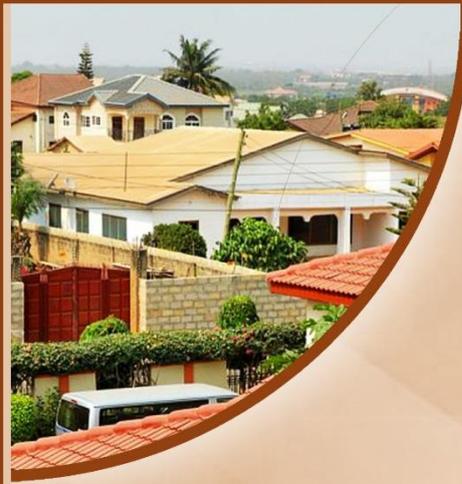




GHANA LIVING STANDARDS SURVEY ROUND 7 (GLSS 7)

POVERTY TRENDS IN GHANA 2005 - 2017



AUGUST, 2018

PREFACE AND ACKNOWLEDGEMENT

This publication presents the latest analysis of the living conditions of Ghanaian households and the poverty profile based on the seventh round of the Ghana Living Standards Survey (GLSS7) conducted in 2016/17. Six rounds of the Ghana Living Standards Survey have been conducted in the past (1987/88, 1988/89, 1991/92, 1998/99, 2005/06 and 2012/13), each covering a nationally representative sample of households interviewed over a period of 12 months.

This report primarily focuses on consumption poverty and inequality in Ghana. It also examines some poverty-related issues such as asset ownership and access to services and human development. The report also 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.

In the previous survey in 2012/13, a new consumption basket was derived and this produced new poverty lines and a new set of items to be included in the welfare measurement. A review of this basket reveals that there is no drastic change in the consumption pattern, and therefore the basket was maintained for the current survey. This report therefore examines the pattern of poverty in Ghana since 2005 based on the 2012/13 basket.

The Ghana Statistical Service (GSS) wishes to acknowledge the contribution of the Government of Ghana, the U.K. Department for International Development (DFID), the Dutch Government and the World Bank, who provided both technical and financial support toward the successful implementation of the GLSS7 project.

The GSS acknowledges the invaluable contribution of Anthony Amuzu, Abena Osei-Akoto, Jacqueline Anum, Anthony Krakah, Francis Bright Mensah, John Foster Agyaho, and Victoria Anim-Ansah, all from the GSS, and the support of Tomomi Tanaka, Rose Mungai, Kwadwo Opoku, Kathleen Beegle, Ryoko Sato and Ayago Esmubancha Wambile (all staff of the World Bank) to produce this report under the overall guidance and supervision of Baah Wadieh, the Acting Government Statistician. We also appreciate the contribution of Professor Abena Daagye Oduro and Dr. Louis Boakye-Yiadom whose reviews and comments as external reviewers have contributed to enriching this report.



BAAH WADIEH
ACTING GOVERNMENT STATISTICIAN

AUGUST 2018

TABLE OF CONTENTS

PREFACE AND ACKNOWLEDGEMENT	i
LIST OF TABLES	iv
LIST OF FIGURES	vi
ACRONYMS AND ABBREVIATIONS.....	viii
EXECUTIVE SUMMARY	ix
CHAPTER ONE: THE ECONOMIC CONTEXT	1
1.1 Gross domestic product 2005–2017	1
1.2 Trends in inflation (2005–2017)	2
1.3 Public expenditures (2005–2017).....	3
1.5 Social interventions	4
1.6 Summary	4
CHAPTER TWO: CONSUMPTION POVERTY, METHODOLOGY, AND MEASUREMENT	5
2.1 Introduction	5
2.2 Data sources	5
2.3 Sampling.....	6
2.4 Construction of the standard of living measure	6
2.5 Standard of living measurement.....	8
2.6 Consumption basket and construction of the poverty line	8
2.7 Summary	9
CHAPTER THREE: CONSUMPTION POVERTY.....	10
3.1 Introduction	10
3.2 Poverty incidence and poverty gap (Absolute Poverty).....	10
3.3 Extreme poverty in Ghana.....	14
3.4 Poverty in administrative regions.....	17
3.5 Summary of consumption poverty	22
CHAPTER FOUR: COVARIATE ANALYSIS.....	23
4.1 Introduction	23
4.2 Inequality: A Gini Coefficient Analysis.....	23
4.3 Inequality: A Palma Ratio/Index Analysis.....	26
4.4 Growth analysis of poverty: Is Ghana’s economic growth pro-poor?	27
4.5 Growth elasticity of poverty.....	27
4.6 Growth incidence in Ghana.....	27
4.7 Decomposition of poverty headcount	30
4.8 Poverty by economic activity and gender of household head.....	32
4.9 Poverty and educational level of household head	34
4.10 Summary.....	35

CHAPTER FIVE: HOUSEHOLD ASSETS	36
5.1 Introduction	36
5.2 Asset ownership	36
5.3 Summary	39
CHAPTER SIX: ACCESS TO SERVICES	40
6.1 Introduction	40
6.2 Household access to utilities and sanitation facilities	40
6.3 Summary	44
CHAPTER SEVEN: HUMAN DEVELOPMENT	45
7.1 Introduction	45
7.2 Access to health services	45
7.3 Access to education	51
7.4 Summary	61
CHAPTER EIGHT: CONCLUSION	62
REFERENCES.....	64
APPENDIX TABLES AND METHODOLOGY	65
Appendix 1: Consumption Poverty Indexes	66
Appendix 2: Household Assets	75
Appendix 3: Household Access to Services	79
Appendix 4: Human Development Tables	88
Appendix 5: Macroeconomics Indicators	99
Appendix 6: GLSS Sample Design.....	100
Appendix 7: Construction of the Standard of Living Measure.....	102
Appendix 8: Poverty Indexes.....	107

LIST OF TABLES

Table 2.1:	Sample allocation of EAs and households by region and by type of residence ..	6
Table 2.2:	Regional cost of living indexes.....	7
Table 3.1:	Poverty incidence and poverty gap by locality, 2005/06–2016/17 (percentage) Poverty line = GH¢1,314	13
Table 3.2:	Extreme poverty incidence and poverty gap by locality, 2005/06–2012/13 (percentage) Extreme poverty line = GH¢792.05	16
Table 3.3:	Poverty incidence and poverty gap by region, 2005/06–2016/17 (percentage) Poverty line = GH¢1,314	19
Table 3.4:	Extreme poverty incidence and poverty gap by locality, 2005/06–2016/17 (percentage) Extreme poverty line = GH¢792.05	21
Table 4.1:	Palma index by region and locality	26
Table 4.2:	Decomposition of regional headcount poverty	31
Table A1.1a:	Indexes of poverty by locality and region; Poverty line = GH¢1,314.00	66
Table A1.1b:	Indexes of poverty by locality and region; Poverty line = GH¢1,314.00	67
Table A1.2a:	Indexes of extreme poverty by locality and region; Poverty line=GH¢792.05 ..	68
Table A1.2b:	Indexes of extreme poverty by locality and region; Poverty line=GH¢792.05 ..	69
Table A1.3:	Indexes of poverty by sex of household head and locality; Poverty line = GH¢1,314	70
Table A1.4:	Indexes of poverty by employment status of household head; Poverty line = GH¢1,314.00	71
Table A1.5:	Indexes of extreme poverty by employment status of household head, Poverty line = GH¢792.05	72
Table A1.6:	Indexes of poverty by educational level of household head; Poverty line = GH¢1,314	73
Table A1.7:	Indexes of poverty by educational level of household head; Poverty line = GH¢792.05	74
Table A2.1:	Percentage of households owning different physical assets by locality	75
Table A2.2:	Percentage of households owning different physical assets by standard of living quintile	76
Table A2.3:	Percentage of households owning different physical assets by standard of living quintile - Urban.....	77
Table A2.4:	Percentage of households owning different physical assets by standard of living quintile - Rural.....	78
Table A3.1:	Main source of drinking water of households by locality	79
Table A3.2:	Main source of drinking water of households by standard of living quintile and poverty status	80
Table A3.3:	Main source of drinking water of households by standard of living quintile and poverty status - Urban	81
Table A3.4:	Main source of drinking water of households by standard of living quintile and poverty status - Rural	82
Table A3.5:	Toilet facility used by households by locality	83
Table A3.6:	Toilet facility used by households by standard of living quintile and poverty status, 2005/06–2016/17	84
Table A3.7:	Toilet facility used by households by standard of living quintile and poverty status - Urban	85
Table A3.8:	Toilet facility used by households by standard of living quintile and poverty status - Rural	86

Table A3.9: Percentage of households using electricity by locality	87
Table A3.10: Percentage of households using electricity by standard of living quintile and poverty status	87
Table A4.1: Type of health personnel consulted by ill or injured individuals by locality	88
Table A4.2: Type of health personnel consulted by ill or injured individuals by standard of living quintile and poverty status.....	89
Table A4.3: Type of health personnel consulted by ill or injured individuals by standard of living quintile and poverty status - Urban	90
Table A4.4: Type of health personnel consulted by ill or injured individuals by standard of living quintile and poverty status - Rural	91
Table A4.5: Where consultation took place for ill or injured individuals by locality	92
Table A4.6: Where consultation took place for ill or injured individuals by standard of living quintile and poverty status.....	93
Table A4.7: Where consultation took place for ill or injured individuals by standard of living quintile and poverty status - Urban	94
Table A4.8: Where consultation took place for ill or injured individuals by standard of living quintile and poverty status - Rural	95
Table A4.9: Net enrolment in primary school, by locality, gender, and standard of living quintile	96
Table A4.10: Net enrolment in JSS/JHS, by locality, sex poverty status and standard of living quintile	97
Table A4.11: Net enrolment in secondary school, by locality, sex, poverty status and standard of living quintile	98
Table A6.1: Main macroeconomic statistics and indicators, 2005–2013	99
Table A7.1: Estimation of total household consumption expenditure for GLSS7	105
Table A7.2: Recommended energy intakes	106

LIST OF FIGURES

Figure 1.1: Annual GDP growth rates (%), 2005–2017	1
Figure 1.2: Sectoral shares (percentage) of GDP at basic prices.....	2
Figure 1.3: Combined food and non-food inflation rates (%), 2005–2017	3
Figure 1.4: Total, recurrent, and capital government budget expenditure(GH¢, Millions).....	3
Figure 3.1: Poverty incidence by locality (Poverty line = GH¢1,314)	12
Figure 3.2: Extreme poverty incidence by locality (Poverty line = GH¢792.05).....	15
Figure 3.3: Poverty incidence (P0) by region, (Poverty line = GH¢1,314).....	18
Figure 3.4: Extreme poverty incidence (P0) by region; Poverty line = GH¢792.05	20
Figure 4.1: Inequality by locality: Gini coefficient, 2005/06–2016/17	24
Figure 4.2: Inequality by region: Gini coefficient, 2005/06–2016/17	25
Figure 4.3: Growth elasticity of poverty	27
Figure 4.4: Growth incidence curve, national level	28
Figure 4.5: Growth incidence curve in urban localities in Ghana	29
Figure 4.6: Growth incidence curve in rural localities in Ghana	29
Figure 4.7: Decomposition of headcount poverty change at the national level and by urban/rural between 2012/13 and 2016/17	31
Figure 4.8: Poverty incidence by employment status of household, 2012/13–2016/17 (Poverty line = GH¢1,314)	33
Figure 4.9: Poverty incidence by sex of household head, 2005/06–2016/17 (Poverty line = GH¢1,314)	33
Figure 4.10: Poverty incidence by household’s head’s education level (Poverty line = GH¢1,314)	34
Figure 4.11: Poverty gap by household head’s education level (Poverty line = GH¢1,314) ..	34
Figure 5.1: Percentage of urban households owning different household assets, 2005/06–2016/17	37
Figure 5.2: Percentage of rural households owning different household assets, 2005/06–2016/17	37
Figure 5.3: Percentage of urban households owning different transportation assets, 2005/06–2016/17	38
Figure 5.4: Percentage of rural households owning different transportation assets, 2005/06–2016/17	38
Figure 5.5: Percentage of households owning a refrigerator by quintile, 2005/06–2016/17.	39
Figure 5.6: Percentage of households owning a television set by quintile, 2005/06–2016/17	39
Figure 6.1: Percentage of households using potable water by locality and standard of living quintile, 2005/06–2016/17.....	41
Figure 6.2: Percentage of households using flush or KVIP toilet by region, 2005/06–2016/17	42
Figure 6.3: Percentage of households using electricity by locality and standard of living quintile, 2005/06–2012/13–2016/17	43
Figure 6.4: Percentage of households using electricity by region, 2005/06–2012/13– 2016/17	43
Figure 7.1: Percentage of ill or injured individuals that consulted a doctor by locality and standard of living quintile, 2005/06–2016/17	46
Figure 7.2: Percentage of ill or injured individuals that consulted a doctor by region, 2005/06–2016/17	46

Figure 7.3: Percentage of ill or injured individuals that consulted a pharmacist/chemical seller by locality and standard of living quintile, 2005/06–2016/17	47
Figure 7.4: Percentage of ill or injured individuals that consulted a pharmacist/chemical seller by region, 2005/06–2016/17	48
Figure 7.5: Percentage of ill or injured individuals that went to a hospital, by locality and standard of living quintile	49
Figure 7.6: Percentage of ill or injured individuals that went to a hospital, by region.....	49
Figure 7.7: Percentage of ill or injured individuals that went to a health facility, by locality and standard of living quintile	50
Figure 7.8: Percentage of ill or injured individuals that went to a health facility, by region	50
Figure 7.9: Net primary school attendance ratio by sex and locality, 2005/06–2016/17	52
Figure 7.10: Net primary school attendance ratio by sex and region, 2005/06–2016/17	53
Figure 7.11: Net primary school attendance rate by sex and quintile, 2005/06–2016/17	53
Figure 7.12: Gross primary school attendance rate by sex and locality, 2005/06–2016/17	55
Figure 7.13: Net JSS school attendance rate by sex and locality, 2005/06–2016/17	56
Figure 7.14: Net JSS school attendance rate by sex and region, 2005/06–2016/17	57
Figure 7.15: Net JSS school attendance rate by sex and quintile, 2005/06–2016/17	58
Figure 7.16: Gross JSS school attendance rate by sex and locality, 2005/06–2016/17.....	58
Figure 7.17: Gross JSS school attendance rate by sex and quintile, 2005/06–2016/17.....	59
Figure 7.18: Net SSS school attendance rate by sex and locality, 2005/06–2016/17.....	59
Figure 7.19: Net SSS school attendance rate by sex and quintile, 2005/06–2016/17	60
Figure 7.20: Gross SSS school attendance rate by sex and quintile, 2005/06–2016/17.....	60

ACRONYMS AND ABBREVIATIONS

BECE	Basic Education Certificate Examination
CHPS	Community-based Health Planning Services
CPI	Consumer Price Index
EA	Enumeration Area
GAMA	Greater Accra Metropolitan Area
GSS	Ghana Statistical Service
GLSS	Ghana Living Standards Survey
GEP	Growth Elasticity of Poverty
GDP	Gross Domestic Product
GIC	Growth Incidence Curve
GAR	Gross Attendance Rate
JHS	Junior High School
JSS	Junior Secondary School
KVIP	Kumasi Ventilated Improved Pit
LEAP	Livelihood Empowerment Against Poverty
MCH	Maternity and Child Health
MSLC	Middle School Living Certificate
NAR	Net Attendance Rate
MDG	Millennium Development Goal
PHC	Population and Housing Census
SDG	Sustainable Development Goal
SHIP	Survey-based Harmonized Indicator Program
SHS	Senior High School
WHO	World Health Organization

EXECUTIVE SUMMARY

Introduction

Since 1987, the Ghana Statistical Service (GSS) has been conducting the Ghana Living Standards Survey (GLSS) with the aim of measuring the living conditions and well-being of the population. The GLSS has been useful to policy makers and other stakeholders as it provides timely and reliable information about trends in poverty and helps identify priority areas for policy interventions that aim at improving the lives of the population. It has, over the years, served as one of the primary tools used in monitoring progress on poverty reduction strategies in the country. Monitoring poverty is an essential part of the struggle to end it.

The survey provides the required data at the regional and urban/rural levels for examining poverty and associated indicators for households and the population. The data also allow for decomposition of poverty changes between different groupings: urban/rural, locality, region, and socioeconomic status.

Since the fifth round of the Ghana Living Standards Survey (GLSS5) in 2005, the Ghanaian economy benefited from the production of crude oil in commercial quantities and strong economic growth in 2011, leading to the achievement of lower-middle-income status for the country. Economic growth decreased thereafter to a low of 3.7 percent in 2016 but increased in 2017. However, it remains to be seen whether this growth has benefitted all sections of society, including the poorest. Several social intervention programs, including the Livelihood Empowerment Against Poverty (LEAP), Capitation Grant and School Feeding Programme, and now the Free Senior High School Programme started in 2017, 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. To address these, reliable information is required to develop and implement policies that would have an impact on the lives of the poor and vulnerable.

This report is based on the seventh round of the Ghana Living Standards Survey (GLSS7) conducted in 2016/17. Previous rounds of the survey were conducted in 1987/88, 1988/89, 1991/92, 1998/99, 2005/06, and 2012/13. The method used to estimate poverty rates in this report is identical to that used in the last two surveys, thus making it possible to compare poverty rates over time. The current survey uses the 2012/13 basket. The report assumes what would happen to poverty if a similar, or the same, basket of goods defined in 2012/13 was consumed in 2005/06 and 2016/17, and the same methodology was used to derive deflators for 2005/06 and 2016/17 to deflate the consumption per capita adult equivalent expenditure.

Economic Context

The annual gross domestic product (GDP) growth rates recorded in Ghana for 2005 to 2017 ranged from 3.7 percent to 14.0 percent with the lowest growth rate recorded in 2016 and the highest in 2011. The average annual growth rate recorded for the same period was 6.8 percent. From 2010 to 2013, the country experienced an annual average GDP growth rate of 9.6 percent, with average per capita income of GH¢2,672.2. Ghana became a lower-middle-income country. The country's average annual growth rate of GDP in constant 2006 prices and per capita income was 5.0 percent and GH¢5,540.8, respectively, for 2014–2017.

The non-food inflation rate has mainly been responsible for the high inflation rate in Ghana. The average annual non-food inflation rate for 2005–2017 was 16.6 percent and has been consistently higher than the average annual food inflation rate of 8.9 percent.

Government expenditure in nominal terms increased from GH¢2,970.62 million in 2005 to GH¢26,277.17 million in 2013 and to GH¢51,985.9 million in 2017.

Consumption Poverty, Methodology, and Measurement

GLSS7 collected sufficient information to estimate total consumption of each household. This covered consumption of both food and non-food items. In using measures of household consumption to compare living standards across geographical areas, variations in the cost of living across regions were considered, as well as differences in household size. The measure of the standard of living is based on household consumption expenditure, covering food and non-food items, including housing. The current survey uses the new basket derived in GLSS6 (2012/13), and did not re-base the basket since preliminary checks indicate that there was no significant change in the composition of consumption expenditure over the 4-year period.

Profile of Consumption Poverty

The profile of consumption poverty based on surveys (2005/06, 2012/13, and 2016/17) shows that the country made a marginal progress in the pursuit of poverty reduction since the last round of the survey in 2012/13. In contrast to the period between 2005/06 and 2012/13 which recorded a decline in the poverty headcount of 7.7 percentage points, the decline in the poverty headcount between 2012/13 and 2016/17 was minuscule at 0.8 percentage points (that is, from 24.2 percent to 23.4 percent).

Much needs to be done if the country has to achieve the Sustainable Development Goal (SDG) on ending poverty in all its forms by 2030. Extreme poverty (people unable to meet their basic food needs) declined from 8.4 percent in 2012/13 to 8.2 percent in 2016/17. In absolute terms, more Ghanaians are living in extreme poverty: the number of people living in extreme poverty increased from 2.2 million in 2013 to 2.4 million in 2017, based on the 2010 projections.

Over the four-year period (2013 to 2017), population growth has outstripped reduction of overall poverty incidence, resulting in far more people becoming poor. There is a lot of variation in the poverty incidence by region. While five of the ten regions (Greater Accra Region, Western Region, Central Region, Eastern Region, and Ashanti Region) had rates of poverty incidence lower than the national average of 23.4 percent, the remaining five regions

had rates higher than the national average. The poverty incidence worsened in five out of the ten regions—Western Region, Volta Region, Northern Region, Upper East Region, and Upper West Region— and improved in the Ashanti Region, Brong-Ahafo Region, Eastern Region, Central Region, and Greater Accra Region. The Greater Accra Region has the lowest poverty incidence while the Upper West Region has the highest. However, the Northern Region has the largest number of poor persons. Nationally, the trend in poverty has not greatly changed.

Covariate Analysis

The covariates of poverty in Ghana have not changed much over the four-year period. The data suggest a marginal increase in the Gini coefficient, indicating that inequality has worsened over the four-year period. This means that the poverty incidence would have been lower than it is but for the worsening inequality which partially offset the poverty reducing effect of growth.

Economic growth between 2012/13 and 2016/17 has not been pro-poor. The growth incidence curve reveals that the middle class benefitted from growth, while those at the bottom end of the distribution, especially the very poor, experienced a decline in consumption per adult equivalent over the four-year period. The Palma Index confirms that welfare over the period has been highly disproportionate in favor of the non-poor and provides an indication that for a regional pro-poor policy targeting, the Upper West Region should be given priority, followed by the Northern Region and the Upper East Region in that order since these regions have relatively the highest Palma Index.

The data suggest that households with heads who are farmers are not only the poorest in Ghana but also contribute the most to Ghana's poverty. Households headed by persons engaged as private employees or who are self-employed in non-agricultural sectors are less likely to be poor compared to those engaged in the agricultural sector. Over the period, public sector earners experienced a reduction in poverty. This is probably because of the public sector wage rationalization policy implemented in 2009. In general, female-headed households appear to be better-off than male-headed households in terms of poverty incidence.

Household Assets

The proportion of households owning most of the durable goods covered in the surveys has increased between 2005/2006 and 2016/17. Both urban and rural households registered increases in the ownership of durable goods. However, the increase in ownership was more pronounced among households in the higher welfare quintiles. In 2016/17, ownership of durable goods was much higher in urban areas than rural areas, even among households of similar overall living standards.

Access to Services

There have been significant improvements over the 12-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 among poorer urban households. Improvement in access to adequate toilet facilities have been more marked in poorer regions. However, the gap across regions remains significant. All regions recorded increases in access to electricity between 2012/13 and 2016/17.

Human Development

Data from this survey reveal that access to health services had declined over the years. The proportion of the ill or injured who are likely not to consult a doctor or even visit a health facility for treatment increased over the four-year period. This situation is quite worrying since a healthy population ensures increasing economic productivity. The reduction in the number of the injured/ill who consulted a doctor or visited any health facility in 2016/17 was more pronounced in rural localities of the country.

School attendance rates at all levels increased between 2012/13 and 2016/17. There has been an appreciable improvement in both gross and net attendance rates at primary, junior high, and senior high school levels. The improvement in school attendance favored girls in most localities compared to boys.

