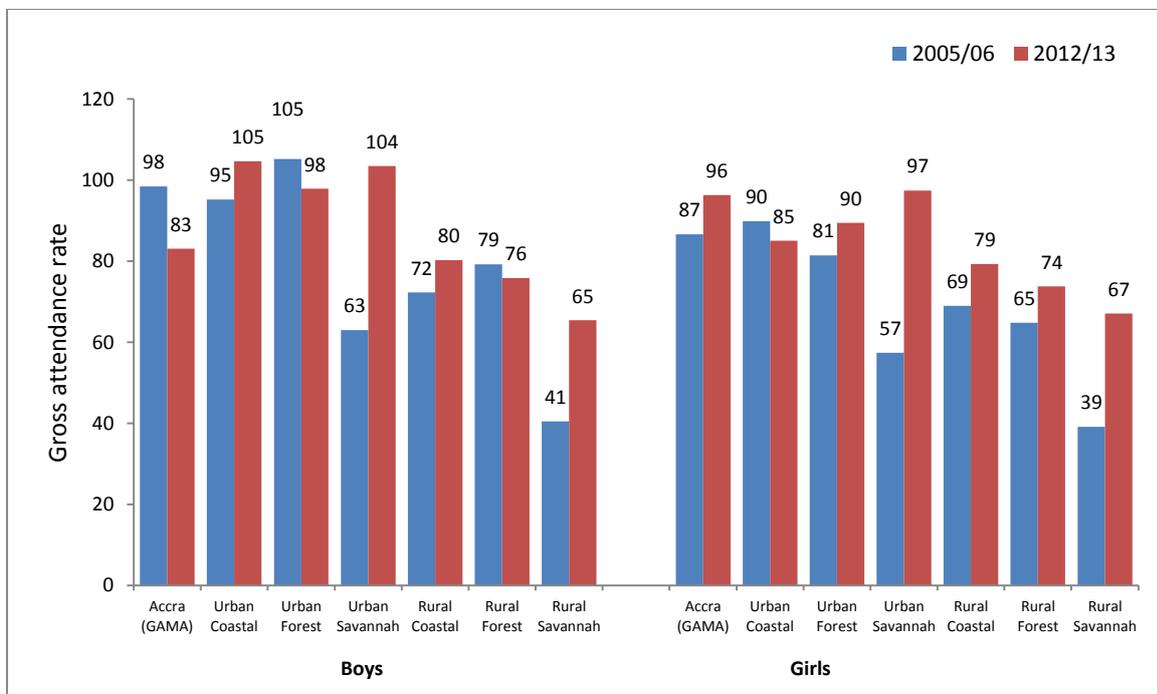
**Figure 7.8: Net JHS school attendance rate by sex and locality, 2005/06-2012/13**



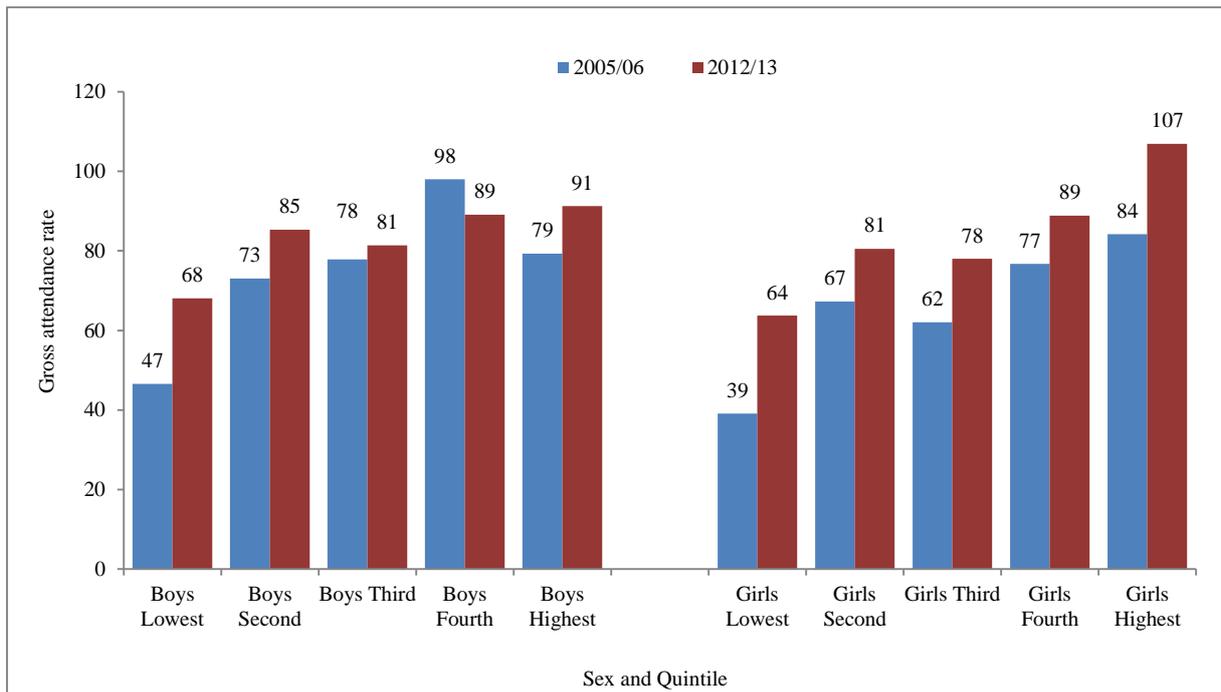
**Figure 7.9: Net JHS school attendance rate by sex and quintile, 2005/06-2012/13**



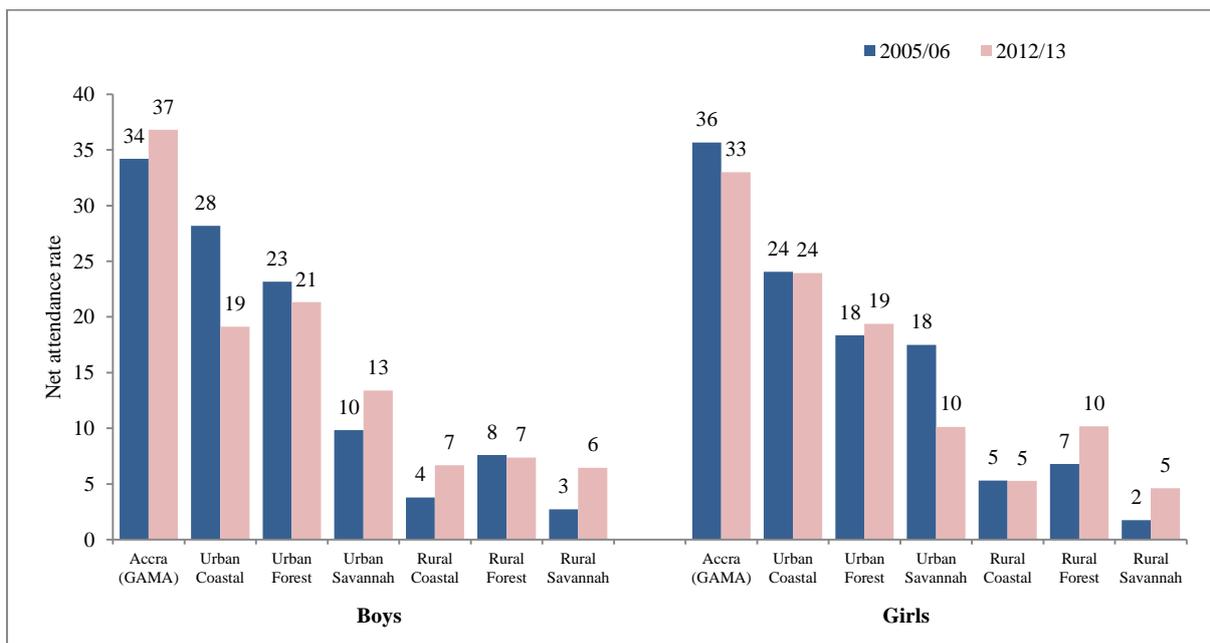
**Figure 7.10: Gross JHS attendance rate by sex and locality, 2005/06-2012/13**



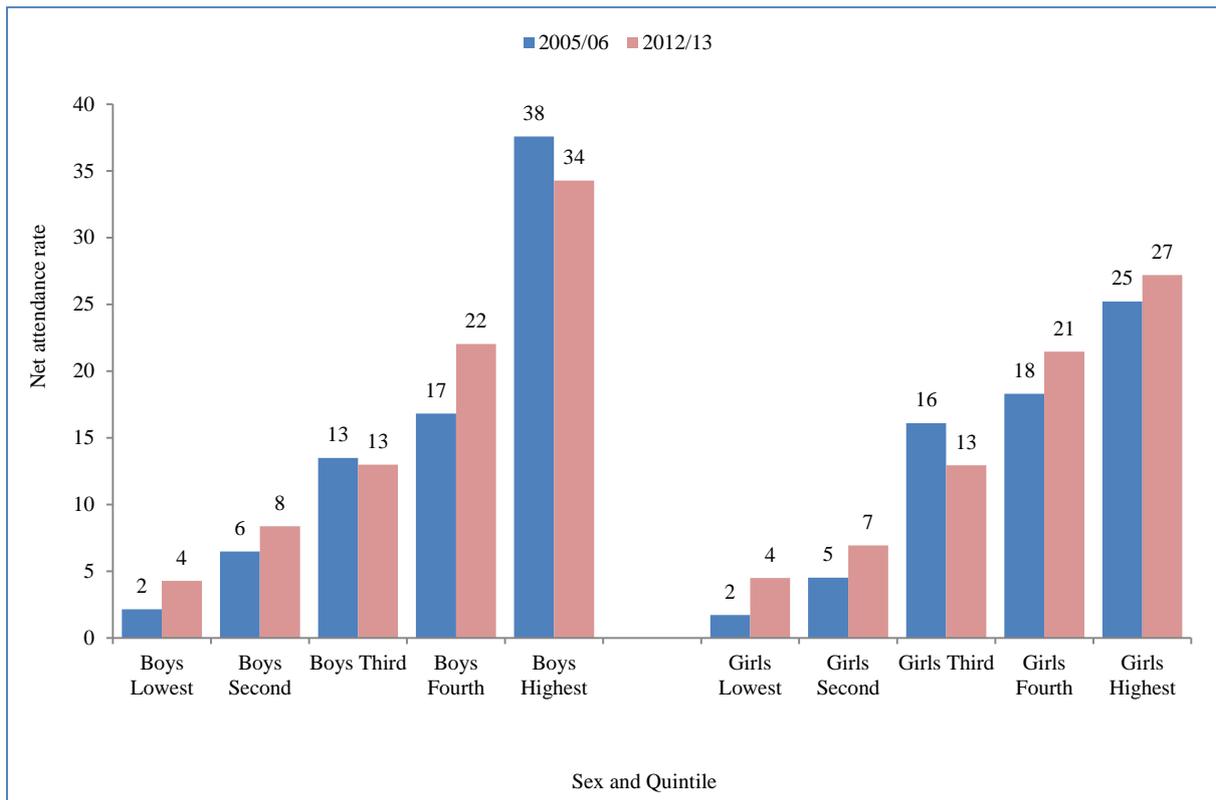
**Figure 7.11: Gross JHS school attendance rate by sex and quintile, 2005/06-2012/13**



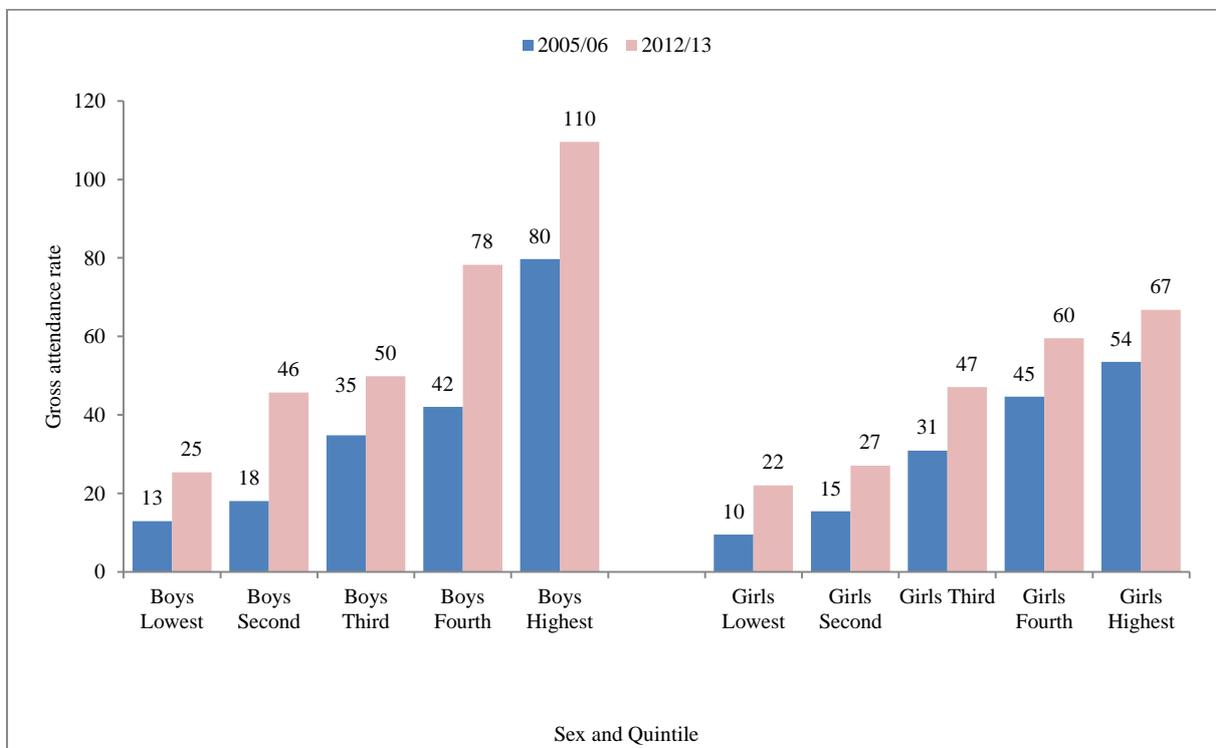
**Figure 7.12: Net SHS school attendance rate by sex and locality, 2005/06-2012/13**



**Figure 7.13: Net SHS school attendance rate by sex and quintile, 2005/06-2012/13**



**Figure 7.14: Gross SSS school attendance rate by sex and quintile, 2005/06-2012/13**



## **7.4 Summary**

The survey period 2005/06 to 2012/13 has seen increased rates of access to a range of health services. However, disparities remain between urban and rural areas and between quintile groups within those areas. Compared to 1998/99 and 2005/06, individuals are more likely now to consult doctors and visit health facilities. Consultation with pharmacists or chemical sellers when ill or injured has decreased. The percentage of individuals ill or injured who did not consult any health practitioner has also declined. This pattern is observed in all income groups in both rural and urban areas.