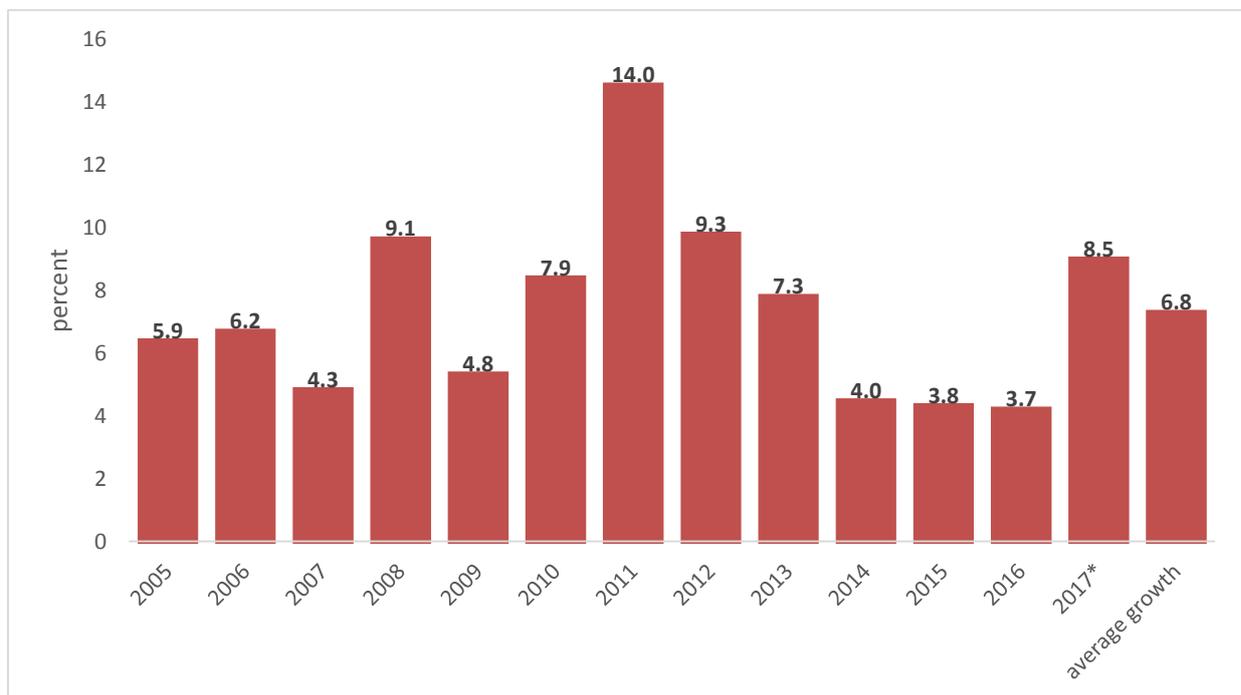
CHAPTER ONE

THE ECONOMIC CONTEXT

1.1 Gross domestic product 2005–2017

The annual gross domestic product (GDP) growth rates recorded in Ghana from 2005 to 2017 ranged from 3.7 percent to 14.0 percent; the lowest growth rate was recorded in 2016 and the highest in 2011. The average annual growth rate for the same period was 6.8 percent (Figure 1.1). From 2010 to 2013, however, the country experienced an annual average GDP growth rate of 9.6 percent with an annual average per capita income of GH¢2,672.2. Ghana became a lower-middle-income country following the production of crude oil in commercial quantities and the re-basing of the GDP. Macroeconomic conditions worsened after 2013 as weaker fiscal and monetary policies, terms of trade shocks from lower oil prices, and electricity rationing slowed growth to an average of approximately 5 percent between 2014 and 2017. The average annual per capita income for 2014 to 2017 was GH¢5,540.8. With an annual GDP growth rate of 8.5 percent in 2017, Ghana was one of the fastest growing economies in the world in 2017.

Figure 1.1: Annual GDP growth rates (%), 2005–2017



Source: GDP Bulletin, Ghana Statistical Service

Ghana's economy before 2005 relied heavily on agriculture. However, the industry and services sectors have become increasingly important and have outpaced agriculture, with the services sector becoming the largest contributor to GDP, followed by industry and agriculture.

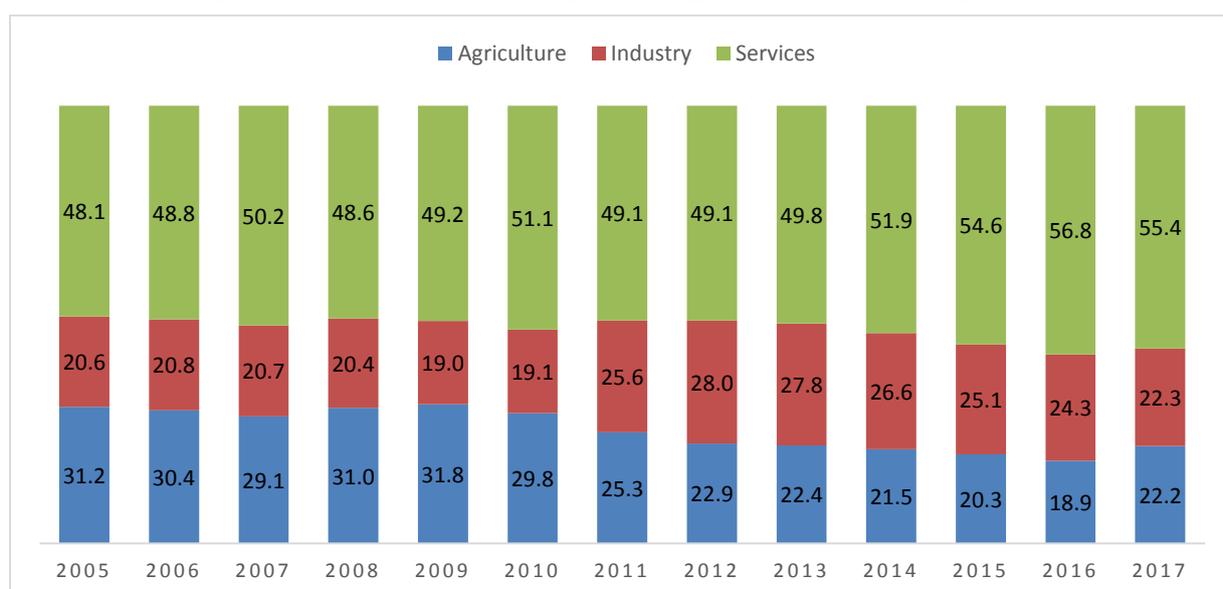
The sectoral distribution of the GDP (Figure 1.2) indicates that the services sector has consistently accounted for the highest share of GDP. The share of agriculture placed second until 2011 when it was overtaken by industry. The expansion in industry was due to the commencement of the production of crude oil in commercial quantities in the country.

The share of the agricultural sector was fairly stable from 2006 to 2010, constituting approximately 30 percent of GDP. It declined thereafter, to 18.9 percent in 2016 and rose to 22.2 percent in 2017.

With respect to the industry sector, its share of GDP reduced slightly from 20.8 percent in 2006 to 19.1 percent in 2010. Subsequently, the share increased to reach 28.0 percent of GDP in 2012 and then experienced a gradual decline in share to 22.3 percent of GDP in 2017.

The share of the services sector constituted about half of GDP (49–51 percent) from 2006 to 2013. Since 2014, the services sector’s share has been more than half of GDP, rising from 51.9 per cent in 2014 to 56.8 percent in 2016 and declining to 55.4 per cent in 2017.

Figure 1.2: Sectoral shares (percentage) of GDP at basic prices

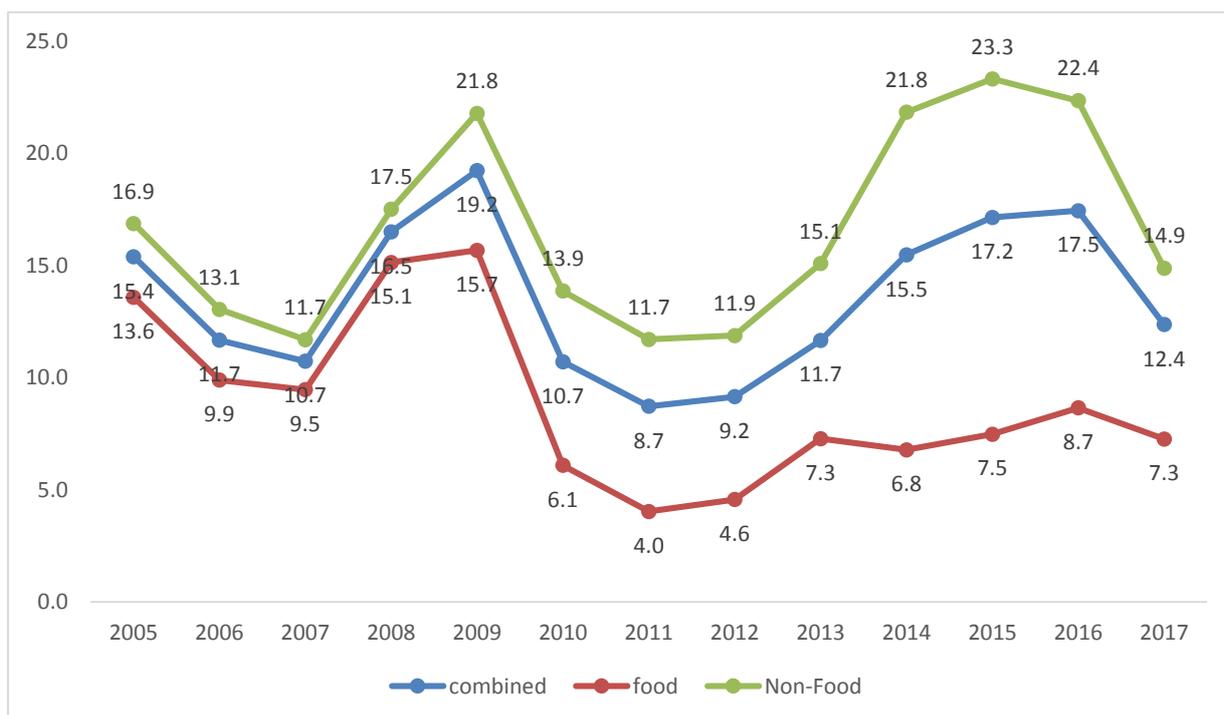


Source: Ghana Statistical Service

1.2 Trends in inflation (2005–2017)

Figure 1.3 presents information on inflation trends in Ghana for 2005–2017. Inflation trends during this period have been largely influenced by the non-food inflation rate which on the average has been consistently higher (16.6 percent) than the food inflation rate (8.9 percent). The average annual combined inflation rate for 2005–2017 was 13.6 percent, peaking at 19.2 percent in 2009.

Figure 1.3: Combined food and non-food inflation rates (%), 2005–2017

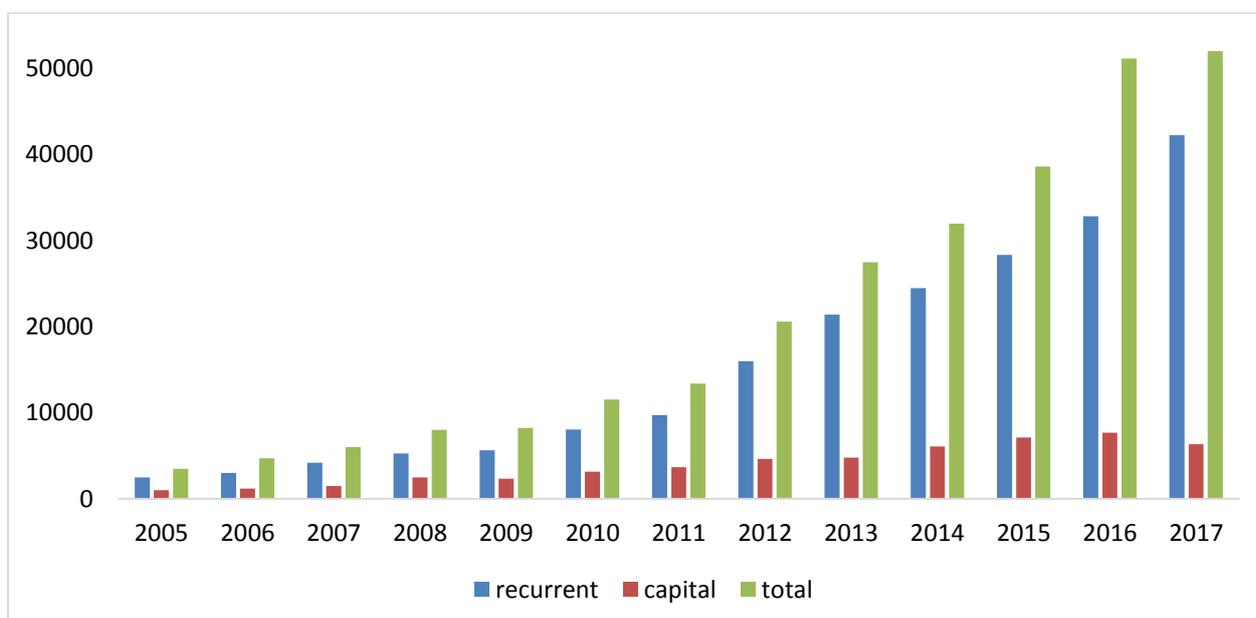


Source: GSS.

1.3 Public expenditures (2005–2017)

Figure 1.4 shows that the government expenditure in nominal terms, over 2005 to 2017, increased from GH¢2,970.62 million in 2005 to GH¢26,277.17 million in 2013 and further to GH¢51,985.9 million in 2017.

Figure 1.4: Total, recurrent, and capital government budget expenditure (GH¢, Millions)



Source: Ministry of Finance.

Figure 1.4 also provides information on the government's spending on recurrent and capital goods and reveals the growing importance of recurrent expenditure in relation to capital expenditure.

1.5 Social interventions

In the past two decades, several social intervention programs, 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, and free senior high school education, 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, indoor residual spraying against malaria-carrying mosquitoes, and universal health care program.

1.6 Summary

After the fifth round of the Ghana Living Standards Survey (GLSS5), the Ghanaian economy benefited from the production of crude oil in commercial quantities and strong economic growth in 2011, leading to the achievement of lower-middle-income status for the country. Economic growth, however, decreased thereafter to a low of 3.7 percent in 2016 but increased in 2017. It remains to be seen whether this growth has benefitted all sections of society, including the very poor.

CHAPTER TWO

CONSUMPTION POVERTY, METHODOLOGY, AND MEASUREMENT

2.1 Introduction

In Ghana, the analysis of poverty has focused on consumption poverty, which classifies the poor as those who lack command over basic consumption needs, including food and non-food components. To identify who is poor and who is non-poor, the expenditure on a minimum consumption basket required by an individual to fulfill his or her basic food and non-food needs is calculated. This expenditure is referred to as the poverty line. Different poverty lines can be developed. In Ghana, the practice is to develop two poverty lines: the **upper poverty line** (which is referred to as the **poverty line**) and the **lower poverty line** (which is referred to as the **extreme poverty line**).

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
- The determination of a poverty line

In this report, a consumption-based standard of living measure is used. The poverty line is set at the level of the minimum consumption requirement.

2.2 Data sources

The main data source for this report is the seventh round of the Ghana Living Standards Survey (GLSS7). The GLSS is a multipurpose 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.

Seven rounds of data have been collected from 1987/88, but in this report, we focus on the most recent rounds of the GLSS conducted in 2005/06, 2012/13, and 2016/17. The questionnaires used for these rounds are almost identical, therefore making their results directly comparable. By contrast, the first two rounds were based on different questionnaires, making comparison with the later rounds more difficult.

The GLSS collects sufficient information to estimate total consumption of each household. This covers consumption of both food and non-food items. Food and non-food consumption commodities may be explicitly purchased by households or acquired through other means (for example, as output of own production activities, payment for work done in the form of commodities, or transfers from other households). The household consumption measure takes into account all these sources in the different modules of the questionnaires (Appendix 7).

2.3 Sampling

Field data collection for GLSS7 began in October 2016 and lasted for 12 months. Interviews were conducted for 14,009 households in 1,000 enumeration areas (EAs) or clusters selected across the country based on probability sampling.

After the selection of EAs and before the main survey, a household listing operation was carried out in all the selected EAs. The household listing operation consists of visiting each of the 1,000 selected EAs to record all structures and households within the EAs with the addresses and the names of the heads of the households using Computer Assisted Personal Interviewing (CAPI). The listed households served as the sampling frame for the selection of 15 households in the second stage selection for the main survey using a systematic sampling method. Table 2.1 gives the sample allocation of EAs and households by region and by type of residence. The sample is representative at the regional and rural/urban levels (see Appendix 6) for details on sampling design).

Table 2.1: Sample allocation of EAs and households by region and by type of residence

Region Name	Allocation of EAs			Allocation of households		
	Urban	Rural	Region	Urban	Rural	Region
Western	41	57	98	615	855	1,470
Central	44	50	94	660	750	1,410
Greater Accra	100	10	110	1,500	150	1,650
Volta	32	64	96	480	960	1,440
Eastern	43	57	100	645	855	1,500
Ashanti	71	48	119	1,065	720	1,785
Brong Ahafo	42	53	95	630	795	1,425
Northern	30	68	98	450	1,020	1,470
Upper East	20	76	96	300	1,140	1,440
Upper West	15	79	94	225	1,185	1,410
Total	438	562	1,000	6,570	8,430	15,000

2.4 Construction of the standard of living measure

The regional cost of living index is a theoretical price index that measures relative cost of living **in regions** over the 12-month period of GLSS7. It is an index that measures differences in the price of goods and services with reference to Greater Accra in January 2017. In using measures of household consumption expenditure to compare living standards across geographical areas,

variations in the cost of living across regions must be taken into consideration as well as differences in household size and composition (children and adults and males and females). Household composition must be considered to reflect the different calorie requirements of household members.

The standard of living measure used in the previous poverty profile report (GSS 2014) is based on household consumption expenditure, covering food and non-food items. The regional cost of living index is based on regional monthly food and non-food consumer price indexes (CPIs) weighted by region and urban-rural shares.

Table 2.2 shows the regional cost of living indexes, with costs compared to Greater Accra in January 2017 as the base. For food items, prices are higher in Greater Accra than in the other nine regions, whereas non-food items are more expensive in the Western Region and Volta Region than in the Greater Accra Region. Within the survey period, the other regions had on average lower prices compared to the Greater Accra Region.

Table 2.2: Regional cost of living indexes

Region	Overall Price Index	Food Index	Non-Food Index
Western	1.02	1.00	1.04
Central	0.98	0.94	1.03
Greater Accra	1.03	1.02	1.03
Volta	0.99	0.93	1.07
Eastern	0.95	0.94	0.96
Ashanti	0.96	0.90	1.03
Brong Ahafo	0.93	0.91	0.97
Northern	0.97	0.98	0.97
Upper East	0.86	0.80	0.93
Upper West	0.92	0.90	0.96

Source: Ghana Statistical Service

Note: Prices were referenced to Greater Accra in January 2017. However, when you take an average of the monthly prices in Greater Accra, it does not equal 1 due to monthly price variations.

The overall cost of living index also allows for variation in prices over time within the survey period, using the monthly regional CPIs. The use of region-specific CPIs allows one to take into account differences in relative spatial prices.

The number of equivalent adults is calculated based on the composition of the household, using a calorie-based scale from the 10th edition of the National Research Council's Recommended Dietary Allowances. 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 presented in Table A7.2 (Appendix 7).

Each individual is represented as having the standard of living of the household to which he or she belongs. 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.

2.5 Standard of living measurement

In this poverty profile report, standard of living is measured by per adult equivalent consumption, which is derived by dividing the total household consumption with the number of adult equivalents in the household. 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 not made in this report because not many new consumer goods that did not exist when the previous survey have since entered the consumption basket of Ghanaian households.

2.6 Consumption basket and construction of the poverty line

In 2012/13 two nutritionally based poverty lines were derived from this procedure:

- *A lower or extreme or food poverty line of GH¢792.05 per adult equivalent 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 GH¢1,314 per adult equivalent per year: this incorporates both essential food and non-food consumption. Individuals consuming above this level can be considered as 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.*

Based on the total consumption expenditure per equivalent adult and the estimated poverty line, the poverty rates or the population below the poverty lines are then estimated.

Following the GLSS5 and 6 methodologies, 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 upper poverty line.

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. This can be done in two ways. A new basket and re-based poverty line of GH¢1,314.0 per adult equivalent per year and an extreme poverty line of GH¢792.2 per adult equivalent per year were estimated in 2012/13. Taking these poverty lines as given, poverty lines for 2005/06 and 2016/17 were estimated with a mixed deflator, so that nominal welfare levels could be subjected to these adjusted poverty lines to obtain the new poverty estimates. The second method adjusts welfare levels in 2005/06 and 2016/17 using the mixed deflator to obtain real welfare levels in 2012/13 prices and applies these adjusted real welfare levels to the 2012/13 poverty lines to obtain the poverty rates. The second method was employed to estimate poverty rates in Ghana.

The process of deriving a mixed deflator for 2016/17 with respect to 2012/13 prices is the same as that employed to obtain the mixed deflators for 2005/06. The mixed deflators combined the Ghana CPI for both food and non-food items for 2012/13 and 2016/17, and the corresponding survey weights of food and non-food items during same periods. This approach produced the mixed deflator of 1.34 for the poverty line, and the same process was adopted using only CPI for food to produce a mixed deflator of 1.24 for the extreme poverty line. These mixed deflators were then used to derive a new upper poverty line of GH¢1,760.8 per adult equivalent per year and extreme or food poverty line of GH¢982.2 per adult equivalent per year for 2016/17. These are equivalent to GH¢1,314.0 and GH¢792.2 in 2012/13 taking into account inflation.

2.7 Summary

The standard of living for individuals in 2016/17 is measured as the total consumption expenditure per adult equivalent of the household to which he or she belongs, expressed in constant prices of Greater Accra in January 2017. These consumption expenditures per equivalent adult or welfare per adult equivalent were adjusted using the mixed deflators, after which these adjusted real welfare levels in 2016/17 prices were subjected to the 2012/13 poverty lines.

CHAPTER THREE

CONSUMPTION POVERTY

3.1 Introduction

This chapter focuses on analysis of poverty for Ghana for three periods (2005/06, 2012/13, and 2016/17), with the current period (2016/17) being the **main** focus of discussion, using the data from the GLSS rounds 5, 6, and 7. The analysis dwells mainly on the Foster-Greer-Thorbecke (FGT) model of estimating poverty incidence **in terms of absolute and extreme poverty**. It also examines poverty gap and spatial analysis of poverty.

3.2 Poverty incidence and poverty gap (Absolute Poverty)

The focus of this chapter is the analysis of two poverty indicators, poverty incidence (P_0) and poverty gap index (P_1), which were estimated by applying the abovementioned **two** poverty lines to the distribution of the standard of living measure.

In theory, these two poverty measures are defined as follows:

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 extent to which individuals fall below the poverty line (the poverty gaps) as a proportion of the poverty line, (for non-poor the gap is counted as 0). The sum of the poverty gap gives the minimum cost of eliminating poverty if transfers were perfectly targeted. The measure does not reflect changes in inequality among the poor.

The objective of this chapter is to examine poverty and inequality for 2016/17 in particular and examine trends and patterns over 2005/06 to 2016/17. This chapter will examine how poverty and inequality across geographical location and administrative regions **have evolved over time**.

Using the upper poverty line, the proportion of the population defined as poor is 23.4 percent in 2016/17 (Figure 3.1). The decline in the incidence of poverty between 2012/13 and 2016/17 was 0.8 percentage points. Based on the 2010 Population and Housing Census (PHC) projections for 2017, about 6.8 million people in Ghana are poor. The number of poor people increased by approximately 400,000 between 2012/13 and 2016/17. This is because the decline in the incidence of poverty was lower than the increase in the population rate. **Invariably, over the four-year period (2012/13 to 2016/17), it is estimated that the number of poor persons living in Ghana has increased by close to 400,000.** This number could include non-poor persons already living in Ghana before 2013 or poor persons who came to Ghana between 2013 and 2016. The increase in the total number of poor persons in Ghana, even though the poverty incidence rate

declined marginally, implies that the population grew far more than the poverty rate decline over the period. The poverty gap index in 2016/17 is 8.4 percent, indicating that 8.4 percent of the total expenditure of the poor fall below the poverty line (Table 3.1).

The result of the surveys conducted in 2005/06, 2012/13, and 2016/17 show that there has been a decline in the rate of poverty. The poverty headcount declined by 7.7 percentage points in the seven-year period between 2005/06 and 2012/13 and by 0.8 percentage points in the four-year period between 2012/13 and 2016/17. Much greater progress in poverty reduction was achieved between 1991/92 and 2005/06, when poverty declined by 23.2 percentage points and the incidence of extreme poverty halved, declining from 37 percent in 1991/92 to 18 percent in 2005/06 (GSS, 2007). By reducing the incidence of extreme poverty by half during this period, Ghana achieved the first Millennium Development Goal (MDG) ahead of time. The failure to achieve substantial reduction in the poverty headcount since 2012/13 suggests that without a change in policy direction, the first Sustainable Development Goal (SDG) of irradiating extreme poverty by 2030 may not be attained.

Poverty in Ghana is predominantly a rural phenomenon. The poverty patterns presented in Figure 3.1 show that irrespective of the ecological zone, the incidence of poverty is higher among the rural than urban population. Apart from the coastal belt which exhibited a similar pattern of poverty within rural and urban areas, the patterns of the savannah and forest areas are quite distinct. For instance, while the poverty incidence in the urban savannah declined over the three periods that of the rural savannah declined in 2012/13 but increased in 2016/17 beyond the 2005/06 rate. The highest poverty headcount in 2016/17 is **found** in the rural savannah zone at 67.7 percent. The worsening of poverty in the rural savannah is worrying and it will be important to further analyze the data to identify the determinants and to inform future policies and programs (Table 3.1).

Over the three periods, even though approximately half of Ghana's population is rural, they contribute more than 80 percent to Ghana's poverty incidence (Table 3.1). Even though the contribution of urban population to poverty incidence has declined, it still contributes almost one-fifth to poverty incidence in 2016/17. In 2016/17, rural savannah contributed half (50 percent) to the poverty incidence in Ghana. Rural savannah has always contributed the most to total poverty: 47 percent in 2005/06 and 40.8 percent in 2012/13 (Table 3.1).