In terms of education, school attendance rates in primary, JHS and SHS have improved over this seven-year period. The savannah areas are still reporting the lowest school attendance rates. The increases in net school attendance rates at the JHS level have been much higher for girls than boys, but are still below those for boys and the reverse holds for SHS. Even with these increases, NAR at SHS are much lower than at the primary and JHS levels, and especially so in rural areas.

## **CHAPTER EIGHT**

### **CONCLUSION**

Ghana achieved positive economic growth in 1991 and by 2007, the country had become a lower-middle income country. The decline in poverty observed over the years have largely been attributed to this growth but to what extent have Ghanaian households and communities benefited from this growth and which groups have benefited most? These questions can only be answered by measuring progress in the welfare of the population.

The Ghana Living Standards Survey (GLSS) is among the series of household surveys that have been conducted by the Ghana Statistical Service (GSS) since 1987 to generate data for the measurement of the well-being of the Ghanaian population. Results from the previous five rounds of the survey have provided a wealth of information for understanding living conditions in the country, and for planning and monitoring the impact of developmental policies and programmes on the lives of the people.

The sixth round (GLSS6) was initiated in October 2012 and completed in October 2013. This survey covered a wide range of indicators including education, health, employment and time use, household assets, and housing conditions, among others. Interviews were conducted among 18,000 households in 1,200 enumeration areas selected across the entire country.

The results of the survey indicate that Ghana has made an enormous amount of progress since the previous GLSS in 2006. More importantly, the country has met the first MDG target of halving poverty between 1990 and 2015, reducing it from 51.7 percent of the population in 1992 to 24.2 percent in 2013. Based on the same consumption basket, the proportion of people living in poverty declined from 31.9 percent in 2005/06 to 24.2 percent in 2012/13, the number of people living in poverty declined from 7 million to 6.4 million. Similarly, the proportion of people living in extreme poverty (those unable to meet their basic food needs) declined from 16.5 percent in 2006 to 8.4 percent in 2013. This means that the number of people living in extreme poverty has reduced from 3.6 million in 2006 to 2.2 million in 2013. Regional analysis of the data suggests that poverty has been reduced in all regions, except in the Eastern Region.

Progress has also been made in many important areas such as education, healthcare and infrastructure, which clearly reflects in the gains made in reducing poverty among various population subgroups, for example, the educated. Generally, poverty remains a rural phenomenon, with those in rural Savannah being mostly affected. At the regional level, the incidence of poverty is largely concentrated in the three northern regions. Greater Accra, on the other hand, is the least poor.

A key area that continues to worsen and is a clear source of concern is that of equity. Ghana's inequality measure, the Gini Coefficient, has risen from 41.9 in 2005/06 to 42.3 in 2012/13, an indication that increasingly, income is shared inequitably across the population. This level of inequality has adverse implications towards Government's efforts at reducing poverty in the country.

# **APPENDIX TABLES AND METHODOLOGY**

## APPENDIX 1: Consumption poverty Indices

**Table A1.1: Indices of Poverty by locality and region; Poverty Line = GH¢1,314.00**

<b>2005/06</b>									
Locality	Population share	Average Welfare	Poverty indices				Contribution to national		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Accra (GAMA)	11.7	3,705.62	12.0	3.4	1.4	28.6	4.4	3.7	3.0
Urban Coastal	5.8	4,080.50	6.4	1.3	0.3	19.7	1.2	0.7	0.4
Urban Forest	14.7	3,404.29	8.7	2.2	0.9	25.6	4.0	3.0	2.5
Urban Savannah	5.4	2,468.06	30.1	10.7	5.2	35.5	5.1	5.3	5.2
Rural Coastal	10.9	2,210.00	27.2	6.7	2.3	24.7	9.3	6.7	4.8
Rural Forest	28.1	2,058.25	33.1	8.4	3.1	25.4	29.1	21.4	16.0
Rural Savannah	23.3	1,311.60	64.2	28.0	15.6	43.7	46.9	59.4	68.1
<b>Ghana</b>	<b>100.0</b>	<b>2,431.43</b>	<b>31.9</b>	<b>11.0</b>	<b>5.4</b>	<b>34.5</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>2012/13</b>									
Locality	Population share	Average Welfare	Poverty indices				Contribution to national		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Accra (GAMA)	15.0	4,829.62	3.5	0.9	0.3	26.3	2.2	1.8	1.3
Urban Coastal	5.1	3,319.77	10.1	2.3	0.9	22.4	2.1	1.5	1.2
Urban Forest	22.0	3,587.68	9.9	2.1	0.7	20.7	9.0	5.8	4.1
Urban Savannah	7.9	2,505.99	26.4	6.6	2.4	25.1	8.6	6.8	5.4
Rural Coastal	5.7	2,637.31	30.3	8.7	3.6	28.8	6.9	6.3	5.6
Rural Forest	26.2	2,296.82	27.9	7.9	3.3	28.3	30.1	26.7	24.0
Rural Savannah	18.0	1,611.62	55.0	22.0	11.5	40.1	40.8	51.1	58.3
<b>Ghana</b>	<b>100.0</b>	<b>2,926.86</b>	<b>24.2</b>	<b>7.8</b>	<b>3.6</b>	<b>32.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>2005/06</b>									
Region	Population share	Average Welfare	Poverty indices				Contribution to national		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Western	10.1	2,572.41	22.9	5.4	1.9	23.6	7.3	5.0	3.6
Central	8.8	2,747.27	23.4	5.6	1.8	23.7	6.4	4.4	3.0
Greater Accra	13.9	3,594.05	13.5	3.7	1.4	27.5	5.9	4.7	3.7
Volta	7.5	2,086.37	37.3	9.2	3.2	24.6	8.7	6.2	4.5
Eastern	13.4	2,571.20	17.8	4.2	1.6	23.8	7.5	5.2	4.0
Ashanti	16.8	2,732.06	24.0	6.4	2.4	26.7	12.6	9.8	7.6
Brong Ahafo	9.2	2,196.86	34.0	9.5	3.7	27.9	9.8	7.9	6.4
Northern	12.0	1,566.46	55.7	23.0	12.0	41.3	21.0	25.2	27.1
Upper East	4.8	1,119.93	72.9	35.3	20.4	48.5	10.9	15.3	18.2
Upper West	3.6	776.43	89.1	50.7	32.8	56.9	10.0	16.4	21.9
<b>Ghana</b>	<b>100.0</b>	<b>2,431.43</b>	<b>31.9</b>	<b>11.0</b>	<b>5.4</b>	<b>34.5</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>2012/13</b>									
Region	Population share	Average Welfare	Poverty indices				Contribution to national		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Western	9.2	2,891.48	20.9	5.7	2.3	27.5	7.9	6.8	6.1
Central	8.9	2,734.99	18.8	5.6	2.5	29.8	6.9	6.4	6.2
Greater Accra	16.3	4,681.65	5.6	1.6	0.6	29.3	3.8	3.5	3.0
Volta	8.7	2,414.94	33.8	9.8	4.0	29.0	12.1	11.0	9.7
Eastern	10.4	2,682.58	21.7	5.8	2.4	26.9	9.3	7.8	7.0
Ashanti	19.7	3,202.53	14.8	3.5	1.3	24.0	12.0	9.0	7.0
Brong Ahafo	9.9	2,471.79	27.9	7.4	2.9	26.4	11.4	9.4	8.0
Northern	10.0	1,763.60	50.4	19.3	9.8	38.3	20.8	24.9	27.6
Upper East	4.1	1,861.14	44.4	17.2	9.0	38.6	7.4	9.0	10.3
Upper West	2.9	1,390.67	70.7	33.2	18.8	46.9	8.4	12.3	15.2
<b>Ghana</b>	<b>100.0</b>	<b>2,926.86</b>	<b>24.2</b>	<b>7.8</b>	<b>3.6</b>	<b>32.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table A1.2: Indices of extreme poverty by locality and region;  
Poverty Line= GH¢792.05**

<b>2005/06</b>									
Locality	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Accra (GAMA)	11.7	3,256.45	4.5	1.1	0.4	24.0	3.2	2.5	1.8
Urban Coastal	5.8	3,585.90	1.1	0.1	0.0	8.4	0.4	0.1	0.1
Urban Forest	14.7	2,991.65	2.8	0.8	0.3	27.8	2.5	2.3	2.1
Urban Savannah	5.4	2,168.90	16.9	5.1	2.1	30.1	5.5	5.5	4.9
Rural Coastal	10.9	1,942.12	9.6	1.6	0.4	16.2	6.4	3.4	2.1
Rural Forest	28.1	1,808.77	12.6	2.1	0.6	16.9	21.4	11.9	7.7
Rural Savannah	23.3	1,152.62	42.9	16.	7.9	37.3	60.6	74.3	81.4
Ghana	100.0	2,136.71	16.5	5.0	2.3	30.4	100.0	100.0	100.0
<b>2012/2013</b>									
Locality	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Accra (GAMA)	15.0	4,829.62	0.5	0.1	0.0	16.7	0.9	0.5	0.3
Urban Coastal	5.1	3,319.77	2.0	0.4	0.2	22.0	1.2	0.9	0.8
Urban Forest	22.0	3,587.68	1.8	0.2	0.1	12.2	4.8	2.1	1.2
Urban Savannah	7.9	2,505.99	4.6	1.0	0.4	20.6	4.4	3.3	3.0
Rural Coastal	5.7	2,637.31	9.4	1.8	0.6	19.2	6.3	4.4	3.3
Rural Forest	26.2	2,296.82	7.8	1.8	0.6	22.6	24.2	20.1	17.9
Rural Savannah	18.0	1,611.62	27.3	8.7	3.9	31.9	58.3	68.5	73.2
Ghana	100.0	2,926.86	8.4	2.3	0.9	27.2	100.0	100.0	100.0
<b>2005/06</b>									
Region	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Western	10.1	2,260.60	6.8	1.3	0.5	19.4	4.2	2.7	2.0
Central	8.8	2,414.27	7.6	1.1	0.3	13.9	4.0	1.9	1.1
Greater Accra	13.9	3,158.41	5.2	1.1	0.3	20.1	4.4	2.9	2.0
Volta	7.5	1,833.48	13.3	2.2	0.6	16.8	6.0	3.3	1.9
Eastern	13.4	2,259.54	5.8	1.2	0.4	21.3	4.7	3.3	2.6
Ashanti	16.8	2,400.91	9.8	1.8	0.6	18.8	9.9	6.2	4.1
Brong Ahafo	9.2	1,930.57	13.7	2.9	1.1	21.3	7.6	5.3	4.3
Northern	12.0	1,376.59	36.1	12.	5.4	33.6	26.3	29.1	28.4
Upper East	4.8	984.18	56.9	21.	10.6	37.5	16.4	20.2	22.1
Upper West	3.6	682.31	76.0	35.	20.1	46.6	16.4	25.1	31.5
Ghana	100.0	2,136.71	16.5	5.0	2.3	30.4	100.0	100.0	100.0
<b>2012/13</b>									
Region	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Western	9.2	2,891.48	5.5	1.3	0.5	23.2	6.0	5.1	4.5
Central	8.9	2,734.99	6.8	1.5	0.6	22.5	7.1	5.9	5.5
Greater Accra	16.3	4,681.65	1.5	0.3	0.1	19.9	2.9	2.1	1.5
Volta	8.7	2,414.94	9.0	1.9	0.6	21.0	9.3	7.2	5.9
Eastern	10.4	2,682.58	6.0	1.3	0.5	21.5	7.3	5.8	5.6
Ashanti	19.7	3,202.53	2.9	0.5	0.2	17.7	6.9	4.5	3.2
Brong Ahafo	9.9	2,471.79	6.6	1.5	0.5	22.5	7.8	6.5	5.3
Northern	10.0	1,763.60	22.8	7.2	3.2	31.7	27.0	31.5	33.6
Upper East	4.1	1,861.14	21.3	6.9	3.1	32.5	10.3	12.3	13.1
Upper West	2.9	1,390.67	45.1	15.	7.2	33.9	15.4	19.3	21.8
Ghana	100.0	2,926.86	8.4	2.3	0.9	27.2	100.0	100.0	100.0