The Greater Accra Metropolitan Area (GAMA), which includes the capital of Ghana, recorded the lowest poverty incidence of 2.0 percent among all the geographical areas. The GAMA has recorded the lowest poverty among all geographical areas even in the previous two periods (2005/06 and 2012/13), though previously the rates were higher than the 2016/17 rate (Table 3.1). The 2010 PHC results indicate that the 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.

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

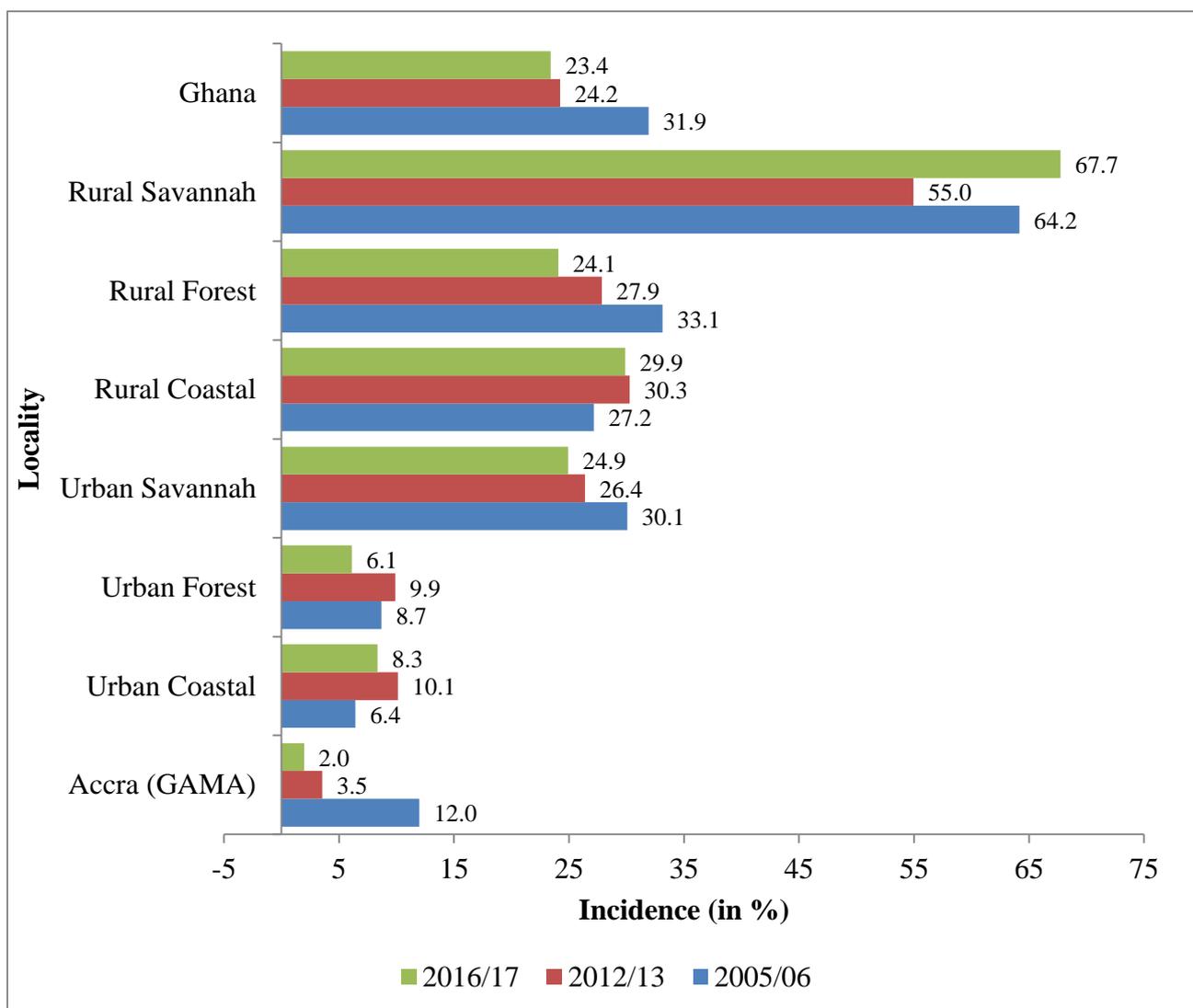


Table 3.1: Poverty incidence and poverty gap by locality, 2005/06–2016/17 (percentage)

Poverty line = GH¢1,314

Locality	2016/17				2012/13				2005/06			
	Poverty incidence (P ₀)	Contribution to total poverty (C ₀)	Poverty gap (P ₁)	Contribution to total poverty gap (C ₁)	Poverty incidence (P ₀)	Contribution to total poverty (C ₀)	Poverty gap (P ₁)	Contribution to total poverty gap (C ₁)	Poverty incidence (P ₀)	Contribution to total poverty (C ₀)	Poverty gap (P ₁)	Contribution to total poverty gap (C ₁)
Accra (GAMA)	2.0	1.3	0.3	0.6	3.5	2.2	0.9	1.8	12.0	4.4	3.4	3.7
Urban Coastal	8.3	2.6	1.9	1.6	10.1	2.1	2.3	1.5	6.4	1.2	1.3	0.7
Urban Forest	6.1	5.8	1.2	3.1	9.9	9.0	2.0	5.8	8.7	4.0	2.2	3.0
Urban Savannah	24.9	7.2	7.0	5.6	26.4	8.6	6.6	6.8	30.1	5.1	10.7	5.3
Rural Coastal	29.9	8.2	8.9	6.8	30.3	6.9	8.7	6.3	27.2	9.3	6.7	6.7
Rural Forest	24.1	25.3	6.3	18.4	27.9	30.3	7.9	26.8	33.1	29.1	8.4	21.4
Rural Savannah	67.7	49.6	31.2	63.7	55.0	40.8	22.0	51.1	64.2	46.9	28.0	59.4
Urban	7.8	16.8	1.8	11.0	10.6	22.0	2.5	15.9	12.4	14.7	3.7	12.6
Rural	39.5	83.2	15.1	89.0	37.9	78.0	13.1	84.1	43.7	85.3	15.4	87.5
All Ghana	23.4	100.0	8.4	100.0	24.2	100.0	7.8	100.0	31.9	100.0	11.0	100.0

3.3 Extreme poverty in Ghana

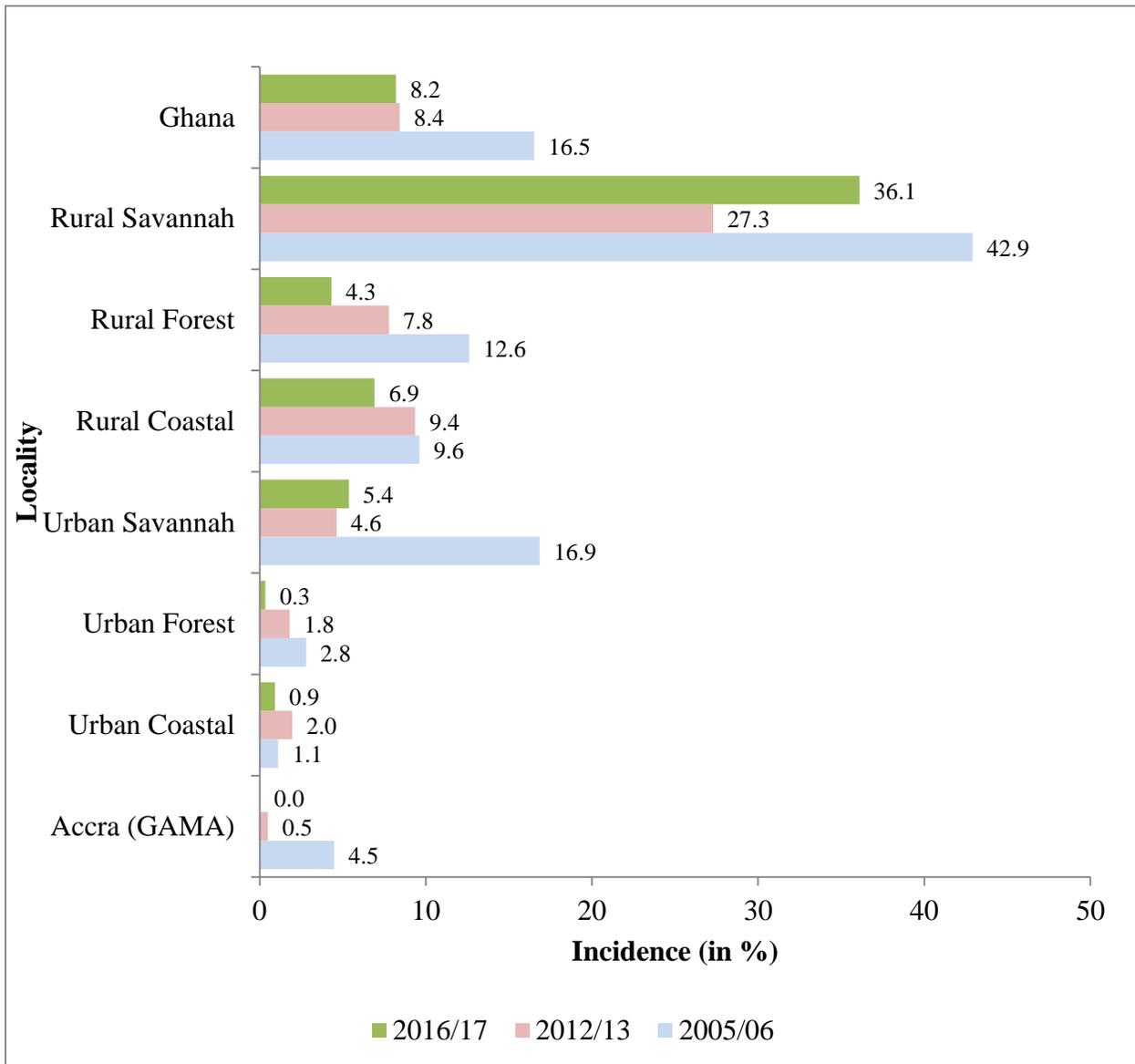
Extreme poverty incidence is defined as the state where the standard of living is insufficient to meet the basic nutritional requirements of the household even if they devote their entire consumption budget to food. The welfare levels for 2005/06 and 2016/17 were adjusted with the corresponding mixed deflators of 2.9 and 1.24 to obtain real welfare levels in 2012/13 prices. The households whose real welfare falls below the extreme poverty line of GH¢792.2 (in 2012/13 prices) per adult equivalent per year are considered extreme poor.

Figure 3.2 presents the national incidence of extreme poverty by locality. Given the extreme poverty line of GH¢792.05 per adult equivalent per year, an estimated 8.2 percent of Ghana's population is living in extreme poverty. The incidence of extreme poverty has declined since 2005/06. It was 16.5 percent in that year, declining to 8.4 percent in 2012/13 and 8.2 percent in 2016/17. The decline in the incidence of extreme poverty has slowed down. It declined by 8.1 percentage points between 2005/06 and 2012/13 and by 0.2 percentage points between 2012/13 to 2016/17.

It is estimated that about 2.4 million people (based on the 2010 PHC projections for 2017) cannot consume the minimum daily requirement of 2,900 calories per adult equivalent of food per day, even if they were to spend all their expenditures on food. This figure is up from the 2013 levels, by almost 200,000.

Extreme poverty is a rural phenomenon, with about 2.2 million persons living in extreme poverty in rural areas (2010 PHC projections for 2017). The geographic variations of extreme poverty incidence are more pronounced than overall poverty incidence, with extreme poverty being the highest in rural Savannah (36.1 percent). In this area, the extreme poverty rate increased by 8.8 percentage points compared with 2012/13 (27.3 percent). Besides the rural savannah locality, all other localities have experienced some decline in extreme poverty rate (Figure 3.2). Extreme poverty in rural savannah, which has remained the highest since 2005/06, is more than four times the average national rate and accounts for 75 percent of the extreme poor in Ghana. The incidence of extreme poverty is virtually non-existent in urban localities, with the GAMA contributing barely nothing (0 percent). Only 1 percent out of the estimated projected urban population of 14.7 million are extremely poor, and they contribute only 6.2 percent to the national incidence of extreme poverty, whereas as much as 15.6 percent of the projected 14.2 million persons in the rural localities are extremely poor, and they contribute 93.8 percent to this national extreme poverty indicator (Table 3.2).

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



**Table 3.2: Extreme poverty incidence and poverty gap by locality,
2005/06–2012/13 (percentage) Extreme poverty line = GH¢792.05**

Locality	2016/17				2012/13				2005/06			
	Poverty incidence (P ₀)	Contribution to total poverty (C ₀)	Poverty gap (P ₁)	Contribution to total poverty gap (C ₁)	Poverty incidence (P ₀)	Contribution to total poverty (C ₀)	Poverty gap (P ₁)	Contribution to total poverty gap (C ₁)	Poverty incidence (P ₀)	Contribution to total poverty (C ₀)	Poverty gap (P ₁)	Contribution to total poverty gap (C ₁)
Accra (GAMA)	0.0	0.0	0.0	0.0	0.5	0.9	0.1	0.5	4.5	3.2	1.1	2.5
Urban Coastal	0.9	0.8	0.3	0.9	2.0	1.2	0.4	0.9	1.1	0.4	0.1	0.1
Urban Forest	0.3	0.9	0.1	0.5	1.8	4.8	0.2	2.1	2.8	2.5	0.8	2.3
Urban Savannah	5.4	4.4	1.1	2.7	4.6	4.4	1.0	3.3	16.9	5.5	5.1	5.5
Rural Coastal	6.9	5.4	1.4	3.3	9.4	6.2	1.8	4.4	9.6	6.4	1.6	3.4
Rural Forest	4.3	13.0	0.9	8.2	7.8	24.3	1.8	20.2	12.6	21.4	2.1	11.9
Rural Savannah	36.1	75.4	13.6	84.3	27.3	58.3	8.7	68.5	42.9	60.6	16.0	74.3
Urban	1.0	6.2	0.2	4.2	1.9	11.2	0.3	6.9	5.1	11.6	1.4	10.4
Rural	15.6	93.8	5.4	95.8	15.0	88.8	4.3	93.1	23.4	88.4	7.2	89.6
All Ghana	8.2	100.0	2.8	100.0	8.4	100.0	2.3	100.0	16.5	100.0	5.0	100.0

3.4 Poverty in administrative regions

Figure 3.3 presents information on the incidence of poverty by administrative region. There is wide variation in the poverty incidence and poverty gap among administrative regions. The Greater Accra Region has consistently had the lowest poverty headcount since 2005/06. In 2016/17 the poverty incidence of 2.5 percent in the Greater Accra Region was about 21 percentage points lower than the national average. On the other hand, the incidence of poverty in the Northern, Upper East, and Upper West Regions have been consistently higher than the national average since 2005/06. While half of the regions, namely Western, Volta, Northern, Upper East, and Upper West, experienced worsening poverty rates between 2012/13 and 2016/17, the other five regions had improvements in their poverty status, as poverty incidence rates for these regions reduced. Figure 3.3 indicates that Upper West region has the highest poverty rate among all the 10 regions in Ghana, with a rate of 70.9 percent. This rate is about 10 percentage points higher than the rate recorded in the Northern Region (61.1 percent), the region with the second highest poverty rate in Ghana. The Upper East Region (54.8 percent), which ranks third in terms of regional poverty incidence rate in Ghana has slightly more than half of its population being poor. Even among the three northern regions of Ghana, there are very wide differences between their poverty incidence rates (Figure 3.3 and Table 3.3).

However, even though poverty in the Upper West Region is the highest among the 10 regions, the region contributes less than 10 percent to national poverty because it is the smallest region in Ghana in terms of population. Indeed, of the 6.8 million persons who are deemed poor in Ghana in 2016/17, about half a million are from the Upper West Region (574,794.9), while the Northern Region with a poverty incidence of 61.1 percent accounts for one-fifth (20.8 percent) or 1.8 million of the poor in Ghana, making this region the highest single contributor to the number of poor in Ghana. This is no different from what pertained in 2005/06, because the Northern Region was the highest contributor to national poverty then (Table 3.3).

Five out of ten regions (Volta Region, Brong Ahafo Region, Northern Region, Upper East Region, and Upper West Region) have extreme poverty incidences higher than the national average, and extreme poverty incidence worsened between 2012/13 and 2016/17 in these regions. The other five regions had rates lower than the national average and their extreme poverty incidence declined between 2012/13 and 2016/17. In 2016/17, the Upper West Region had the highest incidence of extreme poverty of 45.2 percent, followed by the Northern Region (30.7 percent) and the Upper East Region at 27.7 percent (Table 3.4).

In terms of contribution to extreme poverty, the Northern Region (37.5 percent) accounts for over a third of the extreme poor in Ghana, far more than any other region. In 2016/17, the Northern Region, Upper East Region, and Upper West Region together accounted for 67.2 percent of those living in extreme poverty in Ghana. Compared to 2012/13, the contribution of these regions to extreme poverty increased by 14.5 percentage points (Table 3.4).

Figure 3.3: Poverty incidence (P0) by region, (Poverty line = GH¢1,314)

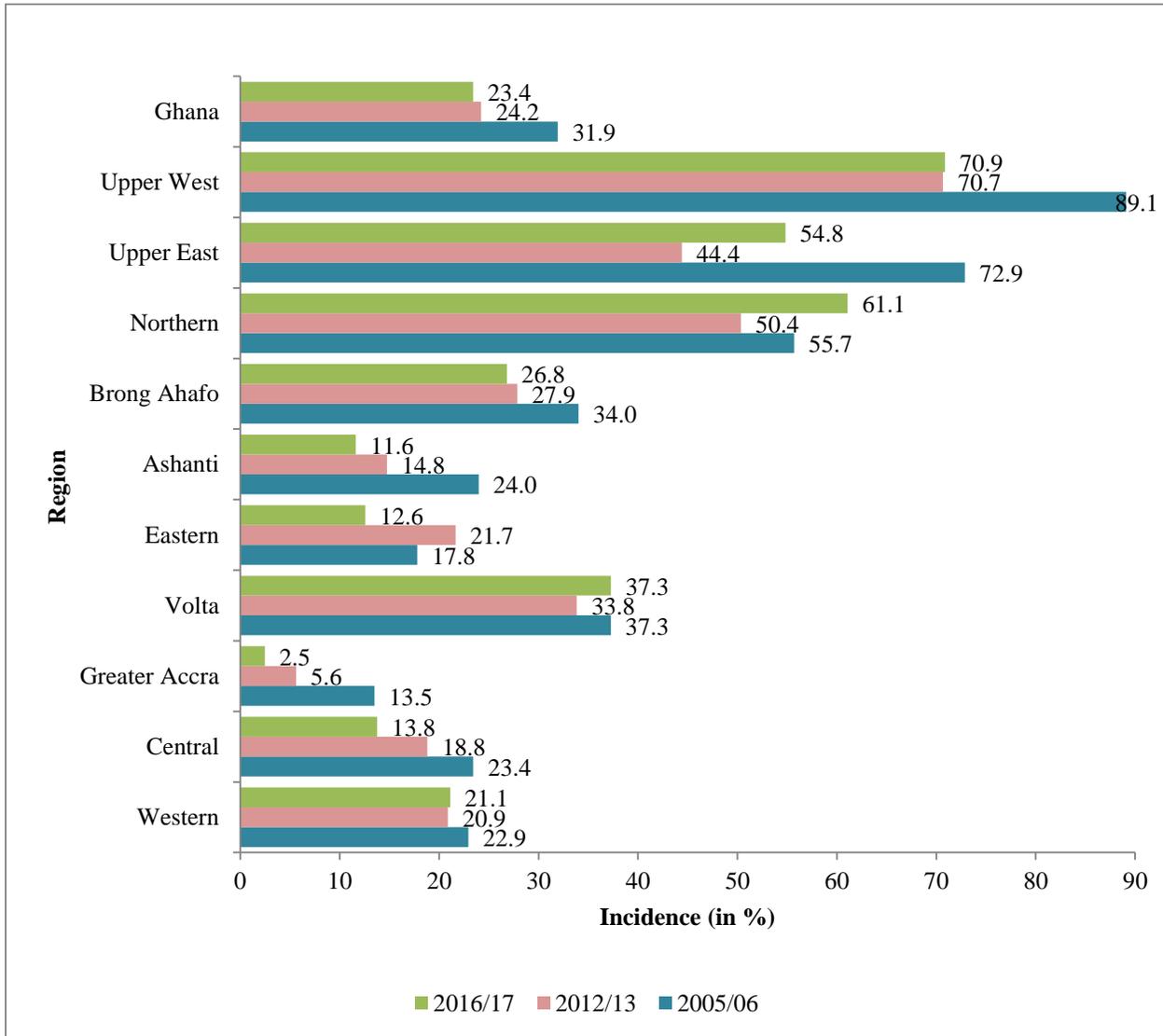
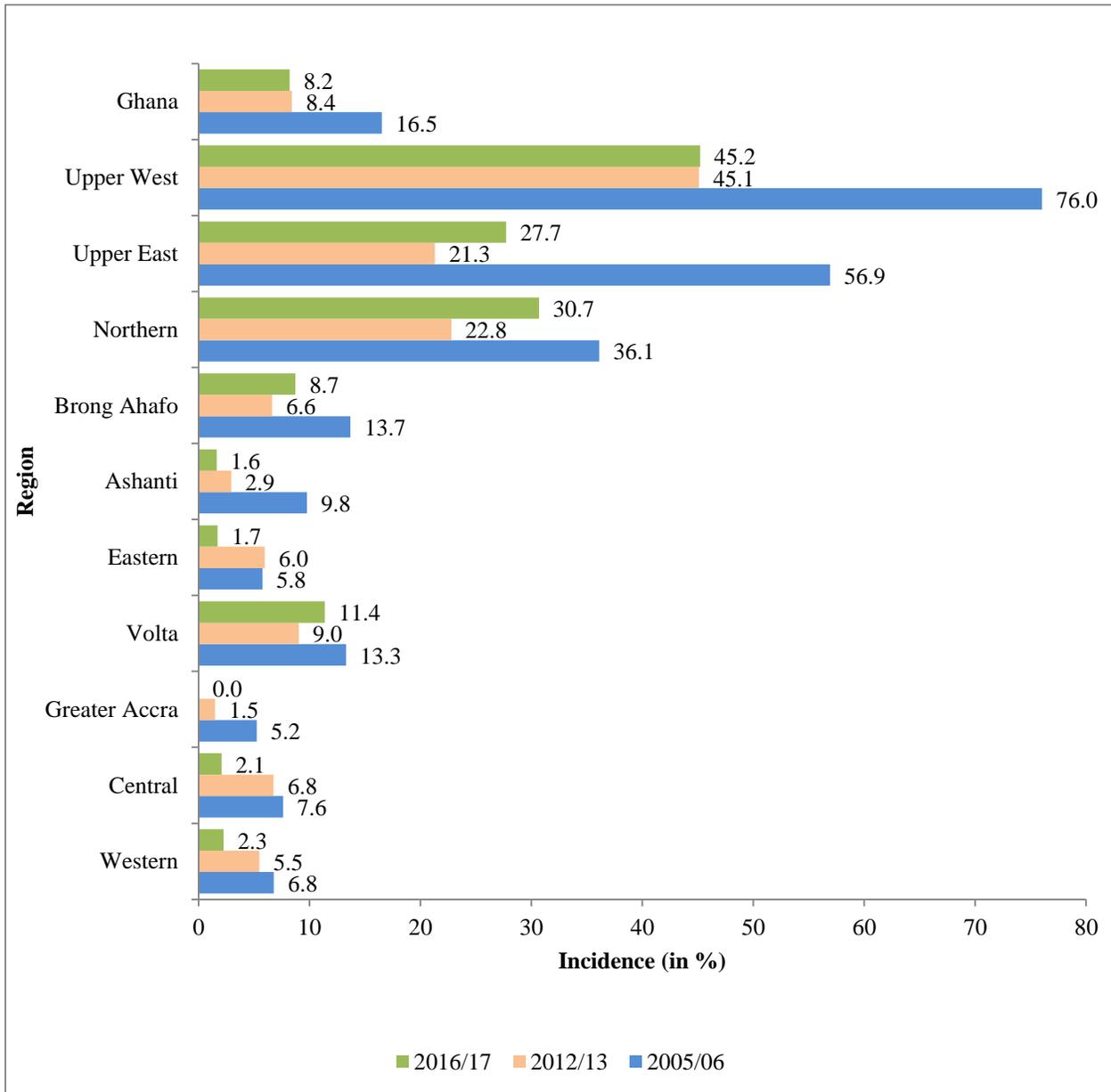


Table 3.3: Poverty incidence and poverty gap by region, 2005/06–2016/17
(percentage)Poverty line = GH¢1,314

Region	2016/17				2012/13				2005/06			
	Poverty incidence (P ₀)	Contri- bution to total poverty (C ₀)	Poverty gap (P ₁)	Contri- bution to total poverty gap (C ₁)	Poverty incidence (P ₀)	Contri- bution to total poverty (C ₀)	Poverty gap (P ₁)	Contri- bution to total poverty gap (C ₁)	Poverty incidence (P ₀)	Contri- bution to total poverty (C ₀)	Poverty gap (P ₁)	Contribut ion to total poverty gap (C ₁)
Western	21.1	9.1	4.9	5.9	20.9	7.9	5.7	6.8	22.9	7.3	5.4	5.0
Central	13.8	5.0	3.6	3.6	18.8	6.9	5.6	6.4	23.4	6.4	5.6	4.4
Greater Accra	2.5	1.7	0.5	0.9	5.6	3.8	1.6	3.5	13.5	5.9	3.7	4.7
Volta	37.3	13.6	13.0	13.3	33.8	12.1	9.8	11.0	37.3	8.7	9.2	6.2
Eastern	12.6	5.8	3.1	3.9	21.7	9.3	5.8	7.8	17.8	7.5	4.2	5.2
Ashanti	11.6	9.5	2.7	6.1	14.8	12.0	3.5	9.0	24.0	12.6	6.4	9.8
Brong Ahafo	26.8	10.8	8.8	9.9	27.9	11.4	7.4	9.4	34.0	9.8	9.5	7.9
Northern	61.1	26.1	26.7	31.9	50.4	20.8	19.3	24.9	55.7	21.0	23.0	25.2
Upper East	54.8	9.8	23.8	11.9	44.4	7.4	17.2	9.0	72.9	10.9	35.3	15.3
Upper West	70.9	8.5	37.6	12.6	70.7	8.4	33.2	12.3	89.1	10.0	50.7	16.4
All Ghana	23.4	100.0	8.4	100.0	24.2	100.0	7.8	100.0	31.9	100.0	11.0	100.0

Figure 3.4: Extreme poverty incidence (P0) by region; Poverty line = GH¢792.05



**Table 3.4: Extreme poverty incidence and poverty gap by locality,
2005/06–2016/17 (percentage) Extreme poverty line = GH¢792.05**

Region	2016/17				2012/13				2005/06			
	Poverty incidence (P ₀)	Contribution to total poverty (C ₀)	Poverty gap (P ₁)	Contribution to total poverty gap (C ₁)	Poverty incidence (P ₀)	Contribution to total poverty (C ₀)	Poverty gap (P ₁)	Contribution to total poverty gap (C ₁)	Poverty incidence (P ₀)	Contribution to total poverty (C ₀)	Poverty gap (P ₁)	Contribution to total poverty gap (C ₁)
Western	2.3	2.8	0.6	2.3	5.5	6.0	1.3	5.1	6.8	4.2	1.3	2.7
Central	2.1	2.2	0.4	1.3	6.8	7.1	1.5	5.9	7.6	4.0	1.1	1.9
Greater Accra	0.0	0.0	0.0	0.0	1.5	2.9	0.3	2.1	5.2	4.4	1.1	2.9
Volta	11.4	11.9	3.8	11.7	9.0	9.3	1.9	7.2	13.3	6.0	2.2	3.3
Eastern	1.7	2.3	0.4	1.6	6.0	7.3	1.3	5.8	5.8	4.7	1.2	3.3
Ashanti	1.6	3.8	0.3	2.1	2.9	6.9	0.5	4.5	9.8	9.9	1.8	6.2
Brong Ahafo	8.7	10.0	2.4	8.2	6.6	7.8	1.5	6.5	13.7	7.6	2.9	5.3
Northern	30.7	37.5	10.6	38.4	22.8	27.0	7.2	31.5	36.1	26.3	12.1	29.1
Upper East	27.7	14.2	9.2	14.0	21.3	10.3	6.9	12.3	56.9	16.4	21.3	20.2
Upper West	45.2	15.5	20.1	20.4	45.1	15.4	15.3	19.3	76.0	16.4	35.4	25.1
All Ghana	8.2	100.0	2.8	100.0	8.4	100.0	2.3	100.0	16.5	100.0	5.0	100.0

3.5 Summary of consumption poverty

Less than a quarter of Ghanaians are poor and less than one out of every nine people in Ghana is extremely poor. Overall, the dynamics of poverty in Ghana over the 12-year period indicate that poverty is still very much a rural phenomenon. Although the incidence of extreme poverty is relatively low, it is concentrated in rural savannah, where more than one-third of the people deemed to be extremely poor reside. Thus, reducing poverty in rural savannah is a panacea to Ghana's persistent poverty. Extreme poverty is more pronounced in the rural savannah areas, resulting in very high poverty rates in the three northern regions. Over the four-year period (2013 to 2017), population growth has outstripped reduction of overall poverty incidence, resulting in more people becoming poor even though there was a decline in poverty incidence.

There is a large regional variation in the incidence of poverty and the gap has widened. While five of the ten regions (Greater Accra Region, Western Region, Central Region, Eastern Region, and Ashanti Region) had poverty incidences lower than the national average of 23.4 percent and their poverty rates had declined, the remaining five regions had poverty rates higher than the national average and increased between 2012/13 and 2016/17. Greater Accra is the least poor region, while the Upper West Region is the poorest in the terms of poverty incidence rate. However, the Northern Region has the largest number of poor persons than any other region in Ghana.

CHAPTER FOUR

COVARIATE ANALYSIS

4.1 Introduction

Between 2013 and 2017, Ghana's GDP per capita increased by 11 percent. This chapter examines the extent to which the population has benefited from this growth. The central question is "whether the poorest households have benefited from the accelerated economic growth". The chapter illustrates the changes in wealth inequality, poverty growth incidence, and trends in poverty reduction by household heads' occupation, gender, and educational backgrounds. It also decomposes poverty changes by growth and redistribution and shows that the fundamental cause of rising poverty in the Volta and three Northern regions is lack of economic growth in these regions.

4.2 Inequality: A Gini Coefficient Analysis

Nationally, the Gini coefficient increased from 41.9 percent in 2005/06 to 42.3 percent in 2012/13 and 43.0 in 2016/17 (Figure 4.1). This increase over the period implies that the benefits of growth have not been evenly distributed and some groups have been left out. The rise in inequality over the last 12-year period has been concentrated largely in rural areas. Rural inequality increased from 37.8 to 40.0, then to 41.8 in 2005/06, 2012/13, and 2016/17, respectively, while urban inequality increased from 38.3 percent to 38.8 percent between 2005/06 and 2012/13 and declined to 37.9 in 2016/17. Among all the localities, inequality is highest in the rural savannah (Figure 4.1). Apart from the urban coastal locality which underwent an increase in inequality, Accra (GAMA) and other urban areas experienced declining inequality between 2012/13 and 2016/17 (Figure 4.1).

Figure 4.2 presents the Gini coefficient by administrative region. Inequality in 2016/17 was highest (48.1) in the Upper West Region, followed by the Northern Region in second place with a Gini coefficient of 45.3.

Figure 4.1: Inequality by locality: Gini coefficient, 2005/06–2016/17

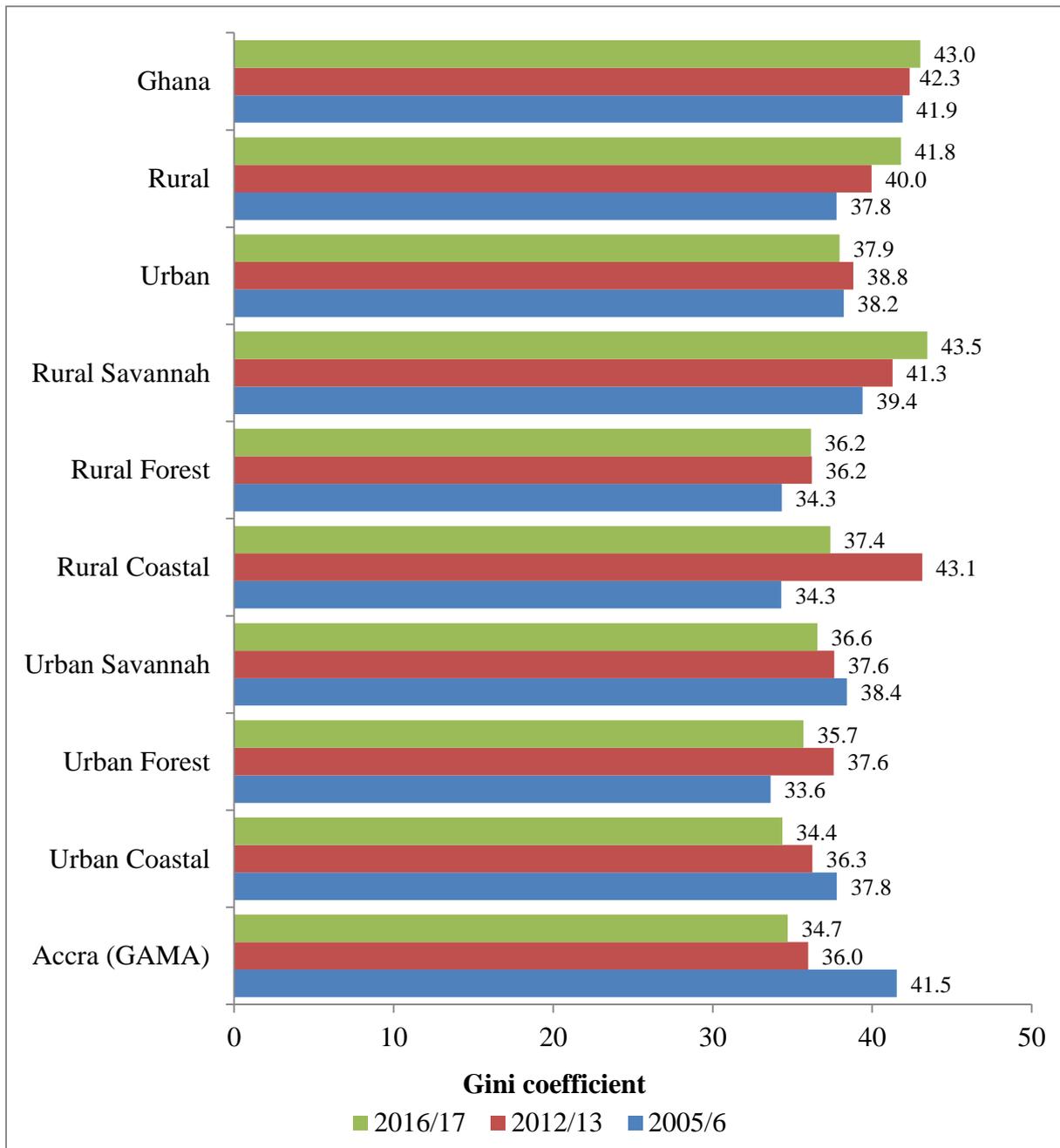
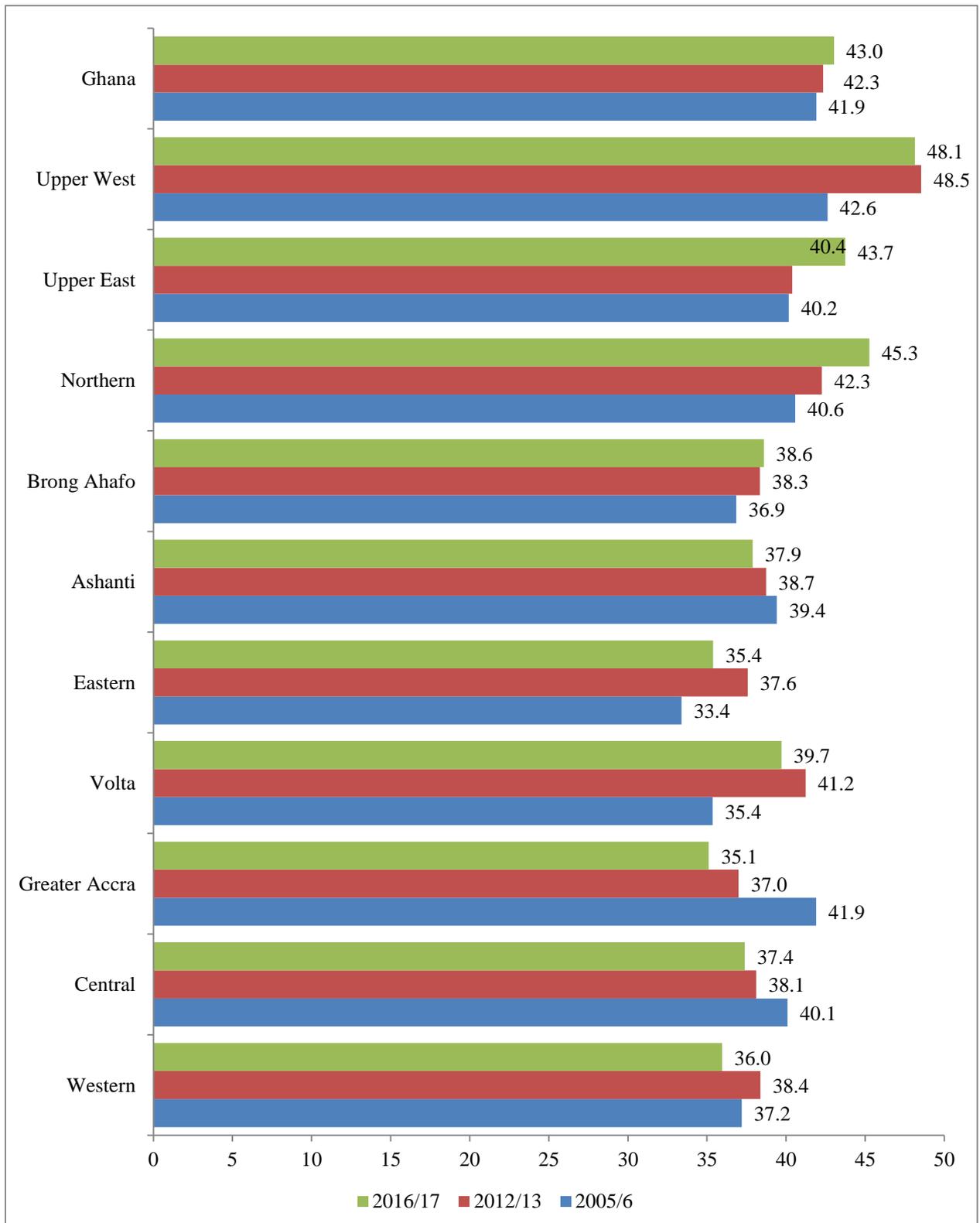


Figure 4.2: Inequality by region: Gini coefficient, 2005/06–2016/17



4.3 Inequality: A Palma Ratio/Index Analysis

Several researchers have identified limitations with the Gini index. The Gini index cannot inform on what has happened to the welfare of the poorest and richest people and the gap between the two groups. Economists have argued that the Gini index is oversensitive to changes in the middle of the distribution and under-sensitive to changes at the top or at the bottom, making it difficult to describe what happens to the poorest and richest people.

To address some of these questions, Palma Gabriel, a Chilean economist developed an index which explicitly takes into account information on the richest 10 percent and the poorest 40 percent of the population in 2005. This index is defined as the ratio of the share of the gross national income of the most affluent 10 percent divided by the share of the poorest 40 percent. The report extends this methodology and uses per capita consumption ratio of the richest 10 percent of the population divided by the poorest 40 percent of the population. For example, a Palma index of 3 means that the consumption of the richest 10 percent is three times higher than the consumption of the poorest 40 percent of the population. In addition to providing information on the depth of inequality in society, it helps policy makers improve targeting.

Table 4.1 provides the estimated Palma index, the ratio of the per capita household consumption of the top 10 percent to the bottom 40 percent, by region. The Upper West Region, which has the highest poverty incidence, has the highest Palma index. It is followed by the Northern Region and Upper East Region. The Greater Accra Region on the other hand has the lowest Palma index. The rural Upper West Region has the highest Palma index across all localities. This suggests that any resource allocation targeted at mitigating high inequality in the country should have the Upper West region as a top priority, followed by the Northern and Upper East Regions. In the same vein, this provides an indication that any policy intervention that would be implemented in the Upper West Region to reduce the high inequality should target the rural localities of the region.

Table 4.1: Palma index by region and locality

Region	Regional	Urban	Rural
Western	1.47	1.18	1.56
Central	1.55	1.34	1.45
Greater Accra	1.38	1.37	1.32
Volta	1.76	1.54	1.70
Eastern	1.40	1.21	1.39
Ashanti	1.60	1.53	1.42
Brong Ahafo	1.68	1.35	1.82
Northern	2.35	1.67	2.17
Upper East	2.22	1.62	1.70
Upper West	2.79	1.47	2.22

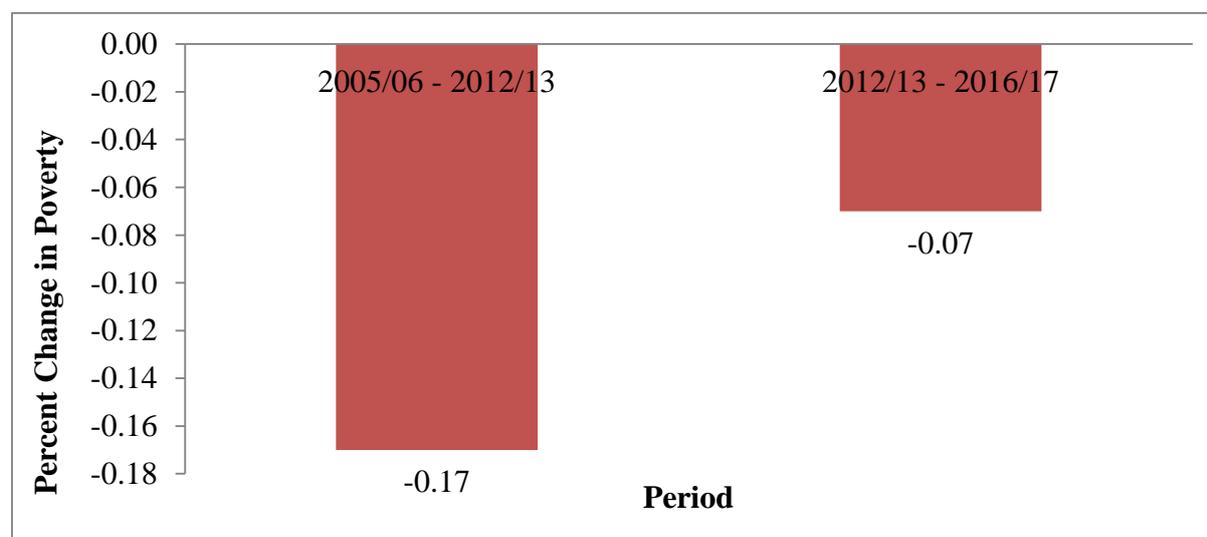
4.4 Growth analysis of poverty: Is Ghana’s economic growth pro-poor?

Economic growth is critical for poverty reduction. According to the World Bank, “If the incomes of the poor rise closely in line with incomes overall, then the key to poverty reduction is rapid economic growth; on the other hand if the relationship is weak, then other policies, such as targeted subsidies, are likely to be important and the concept of “pro-poor growth’ might have some relevance” (World Bank 2005). To examine whether economic growth has been pro-poor between 2013 and 2017, this report adopts the use of the growth elasticity of poverty (GEP) and growth incidence curve (GIC).

4.5 Growth elasticity of poverty

The GEP is the percentage change in poverty rates associated with a 1 percent change in mean per capita income or GDP. Figure 4.3 shows that while a 1 percent change in growth resulted in 0.17 percentage decline in poverty between 2006 and 2013, it only resulted in 0.07 percentage change in poverty reduction over 2013 to 2017. This is consistent with increasing inequality in welfare distribution between 2013 and 2017. Growth benefited only a small segment of the poor households. This suggests that in Ghana, economic reforms should be designed to facilitate pro-poor economic growth.

Figure 4.3: Growth elasticity of poverty



4.6 Growth incidence in Ghana

The 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 allows us to compare the growth rates of per capita consumption in poorer segments of the population with that of richer segments of the population. These curves show the growth rates in per capita consumption at various points of the wealth distribution, starting from the poorest on the left of the horizontal

axis to the richest on the right. The GIC shows the percentage increase in consumption for each percentile of the population.

Figure 4.4 shows that growth rates in consumption (per adult equivalent) decreased for households below the poorest 20th percentile, indicating that economic growth during the four-year period benefitted the segment of the population that had per capita consumption above the 20th percentile. While the 2012/13 Poverty Profile Report (GSS 2014) found significantly higher growth of consumption among the two extreme ends of the distribution (the wealthiest and the poorest), this report finds that the top 10 percent of the population experienced highest gains in consumption. The bottom 20 percent of the population experienced reduction in per capita consumption. This phenomenon further supports the worsening inequality recorded over this period, as welfare was redistributed in favor of the top 20 percent of the population. Generally, the population between the 40th and the 80th quintile of per capita consumption experienced growth in per capita consumption over the period. Similar to the previous Poverty Profile Report, Figure 4.4 suggests a growing middle class in Ghana.

In the rural localities in particular, households with per capita consumption below the 50th percentile experienced a negative growth in consumption over the four-year period. In contrast, households in urban localities experienced positive growth in their per capita consumption (Figure 4.5 and Figure 4.6).