**Table A1.3: Indices of Poverty by sex of household head and locality;  
Poverty Line= GH¢1,314**

2005/06									
Locality/Sex of head	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
<b>Urban</b>	<b>37.7</b>	<b>3,467.05</b>	<b>12.4</b>	<b>3.7</b>	<b>1.6</b>	<b>29.5</b>	<b>14.7</b>	<b>12.6</b>	<b>11.1</b>
Male	26.8	3,463.31	12.3	3.7	1.6	30.3	10.4	9.1	8.1
Female	10.9	3,476.30	12.7	3.5	1.5	27.6	4.3	3.5	3.0
<b>Rural</b>	<b>62.3</b>	<b>1,805.43</b>	<b>12.4</b>	<b>3.7</b>	<b>1.6</b>	<b>29.5</b>	<b>85.3</b>	<b>87.5</b>	<b>88.9</b>
Male	49.9	1,731.38	47.0	17.1	8.6	36.3	73.5	77.4	80.2
Female	12.4	2,103.19	30.4	8.9	3.8	29.4	11.8	10.1	8.7
<b>Ghana</b>	<b>100.0</b>	<b>2,431.43</b>	<b>31.9</b>	<b>11.0</b>	<b>5.4</b>	<b>34.5</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Male	76.7	2,336.63	34.9	12.4	6.2	35.6	83.9	86.5	88.3
Female	23.3	2,743.98	22.1	6.4	2.7	28.9	16.1	13.5	11.7

2012/13									
Locality/Sex of head	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
<b>Urban</b>	<b>50.1</b>	<b>3,761.43</b>	<b>10.6</b>	<b>2.5</b>	<b>0.9</b>	<b>23.2</b>	<b>22.0</b>	<b>15.9</b>	<b>12.0</b>
Male	35.3	3,770.65	10.9	2.5	0.9	23.1	15.8	11.5	8.7
Female	14.9	3,750.69	10.0	2.3	0.8	23.2	6.1	4.4	3.4
<b>Rural</b>	<b>49.9</b>	<b>2,088.41</b>	<b>37.9</b>	<b>13.1</b>	<b>6.3</b>	<b>34.5</b>	<b>78.0</b>	<b>84.1</b>	<b>88.0</b>
Male	39.8	2,041.98	39.3	13.7	6.6	34.9	64.5	70.3	73.6
Female	10.1	2,272.52	32.5	10.7	5.1	32.8	13.5	13.8	14.4
<b>Ghana</b>	<b>100.0</b>	<b>2,926.86</b>	<b>24.2</b>	<b>7.8</b>	<b>3.6</b>	<b>32.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Male	75.1	2,853.76	25.9	8.4	3.9	32.6	80.4	81.8	82.3
Female	24.9	3,153.97	19.1	5.7	2.5	29.8	19.6	18.2	17.7

**Table A1.4: Indices of Poverty by employment status of household head;  
Poverty Line= GH¢1,314.00**

2005/06									
Employment status	Popula- tion share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Public Employee	7.6	3,762.84	9.0	2.7	1.1	30.1	2.1	1.9	1.6
Private Employee	11.5	3,280.66	14.3	3.9	1.5	27.0	5.2	4.0	3.2
Self-employed(non-agric)	19.6	3,077.09	17.0	5.3	2.5	31.1	10.4	9.4	9.2
Self-employed (agric)	49.0	1,755.80	45.1	15.4	7.3	34.1	69.2	68.3	67.0
Unemployed	2.0	2,953.46	20.0	7.4	4.0	37.2	1.2	1.3	1.5
Retired	0.7	3,791.33	9.1	2.0	0.8	21.4	0.2	0.1	0.1
Other Inactive	9.6	2,276.92	38.6	17.0	9.7	44.0	11.7	14.9	17.4
<b>Ghana</b>	<b>100.0</b>	<b>2,431.43</b>	<b>31.9</b>	<b>11.0</b>	<b>5.4</b>	<b>34.5</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

2012/2013									
Employment status	Popula- tion share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Public Employee	6.9	4,553.12	7.1	2.0	0.8	28.1	2.0	1.8	1.5
Private Employee	15.3	3,820.70	10.8	2.9	1.1	26.8	6.8	5.7	4.7
Self-employed (non-)	26.2	3,458.20	12.8	3.2	1.2	25.0	13.8	10.8	9.1
Self-employed (agric)	42.8	1,977.22	39.2	13.2	6.2	33.6	69.3	72.6	74.7
Unemployed	2.2	2,752.89	28.1	12.3	7.0	43.8	2.6	3.5	4.4
Retired	1.1	4,970.15	4.7	1.4	0.6	28.8	0.2	0.2	0.2
Other Inactive	5.4	2,957.94	23.6	7.6	3.6	32.4	5.3	5.3	5.4
<b>Ghana</b>	<b>100.0</b>	<b>2,926.86</b>	<b>24.2</b>	<b>7.8</b>	<b>3.6</b>	<b>32.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table A1.5: Indices of extreme poverty by employment status of household head, Poverty Line= GH¢792.05**

<b>2005/06</b>									
Employment Status	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Public Employee	7.6	2,964.66	4.6	1.3	0.5	27.9	1.7	1.5	1.2
Private Employee	11.5	2,584.76	8.3	1.7	0.6	21.0	4.7	3.1	2.3
Self-employed (non- Self-employed (agric)	19.6	2,424.37	9.2	3.0	1.4	32.4	8.9	9.1	9.1
Unemployed	49.0	1,383.36	28.5	8.8	3.9	30.8	69.2	67.3	65.0
Retired	2.0	2,326.97	12.2	4.7	2.5	38.9	1.2	1.5	1.7
Other Inactive	0.7	2,987.11	2.8	1.0	0.4	34.0	0.1	0.1	0.1
Ghana	9.6	1,793.94	29.6	11.5	6.3	38.9	14.2	17.4	20.6
<b>2012/2013</b>									
Employment Status	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Public Employee	6.9	4,553.12	3.5	0.9	0.3	27.3	1.6	1.4	1.1
Private Employee	15.3	3,820.70	5.1	1.2	0.4	23.1	3.5	2.7	1.9
Self-employed (non- Self-employed (agric)	26.2	3,458.20	8.2	2.3	1.1	28.4	9.7	9.1	9.1
Unemployed	42.8	1,977.22	23.2	6.8	3.0	29.3	68.9	66.5	63.9
Retired	2.2	2,752.89	10.7	4.0	2.1	37.4	1.3	1.6	1.8
Other Inactive	1.1	4,970.15	2.8	0.8	0.3	26.4	0.1	0.1	0.1
Ghana	5.4	2,957.94	25.5	9.7	5.2	38.1	14.9	18.6	22.2
Ghana	100.0	2,926.86	8.4	2.3	0.9	27.2	100.0	100.0	100.0

**Table A1.6: Indices of poverty by educational level of household head; Poverty Line= GH¢1,314**

<b>2012/13</b>									
Educational level of head	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
None	46.7	2,087.46	37.6	12.8	6.1	34.2	72.4	77.2	80.7
BECE	13.5	3,089.37	15.7	3.9	1.5	24.9	8.8	6.8	5.7
MSLC	21.7	3,023.27	16.2	4.5	1.8	28.1	14.5	12.7	11.0
SSS/Secondary	7.9	4,263.78	8.0	1.8	0.7	22.7	2.6	1.9	1.5
Voc/Tech/Teacher	4.7	4,267.37	5.5	1.4	0.5	24.8	1.1	0.8	0.6
Tertiary	5.4	6,268.60	3.0	0.9	0.3	28.7	0.7	0.6	0.5
Ghana	100.0	2,926.86	24.2	7.8	3.6	32.0	100.0	100.0	100.0
<b>2005/06</b>									
Educational level of head	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
None	56.1	1,837.26	44.3	16.6	8.5	37.3	78.0	84.4	88.6
BECE	5.8	3,063.14	14.6	3.6	1.2	24.3	2.7	1.9	1.3
MSLC	24.4	2,602.18	21.7	5.1	1.8	23.6	16.6	11.3	8.1
SSS/Secondary	4.8	3,707.86	9.2	2.8	1.2	30.3	1.4	1.2	1.1
Voc/Tech/Teacher	6.1	3,866.58	7.2	2.0	0.8	27.9	1.4	1.1	0.9
Tertiary	2.7	6,305.03	0.3	0.1	0.0	15.2	0.0	0.0	0.0
Ghana	100.0	2,431.43	31.9	11.0	5.4	34.5	100.0	100.0	100.0

**Table A1.7: Indices of poverty by educational level of household head;  
Poverty Line= GH¢792.05**

<b>2012/13</b>									
Educational level of head	Population share	Average Welfare	Poverty indices				Contribution to national		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
None	46.7	2,087.46	14.4	4.2	1.8	29.3	79.7	85.9	88.3
BECE	13.5	3,089.37	3.4	0.7	0.3	22.0	5.4	4.4	4.0
MSLC	21.7	3,023.27	4.9	0.8	0.3	17.2	12.6	7.9	6.5
SSS/Secondary	7.9	4,263.78	1.6	0.3	0.1	18.2	1.5	1.0	0.7
Voc/Tech/Teacher	4.7	4,267.37	0.6	0.2	0.1	33.5	0.4	0.4	0.4
Tertiary	5.4	6,268.60	0.7	0.1	0.0	19.8	0.5	0.3	0.2
Ghana	100	2,926.86	8.4	2.3	0.9	27.2	100.0	100.0	100.0

<b>2005/06</b>									
Educational level of head	Population share	Average Welfare	Poverty indices				Contribution to national		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
None	56.1	1,614.56	25.8	8.2	3.8	31.8	87.7	91.9	94.2
BECE	5.8	2,691.85	4.1	0.7	0.2	18.0	1.5	0.9	0.6
MSLC	24.4	2,286.76	5.9	1.1	0.4	19.4	8.7	5.6	4.0
SSS/Secondary	4.8	3,258.42	4.0	1.1	0.4	27.0	1.1	1.0	0.8
Voc/Tech/Teacher	6.1	3,397.91	2.8	0.6	0.2	20.9	1.0	0.7	0.5
Tertiary	2.7	5,540.78	0.1	0.0	0.0	5.4	0.0	0.0	0.0
Ghana	100.0	2,136.71	20.2	6.4	2.9	31.7	100.0	100.0	100.0

## Appendix 2: Household Assets

**Table A2.1: Percentage of households owning different physical assets by locality**

<b>1998/99</b>								
Asset	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Sewing machine	33.5	31.0	33.8	34.7	26.9	34.7	19.3	30.2
Stove	35.6	21.9	16.8	15.8	8.9	7.9	2.8	12.8
Refrigerator	44.1	31.4	30.8	14.7	7.8	10.5	1.1	16.6
Fan	63.8	37.9	40.6	26.5	13.7	15.7	1.5	23.6
Radio	74.5	57.3	57.0	64.8	41.0	49.9	46.4	52.7
TV	51.8	38.9	36.6	25.5	14.1	16.5	2.4	22.4
Camera	7.7	5.3	3.2	3.8	1.6	1.6	0.7	2.7
Mobile phone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Computer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bicycle	7.2	6.1	8.3	43.7	11.0	13.1	52.8	19.2
Motorcycle	0.5	1.2	0.8	5.2	0.7	0.7	2.4	1.2
Car	9.4	4.7	3.4	0.0	1.3	1.6	0.6	2.6
<b>2005/06</b>								
Asset	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Sewing machine	23.2	23.2	26.7	22.3	15.7	22.0	14.7	21.0
Stove	45.1	31.3	29.5	9.3	8.4	8.0	3.9	18.0
Refrigerator	49.4	32.7	37.7	20.9	10.4	9.3	3.4	21.2
Fan	66.6	47.2	49.4	40.8	15.9	14.6	6.1	30.2
Radio	81.7	76.2	75.9	70.9	66.4	73.9	69.0	73.6
TV	69.3	45.3	48.0	34.8	18.1	17.8	6.6	31.2
Camera	6.8	3.9	3.5	2.8	2.1	1.6	1.1	2.9
Mobile phone	48.1	30.2	33.5	15.5	7.5	8.0	2.9	19.1
Computer	7.1	2.9	2.9	2.6	0.2	0.9	0.2	2.1
Bicycle	4.9	9.3	12.0	50.9	12.3	15.6	62.6	22.5
Motorcycle	0.7	1.3	2.4	9.0	0.4	0.9	6.4	2.4
Car	9.0	3.2	4.1	2.3	1.1	1.5	0.8	3.0
<b>2012/13</b>								
Asset	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Sewing machine	16.5	15.2	18.0	19.9	11.9	14.8	12.6	15.8
Stove	60.2	44.7	45.5	17.5	15.6	12.6	2.5	30.2
Refrigerator	64.8	45.8	52.9	30.0	17.5	18.5	7.3	36.0
Fan	82.1	61.0	65.2	56.6	32.5	28.6	15.3	49.5
Radio	68.8	59.4	63.7	63.2	63.6	70.1	62.8	65.8
TV	85.9	71.3	74.2	57.9	42.9	39.5	20.8	57.1
Camera	6.4	2.6	3.2	1.4	0.9	0.8	0.5	2.5
Mobile phone	90.0	85.2	89.0	84.4	73.0	72.9	63.8	80.2
Computer	22.4	13.5	17.4	10.3	4.8	4.5	3.2	11.6
Bicycle	7.7	8.5	10.1	44.8	10.8	13.7	63.8	20.2
Motorcycle	2.0	3.8	4.0	25.2	4.5	3.6	21.1	7.4
Car	7.8	5.7	7.1	5.5	2.7	3.0	1.2	4.9

**Table A2.2: Percentage of households owning different physical assets by standard of living quintile**

**1998/99**

Asset	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Sewing machine	16.6	26.5	32.9	33.1	34.7	19.3	28.4	33.7	30.2
Stove	1.6	3.5	7.5	13.9	24.0	1.9	5.3	17.0	12.8
Refrigerator	0.7	2.2	9.6	18.5	32.6	0.8	3.4	23.1	16.6
Fan	1.4	6.1	16.5	26.0	43.5	2.4	7.2	32.1	23.6
Radio	35.5	42.6	51.6	57.1	62.6	36.9	44.3	58.5	52.7
TV	1.9	7.9	18.0	25.1	38.4	3.3	10.7	29.5	22.4
Camera	0.3	0.8	1.1	2.2	5.8	0.4	0.9	3.7	2.7
Mobile phone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Computer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bicycle	34.4	24.0	19.9	17.4	11.2	31.8	23.3	15.0	19.2
Motorcycle	0.5	0.4	1.8	1.7	1.4	0.4	1.1	1.5	1.2
Car	0.2	0.4	0.6	1.6	6.5	0.2	0.3	3.7	2.6