Figure 4.4: Growth incidence curve, national level

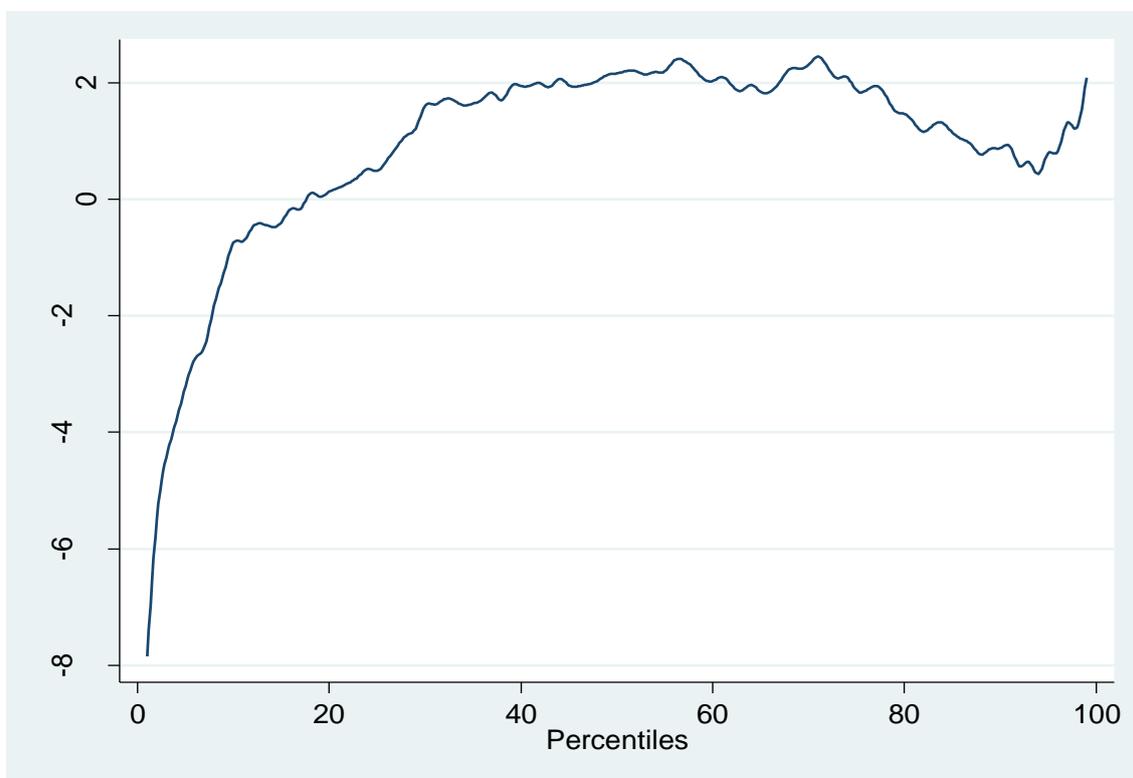


Figure 4.5: Growth incidence curve in urban localities in Ghana

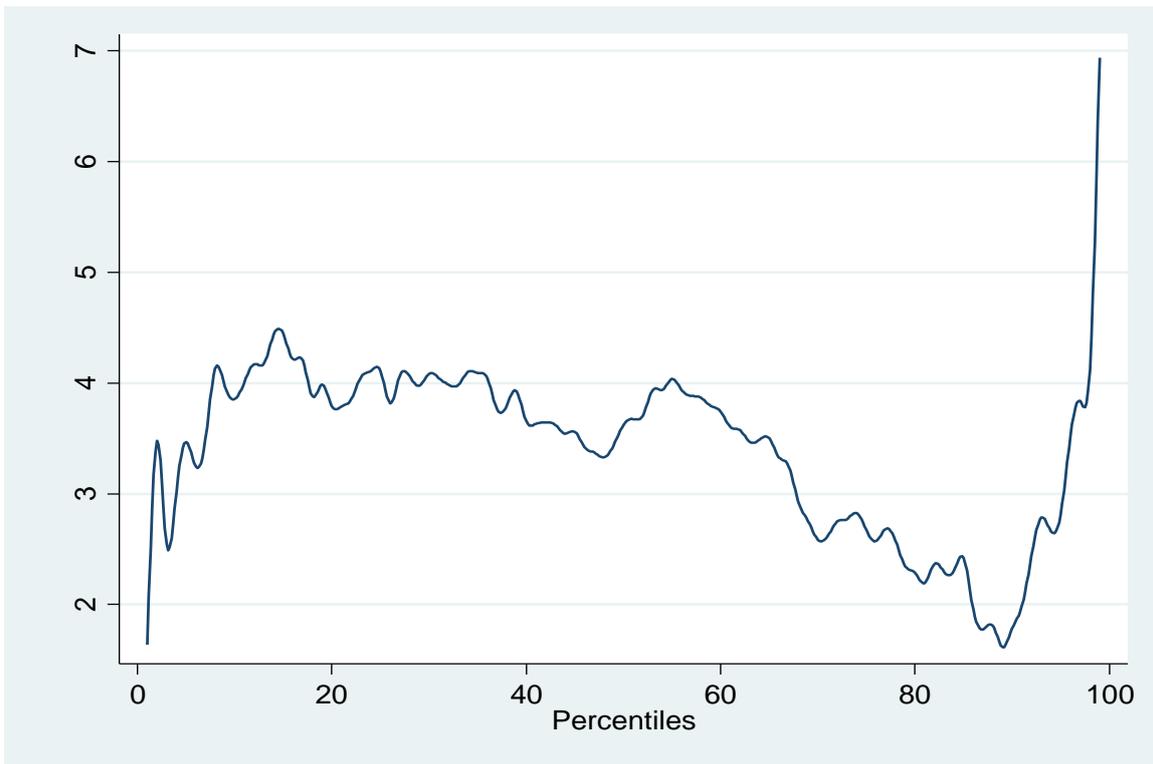
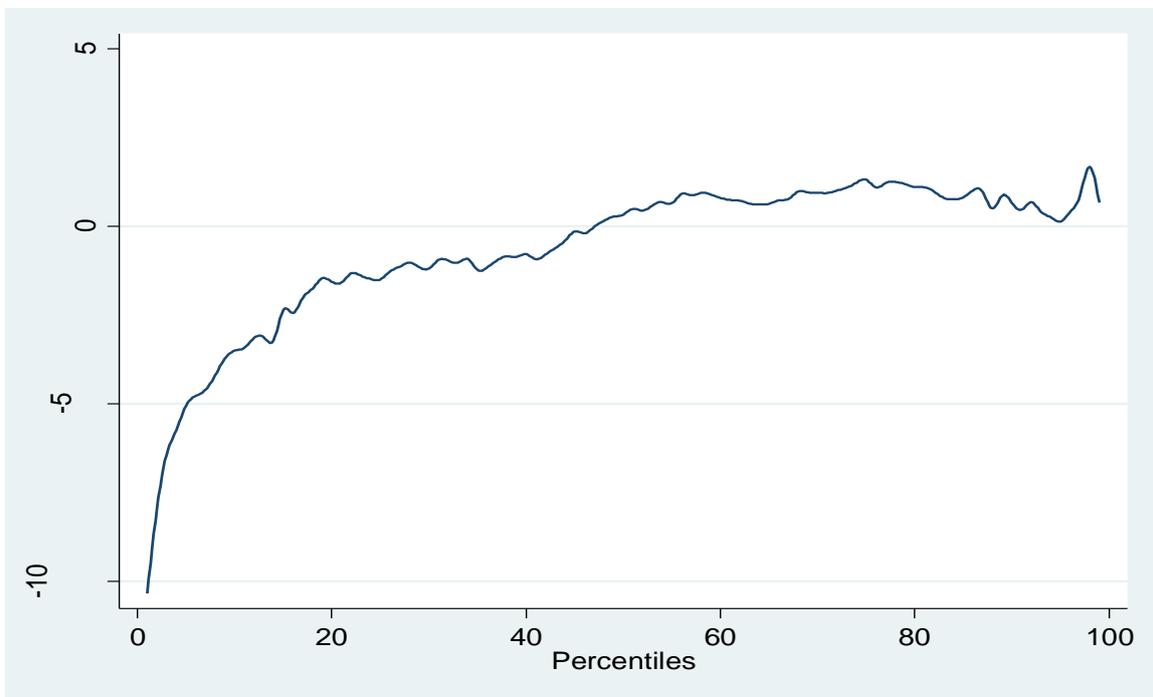


Figure 4.6: Growth incidence curve in rural localities in Ghana



4.7 Decomposition of poverty headcount

Decomposing poverty into growth and redistribution enables policy makers to address poverty either through programs that would improve welfare or ensure equitable distribution of welfare. Decomposing poverty in this way is possible since 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), and (b) the observed change in inequality, assuming that the mean consumption expenditure had remained unchanged (redistribution effect).

Growth in consumption expenditure will reduce poverty, all other things being equal, but when it is accompanied by an increase in inequality, reduction in poverty may not be as pronounced. The effectiveness of growth in poverty reduction is increased when 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 has 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 effects.

This report decomposes poverty changes at the national, urban/rural, and regional levels. The 0.8 percentage point reduction in the national poverty headcount between 2012/13 and 2016/17 was due largely to the growth effect. The redistribution effect was negative and partially offset the growth effect by 1.4 percentage points. Thus, poverty reduction would have been higher without the worsened redistribution or increased inequality (Figure 4.7).

In urban communities of Ghana, growth and inequality contributed to 1.8 and 1.1 percent of the 2.9 percentage points reduction in poverty incidence, respectively (Figure 4.7). In the rural localities, however, the growth contributed to reducing poverty while rising inequality had a poverty increasing effect. The net effect was an increase in the poverty headcount by 1.6 percentage points (Figure 4.7).

Poverty incidence in the Western, Volta, Northern, Upper East, and Upper West Regions increased between 2012/13 and 2016/17. In the Western, Volta, and Upper West Regions, the growth effect contributed to increased poverty while the redistribution effect reduced it. In the Northern Region and Upper East Region, poverty increased because both the growth and redistribution deteriorated (Table 4.2).

In the Greater Accra, Eastern, Ashanti, and Brong Ahafo Regions, both the growth and redistribution effects contributed to the decline in poverty (Table 4.2). In the Central Region on the other hand, the decline in poverty was largely because the growth effect outweighed the negative impact of the redistribution effect on poverty (Table 4.2).

Figure 4.7: Decomposition of headcount poverty change at the national level and by urban/rural between 2012/13 and 2016/17

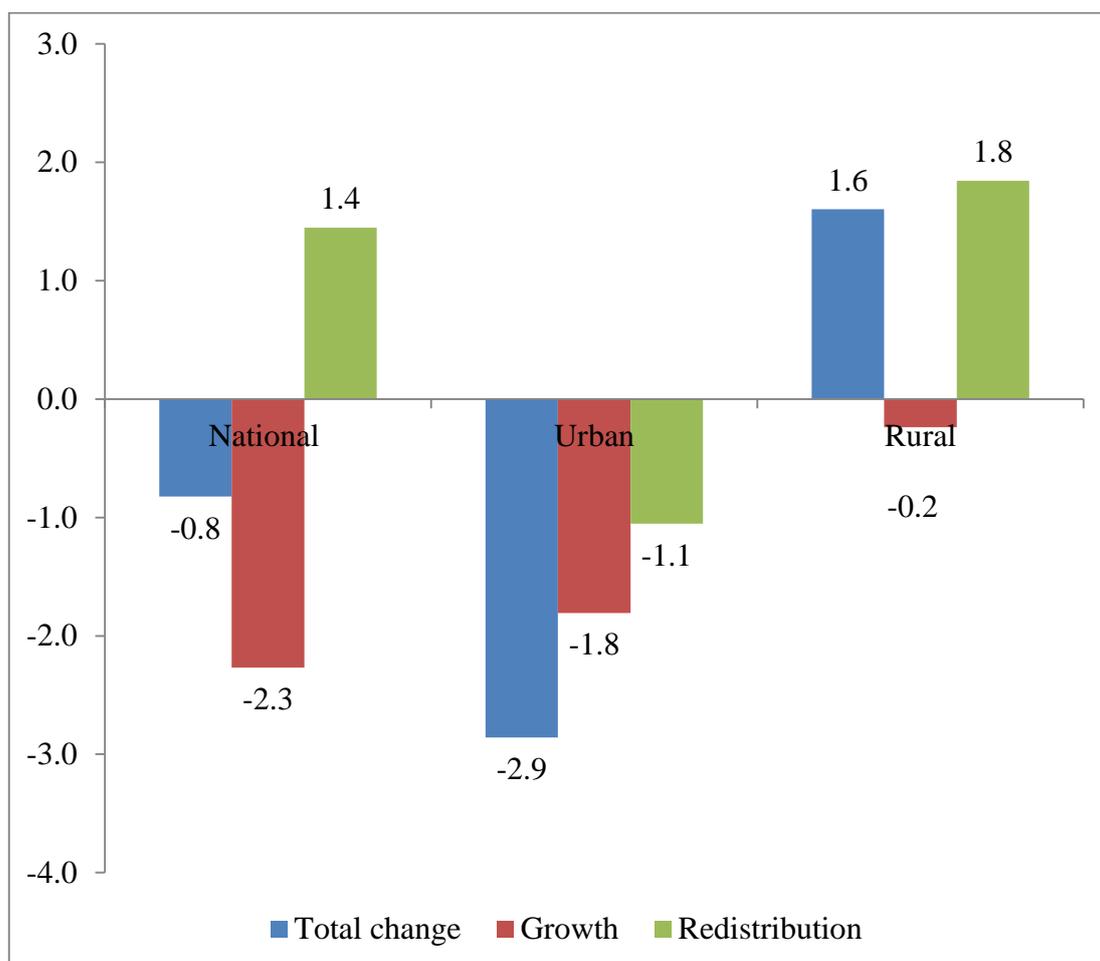


Table 4.2: Decomposition of regional headcount poverty

Region	Total poverty change	Share of change due to	
		Growth	Redistribution
Western	0.2	3.3	-3.0
Central	-5.0	-5.1	0.1
Greater Accra	-3.1	-1.0	-2.1
Volta	3.4	8.4	-5.0
Eastern	-9.1	-6.3	-2.8
Ashanti	-3.2	-3.6	0.4
Brong Ahafo	-1.1	-0.6	-0.5
Northern	10.7	7.6	3.1
Upper East	10.4	7.5	2.9
Upper West	0.2	6.8	-6.6

4.8 Poverty by economic activity and gender of household head

Figure 4.8 presents the incidence of poverty by the main economic activity of the household head. In 2016/17, the poverty incidence was highest (42.7 percent) among households whose heads are self-employed in the agricultural sector. The incidence of poverty was lowest among households headed by retired persons (1.6 percent). Households headed by persons who are employed in the public sector had the second lowest incidence of poverty of 4.8 percent.

The poverty rates increased among households whose heads are self-employed in agriculture, employees in the private sector, and unemployed or inactive persons (sick or elderly heads) in 2016/17 compared to 2012/13. However, even though households whose heads are engaged as employees in the private sector experienced higher poverty rates, it is far lower than those who are engaged in the agriculture sector and unemployed (Figure 4.8).

It is not surprising that poverty in Ghana is a rural phenomenon and in particular a rural savannah phenomenon, since agriculture is the major economic activity in the rural savannah area of Ghana. The lower poverty rates among households whose heads are unemployed, retired, or inactive than those engaged in agriculture activities needs further research. But it could be because they may be benefitting from income transfers.

In 2016/17, the poverty incidence among male-headed households was higher (25.8 percent) than among female-headed households (17.6 percent). This follows the same pattern found in 2005/06 and 2012/13. Although the poverty incidence for households headed by men and women declined in 2016/17 compared to 2012/13, the decline in the poverty headcount among households headed by men was smaller (0.1 percentage point) than the decline in the poverty headcount among households headed by women (2.5 percentage points) (Figure 4.9).

Figure 4.8: Poverty incidence by employment status of household, 2012/13–2016/17
(Poverty line = GH¢1,314)

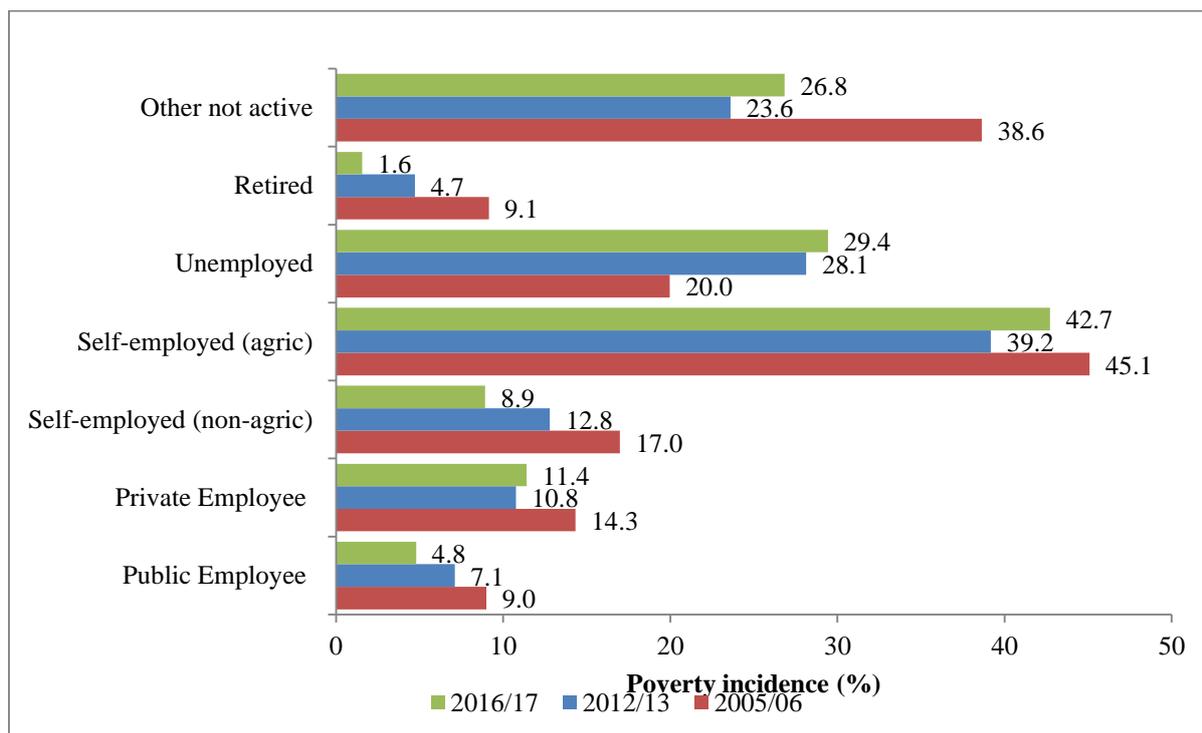
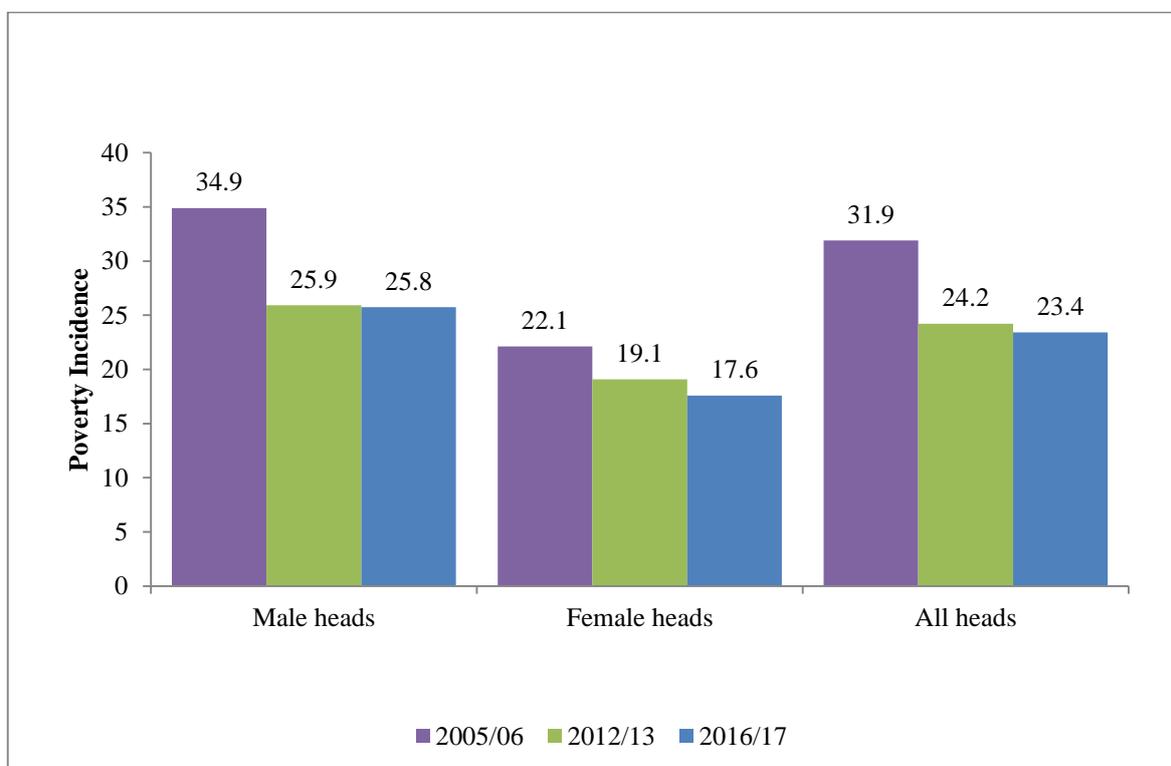


Figure 4.9: Poverty incidence by sex of household head, 2005/06–2016/17
(Poverty line = GH¢1,314)



4.9 Poverty and educational level of household head

Poverty is higher among households whose heads are uneducated than among those with some education. Figure 4.10 shows a clear trend that suggests that the level of poverty reduces as the educational level of the household head increases. Forty-four percent of household heads with no education are poor compared with 0.9 percent among those with tertiary education (Figure 4.10). In Ghana therefore, educational attainment for that matter could contribute to poverty reduction. This is partly because they have acquired the skill that could make them employable and productive.

Figure 4.10: Poverty incidence by household's head's education level (Poverty line = GH¢1,314)

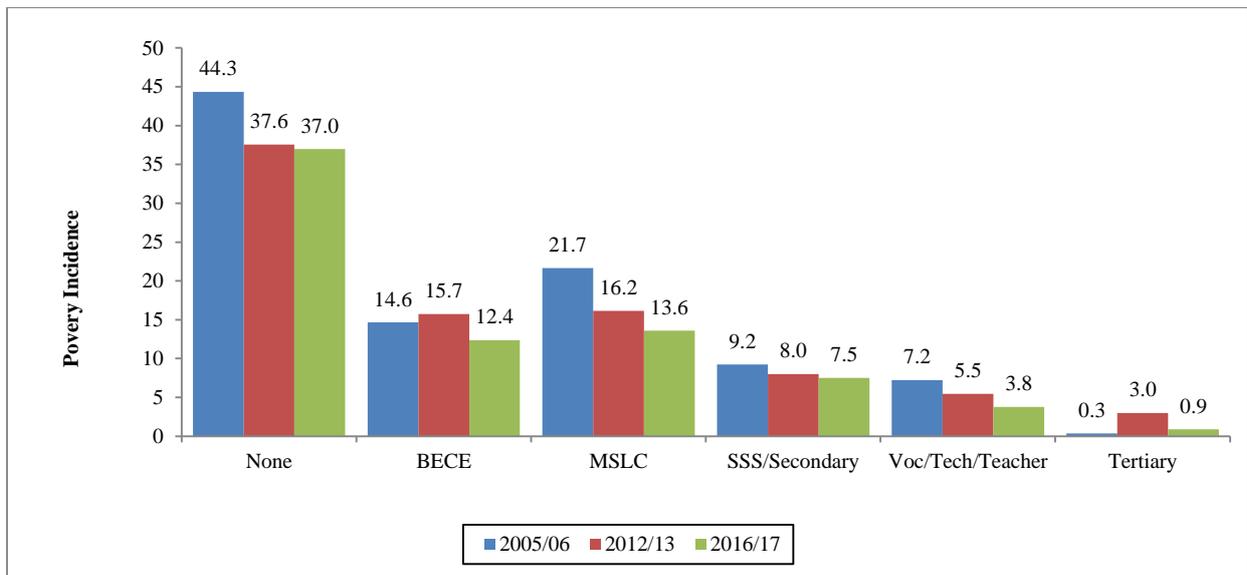
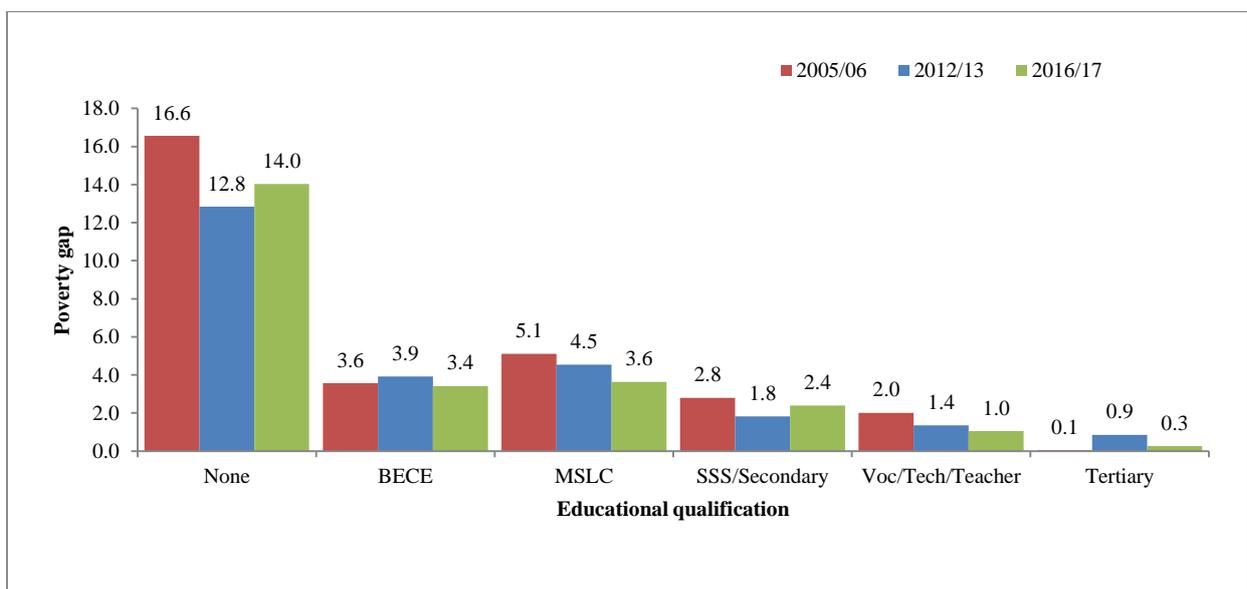


Figure 4.11: Poverty gap by household head's education level (Poverty line = GH¢1,314)



4.10 Summary

This chapter examined the trends and correlates of poverty with respect to geographical, social, and economic characteristics of the poor households. The data suggest a marginal increase in the Gini coefficient over the last four-year period, indicating that welfare distribution has worsened. Decomposition of the poverty changes confirms this fact, as overall poverty would be reduced further, but the worsening inequality partially offsets the growth effect of poverty reduction.

Further, the GIC reveals that the middle class population benefitted from growth, while those in the extreme end of the distribution, especially the very poor, experienced a decline in per capita consumption or were really worse-off, leading to the conclusion that over the four-year period, economic growth in Ghana had not been pro-poor. The Palma index confirms that welfare distribution has been highly disproportionate in favor of the non-poor and provides an indication that for a regional pro-poor policy targeting, the Upper West Region should be given priority, followed by the Northern Region and the Upper East Region in that order.

Generally, household with heads who are farmers are not just the poorest in Ghana, but they also contribute the most to Ghana's poverty. Household heads who are 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 workers have, probably 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. The likely association of poverty to the demographic characteristics has maintained the same patterns over the 12-year period.