**2005/06**

Asset	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Sewing machine	12.5	18.9	18.8	23.0	25.4	12.5	16.3	22.7	21.0
Stove	1.9	5.1	8.2	16.8	37.0	1.5	4.5	21.5	18.0
Refrigerator	2.1	7.0	12.1	21.5	40.5	1.9	4.8	25.4	21.2
Fan	5.6	12.6	19.2	33.2	52.8	5.3	9.0	35.7	30.2
Radio	66.9	70.2	70.7	74.2	79.2	66.4	69.2	75.0	73.6
TV	5.3	14.9	22.0	35.0	51.9	4.9	12.2	36.6	31.2
Camera	0.3	1.1	0.8	2.4	6.1	0.2	0.9	3.4	2.9
Mobile phone	1.1	5.0	8.0	18.7	39.5	1.2	3.0	23.0	19.1
Computer	0.0	0.2	0.3	1.8	5.2	0.0	0.0	2.6	2.1
Bicycle	47.2	26.4	21.0	18.3	14.5	48.7	29.5	18.2	22.5
Motorcycle	3.1	2.2	1.4	2.2	3.1	3.2	2.4	2.3	2.4
Car	0.2	0.4	0.7	1.3	7.8	0.2	0.1	3.6	3.0

**2012/13**

Asset	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Sewing machine	10.4	14.0	16.2	18.2	17.1	7.4	13.4	16.7	15.8
Stove	2.6	8.9	19.6	34.0	56.8	1.8	4.1	35.4	30.2
Refrigerator	6.5	16.6	28.8	40.9	59.9	3.6	9.2	41.7	36.0
Fan	13.6	27.1	43.1	58.4	74.1	7.9	18.3	56.3	49.5
Radio	58.9	63.1	65.0	66.2	70.4	55.1	61.5	67.1	65.8
TV	22.1	37.9	52.7	66.4	78.4	13.9	29.3	63.6	57.1
Camera	0.2	0.2	0.3	1.2	6.9	0.0	0.2	2.9	2.5
Mobile phone	59.9	73.8	78.8	84.5	90.2	50.9	67.1	83.9	80.2
Computer	2.0	3.1	5.5	10.2	24.9	1.8	2.3	13.5	11.6
Bicycle	33.7	26.9	21.2	16.6	12.7	35.3	31.5	17.7	20.2
Motorcycle	8.0	8.2	7.8	6.1	7.4	7.9	8.7	7.2	7.4
Car	0.6	1.1	1.9	3.2	11.9	0.1	0.9	5.8	4.9

**Table A2.3: Percentage of households owning different physical assets by standard of living quintile - Urban**

**1998/99**

Asset	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Sewing machine	12.9	29.0	33.8	34.5	34.9	20.6	33.4	34.3	33.1
Stove	4.8	7.3	13.1	20.9	31.0	4.9	12.2	25.7	23.2
Refrigerator	2.3	5.3	20.0	31.1	43.9	2.7	7.3	37.3	32.8
Fan	3.5	15.2	32.3	41.8	58.0	8.4	14.3	50.4	44.9
Radio	28.0	47.0	59.2	64.6	69.1	36.8	47.6	66.5	63.0
TV	5.7	15.8	34.8	41.1	48.1	10.7	18.1	44.4	40.1
Camera	1.4	0.8	2.4	3.3	7.6	1.1	0.7	5.7	5.1
Mobile phone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Computer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bicycle	20.0	20.5	16.9	12.9	7.9	20.3	22.0	10.3	11.8
Motorcycle	0.0	0.7	1.9	1.7	1.3	0.7	2.0	1.4	1.4
Car	0.0	0.4	0.3	1.8	8.8	0.4	0.0	5.8	5.0

**2005/06**

Asset	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Sewing machine	9.5	20.9	21.2	24.7	27.1	10.7	13.7	25.4	24.5
Stove	4.6	10.0	17.5	26.5	46.0	2.6	7.1	34.8	32.6
Refrigerator	9.8	17.1	25.5	34.1	50.9	8.8	10.0	41.1	38.8
Fan	20.0	32.0	39.4	50.7	65.8	19.4	25.8	56.2	53.8
Radio	62.2	69.2	70.7	76.4	82.2	59.0	64.5	78.5	77.3
TV	22.9	32.7	41.8	51.8	62.8	22.8	24.3	55.4	53.1
Camera	0.0	2.2	1.0	3.0	7.1	0.0	0.3	4.9	4.6
Mobile phone	2.6	13.5	17.3	29.8	50.2	3.2	7.3	38.1	35.7
Computer	0.0	0.8	0.9	2.9	6.8	0.0	0.0	4.6	4.2
Bicycle	24.0	17.1	14.1	14.7	11.8	25.5	20.0	13.1	13.7
Motorcycle	2.0	1.3	1.6	2.7	2.7	2.4	1.0	2.5	2.4
Car	0.0	1.2	0.3	1.0	10.1	0.0	0.0	5.8	5.4

**2012/13**

Asset	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Sewing machine	13.0	16.5	17.5	19.5	17.0	4.5	17.6	17.6	17.5
Stove	7.8	18.1	31.6	44.6	65.5	8.5	9.3	49.1	46.4
Refrigerator	17.6	28.9	42.1	52.4	68.2	17.6	18.8	55.5	52.9
Fan	28.6	43.8	61.2	71.6	82.1	19.7	32.4	71.9	69.0
Radio	52.1	59.0	62.3	64.0	69.4	46.0	56.0	65.6	64.8
TV	39.5	54.9	68.6	79.0	85.8	32.6	44.1	77.9	75.4
Camera	0.8	0.3	0.4	1.4	8.2	0.0	0.7	4.2	3.9
Mobile phone	70.2	79.8	85.2	89.6	93.1	61.4	74.7	89.5	88.3
Computer	5.6	4.9	8.0	13.2	28.9	8.2	5.5	18.5	17.6
Bicycle	22.9	23.9	15.2	12.0	10.5	19.0	25.5	13.0	13.8
Motorcycle	4.1	8.4	7.7	4.5	6.2	4.7	7.0	6.1	6.2
Car	0.9	1.2	1.9	3.4	13.4	0.0	1.4	7.4	7.0

**Table A2.4: Percentage of households owning different physical assets by standard of living quintile – Rural**

**1998/99**

Asset	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Sewing machine	17.1	25.8	32.5	32.1	34.4	19.1	27.1	33.1	28.6
Stove	1.2	2.5	5.4	9.4	14.3	1.4	3.5	9.8	6.7
Refrigerator	0.5	1.4	5.6	10.3	17.1	0.5	2.4	11.3	7.3
Fan	1.1	3.9	10.6	15.7	23.5	1.3	5.4	17.0	11.3
Radio	36.5	41.5	48.7	52.2	53.7	36.9	43.4	51.8	46.7
TV	1.3	5.9	11.6	14.7	25.0	2.0	8.7	17.2	12.1
Camera	0.1	0.8	0.6	1.6	3.5	0.2	1.0	2.0	1.4
Mobile phone	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Computer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bicycle	36.5	24.8	21.0	20.4	15.6	33.8	23.6	18.8	23.5
Motorcycle	0.5	0.3	1.7	1.6	1.6	0.4	0.9	1.6	1.2
Car	0.2	0.4	0.7	1.4	3.4	0.2	0.4	1.9	1.3

**2005/06**

Asset	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Sewing machine	13.0	18.3	17.6	21.3	22.0	12.8	17.0	20.0	18.4
Stove	1.4	3.7	3.6	7.8	18.8	1.4	3.8	8.6	6.9
Refrigerator	0.8	4.0	5.7	9.8	19.2	0.9	3.3	10.0	7.7
Fan	3.2	6.9	9.4	16.7	26.5	3.1	4.3	15.7	12.3
Radio	67.7	70.5	70.7	72.2	73.0	67.5	70.6	71.6	70.8
TV	2.3	9.7	12.5	19.2	29.6	2.2	8.8	18.2	14.5
Camera	0.4	0.8	0.8	1.9	4.1	0.3	1.1	1.9	1.5
Mobile phone	0.9	2.5	3.5	8.3	17.7	0.9	1.8	8.3	6.4
Computer	0.0	0.0	0.0	0.8	2.0	0.0	0.0	0.7	0.5
Bicycle	51.1	29.2	24.4	21.6	20.0	52.3	32.2	23.1	29.1
Motorcycle	3.3	2.5	1.2	1.7	3.8	3.3	2.8	2.2	2.4
Car	0.2	0.1	0.9	1.5	3.3	0.3	0.2	1.5	1.2

**2012/13**

Asset	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Sewing machine	9.8	12.4	14.8	16.2	17.3	7.8	11.7	15.1	13.8
Stove	1.2	3.2	6.9	16.3	28.7	0.9	2.0	13.4	10.0
Refrigerator	3.5	8.9	14.9	21.8	32.7	1.6	5.4	19.4	15.0
Fan	9.5	16.8	24.0	36.3	48.1	6.2	12.7	31.1	25.2
Radio	60.7	65.7	67.8	69.9	74.0	56.4	63.7	69.5	67.1
TV	17.4	27.4	36.0	45.4	54.2	11.2	23.5	40.6	34.4
Camera	0.0	0.1	0.3	0.8	2.9	0.0	0.0	1.0	0.7
Mobile phone	57.1	70.0	72.2	75.9	80.8	49.4	64.1	74.9	70.3
Computer	1.1	2.0	2.8	5.3	12.1	0.9	1.1	5.4	4.2
Bicycle	36.6	28.7	27.5	24.2	20.2	37.6	33.9	25.3	28.1
Motorcycle	9.0	8.1	8.0	8.7	11.3	8.4	9.3	8.9	8.9
Car	0.5	1.1	1.9	3.1	6.8	0.2	0.7	3.1	2.4

## Appendix 3: Household Access to Services

**Table A3.1: Main source of drinking water of households by locality**

<b>2005/06</b>								
Facility	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Inside pipe	42.18	30.81	25.24	13.38	3.66	1.81	2.2	14.45
Water vendor	14.34	10.16	4.56	1.03	2.97	0.33	0	4.04
Neighbor/private	37.64	24.59	20.08	24.28	11.47	2.91	2.48	14.34
Public standpipe	4.52	16.18	21.04	28.21	14.63	7.24	1.24	10.72
Borehole	0.09	4.26	8.75	16.56	27.56	55.48	53.39	30.37
Well	1.12	11.34	17.3	8.83	10.24	11.88	8.74	10.32
Natural sources	0.12	2.67	3.02	7.71	29.47	20.34	31.95	15.76
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>2012/13</b>								
Facility	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Inside pipe	13.4	13.3	14.4	17.2	5.4	1.4	2.7	9.0
Water vendor	73.2	46.5	36.6	9.4	19.0	8.5	1.6	28.8
Neighbor/private	11.9	19.1	6.7	14.0	8.9	1.9	3.5	7.4
Public standpipe	1.0	15.8	17.9	28.1	24.6	10.2	6.3	12.5
Borehole	0.2	0.4	13.3	19.9	9.7	53.5	58.6	26.7
Well	0.3	3.6	8.5	7.8	8.9	5.4	5.9	5.6
Natural sources	0.1	1.5	2.4	3.8	23.5	19.1	21.5	10.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table A3.2: Main source of drinking water of households by standard of living quintile and poverty status**

<b>2005/06</b>									
Facility	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Inside pipe	3.2	5.9	7.6	14.5	27.0	2.8	3.6	17.1	14.5
Water vendor	0.1	1.3	2.0	4.0	8.1	0.1	1.4	4.8	4.0
Neighbor/private	5.1	9.5	13.5	18.5	18.0	4.3	8.5	16.3	14.3
Public standpipe	4.4	8.8	11.5	12.4	12.6	3.5	8.1	12.0	10.7
Borehole	52.9	40.4	33.9	26.0	17.6	54.2	43.8	25.8	30.4
Well	13.4	10.6	11.6	9.6	8.7	13.7	11.1	9.8	10.3
Natural sources	20.9	23.6	19.9	15.1	8.0	21.4	23.6	14.2	15.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>2012/13</b>									
Facility	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Inside pipe	2.7	5.0	8.8	10.4	12.9	1.7	3.5	10.2	9.0
Water vendor	3.7	10.2	20.1	30.7	53.3	2.0	5.1	33.7	28.8
Neighbor/private	5.1	7.1	8.3	9.3	6.5	2.6	7.0	7.7	7.4
Public standpipe	10.6	14.4	16.5	13.5	9.1	6.6	13.3	12.7	12.5
Borehole	48.6	38.8	29.4	23.0	12.0	54.9	43.3	22.7	26.7
Well	8.6	8.4	6.2	6.1	2.2	9.6	8.4	5.0	5.6
Natural sources	20.7	16.2	10.7	7.1	4.1	22.5	19.3	8.1	10.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table A3.3: Main source of drinking water of households by standard of living quintile and poverty status – Urban**

2005/06									
Facility	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Inside pipe	18.9	22.4	21.1	27.1	36.9	18.7	13.9	31.5	30.4
Water vendor	0.0	4.8	5.0	6.7	11.3	0.0	6.5	8.7	8.3
Neighbor/private	27.7	30.9	33.2	30.6	23.1	24.5	33.9	27.0	27.1
Public standpipe	11.3	18.9	17.1	15.3	15.2	8.7	21.7	15.6	15.6
Borehole	17.3	9.4	7.1	6.1	4.2	21.4	9.2	5.4	6.1
Well	20.7	10.0	13.2	11.0	7.7	22.6	10.5	9.5	10.0
Natural sources	4.1	3.7	3.3	3.3	1.7	4.2	4.3	2.4	2.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2012/13									
Facility	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Inside pipe	9.2	10.6	15.5	14.4	15.4	9.0	9.7	14.7	14.3
Water vendor	14.0	21.9	32.6	42.2	63.1	11.8	14.6	48.0	45.7
Neighbor/private	13.7	12.5	13.2	12.5	7.6	15.3	13.8	10.4	10.6
Public standpipe	23.9	21.5	19.5	14.6	7.5	16.5	24.8	13.0	13.7
Borehole	17.3	18.0	11.1	8.7	4.1	18.6	17.5	8.0	8.6
Well	14.6	12.1	5.8	6.4	1.6	19.8	13.7	4.6	5.3
Natural sources	7.5	3.5	2.3	1.3	0.7	8.9	6.0	1.4	1.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Table A3.3: Main source of drinking water of households by standard of living quintile and poverty status – Rural**

2005/06									
Facility	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Inside pipe	0.5	1.0	1.1	2.7	6.8	0.4	0.7	3.0	2.3
Water vendor	0.1	0.3	0.6	1.5	1.6	0.1	0.0	1.1	0.8
Neighbor/private	1.3	3.2	4.0	7.1	7.8	1.3	1.3	5.9	4.6
Public standpipe	3.2	5.8	8.8	9.6	7.4	2.7	4.3	8.4	7.0
Borehole	58.9	49.6	46.8	44.6	44.6	59.1	53.4	45.8	48.9
Well	12.2	10.7	10.9	8.3	10.9	12.3	11.2	10.1	10.6
Natural sources	23.8	29.5	28.0	26.1	20.9	24.0	29.0	25.8	25.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2012/13									
Facility	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Inside pipe	0.9	1.5	1.8	3.7	4.5	0.6	1.1	2.9	2.3
Water vendor	0.9	3.0	7.0	11.6	21.4	0.6	1.4	10.5	7.8
Neighbor/private	2.7	3.7	3.2	3.9	2.9	0.7	4.4	3.4	3.3
Public standpipe	7.1	9.9	13.2	11.7	14.3	5.2	8.7	12.4	11.0
Borehole	57.1	51.8	48.7	46.8	37.6	60.2	53.5	46.5	49.2
Well	7.0	6.0	6.6	5.7	4.2	8.2	6.3	5.6	6.0
Natural sources	24.3	24.1	19.5	16.7	15.1	24.5	24.6	18.8	20.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Table A3.5: Toilet facility used by households by locality**

<b>2005/06</b>								
Facility type	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Flush	33.2	22.9	17.5	5.1	1.4	1.1	0.7	10.2
Pit latrine	5.0	22.6	23.2	11.6	43.6	57.6	20.9	31.5
Pan/bucket	3.2	1.5	3.2	0.3	0.1	0.3	0.3	1.3
KVIP	15.8	9.3	15.5	14.3	11.4	11.8	4.6	11.7
Public	41.6	33.0	37.5	51.2	15.8	21.7	4.6	25.8
Other*	1.2	10.7	3.1	17.4	27.7	7.5	68.9	19.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>2012/13</b>								
Facility type	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Flush	34.2	21.2	21.1	5.7	5.0	2.5	0.8	13.9
Pit latrine	10.0	14.2	19.7	11.8	22.2	32.6	8.7	19.1
Pan/bucket	0.5	0.4	0.2	0.2	0.0	0.2	0.0	0.2
KVIP	20.6	13.6	14.1	7.3	7.4	10.7	3.6	12.1
Public	31.3	35.2	41.9	47.9	34.2	40.7	14.3	35.7
Other*	3.5	15.5	3.0	27.1	31.2	13.4	72.7	19.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

\*Other include bush, beaches etc.

**Table A3.6: Toilet facility used by households by standard of living quintile and poverty status**

<b>2005/06</b>									
Facility type	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Flush	0.5	2.4	4.1	8.1	22.7	0.5	1.1	12.4	10.2
Pit latrine	26.2	39.3	37.7	34.3	24.3	25.6	38.0	31.7	31.5
Pan/bucket	0.0	0.9	0.8	1.5	2.1	0.0	0.8	1.5	1.3
KVIP	5.0	7.7	11.7	13.2	15.1	4.9	5.6	13.2	11.7
Public	13.4	23.5	26.9	30.2	28.3	11.9	23.6	28.0	25.8
Other*	55.0	26.2	18.7	12.8	7.5	57.1	31.0	13.3	19.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>2012/13</b>									
Facility type	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Flush	1.7	3.6	6.6	13.7	29.1	0.8	2.0	16.3	13.9
Pit latrine	20.0	22.6	22.4	19.2	14.8	18.5	21.0	18.9	19.1
Pan/bucket	0.0	0.2	0.1	0.1	0.5	0.0	0.0	0.2	0.2
KVIP	3.9	8.1	11.3	16.8	14.8	2.0	5.8	13.6	12.1
Public	28.5	38.0	39.5	37.5	33.9	23.2	33.3	36.8	35.7
Other*	45.8	27.5	20.2	12.8	7.0	55.5	37.9	14.2	19.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

\*Other include bush, beaches etc.

**Table A3.7: Toilet facility used by households by standard of living quintile and poverty status – Urban**

2005/06									
Facility type	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Flush	3.2	9.2	11.8	15.6	32.0	3.5	2.9	23.7	22.2
Pit latrine	18.2	15.9	15.3	19.2	13.9	17.1	19.7	15.5	15.7
Pan/bucket	0.0	2.9	1.8	2.7	3.0	0.0	3.0	2.7	2.6
KVIP	12.8	10.9	13.6	13.9	15.7	13.9	12.0	14.6	14.5
Public	43.9	49.6	49.6	44.7	32.6	40.3	51.2	39.2	39.7
Other*	21.9	11.5	7.9	4.0	2.9	25.1	11.1	4.4	5.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2012/13									
Facility type	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Flush	6.0	8.0	11.7	20.3	35.8	5.1	5.0	24.6	23.3
Pit latrine	17.9	20.4	19.0	14.3	12.0	12.7	19.2	14.8	15.0
Pan/bucket	0.0	0.2	0.2	0.1	0.5	0.0	0.0	0.3	0.3
KVIP	6.3	11.7	14.1	18.8	15.5	4.0	8.5	15.8	15.2
Public	42.2	43.0	44.4	40.6	33.5	35.6	44.7	38.3	38.6
Other*	27.6	16.7	10.7	5.9	2.7	42.7	22.6	6.3	7.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

\*Other include bush, beaches etc

**Table A3.8: Toilet facility used by households by standard of living quintile and poverty status – Rural**

2005/06									
Facility type	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Flush	0.0	0.4	0.4	1.0	3.8	0.0	0.6	1.4	1.1
Pit latrine	27.5	46.2	48.6	48.5	45.5	26.9	43.1	47.5	43.5
Pan/bucket	0.0	0.3	0.4	0.3	0.3	0.0	0.1	0.3	0.3
KVIP	3.7	6.8	10.9	12.5	14.0	3.5	3.8	11.8	9.5
Public	8.3	15.8	15.9	16.7	19.6	7.6	15.8	17.0	15.3
Other	60.6	30.6	23.9	21.0	16.9	61.9	36.6	22.0	30.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2012/13									
Facility type	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Flush	0.6	0.9	1.2	2.7	7.6	0.1	0.8	3.0	2.3
Pit latrine	20.6	23.9	26.1	27.2	23.8	19.4	21.7	25.5	24.2
Pan/bucket	0.0	0.2	0.1	0.1	0.3	0.0	0.0	0.1	0.1
KVIP	3.3	5.9	8.2	13.4	12.4	1.8	4.7	10.0	8.2
Public	24.9	34.9	34.4	32.4	35.1	21.4	28.8	34.4	32.0
Other	50.7	34.2	30.1	24.2	21.0	57.3	44.0	27.0	33.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

\*Other include bush, beaches etc.

**Table A3.9: Percentage of households using electricity by locality**

Year	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
1998/99	90.7	72.9	83.4	45.8	28.2	25.1	3.9	41.4
2005/06	89.0	75.8	76.4	61.3	29.4	33.2	14.5	45.3
2012/13	92.7	83.9	89.2	79.9	61.7	55.5	29.5	70.7

Note: electricity include main grid and generator

**Table A3.10: Percentage of households using electricity by standard of living quintile and poverty status****1998/99**

Locality	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Urban	32.2	44.8	65.5	77.2	91.9	34.2	48.3	84.6	78.4
Rural	5.3	11.4	17.3	26.4	37.4	5.8	14.8	27.5	20.0
Total	8.7	18.1	30.5	46.4	68.9	10.0	21.7	53.3	41.4

**2005/06**

Locality	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Urban	45.9	62.4	70.8	81.2	89.7	40.0	61.6	81.4	78.0
Rural	11.8	25.8	28.2	34.8	44.0	11.1	21.9	32.4	25.5
Total	16.2	33.3	42.5	58.4	76.2	14.5	29.1	55.5	45.3

**2012/13**

Locality	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Urban	69.9	74.7	84.1	91.1	94.7	58.4	71.1	90.0	88.5
Rural	28.0	43.3	52.9	60.2	67.1	22.2	35.7	55.7	48.6
Total	36.9	55.3	68.9	79.5	88.2	26.7	45.7	76.9	70.7

Note: electricity includes main grid and generator

## Appendix 4: Human Development Tables

**Table A4.1: Type of health personnel consulted by ill or injured individuals by locality**

<b>2005/06</b>								
Type of Health personnel	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Doctor	51.2	39.5	34.9	26.0	22.2	19.8	11.4	22.7
Nurse/midwife	2.5	2.1	7.1	8.0	9.0	8.2	13.1	8.9
Medical	0.6	2.6	2.3	4.7	5.6	5.3	7.4	5.1
Pharmacist	6.0	1.2	4.3	1.5	0.0	0.8	0.2	1.4
Other	2.9	11.8	23.8	32.7	17.3	25.1	20.5	21.3
Did not consult	36.9	42.9	27.6	27.1	45.9	40.8	47.5	40.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>2012/13</b>								
Type of Health personnel	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Doctor	48.5	43.3	45.1	35.8	37.3	27.4	22.0	34.3
Nurse/midwife	3.5	4.9	7.1	9.3	14.3	13.7	22.9	12.3
Medical	0.6	1.3	1.6	3.7	3.6	3.2	4.0	2.7
Pharmacist	14.3	6.2	1.8	1.1	1.8	0.8	1.2	2.7
Other	10.0	14.2	15.1	8.4	12.2	17.4	13.4	14.2
Did not consult	23.1	30.1	29.4	41.8	30.9	37.6	36.7	33.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table A4.2: Type of health personnel consulted by ill or injured individuals by standard of living quintile and poverty status**

<b>2005/06</b>									
Type of Health personnel	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Doctor	12.8	18.3	21.5	27.0	37.6	12.5	14.9	26.9	22.7
Nurse/midwife	10.2	10.8	9.5	7.9	5.2	10.5	11.5	8.0	8.9
Medical	6.6	5.3	6.0	3.5	3.8	6.8	3.3	4.9	5.1
Pharmacist	0.7	0.4	1.0	2.3	2.9	0.7	0.1	1.8	1.4
Other	22.9	23.7	22.1	21.7	14.8	23.6	25.3	20.1	21.3
Did not consult	46.9	41.6	39.8	37.6	35.8	45.9	44.9	38.4	40.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>2012/13</b>									
Type of Health personnel	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Doctor	24.0	30.6	34.3	36.0	43.8	24.6	24.9	36.8	34.3
Nurse/midwife	15.4	14.0	14.3	11.8	7.1	15.8	14.8	11.6	12.3
Medical	3.4	3.2	2.8	2.4	2.0	3.5	3.3	2.5	2.7
Pharmacist	1.4	1.4	1.5	3.2	5.3	1.0	1.2	3.1	2.7
Other	13.6	14.9	15.4	16.2	10.9	11.1	16.9	14.0	14.2
Did not consult	42.2	36.0	31.7	30.3	30.9	43.9	38.9	32.1	33.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table A4.3: Type of health personnel consulted by ill or injured individuals by standard of living quintile and poverty status - Urban**

2005/06									
Type of Health personnel	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Doctor	22.0	36.0	36.8	34.7	42.9	18.8	28.2	38.8	37.2
Nurse/midwife	9.2	8.3	3.6	6.3	4.4	9.9	6.3	5.2	5.5
Medical Assistant	4.5	0.1	1.4	3.2	2.7	4.8	0.9	2.4	2.5
Pharmacist	1.7	2.9	3.5	4.3	3.5	1.3	0.9	3.8	3.6
Other	37.8	20.9	26.2	20.2	11.2	39.3	24.6	17.9	19.4
Did not consult	24.8	31.8	28.7	31.3	35.3	25.9	39.1	31.9	31.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2012/13									
Type of Health personnel	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Doctor	35.7	37.7	44.9	41.4	49.4	41.5	33.1	44.7	43.9
Nurse/midwife	7.6	4.2	9.8	7.5	4.6	4.7	8.1	6.4	6.5
Medical Assistant	1.9	2.2	2.2	1.7	1.2	1.5	2.0	1.7	1.7
Pharmacist	5.8	3.1	3.0	4.8	6.2	5.7	4.0	4.7	4.7
Other	10.6	13.6	12.1	17.9	9.1	7.4	14.4	12.7	12.7
Did not consult	38.4	39.2	28.0	26.7	29.6	39.3	38.6	29.7	30.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Table A4.4: Type of health personnel consulted by ill or injured individuals by standard of living quintile and poverty status - Rural**