CHAPTER FIVE

HOUSEHOLD ASSETS

5.1 Introduction

Chapter 3 of this report has shown that the incidence of poverty—measured in terms of consumption expenditure—has been declining in Ghana between 2005/06 and 2016/17, although this reduction has not been uniformly spread across the country, with some regions experiencing worsening poverty rates, while others recorded declines in their poverty rates.

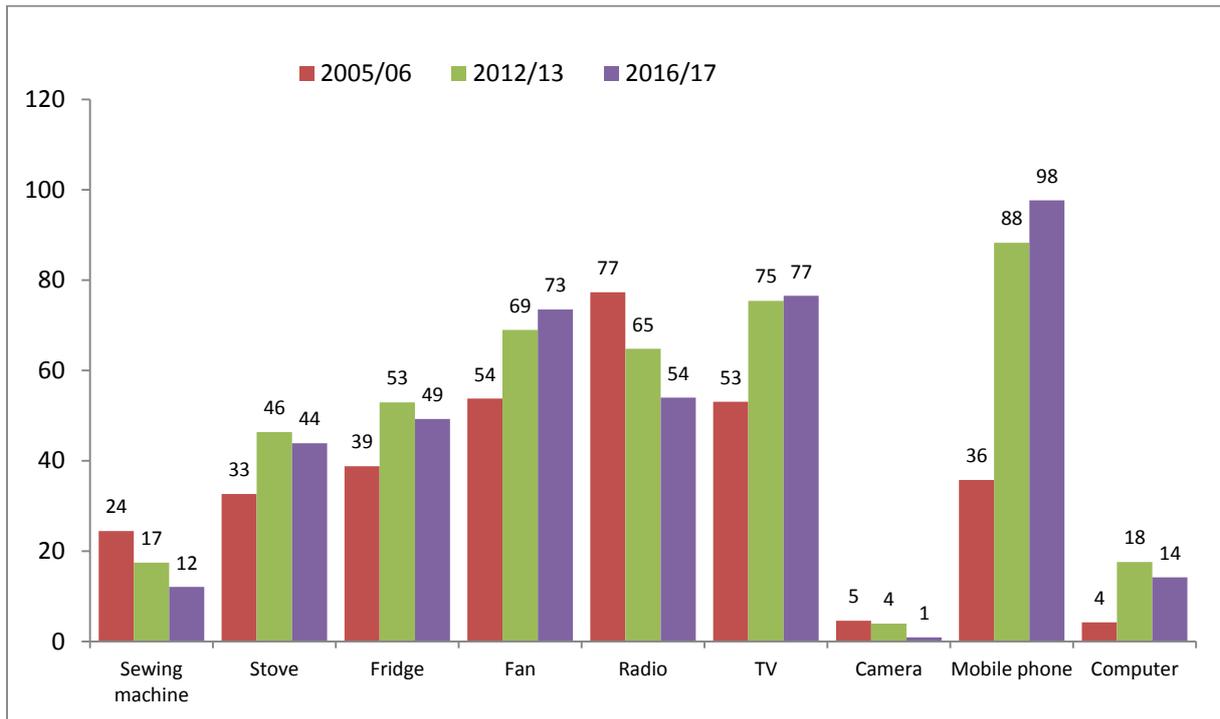
Poverty is a multidimensional phenomenon and consumption-based measures need to be supplemented by other welfare indicators. This chapter examines household ownership of key consumer durable goods. One of the advantages of these asset-based indicators is the ease with which they can be measured compared to the indicators based on consumption expenditure.

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

5.2 Asset ownership

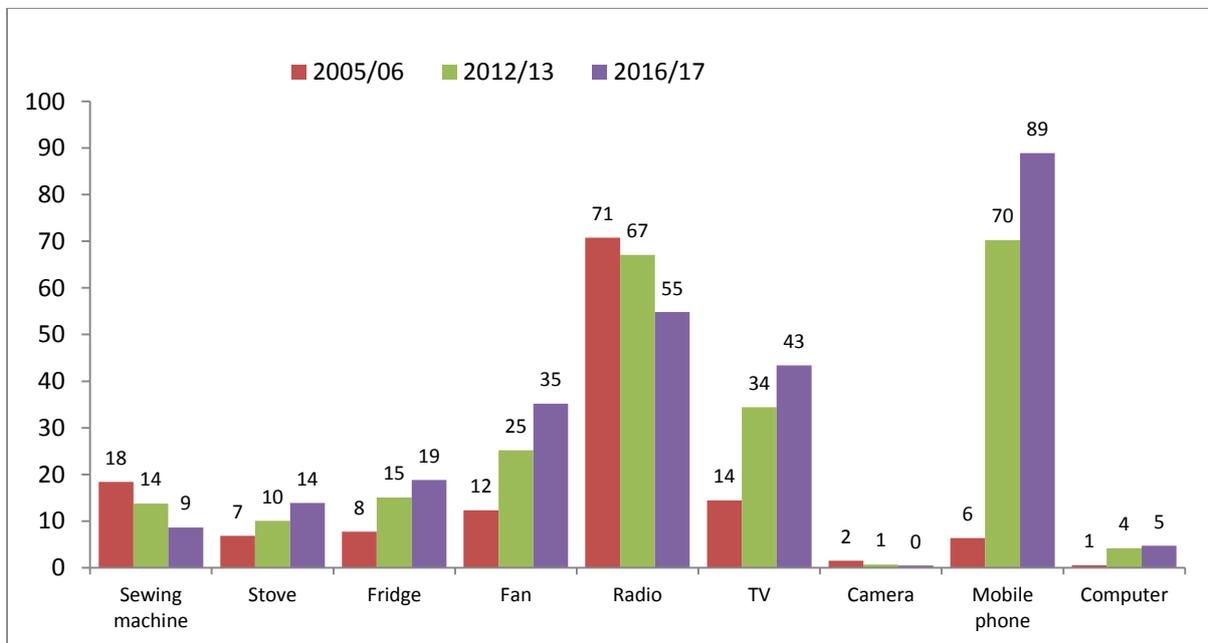
Information on the proportion of households owning different consumer durable goods in 2005/06, 2012/13, and 2016/17 is presented in Figures 5.1 and 5.2 for urban and rural areas, respectively. The data presented in these graphs refer to ownership of the following assets: sewing machine, stove, fridge, fan, radio, television, camera, mobile phone, and computer. Over the 12-year period, the proportion of households owning mobile phones has seen dramatic increases in both urban and rural areas (Figures 5.1 and 5.2). In addition, the percentage of households owning a television set and fans increased significantly in both urban and rural areas. Figures 5.1 and 5.2 show that with the exception of radio ownership, the proportion of households owning assets continues to be much higher in rural areas than in urban areas. In urban areas, almost every household owns a mobile phone, an increase from 36 percent 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 and 89 percent in 2016/17.

Figure 5.1: Percentage of urban households owning different household assets, 2005/06–2016/17



Source: Table A2.1.

Figure 5.2: Percentage of rural households owning different household assets, 2005/06–2016/17



The ownership of motor cycles and cars shows increases in the rural areas over the past 12 years. In urban areas, 6.0 percent of households owned a car in 2016/17 compared to only 2.0 percent in rural areas (Figures 5.3 and 5.4).

Figure 5.3: Percentage of urban households owning different transportation assets, 2005/06–2016/17

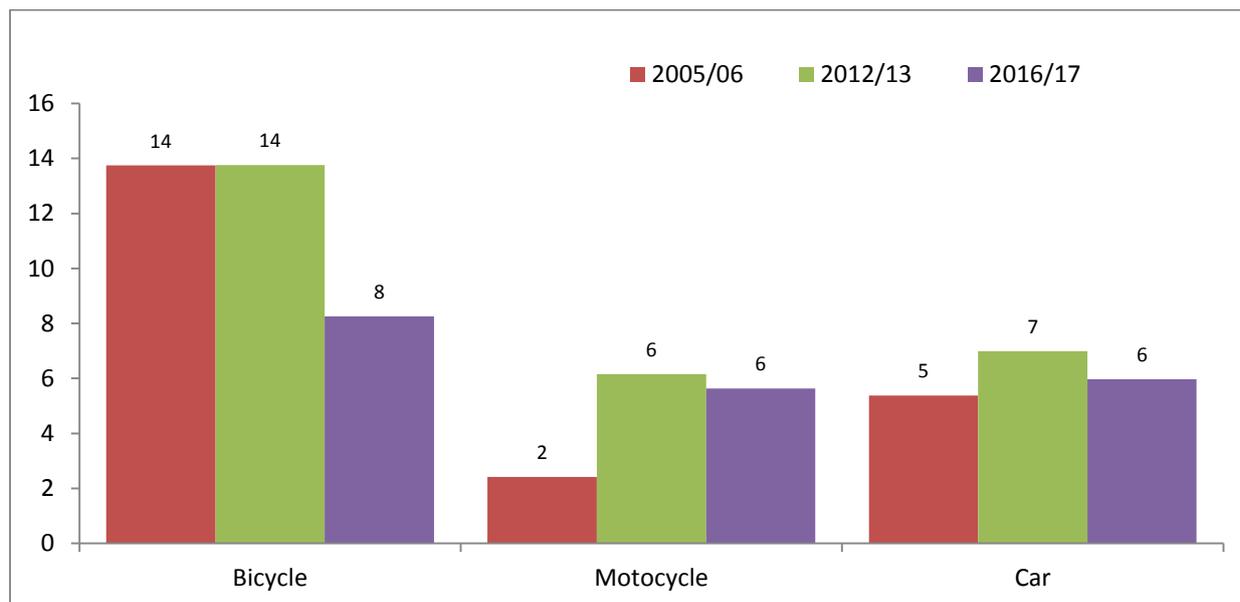
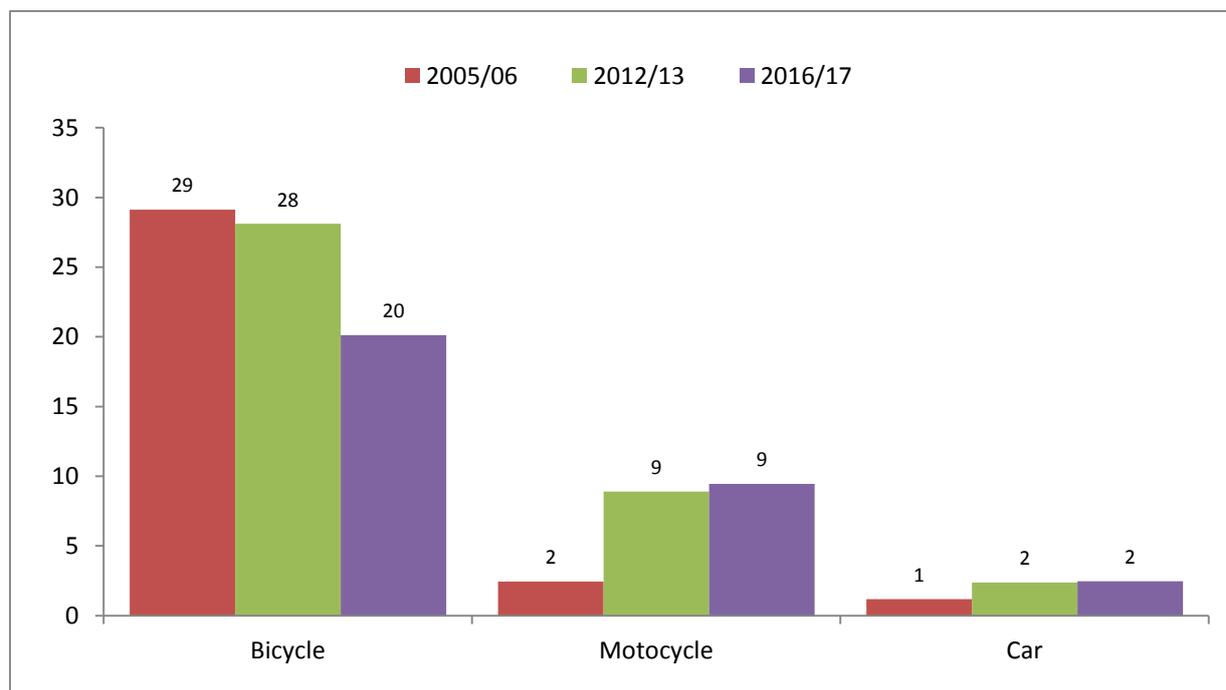


Figure 5.4: Percentage of rural households owning different transportation assets, 2005/06–2016/17



More information can be provided by considering asset ownership by wealth quintile. Figures 5.5 and 5.6 present the changes in ownership of refrigerator and television set for different quintiles of households. Across all wealth groups, the ownership of these assets significantly increased. However, a higher proportion of wealthier households own refrigerators and television sets, compared with poorer households.

Figure 5.5: Percentage of households owning a refrigerator by quintile, 2005/06–2016/17

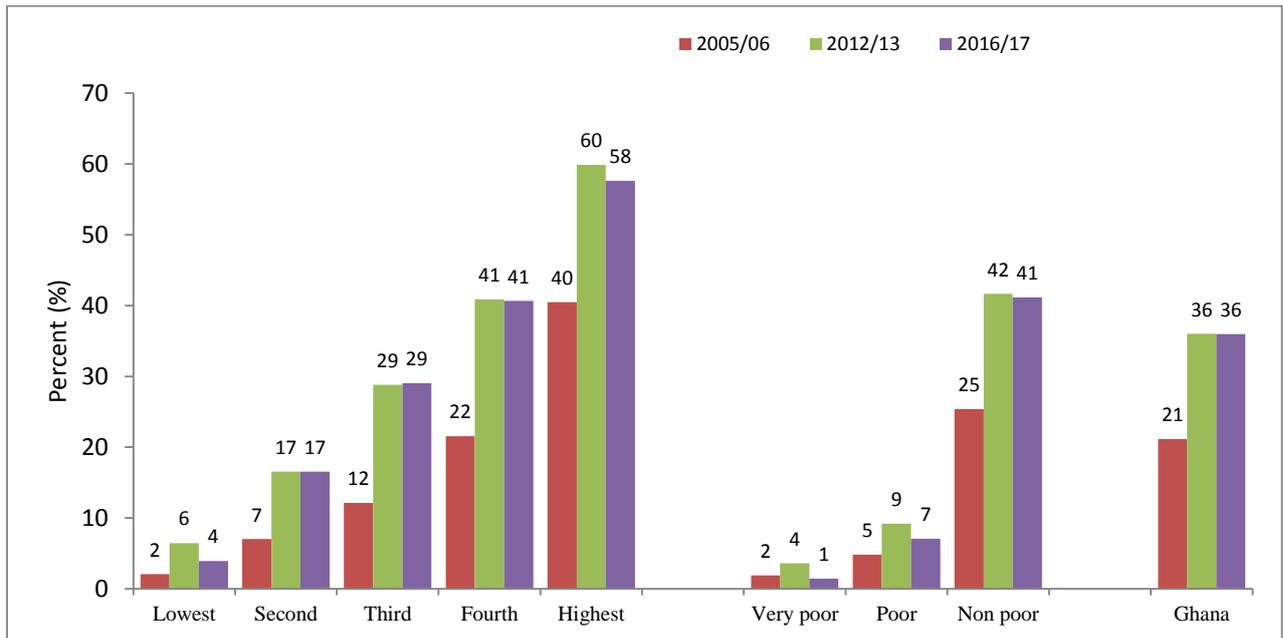
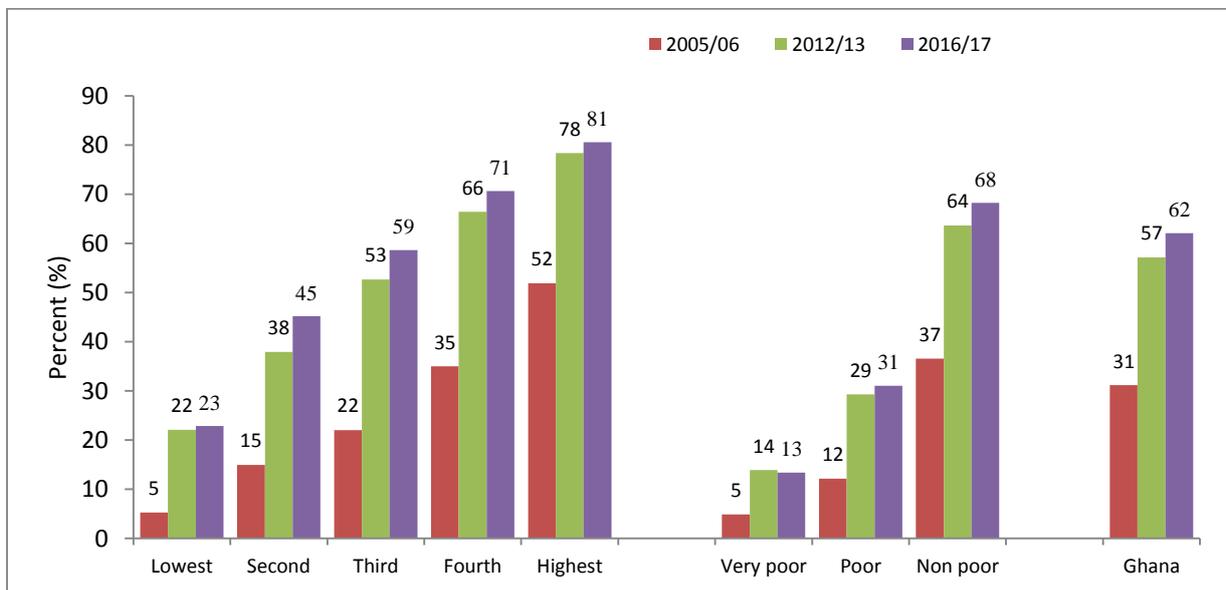


Figure 5.6: Percentage of households owning a television set by quintile, 2005/06–2016/17



5.3 Summary

The proportions of households owning most of the durable goods have shown large increases between 2005/2006 and 2016/17. The above increases were observed in both urban and rural areas, but they have often been higher for wealthier groups. The increases in the ownership of mobile phones were most remarkable both in rural and urban areas.

CHAPTER SIX

ACCESS TO SERVICES

6.1 Introduction

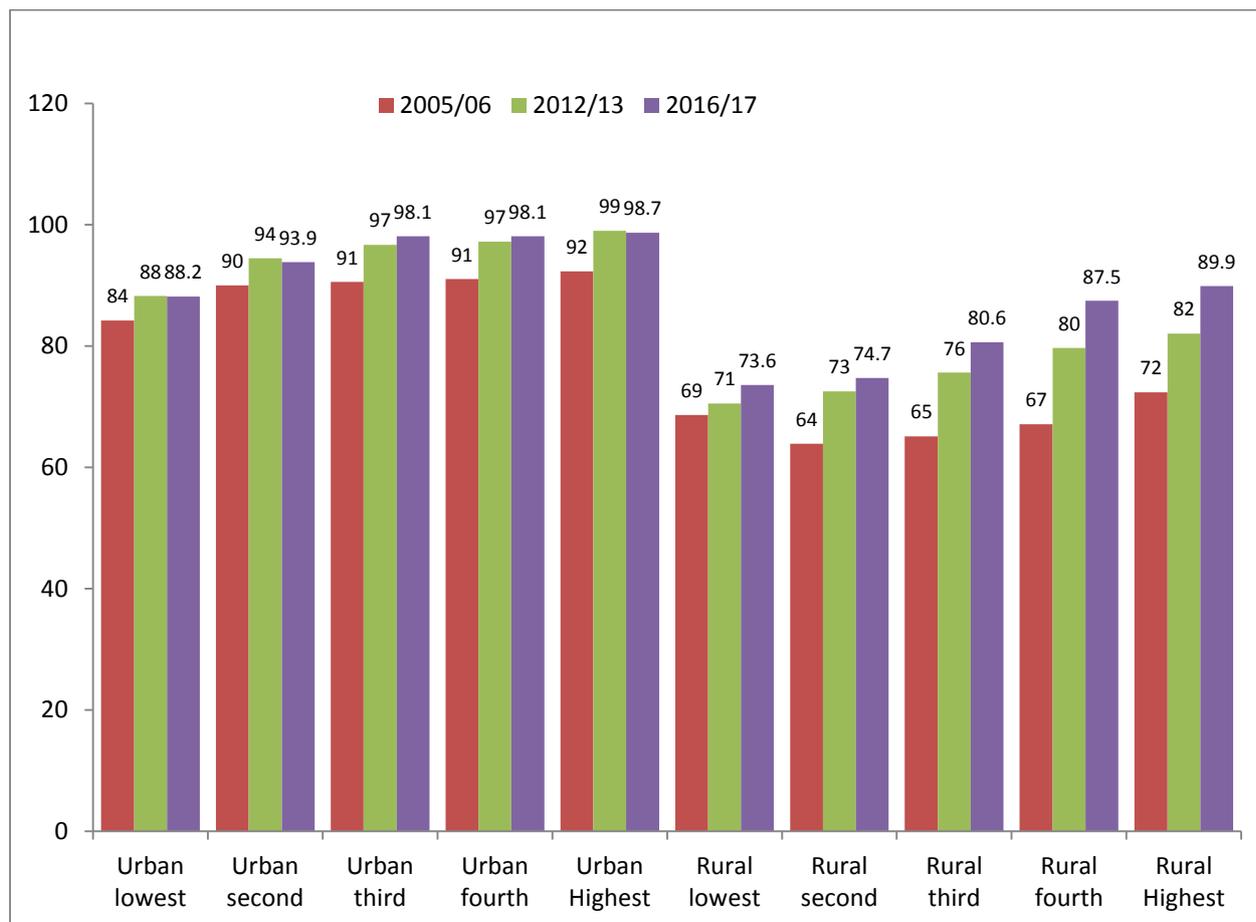
In previous chapters, the GLSS7 data have been used to demonstrate improvements in living standards of Ghanaians based on the household's total consumption and ownership of assets. Access to services, which is a part of the MDG indicators, is another important element used to evaluate or determine whether living standards have improved, especially among households in 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 Kumasi Ventilated Improved Pit [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 nearby. 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 household's ability to pay for available services, and ability to pay is itself determined by cost and by income. Figures 6.1 to 6.6 provide information on the proportion of households using potable water and adequate toilet facilities and having access to electricity.

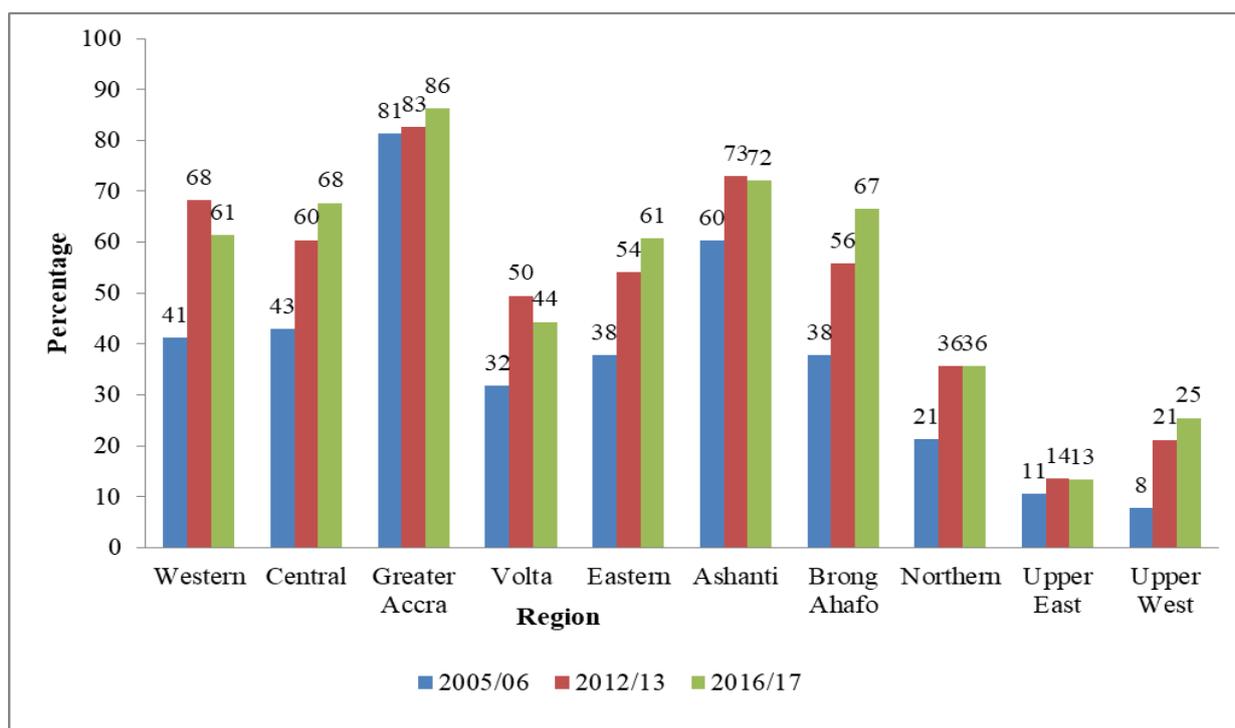
Figure 6.1 shows the percentage of households using potable water by locality and standard of living quintiles. The proportionate changes in access between the survey years are relatively small for all the quintile groups for the periods 2012/13 to 2016/17, following high increases between 2005/06 and 2012/13. By 2016/17, at least 98 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. Access increased in all quintiles in urban areas. The period 2012/13 to 2016/17, however, saw higher increases in the proportion of rural households using potable water with increasing wealth. Overall, between 2012/13 and 2016/17, there has been a reduction in the urban-rural gap in terms of the proportion of households using potable water.

Figure 6.1: Percentage of households using potable water by locality and standard of living quintile, 2005/06–2016/17



The information on access to an adequate toilet facility is provided in Figure 6.2. All regions recorded increases in the proportion of households with access to flush or KVIP toilet between 2005/06 and 2016/17. However, the large regional disparity still remains. In 2016/17, only 13 percent of households had access to flush or KVIP toilets in the Upper East Region, while as much as 86 percent of households had access to flush or KVIP toilets in the Greater Accra Region.

Figure 6.2: Percentage of households using flush or KVIP toilet by region, 2005/06–2016/17



In 2016/17, access to electricity increased across all localities and consumption quintiles, with the exception of the urban lowest quintile (Figure 6.3). The rural areas witnessed sharp increases in access to electricity in all wealth quintiles. However, the proportion of households with access to electricity still varies by quintile and urban/rural areas, with the lowest wealth quintile in rural areas having the least access (46.1 percent) and the highest quintile in urban area having the highest access (96.8 percent). Overall, 81.4 percent of households in Ghana now have access to electricity compared to 45.3 percent 12 years ago (Table A3.9).

In all the 10 regions, access to electricity significantly increased in the last 12 years. Between 2005/06 and 2016/17, the percentage point increase in access to electricity was most remarkable in the Upper West Region with 48 percentage point, followed by the Volta Region (44) and the Central Region (42). However, the regional variation in access to electricity is still large, with less than half the households of Upper East having access to electricity, while 94 percent of households in Greater Accra have access to electricity in 2016/17.

Figure 6.3: Percentage of households using electricity by locality and standard of living quintile, 2005/06–2012/13–2016/17

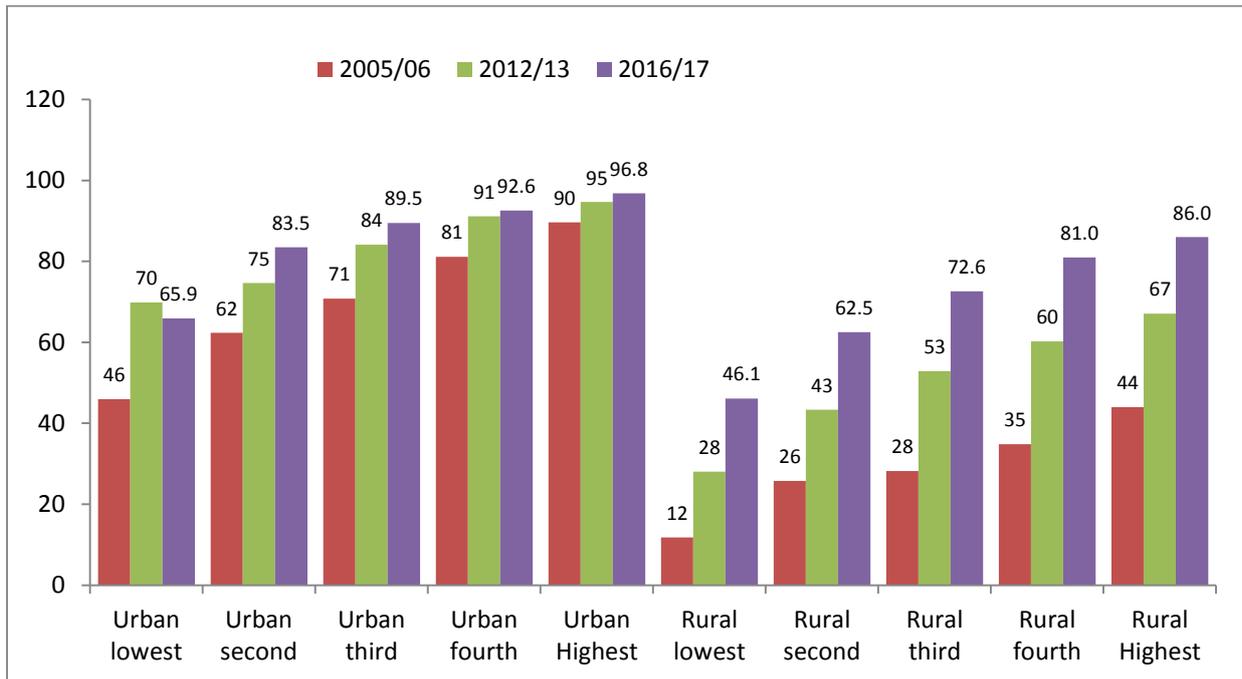
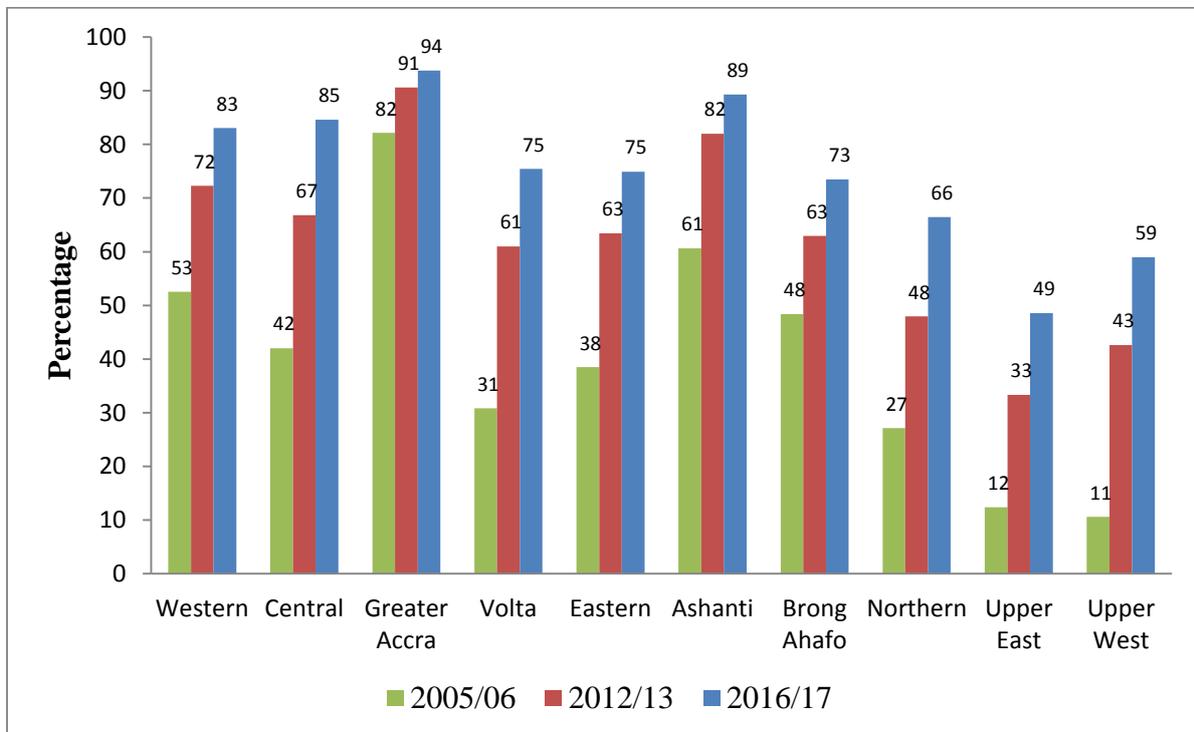


Figure 6.4: Percentage of households using electricity by region, 2005/06–2012/13–2016/17



6.3 Summary

There have been significant improvements over the 12-year period in the proportions of households with access to drinking water from an improved source, adequate toilet facilities and electricity. Increases in the use of adequate drinking water sources have been most pronounced in rural areas. There were also significant improvements in access to flush and KVIP toilets across all regions. With regard to the distribution of electricity, all the regions recorded increases in 2016/17. The increase was especially large in the Upper East Region. However, the gaps between urban and rural households and across regions remain significant for all services.

CHAPTER SEVEN

HUMAN DEVELOPMENT

7.1 Introduction

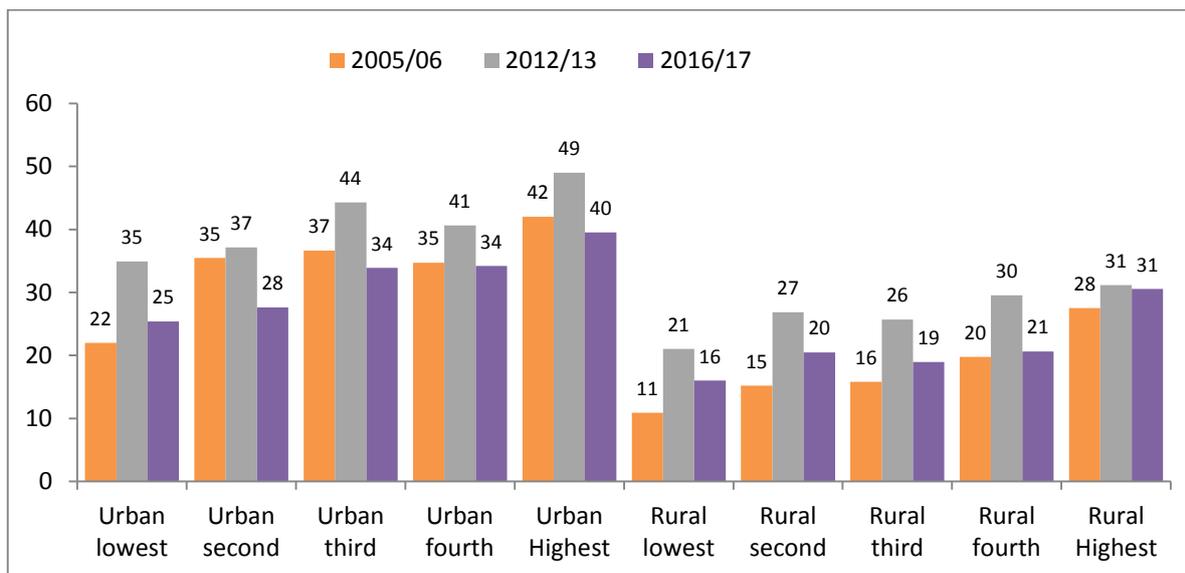
This chapter seeks to examine other factors that enhance the welfare of the people and the possibility of creating a better world for the poorest population based on the human development framework. Human development is about people, expanding their choices to live a full life with freedom and dignity (Madan 2012). The goal of development planning is to enhance the well-being of the society. Generally, people living below the poverty line have a low standard of living and it is important to measure the trickle-down effect of economic growth. This chapter adds to our understanding of the extent of deprivation that people, especially the poorest of the poor, grapple with.

7.2 Access to health services

Health is an important determinant of poverty. The health status of an individual determines his/her ability to work, and the more an individual engages in a productive economic activity, the greater the probability of him/her earning an income that will take him/her out of poverty. Health is said to have a strong influence on people's earning capacity and productivity, and it is fundamental to people's ability to enjoy and appreciate all other facets of life. Health, according to the World Health Organization (WHO) is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity (GSS 2014). The measurement of health and the effects of health care give an indication of well-being. When people are healthier as a result of improved health care and living conditions, they live longer. People with the means are able to access health care, but those who are unable to afford their daily food requirements would, in most cases, be unable to afford health care.

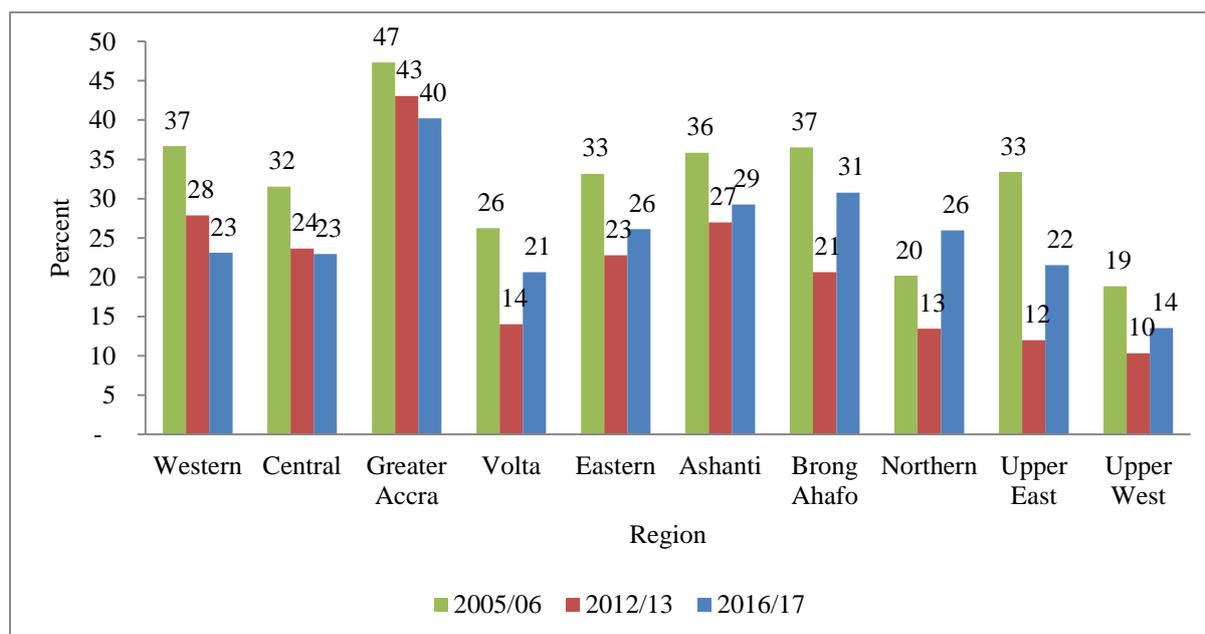
Figure 7.1 presents the proportion of persons who reported ill or were injured during the two weeks preceding the day of interview and were able to consult a doctor. The Figure shows that the percentage of ill or injured persons who consulted a doctor had declined between 2012/13 and 2016/17 across all localities and quintiles. The percentage of ill or injured persons that consulted a doctor in the highest urban quintile dropped from 49.0 percent in 2012/13 to 40.0 percent in 2016/17, while 31.0 percent of those in the highest rural quintile consulted a doctor in 2016/17 (same as recorded in 2012/13 for the same class of persons). It is important to note that the percentage of the ill or injured who consulted a doctor in 2016/17 is even lower than what was recorded in 2005/06 in almost all urban localities except for those in the urban lowest quintile.

Figure 7.1: Percentage of ill or injured individuals that consulted a doctor by locality and standard of living quintile, 2005/06–2016/17



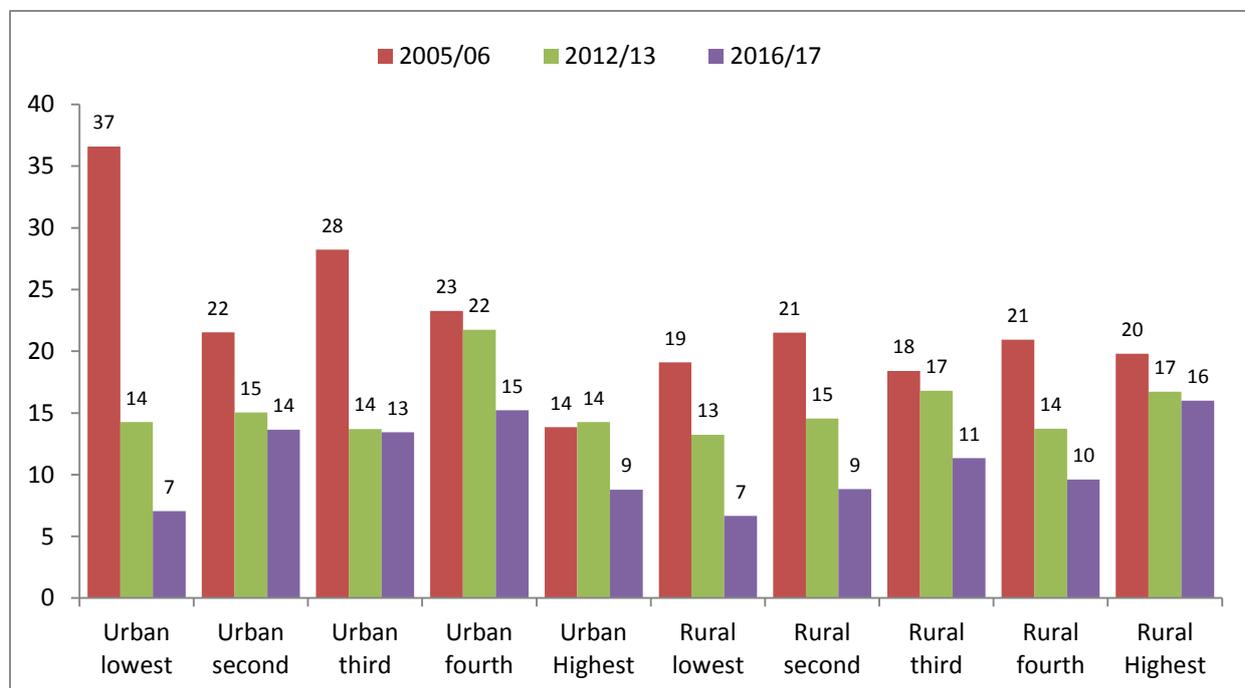
The Western, Central, and Greater Accra Regions recorded consistent declines in the percentage of ill or injured persons who consulted a doctor (Figure 7.2). All the other seven regions recorded an improvement in the percentage of the ill or injured who consulted a doctor in 2012/13, with the Northern Region recording the highest improvement of 13.0 percentage points. Again, the Northern Region is the only region which recorded a percentage of the ill or injured who consulted a doctor in 2016/17 to be higher than what was recorded in both 2012/13 and 2005/06.

Figure 7.2: Percentage of ill or injured individuals that consulted a doctor by region, 2005/06–2016/17



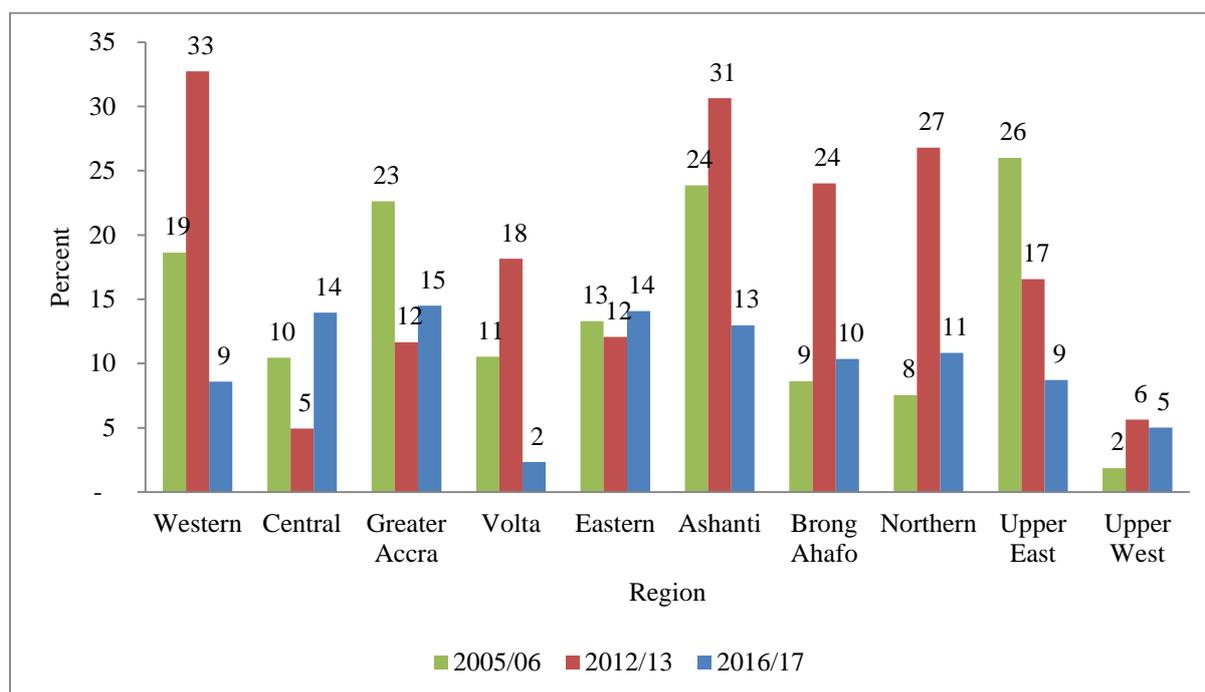
The situation is not different for those who were ill or injured and who consulted a pharmacist/chemical seller in 2016/17 across all localities and quintiles. There has been a continuous decline in the proportion of ill or injured persons who consulted a pharmacist or chemical seller over the three survey waves. The percentage of the ill/injured who consulted a pharmacist/chemical seller in the urban lowest quintile for instance, dropped from 37.0 percent in 2005/06 to 14.0 percent in 2012/03, and further dropped to 7.0 percent in 2016/17. On the other hand, those in the rural lowest quintile recorded a 6.0 percentage point decline from the 13.0 percent recorded in 2012/13. Even though the percentage of the ill or injured persons that consulted a pharmacist or chemical seller continued to decline, it is important to note that the decline has generally slowed down between 2012/13 and 2016/17 compared to what was witnessed between 2005/06 and 2012/13.

Figure 7.3: Percentage of ill or injured individuals that consulted a pharmacist/chemical seller by locality and standard of living quintile, 2005/06–2016/17



The Western, Volta, Ashanti, Brong Ahafo, and Northern Regions recorded significant drops in the percentage of the ill or injured persons who consulted a pharmacist/chemical seller in 2016/17 compared to what was recorded in 2012/13 (Figure 7.4). On the contrary, the Central, Greater Accra, and Eastern Regions recorded an improvement in the percentage of the ill or injured who consulted a pharmacist/chemical seller in 2016/17 over what was recorded in 2012/13.

Figure 7.4: Percentage of ill or injured individuals that consulted a pharmacist/chemical seller by region, 2005/06–2016/17



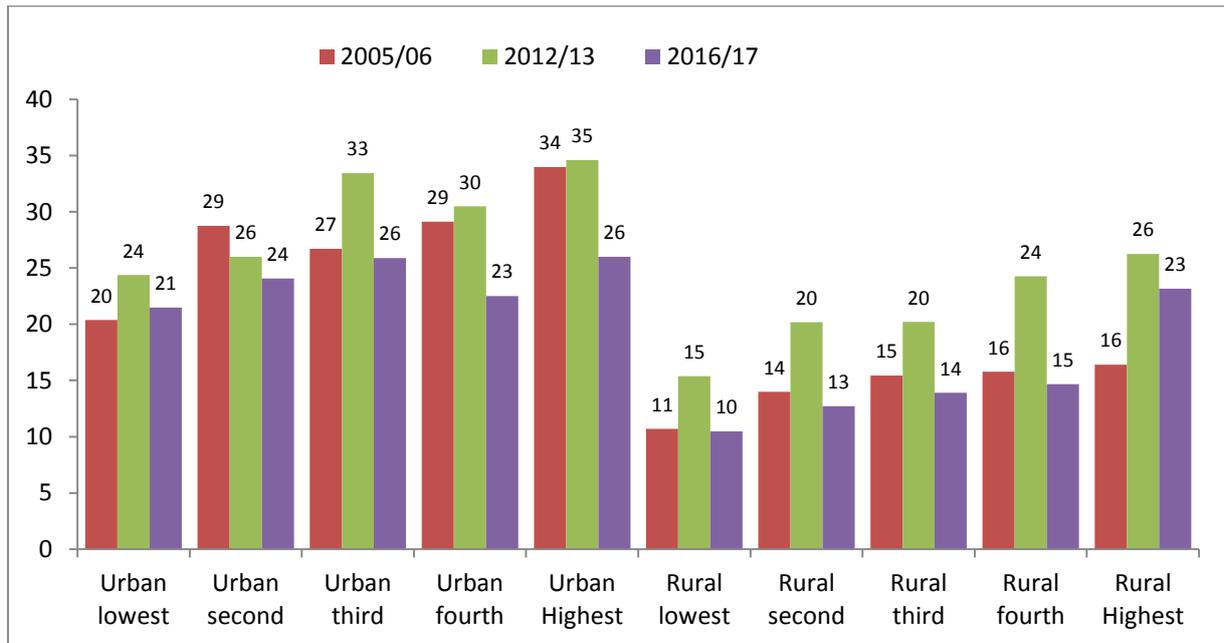
Ideally, when one is ill or injured, it is expected that the person will visit a hospital, clinic, health center, or CHPS compound for treatment. However, given all other conditions, affordability serves as a hindrance for some people. Figure 7.5 shows the percentage of the ill/injured persons who did their consultation in a hospital. The proportion of the injured or ill persons who consulted in a hospital has declined significantly from what was recorded in both 2005/06 and 2012/13 across most localities and quintiles.