2005/06									
Type of Health personnel	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Nurse/midwife	10.3	11.2	11.6	9.2	6.7	10.6	12.1	9.8	10.3
Medical	6.8	6.1	7.7	3.8	5.9	7.0	3.6	6.5	6.2
Pharmacist	0.6	0.1	0.2	0.7	1.6	0.6	0.0	0.5	0.5
Other	21.3	24.1	20.7	22.8	21.4	22.1	25.3	21.5	22.2
Did not consult	49.3	43.1	43.8	42.6	36.5	47.9	45.6	42.5	44.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2012/13									
Type of Health personnel	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Doctor	21.6	27.1	26.0	29.6	31.8	22.1	22.8	28.3	26.5
Nurse/midwife	17.0	18.6	17.8	16.9	12.6	17.4	16.5	17.0	17.0
Medical	3.7	3.7	3.2	3.3	3.5	3.8	3.6	3.4	3.5
Pharmacist	0.5	0.7	0.4	1.3	3.3	0.4	0.5	1.3	1.0
Other	14.3	15.5	18.0	14.2	15.0	11.7	17.6	15.4	15.4
Did not consult	42.9	34.4	34.7	34.7	33.8	44.6	39.0	34.6	36.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

**Table A4.5: Where consultation took place for ill or injured individuals by locality**

<b>2005/06</b>								
Place of consultation	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Hospital	28.4	29.5	32.5	25.7	20.9	15.3	10.3	18.6
Dispensary/Pharmacy	7.9	11.8	26.6	30.9	13.8	23.3	14.1	19.1
Clinic/maternity Home	26.0	14.2	11.6	12.5	14.8	17.3	20.5	17.4
Other	0.8	1.6	1.8	3.9	4.7	3.4	7.7	4.4
Did not consult	36.9	42.9	27.6	27.1	45.9	40.8	47.5	40.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>2012/13</b>								
Place of consultation	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Hospital	26.6	29.4	33.9	31.3	28.7	21.2	16.9	25.4
Dispensary/Pharmacy	22.9	19.0	15.8	7.9	12.0	15.8	11.1	14.8
Clinic/maternity Home	25.4	19.9	19.6	17.8	26.9	23.1	31.8	23.8
Other	2.1	1.5	1.4	1.2	1.5	2.4	3.5	2.2
Did not consult	23.1	30.1	29.4	41.8	30.9	37.6	36.7	33.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table A4.6: Where consultation took place for ill or injured individuals by standard of living quintile and poverty status**

<b>2005/06</b>									
Place of consultation	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Hospital	11.7	16.0	18.4	21.6	27.7	11.2	12.8	21.7	18.6
Dispensary/Pharmacy	18.7	19.3	19.8	21.4	15.4	19.2	20.0	18.9	19.1
Clinic/maternity	17.5	17.5	18.0	15.7	18.2	18.2	15.5	17.4	17.4
Other	5.3	5.6	4.0	3.6	2.8	5.5	6.8	3.6	4.4
Did not consult	46.9	41.6	39.8	37.6	35.8	45.9	44.9	38.4	40.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>2012/13</b>									
Place of consultation	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Hospital	16.9	22.1	26.0	27.7	31.9	17.8	17.4	27.4	25.4
Dispensary/Pharmacy	11.9	14.1	14.9	17.7	14.8	9.2	15.0	15.3	14.8
Clinic/maternity	26.2	25.8	24.9	22.3	20.8	26.8	25.9	23.2	23.8
Other	2.8	2.1	2.4	2.1	1.6	2.3	2.8	2.0	2.2
Did not consult	42.2	36.0	31.7	30.3	30.9	43.9	38.9	32.1	33.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table A4.7: Where consultation took place for ill or injured individuals by standard of living quintile and poverty status – Urban**

<b>2005/06</b>									
Place of consultation	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Hospital	20.4	28.8	26.7	29.1	34.0	16.8	23.3	30.9	29.8
Dispensary/Pharmacy	32.3	22.0	28.0	23.4	13.6	32.2	23.3	20.4	21.2
Clinic/maternity	16.4	15.5	14.6	14.8	15.4	17.9	12.1	15.1	15.2
Other	6.1	1.9	2.0	1.4	1.7	7.2	2.2	1.6	2.0
Did not consult	24.8	31.8	28.7	31.3	35.3	25.9	39.1	31.9	31.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>2012/13</b>									
Place of consultation	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Hospital	24.4	26.0	33.4	30.5	34.6	31.6	20.7	32.2	31.4
Dispensary/Pharmacy	14.2	15.1	13.9	21.3	14.3	10.6	16.2	16.2	16.1
Clinic/maternity	21.3	19.0	22.9	19.8	20.1	16.1	23.6	20.4	20.5
Other	1.7	0.7	1.9	1.8	1.4	2.4	0.9	1.5	1.5
Did not consult	38.4	39.2	28.0	26.7	29.6	39.3	38.6	29.7	30.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table A4.8: Where consultation took place for ill or injured individuals by standard of living quintile and poverty status - Rural**

<b>2005/06</b>									
Place of consultation	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Hospital	10.7	14.0	15.4	15.8	16.4	10.7	11.5	15.8	13.9
Dispensary/Pharmacy	17.2	18.9	16.9	19.8	18.9	17.9	19.6	17.9	18.2
Clinic/maternity	17.7	17.9	19.2	16.4	23.4	18.3	15.9	18.9	18.3
Other	5.2	6.2	4.8	5.4	4.9	5.3	7.4	4.9	5.4
Did not consult	49.3	43.1	43.8	42.6	36.5	47.9	45.6	42.5	44.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<b>2012/13</b>									
Place of consultation	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Hospital	15.4	20.2	20.2	24.3	26.3	15.8	16.6	22.3	20.5
Dispensary/Pharmacy	11.4	13.7	15.8	13.4	15.8	9.0	14.7	14.2	13.8
Clinic/maternity	27.2	29.0	26.5	25.3	22.2	28.4	26.5	26.3	26.5
Other	3.1	2.8	2.8	2.4	1.9	2.3	3.2	2.6	2.7
Did not consult	42.9	34.4	34.7	34.7	33.8	44.6	39.0	34.6	36.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table A4.9: Net enrolment in primary school, by locality, gender and standard of living quintile**

2005/06

Locality	Sex	Quintile					Poverty status			
		Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Urban	Male	61.8	70.9	79.3	82.2	83.9	61.3	63.2	81.5	78.4
	Female	74.3	70.3	74.9	79.4	88.2	74.1	68.4	80.9	79.7
	All	67.3	70.6	77.1	80.8	86.4	66.9	65.6	81.2	79.1
Rural	Male	51.1	65.9	68.2	71.5	83.2	50.1	61.6	70.9	61.5
	Female	48.7	61.6	67.5	66.4	70.7	48.3	60.5	66.0	58.6
	All	50.0	63.8	67.9	68.9	77.4	49.2	61.1	68.6	60.1
Total	Male	52.0	66.8	71.5	77.3	83.7	52.0	66.8	71.5	66.3
	Female	50.8	63.3	69.8	73.4	84.4	50.8	63.3	69.8	65.4
	All	51.5	65.1	70.7	75.3	84.1	51.5	65.1	70.7	65.8

Computed from GLSS 5 (2005/06)

2012/13

Locality	Sex	Quintile					Poverty status			
		Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	All
Urban	Male	69.5	76.6	79.4	81.8	88.3	78.7	67.4	81.8	79.6
	Female	69.4	76.9	82.1	82.7	84.1	52.2	74.7	81.8	80.2
	All	69.5	76.7	80.8	82.3	86.1	68.6	70.8	81.8	79.9
Rural	Male	60.8	69.2	72.6	70.1	74.1	59.3	63.8	71.1	66.2
	Female	60.7	68.3	73.6	73.9	77.1	58.6	64.6	71.9	66.6
	All	60.7	68.8	73.1	72.1	75.7	59.0	64.2	71.5	66.4
Total	Male	61.9	71.4	75.4	76.6	83.7	60.5	64.6	75.9	70.6
	Female	61.7	70.9	77.5	78.9	81.9	58.3	66.5	76.7	71.2
	All	61.8	71.2	76.4	77.8	82.8	59.5	65.5	76.3	70.9

Computed from GLSS 5 (2012/13)

Notes: Cells with less than 30 observations are marked with \*. "Very poor" correspond to those lying below the extreme poverty line, "poor" to those below the poverty line but above the extreme poverty line, and "non-poor" to those above the poverty line.

**Table A4.10: Net enrolment in JSS/JHS, by locality, sex poverty status and standard of living quintile**

**2005/06**

Locality	Sex	Quintile					Poverty status			All
		Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Urban	Male	*23.1	*25.3	37.0	51.9	46.2	26.5	23.5	43.3	40.7
	Female	*10.3	*23.3	44.8	35.5	43.0	8.8	21.1	39.2	36.5
	All	*16.7	24.4	40.8	43.4	44.3	17.6	22.6	41.1	38.5
Rural	Male	7.4	17.5	17.1	29.3	15.4	6.9	16.9	20.1	14.6
	Female	8.9	20.0	22.2	22.2	21.4	9.0	13.6	22.5	16.8
	All	8.0	18.7	19.6	25.9	18.5	7.8	15.3	21.3	15.6
Total	Male	8.7	19.3	23.9	41.4	39.1	8.5	18.2	30.8	23.0
	Female	9.0	20.7	29.7	29.7	38.9	9.0	14.6	30.7	23.9
	All	8.9	20.0	26.8	35.5	39.0	8.7	16.6	30.7	23.4

Computed from GLSS 5 (2005/06)

**2012/13**

Locality	Sex	Quintile					Poverty status			All
		Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Urban	Male	*16.8	33.5	35.4	41.4	48.7	*7.4	22.7	39.8	36.6
	Female	*18.3	32.0	34.2	38.6	56.7	*20.7	*19.7	41.1	37.9
	All	17.6	32.8	34.8	39.8	53.1	*14.3	21.2	40.5	37.3
Rural	Male	10.2	18.0	17.7	*15.0	34.8	7.1	13.8	19.6	14.6
	Female	10.6	20.2	20.6	25.7	39.4	8.6	15.2	23.3	17.7
	All	10.3	19.0	19.1	20.5	37.2	7.7	14.4	21.4	16.0
Total	Male	10.9	22.8	25.9	29.3	44.4	7.1	15.6	29.2	21.9
	Female	11.7	24.1	27.5	33.6	51.8	9.4	16.3	32.7	25.7
	All	11.2	23.4	26.7	31.6	48.4	8.1	15.9	31.0	23.8

Computed from GLSS 5 (2012/13)

Notes: Cells with less than 30 observations are marked with \*. "Very poor" correspond to those lying below the extreme poverty line, "poor" to those below the poverty line but above the extreme poverty line, and "non-poor" to those above the poverty line.

**Table A4.11: Net enrolment in secondary school, by locality, sex, poverty status and standard of living quintile**

2005/06

Locality	Sex	Quintile					Poverty status			All
		Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Urban	Male	2.0	13.8	23.7	25.0	44.6	*2.3	*13.8	28.7	25.1
	Female	14.3	12.1	25.0	25.7	28.3	*16.1	*0.0	*25.9	24.0
	All	7.0	12.9	24.3	25.4	34.0	8.0	7.3	27.1	24.5
Rural	Male	*2.2	*4.7	*7.6	*5.3	*15.6	*2.0	*3.4	7.1	4.7
	Female	*0.0	*2.0	*10.8	*6.8	*11.9	*0.0	*1.9	7.5	4.2
	All	*1.3	*3.4	*9.1	*6.0	*13.5	*1.2	*2.7	7.3	4.5
Total	Male	*2.1	*6.5	13.5	16.8	37.6	*2.1	*5.4	16.9	11.4
	Female	*1.7	*4.5	16.1	18.3	25.2	*1.8	*1.5	17.4	12.3
	All	*2.0	5.5	14.7	17.6	29.8	*2.0	*3.6	17.2	11.8

Computed from GLSS 5 (2005/06)

2012/13

Locality	Sex	Quintile					Poverty status			All
		Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non poor	
Urban	Male	*8.2	*9.9	18.9	29.1	37.4	*7.1	*7.7	24.8	36.6
	Female	*11.8	*9.9	16.6	25.1	31.3	*7.7	*12.3	22.2	37.9
	All	*9.8	9.9	17.7	26.9	33.7	*7.4	*10.0	23.3	37.3
Rural	Male	*3.6	7.8	*8.1	*12.0	*25.5	*2.1	*5.9	10.0	14.6
	Female	*3.2	*5.2	*9.5	*15.6	*13.9	*1.5	*5.2	9.8	17.7
	All	3.4	6.6	8.8	13.9	*18.7	*1.9	5.6	9.9	16.0
Total	Male	4.3	8.4	13.0	22.0	34.3	2.6	6.3	17.2	11.9
	Female	4.5	6.9	12.9	21.4	27.2	2.0	7.1	16.6	12.6
	All	4.4	7.7	13.0	21.7	29.9	2.3	6.7	16.9	12.2

Computed from GLSS 5 (2012/13)

Notes: Cells with less than 30 observations are marked with \*. "Very poor" correspond to those lying below the extreme poverty line, "poor" to those below the poverty line but above the extreme poverty line, and "non-poor" to those above the poverty line.

## Appendix 5: Consumption poverty using 2005/6 poverty lines

**Table A5.1: Indices of Poverty by locality using the old poverty line: GH¢370.89**

**2005/06**

Locality	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Accra (GAMA)	11.7	1,122.91	10.6	2.9	1.1	27.0	4.4	3.5	2.8
Urban Coastal	5.8	1,236.52	5.5	0.9	0.2	16.5	1.1	0.5	0.3
Urban Forest	14.7	1,031.60	7.0	1.8	0.7	25.8	3.6	2.8	2.4
Urban Savannah	5.4	747.90	26.9	9.3	4.4	34.7	5.1	5.3	5.2
Rural Coastal	10.9	669.70	23.9	5.3	1.8	22.2	9.2	6.0	4.2
Rural Forest	28.1	623.71	27.9	6.8	2.4	24.3	27.4	19.8	14.4
Rural Savannah	23.3	397.46	60.3	25.5	13.9	42.3	49.3	62.0	70.7
<b>Ghana</b>	<b>100.0</b>	<b>736.80</b>	<b>28.5</b>	<b>9.6</b>	<b>4.6</b>	<b>33.6</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**2012/13**

Locality	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Accra (GAMA)	15.0	1,463.52	3.4	0.7	0.2	21.9	2.4	1.7	1.2
Urban Coastal	5.0	1,010.49	7.9	1.8	0.7	22.7	1.9	1.4	1.1
Urban Forest	22.1	1,085.68	7.9	1.5	0.5	19.5	8.2	5.1	3.7
Urban Savannah	7.9	759.39	22.7	5.3	1.9	23.4	8.4	6.3	4.9
Rural Coastal	5.6	804.47	25.8	7.3	2.9	28.3	6.7	6.1	5.4
Rural Forest	26.3	695.45	24.4	6.6	2.6	26.9	29.9	25.9	23.3
Rural Savannah	18.0	488.37	50.7	19.8	10.1	39.0	42.6	53.5	60.5
<b>Ghana</b>	<b>100.0</b>	<b>886.93</b>	<b>21.4</b>	<b>6.7</b>	<b>3.0</b>	<b>31.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Computed from GLSS6 (200125/13)

**2005/06**

Region	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Western	10.1	779.52	8.1	1.6	0.6	20.3	4.5	2.9	2.2
Central	8.8	832.51	9.7	1.5	0.4	15.1	4.7	2.3	1.3
Greater Accra	13.9	1,089.11	5.8	1.3	0.4	22.1	4.5	3.2	2.2
Volta	7.5	632.23	15.3	2.9	0.8	18.8	6.3	3.8	2.3
Eastern	13.4	779.15	6.6	1.5	0.5	22.7	4.9	3.5	2.8
Ashanti	16.8	827.90	11.2	2.3	0.7	20.5	10.4	6.8	4.6
Brong Ahafo	9.2	665.71	15.0	3.5	1.3	23.5	7.6	5.7	4.5
Northern	12.0	474.69	38.9	13.5	6.1	34.7	25.9	28.6	28.5
Upper East	4.8	339.37	59.8	23.3	11.8	39.0	15.7	19.6	21.6
Upper West	3.6	235.28	79.1	37.7	21.8	47.6	15.6	23.7	30.0
<b>Ghana</b>	<b>100.0</b>	<b>736.80</b>	<b>28.5</b>	<b>9.6</b>	<b>4.6</b>	<b>33.6</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**2012/13**

Region	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Western	9.2	876.20	18.0	4.7	1.9	26.3	7.7	6.5	5.8
Central	8.9	828.76	16.1	4.7	2.1	29.5	6.6	6.3	6.1
Greater Accra	16.3	1,415.68	5.1	1.4	0.5	27.0	3.9	3.4	2.8
Volta	8.7	731.80	29.4	8.2	3.2	28.0	11.9	10.7	9.2
Eastern	10.4	812.89	18.0	4.8	2.0	26.8	8.7	7.5	6.8
Ashanti	19.7	970.43	12.8	2.8	1.0	21.7	11.8	8.2	6.3
Brong Ahafo	9.9	748.99	24.3	6.0	2.3	24.6	11.2	8.9	7.6
Northern	10.0	534.40	45.9	17.2	8.5	37.4	21.4	25.8	28.5
Upper East	4.1	563.98	40.4	15.3	7.9	37.8	7.7	9.3	10.7
Upper West	2.9	421.40	67.8	30.5	16.8	45.1	9.1	13.2	16.1
<b>Ghana</b>	<b>100.0</b>	<b>886.93</b>	<b>21.4</b>	<b>6.7</b>	<b>3.0</b>	<b>31.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Computed from GLSS6 (2012/13)

**Table A5.2: Indices of Poverty by locality using the old poverty line: GH¢288.47****2005/06**

Locality	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Accra (GAMA)	11.7	1,122.91	5.2	1.3	0.4	24.5	3.4	2.6	2.0
Urban Coastal	5.8	1,236.52	1.9	0.2	0.0	8.5	0.6	0.2	0.1
Urban Forest	14.7	1,031.60	3.0	0.9	0.4	29.5	2.5	2.3	2.1
Urban Savannah	5.4	747.90	18.1	5.7	2.4	31.8	5.4	5.5	5.0
Rural Coastal	10.9	669.70	11.3	2.0	0.6	17.9	6.8	3.9	2.4
Rural Forest	28.1	623.71	14.6	2.7	0.8	18.8	22.6	13.6	8.8
Rural Savannah	23.3	397.46	45.6	17.5	8.9	38.4	58.7	71.9	79.6
<b>Ghana</b>	<b>100.0</b>	<b>736.80</b>	<b>18.1</b>	<b>5.7</b>	<b>2.6</b>	<b>31.3</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**2012/13**

Locality	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Accra (GAMA)	15.0	1,665.39	1.0	0.1	0.0	12.3	1.5	0.7	0.4
Urban Coastal	5.0	1,149.87	2.1	0.5	0.2	24.5	1.1	1.0	0.9
Urban Forest	22.1	1,235.43	2.0	0.3	0.1	15.8	4.5	2.6	1.4
Urban Savannah	7.9	864.13	6.6	1.2	0.4	18.0	5.4	3.6	3.1
Rural Coastal	5.6	915.43	11.5	2.2	0.7	19.6	6.6	4.7	3.6
Rural Forest	26.3	791.38	9.3	2.1	0.8	22.7	25.4	21.1	18.7
Rural Savannah	18.0	555.73	29.7	9.8	4.4	32.9	55.4	66.4	71.9
<b>Ghana</b>	<b>100.0</b>	<b>1,009.26</b>	<b>9.6</b>	<b>2.6</b>	<b>1.1</b>	<b>27.4</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Computed from GLSS6 (2012/13)

**2005/06**

Region	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Western	10.1	779.52	8.1	1.6	0.6	20.3	4.5	2.9	2.2
Central	8.8	832.51	9.7	1.5	0.4	15.1	4.7	2.3	1.3
Greater Accra	13.9	1,089.11	5.8	1.3	0.4	22.1	4.5	3.2	2.2
Volta	7.5	632.23	15.3	2.9	0.8	18.8	6.3	3.8	2.3
Eastern	13.4	779.15	6.6	1.5	0.5	22.7	4.9	3.5	2.8
Ashanti	16.8	827.90	11.2	2.3	0.7	20.5	10.4	6.8	4.6
Brong Ahafo	9.2	665.71	15.0	3.5	1.3	23.5	7.6	5.7	4.5
Northern	12.0	474.69	38.9	13.5	6.1	34.7	25.9	28.6	28.5
Upper East	4.8	339.37	59.8	23.3	11.8	39.0	15.7	19.6	21.6
Upper West	3.6	235.28	79.1	37.7	21.8	47.6	15.6	23.7	30.0
<b>Ghana</b>	<b>100.0</b>	<b>736.80</b>	<b>18.1</b>	<b>5.7</b>	<b>2.6</b>	<b>31.3</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**2012/13**

Region	Population share	Average Welfare	Poverty indices				Contribution to national poverty		
			P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>1</sub> /P <sub>0</sub>	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>
Western	9.2	997.06	6.3	1.5	0.6	23.8	6.1	5.3	4.6
Central	8.9	943.07	7.6	1.8	0.7	23.9	7.0	6.1	5.6
Greater Accra	16.3	1,610.95	2.0	0.4	0.1	18.6	3.4	2.3	1.7
Volta	8.7	832.73	12.1	2.3	0.8	19.2	10.9	7.7	6.2
Eastern	10.4	925.02	7.1	1.6	0.6	22.1	7.6	6.1	5.7
Ashanti	19.7	1,104.28	3.3	0.7	0.2	19.9	6.7	4.9	3.5
Brong Ahafo	9.9	852.30	7.8	1.8	0.6	23.0	8.0	6.7	5.6
Northern	10.0	608.11	24.9	8.1	3.6	32.5	25.8	30.6	33.0
Upper East	4.1	641.77	23.5	7.8	3.5	33.1	9.9	11.9	12.9
Upper West	2.9	479.52	48.8	17.0	8.1	34.8	14.6	18.5	21.1
<b>Ghana</b>	<b>100.0</b>	<b>1,009.26</b>	<b>9.6</b>	<b>2.6</b>	<b>1.1</b>	<b>27.4</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Computed from GLSS6 (2012/13)

## Appendix 6: Macroeconomics Indicators

**Table A6.1: Main macroeconomic statistics and indicators, 2005-2013**

<b>ANNEX 1; MAIN MACROECONOMIC STATISTICS AND INDICATORS, 2005-2013</b>									
	2005	2006	2007	2008	2009	2010	2011	2012	2013**
Population estimate (million)	21.37	21.88	22.39	22.90	23.42	24.23	24.61	25.87	26.48
Exchange rate (C/\$)	0.91	0.92	0.94	1.07	1.42	1.43	1.51	1.81	1.92
GDP current (million GH¢)	15,586.6	18,706.0	23,169.5	30,265.9	36,698.1	44,530.5	59,816.3	74,959.1	93,461.5
GDP current (million US\$)	17,161.2	20,332.7	24,648.9	28,285.5	25,844.0	31,129.3	39,516.6	41,458.9	48,677.5
GDP constant 2006 (million GH¢)	17,602.4	18,706.0	19,913.9	21,591.9	22,454.5	24,251.9	27,891.4	30,342.6	32,507.3
GDP constant 2006 (million US\$)	19,380.6	20,332.7	21,185.4	20,179.1	15,813.2	16,953.5	18,426.0	16,782.1	16,930.8
Per capita GDP (GH¢)	729.5	854.9	1,034.8	1,321.6	1,567.0	1,837.8	2,430.6	2,897.8	3,529.6
Per capita GDP (US\$)	803.2	929.3	1,100.9	1,235.2	1,103.5	1,284.7	1,605.7	1,602.8	1,838.3
Indicators of growth									
Growth in GDP at current market prices	21.7	20.0	23.9	30.6	21.3	21.3	34.3	25.3	24.7
Growth in GDP at constant 2006 prices	5.9	6.2	6.5	8.4	4.0	8.0	15.0	8.8	7.1
Change in GDP deflator	14.9	12.9	16.4	20.5	16.6	12.3	16.8	15.2	16.4
Cement Production ('000 tonnes)	2,534.9	2,898.1	3,184.7	3,418.8	3,239.3	3,603.8	4,437.9	4,650.0	4,869.0
Electricity generation ('000 MegaWatts)	6,787.9	8,429.0	6,978.1	8,333.5	8,958.9	10,057.7	9,976.3	11,081.8	12,867.3

\*\* Revised

## Appendix 7: GLSS Sample Design

The sixth round of the Ghana Living Standards Survey (GLSS6), like the previous rounds, was designed to provide nationally and regionally representative indicators. It applied the same sampling methodology, a two stage sampling procedure. In the first stage enumeration areas (EAs) were selected based on the 2010 Population and Housing Census, with probability proportional to size (number of households). At the second stage a fixed number of households were selected by systematic sampling within each of the selected enumeration areas.

Given the long period of time between any of the GLSS surveys and the nearest census, the above procedure will generally not give a self-weighting sample (where the probability of inclusion of each household is equal). This is because the number of households in an enumeration area is likely to have changed between the survey and the census. The selected enumeration areas will then not have been picked with probability proportional to their *true* sizes.

If the selected enumeration areas were fully listed after their selection, however, then it is possible either (i) to compute weights reflecting differential probabilities of selection of households in different EAs; or (ii) to amend the above procedure to restore a self-weighting sample. The former was used for GLSS 6.

In GLSS 6, the number of primary Sampling Units (PSUs) and households were increased from 580 and 8,700 to 1,200 and 18,000 respectively –an increase of about 107% over the GLSS 5 figures to cater for the needs of other developmental studies ongoing in Ghana. Overall, the response rate for the survey was 93.2 percent (see main GLSS6 report for detailed information).

## **Appendix 8: Construction of the Standard of Living Measure<sup>6</sup>**

As noted in the text, the primary standard of living measure used in this study is total household consumption, per adult equivalent, expressed in constant prices of Greater Accra in January 2013. This forms the basis for both the analysis of consumption poverty (chapter 3 of the report) and for the definition of the quintile groups used in the analysis of other aspects of living conditions (chapter 4 to 6 of the report). This appendix explains more fully the construction of the standard of living measure and briefly summarizes how it is used in defining poverty and quintile groups.

### **Measuring total household consumption expenditure<sup>7</sup>**

For GLSS 6, the construction of the standard of living measure differs slightly from what was used in the previous surveys in the components aggregated. In addition to the previous estimation manual used for the previous GLSS, the Survey-based Harmonized Indicator program manual (SHIP) developed by the World Bank was also used which presents detailed guidelines and recommendations for compiling household survey data into a set of most commonly available variables/indicators so that the results can be replicated from the original household survey data with ease.

The first step in constructing the standard of living measure is to estimate total household consumption expenditure. Table A8.1 sets out in detail how this is done, covering the components, their composition and sources within the different GLSS 6 questionnaires. This consumption measure covers food, housing and other non-food items, and includes imputations for consumption from sources other than market purchases. These imputations include consumption from the output of own production and imputed rent from owner-occupied dwellings. An imputation is also made for user values derived from durable consumer goods owned by the household, rather than including expenditure on the acquisition of such goods (these are lumpy expenditures, e.g. purchasing a car, more like an investment rather than consumption).

Total consumption expenditure is estimated for a twelve-month period based on information collected with the questionnaire. In the case of frequent purchases (e.g. food purchases, consumption of own produced food, frequently purchased non-food items such as soap, tobacco) this is estimated by grossing up responses relating to a shorter recall period. GLSS 6 households received 6 visits at regular intervals of 5 days in the course of the survey (in GLSS 3 eight visits at two-day intervals in rural areas and eleven visits at three-day intervals in urban areas; seven visits at 5-day interval in the case of GLSS 4; and 11 visits at three-day intervals in GLSS 5). In each case, in all but the first two visits, they were asked about their purchases of each item since the last visit, and the answers to these “bounded recall” questions (recall relative to a fixed reference point) was used as the basis for estimating

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<sup>6</sup> *The methodology to measure the household-level standard of living used in this report is consistent with the one established in the previous Patterns and Trends of Poverty in Ghana (GSS, 2007). Therefore this appendix is reproduced from GSS (2007) although changes were made to reflect the addition of GLSS 6.*

<sup>7</sup> Refer to *THE ESTIMATION OF COMPONENTS OF HOUSEHOLD INCOMES AND EXPENDITURES: A Methodological Guide based on the Ghana Living Standards Survey, 1991/92, 1998/99 and 2005/06 and Survey-based Harmonized Indicator Program Manual (SHIP).*

annual expenditure or consumption. Similar principles were used to estimate annual expenditure on frequently purchased non-food items and on consumption of own produced food (valuing items at the price at which they could have been sold). In the case of consumption of own produced food, the number of months in which an item was normally consumed was used to annualize.

A longer recall period of twelve months, was used in GLSS 6 to collect information on less frequently purchased consumption items (e.g. clothing and footwear). As noted above (as in GLSS3-5), purchases of durable goods were not included in this, and some other expenditure items deemed not to be associated with increases in welfare were also excluded such as expenditure on hospital stays. This is also a lumpy sum, and it would not be reasonable to regard a household as being significantly better off because it had to make a large expenditure on an emergency operation. Medical expenses in the last 2 weeks (Section 3) were also excluded, however medical services expenditure (section 9A) for the past 12 months were included in the consumption measure.

In the case of owner occupied dwellings, imputed rents were estimated based on a hedonic equation, which related rents of rented housing to characteristics, and used this to estimate rental values for owner-occupied dwellings based on their characteristics and amenities. Consumption flows (user values) for durable goods were estimated based on an average depreciation rate of 20 percent.

In GLSS 6, the value of wage payments received in kind, and consumption of the output of non-farm enterprises owned and operated by the household were excluded, hence the minor difference in the estimation of total household consumption from the previous surveys (SHIP included these components as income). The sum of all the items in Table A8.1 gives the estimate of total household consumption expenditure, which is expressed in nominal values (current prices).

### **Allowing for cost of living variations**

Having estimated total nominal household consumption expenditure, further steps are needed before it is possible to compare standards of living across households. Because the standard of living is expressed in nominal terms, it must be adjusted to allow for variations in prices faced by households. Two sources of variations are relevant for purposes of this study:

- (i) differences in the cost of living between different localities and regions at a point in time;
- (ii) variations in prices within the time periods covered by the surveys, which can occur due to inflation and seasonality

A cost of living index was constructed capturing these different dimensions of variation. Geographic and time differences in the cost of living were indexed to January 2013 Greater Accra prices between food and non-food based on the monthly regional food and non-food CPI. The differences in the share of food and non-food components of the consumption basket were considered among regions and between rural and urban areas. These procedures give the geographic cost of living indices reported in Table 2.1 (in the main text).

### **Allowing for differences in the size and composition of households**

The last adjustment needed to construct a standard of living measure is to allow for differences in the size and or composition of households. Though a simple way of doing this would be to divide by the nominal size of the household to give total household consumption

expenditure per capita, this does not allow for the fact that different members (e.g. young children and adults) have different calorie needs. A way of allowing for these differences in calorie intake needs is, instead, to measure household size in equivalent adults, where this is measured using an appropriate adult equivalence scale based on calorie needs of different members (e.g. based on age, sex).

The issue in doing this in practice is which equivalence scale to use. Given that there is currently no Ghana specific scale to use, the scale used here is based on calorie requirements commonly used in nutritional studies in Ghana (see Table A8.2). Calorie requirements are distinguished by age category and sex.

The standard of living measure is then calculated by dividing the estimate of total household consumption expenditure in January 2013 Accra prices by household size measured in number of equivalent adults. The poverty analysis is based on the distribution of this standard of living measure over all households in the sample, weighting each household by its size in number of persons. This household size weight means that for example a poor household of six members is given twice the weight of an equally poor household of three persons. Each individual (rather than each household) in the sample is given equal weight.

The standard of living measure is used both in the analysis of consumption poverty (chapter 3) and in defining quintile groups for the analysis of other aspects of living standards (chapter 4 to 6). Box 1 provides the rationale for the poverty lines used in this study. Individuals are then defined as poor if their standard of living measure falls below the poverty line, and as extreme poor if it falls below the lower poverty line.

Characteristics of poverty are summarized in the tables by poverty indices and the interpretation of which is discussed in Appendix 9. The quintile groups used in chapter 4 to 6 are based on the quintile points of the (weighted) distribution over individuals of the standard of living measure. Thus the first quintile represents the poorest 20 percent of individuals, the second quintile the next poorest 20 percent and so on until the fifth quintile which is the richest 20 percent. By analyzing education, health and so on by quintile group, it enables an assessment of the extent to which poor outcomes in these areas are – or are not – associated with low values of the standard of living.

**Table A8.1: Estimation of total household consumption expenditure from the GLSS 3-5 and GLSS6 surveys**

<b>Element of total household consumption</b>	<b>Composition</b>	<b>Source of data in GLSS questionnaire</b>	<b>Notes</b>
Expenditure on food, beverages and tobacco	Expenditure on about 120 commodities (based on pattern in several short recall periods in the past month)	Section 9B	
Consumption of own produced food	Consumption of food commodities from own production, valued by respondents at prices at which they could be sold	Section 8H	
	Wage income received in form of food (based on payment interval reported by respondents)	Section 4A	Excluded in GLSS 6 expenditure but included as income
Expenditure on non-food items	Expenditure on frequently purchased non-food items (based on pattern in 6 five-day recall period in the past month)	Section 9B	Section 9B in GLSS6
	Expenditure on less-frequently purchased non-food goods and services ( based on purchases in last 12 months)	Section 9A	Excluding purchases of durable goods and expenditure on hospital stays
	Expenditure on education (based on expenditure for each child in past 12 months)	Section 2A	
	Additional expenditure not captured in Sec2A	Section 9A	
	Expenditure on household utilities: water, electricity, garbage disposal (based on payment interval reported by respondents)	Section 7	Replaced with information in Section 9A & 9 B if missing in Section 7 (SHIP)
Expenditure on housing	Actual rental expenditure (based on payment interval reported by respondents)	Section 7	Rent excluded in estimation of poverty lines only
	Imputed rent of owner occupied dwellings	Section 7	Estimated using the hedonic regression equation
Imputed expenditure on non-food items	Durable goods user values	Section 12B	
	Consumption from output of non-farm enterprises (based on two week period)	Section 10H	Excluded in GLSS 6 expenditure but included as income
	Wage income in kind in forms other than food and housing (based on payment interval reported by respondents)	Section 4	

**Table A8.2: Recommended energy intakes**

Category	Age (years)	Average energy allowance per day (kcal)	Equivalence scale
Infants	0 - 0.5	650	0.22
	0.5 - 1.0	850	0.29
Children	1 - 3	1300	0.45
	4 - 6	1800	0.62
	7 - 10	2000	0.69
Males	11 - 14	2500	0.86
	15 - 18	3000	1.03
	19 - 25	2900	1.00
	25 - 50	2900	1.00
	51+	2300	0.79
Females	11 - 14	2200	0.76
	15 - 18	2200	0.76
	19 - 25	2200	0.76
	25 - 50	2200	0.76
	51+	1900	0.66

Source: Recommended Dietary Allowances, 10<sup>th</sup> edition, (Washington D.C.: National Academy Press, 1989)

## Appendix 9: Poverty Indices<sup>8</sup>

Given a suitable measure of the standard of living (denoted as  $y_i$ ) and poverty line ( $z$ ), it remains to define a convenient means of summarizing the principal dimensions of poverty. Essentially, two aspects are of interest: the *incidence* and the *depth* of poverty. The former is conveniently summarized as the proportion of individuals in the population of interest who are poor, and the latter by the mean proportion by which the welfare level of the poor falls short of the poverty line. Both of these may be derived as special cases of the widely used  $P_\alpha$  indices of poverty proposed by Foster, Greer and Thorbecke<sup>9</sup> and defined as follows:

$$P_\alpha = \frac{1}{n} \sum_{i=1}^q \left( \frac{z - y_i}{z} \right)^\alpha$$

where individuals have been ranked from the poorest ( $i=1$ ) to the richest ( $i=n$ , where  $n$  is the population size), where  $q$  is the number of economic units reflecting the weight placed on the welfare levels of the poorest among the poor. In the special case in which  $\alpha = 0$ , the index reduces to a measure of the incidence of poverty (the proportion of the population defined to be poor):

$$P_0 = \frac{q}{n}$$

This index takes into account the number of poor people, but not the depth of their poverty. In the case in which  $\alpha = 1$  the index may be written as follows:

$$P_1 = \left( \frac{q}{n} \right) \left( \frac{z - \mu_p}{z} \right)$$

where  $\mu_p$  is the mean income of the poor. The index  $P_1$  is thus the product of the index  $P_0$  and the income gap ratio, a measure of the average amount by which poor households fall below the poverty line. Therefore the  $P_1$  index takes account of both the incidence and the depth of poverty. It is not, however, sensitive to a mean-preserving redistribution among the poor. For higher values of  $\alpha$ , increased weight is placed on the poorest of the poor; the  $P_2$  index for example, takes account not only of the incidence and depth of poverty, but also of the distribution among the poor.

Apart from their ability to capture the different dimensions of poverty, another useful feature of the  $P_\alpha$  class of indices is their property of *decomposability*. This means that, if the population can be divided into  $m$  mutually exclusive and exhaustive subgroups, then the value of the index for the population as a whole can be written as the weighted sum of the

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<sup>8</sup> Note that this Appendix is largely based on the discussion in the *Pattern of Poverty* study (GSS, 1995, pp. 97-99).

<sup>9</sup> J.E. Foster, J. Greer and E. Thorbecke, "A Class of Decomposable Poverty Measures", *Econometrica*, Vol. 52 (1984), pp. 761-766.

values of the poverty indices relating to the subgroups ( $P_{\alpha,j}$ , where  $j = 1, \dots, m$ ), where the weights are the population shares of the subgroups ( $x_j$ ):

$$P_{\alpha} = \sum_{j=1}^m x_j P_{\alpha,j}$$

Given this decomposition, the contribution of group  $j$  to national poverty can be calculated as  $c_j$ :

$$c_j = \frac{x_j P_{\alpha,j}}{P_{\alpha}}$$

Decomposition of  $P_{\alpha}$  indices is used in this study as the basis for examining the geographic and socio-economic pattern of consumption poverty in Ghana.

Finally, note that when welfare is measured using a household level variable (as proposed above) it is appropriate to use weights in calculating poverty indices, where the weights reflect the differences in size of different households. These weights are in addition to those used to reflect differences in the probability of selection for different households in GLSS (see Appendix 5).

### ***The use of poverty indices for poverty analysis***

	Population share	Average Welfare	$P_0$	$P_1$	$P_2$	$P_1/P_0$	$C_0$	$C_1$	$C_2$
Rural Coastal	5.7	2,637.31	30.1	8.7	3.6	28.9	7.1	6.4	5.7

To illustrate the use of poverty indices, take the example of rural coastal in 2012/13, and the higher poverty line of GH¢1,314.00. The above is taken from Table A1.1 in Appendix 1. The following conclusions can be drawn from this data.

*Population share:* the proportion of the total population accounted for by people from that locality. In this example rural coastal represents 5.7 percent of the total population.

*Average welfare:* this is the mean value (expressed in Ghana cedis) of the standard of living measure: total household consumption expenditure per adult equivalent, in the constant prices of Accra in January 2013. The average standard of living in this locality GH¢2,637.31.

$P_0$ : the proportion of the population in that locality falling below the national poverty line, which is referred to as the headcount ratio or the incidence of poverty. About 30.1 percent of population in the sample in rural coastal live below the poverty line.

$C_0$ : the locality's contribution to the total number of people in poverty ( $P_0$ ). Of all the people in the sample who fall below the poverty line, 7.1 percent live in the rural coastal. This is higher than its population share, indicating a disproportionately high incidence of poverty than the national average.

$P_1/P_0$ : the income gap ratio or the depth of poverty. Those in the rural coastal below the poverty line have an average standard of living 28.9 percent below the selected poverty line.

$P_1$ : the poverty gap index. This measure takes account of both the incidence and the depth of poverty. It gives an indication of the minimum level of resources which would be required to eliminate poverty, assuming that resources could be perfectly targeted to raise every poor person exactly to the poverty line. The amount of money required is equivalent to 8.7 percent of the poverty line for every person in rural coastal. This amount would then have to be allocated, with perfect targeting, among those in rural coastal who are below the poverty line in order to raise them exactly to the poverty line.

$C_1$ : the locality's contribution to total poverty, as measured by the poverty index  $P_1$ .  $C_1$  is lower than  $C_0$  because there is a lower depth of poverty in the rural coastal than in the country as a whole.

$P_2$ : the severity of poverty. This measure is more complex to interpret, but reflects the need to give greater attention to the needs of the poorest. It takes account of the distribution of poverty among the poor, giving greater weight to the poorest of the poor.

$C_2$ : The locality's contribution to the severity of poverty, as measured by the poverty index  $P_2$ .  $C_2$  is lower than  $C_1$ ; as more emphasis is placed on the depth of poverty (moving from  $P_0$  to  $P_1$  to  $P_2$ ), the contribution of the rural coastal to severity of poverty in Ghana decreases.