The proportion of the rural highest quintile who consulted in the hospital when injured or ill dropped from 26.0 percent in 2012/13 to 23.0 percent in 2016/17. The drop was more conspicuous in the urban highest quintile who recorded 9.0 percentage points drop from the 35.0 percent recorded in 2012/13 to 26.0 percent in 2016/17. Again, it is worth mentioning that the proportion of the ill or injured persons who consulted at the hospital is higher among the urban localities and quintiles compared to their rural counterparts. The Volta, Brong Ahafo, Northern, Upper East, and Upper West Regions recorded increases in the percentage of persons who consulted at the hospital when injured or ill in 2016/17 over the numbers recorded in 2012/13 (Figure 7.6).

Figure 7.7 shows the percentage of those who reported ill or injured in the two weeks prior to the date of interview and who consulted a health facility (including hospitals, clinics, and health centers but excluding maternity and child health (MCH) clinics and CHPS compound). The situation is not too different from what was observed for those who consulted only in hospitals. There is a reversal in the progress made between 2005/06 and 2012/13 and what was observed for 2016/17. Whereas more than half of the persons injured or ill in the urban third, urban fourth, and urban highest quintiles (55.0 percent, 50.0 percent, and 53.0 percent, respectively)

went to a health facility in 2012/13, less than half of the injured or ill persons in the same localities and quintiles went to a health facility in 2016/17 (40.0 percent, 40.0 percent, and 44.0 percent, respectively). Figure 7.8 presents the regional analysis of the percentage of the injured or ill who consulted a health facility. All the regions (with the exception of the Western, Central, Greater Accra, and Eastern Regions) saw improvements in the proportion of the injured or ill persons who consulted at a health facility in 2016/17.

Figure 7.5: Percentage of ill or injured individuals that went to a hospital, by locality and standard of living quintile



Note: Hospitals only, excluding clinics, health centers, MCH clinic, and CHPS.

Figure 7.6: Percentage of ill or injured individuals that went to a hospital, by region

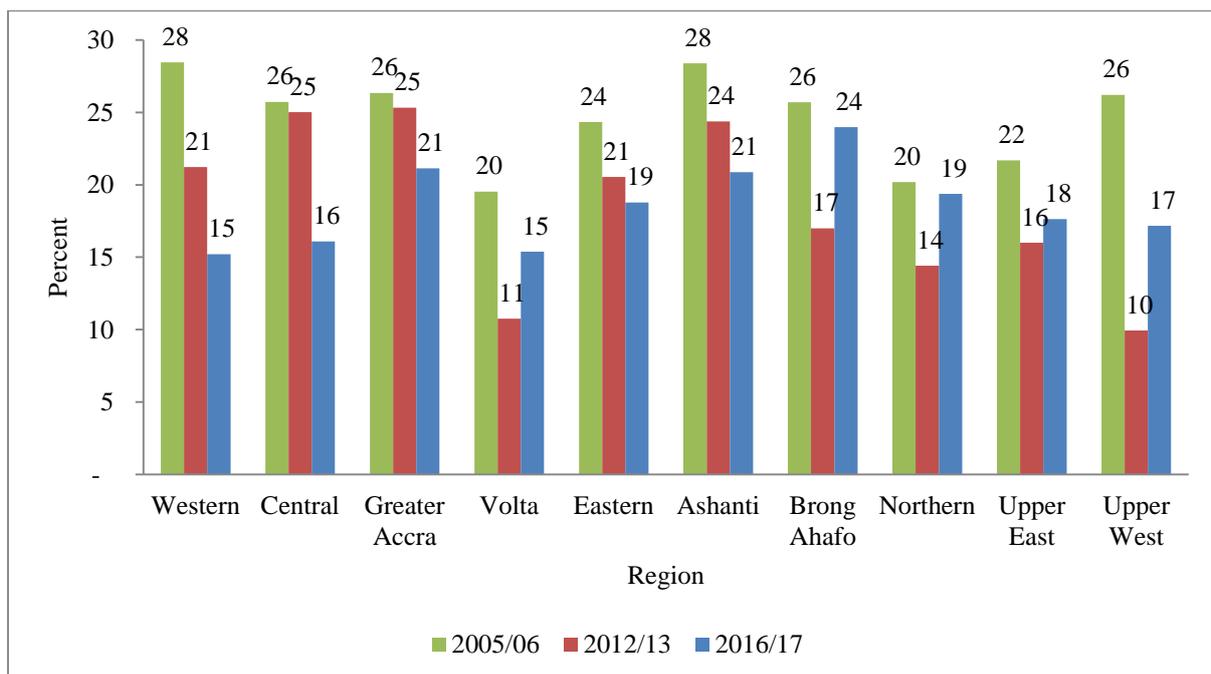
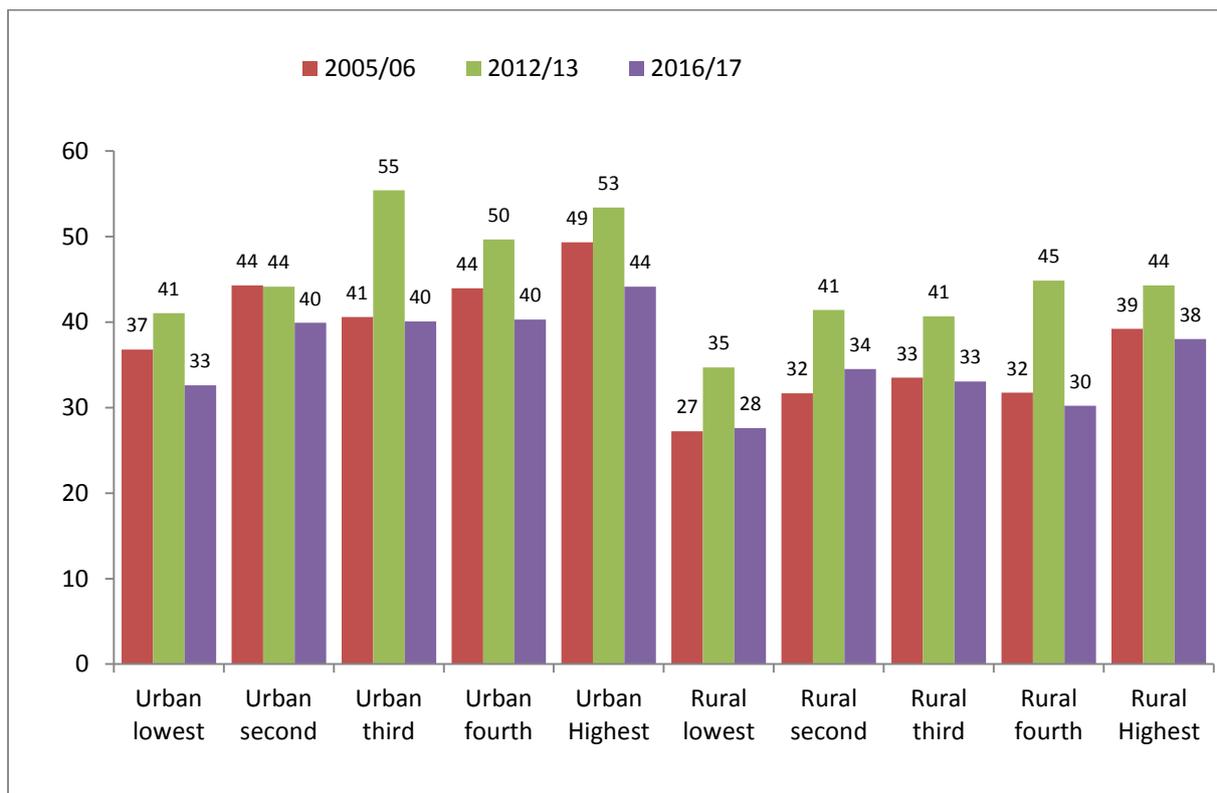
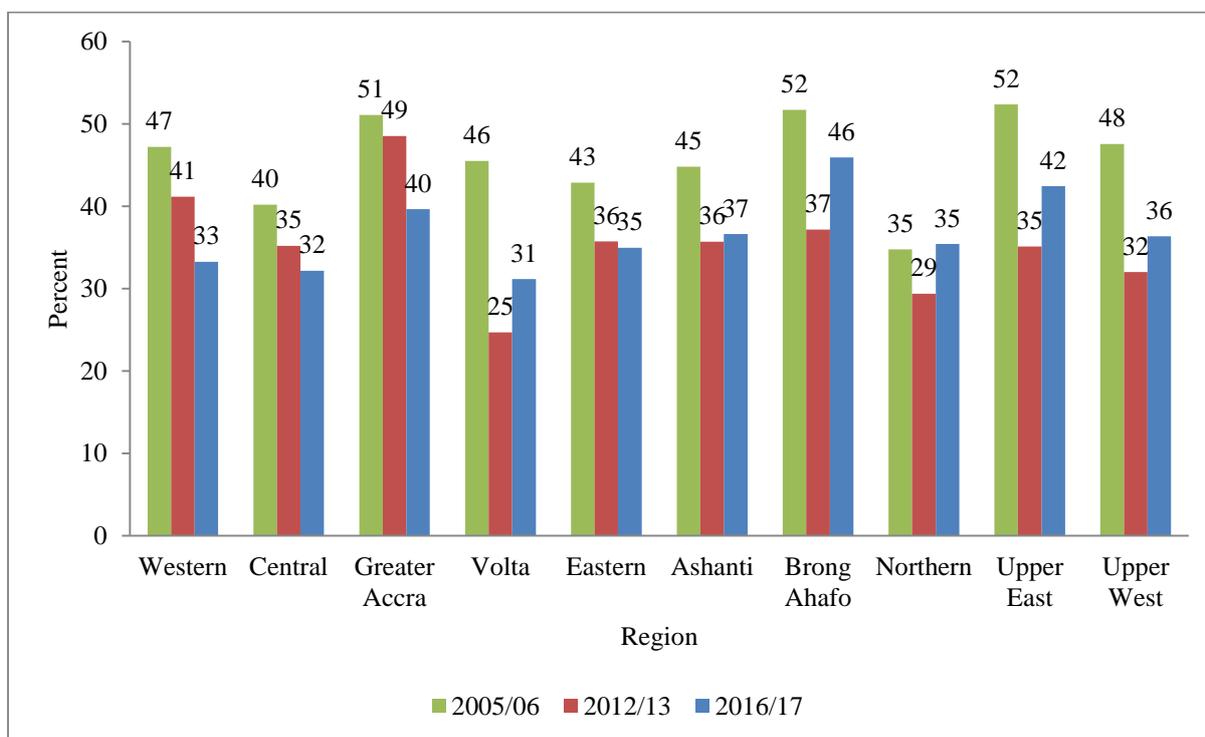


Figure 7.7: Percentage of ill or injured individuals that went to a health facility, by locality and standard of living quintile



Note: Health facilities including hospitals, clinics, health centers, excluding MCH clinic and CHPS.

Figure 7.8: Percentage of ill or injured individuals that went to a health facility, by region



7.3 Access to education

Continuous and sustained access to education is said to support long-term improvements in productivity, reduce poverty, and help improve preventive health care (Lewin 2015). People become poor due to lack of education, and the lack of the knowledge and skills it can develop. Efforts have been made over the years to ensure increased enrolment at both basic and secondary education levels to achieve Free Compulsory Universal Basic Education (FCUBE) as enshrined in the 1992 constitution of Ghana. This section presents both gross and net school attendance rates at primary school level, junior high school (JHS), and senior high school (SHS) levels.

Figure 7.9 presents primary school net attendance rate (NAR) for all localities by sex. NARs of children at primary, JHS, and SHS is the number of children of official schooling age who are attending primary, JHS, and SHS as a percentage of the total number children of the official school-age population. Net primary attendance rates for girls witnessed increases across all localities between 2012/13 and 2016/17 while that for the boys recorded some fluctuations during the same period. Eighty-seven percent of girls who had attained the official primary school age in Accra (GAMA) were enrolled in primary schools. This indicates 11 percentage points increase since 2012/13. However, there was a dip in the percentage of boys of primary school age who were enrolled in primary school in Accra (GAMA) from 88.0 percent to 80.0 percent between 2012/13 and 2016/17. Figure 7.9 further reveals that net primary school enrolment was in favor of the female child across all localities for the 2016/17 school year. Out of the 10 regions, only the Greater Accra and Northern Regions recorded a drop in net primary school enrolment ratio for males between 2012/13 and 2016/17 (Figure 7.10). Even though the Volta Region recorded a drop in NAR for boys from 2005/06 to 2012/13, the situation reversed between 2012/13 and 2016/17. No region recorded a drop in NAR for females in 2016/17 relative to what was recorded in 2012/13.

The net primary school enrolment by quintiles is presented in Figure 7.11. There is a steady improvement in net primary school enrolment for both boys and girls across all quintiles from 2005/06 to 2016/17. The net primary school enrolment for boys living in households classified under the lowest quintile increased from 52.0 percent in 2005/06 to 62.0 percent in 2012/13, and further increased to 64.0 percent in 2016/17. However, the net primary school enrolment for boys in the highest quintile households remained stagnant at 84.0 percent across the three survey periods.

Figure 7.9: Net primary school attendance ratio by sex and locality, 2005/06–2016/17

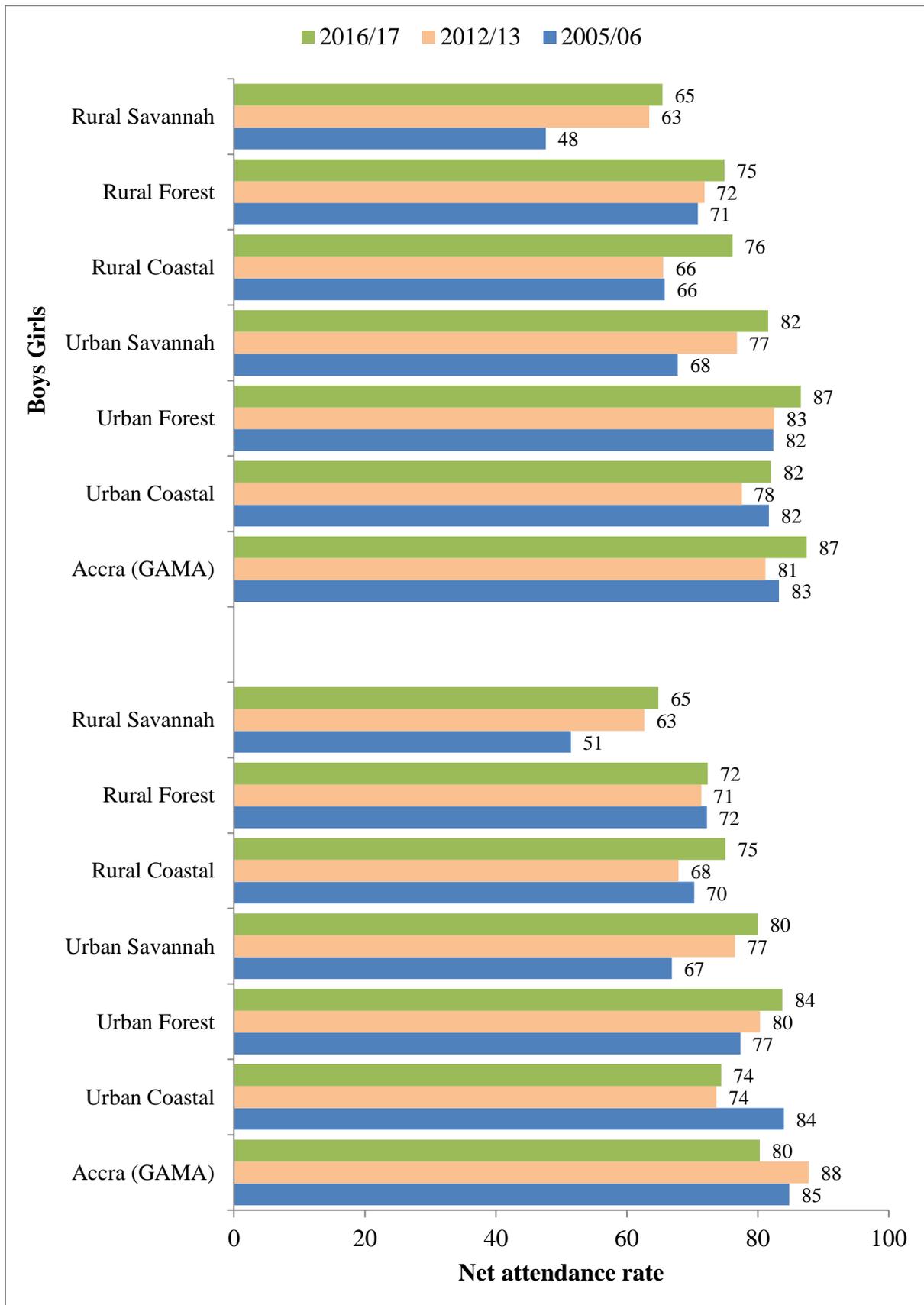


Figure 7.10: Net primary school attendance ratio by sex and region, 2005/06–2016/17

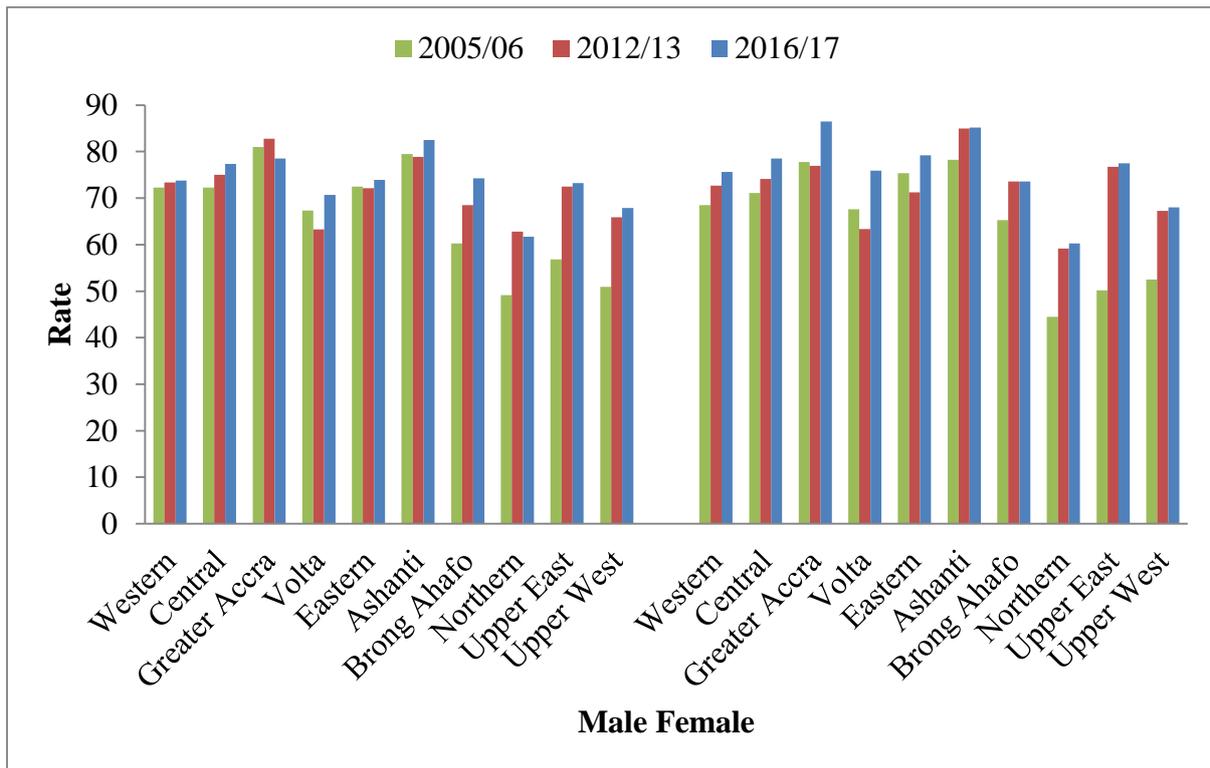
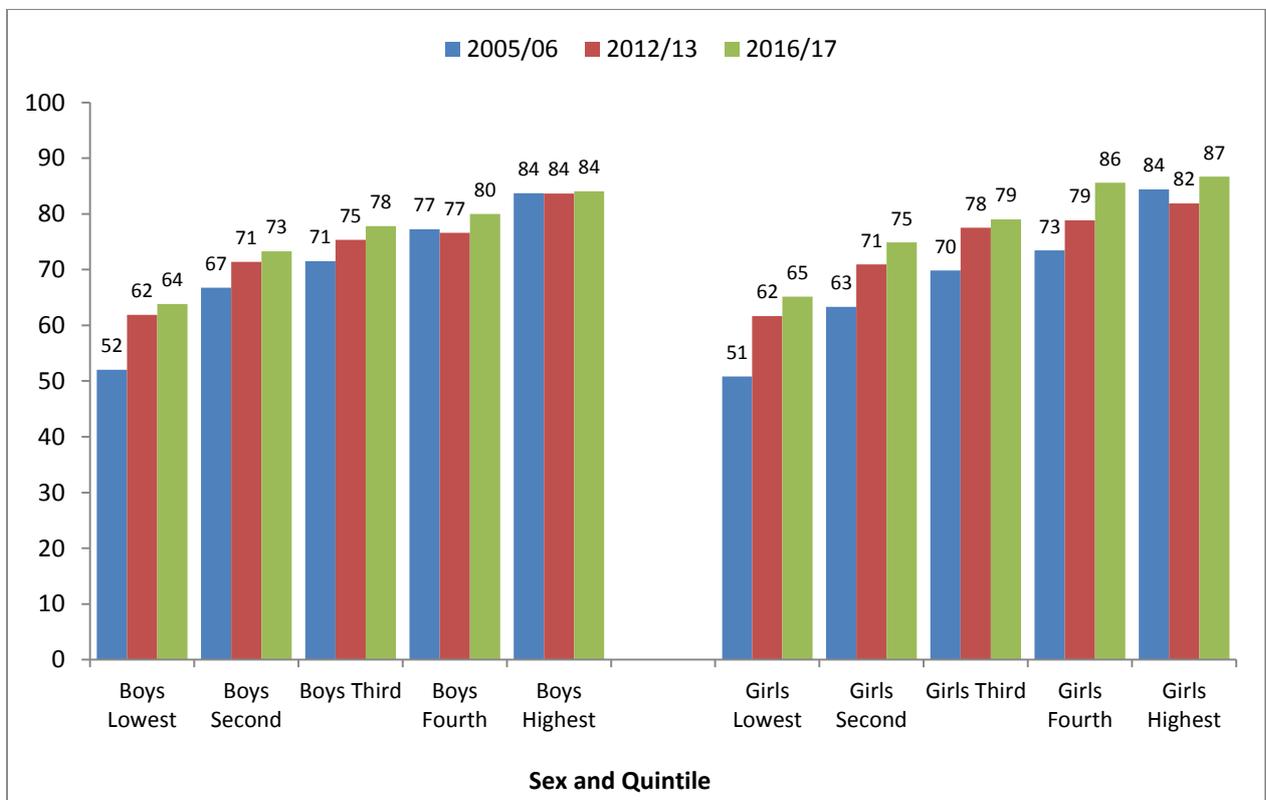


Figure 7.11: Net primary school attendance rate by sex and quintile, 2005/06–2016/17



The gross primary school attendance rate (GAR) for both boys and girls exceeds 100 for the 2016/17 school year across all localities in the country (Figure 7.12). This means that there is a sizeable number of overage or underage pupils participating at the primary school level. This, to some extent, has been attributed to the introduction of policies such as the Capitation Grant, Free School Feeding Programme, and Free School Uniforms in the primary schools. Urban Savannah recorded the highest GAR for both boys (124) and girls (117) in the 2016/17 academic year.

Whereas there was a decline in NAR in junior secondary school (JSS) between 2005/06 and 2012/13 for some localities (Accra, Urban Coastal, and Urban Forest for boys; Urban Coastal for girls), Figure 7.13 shows that all the localities (with the exception of Urban Savannah for boys, and Urban Coastal for girls) recorded increases in NAR for JSS between 2012/13 and 2016/17. It is important to note that Rural Savannah still recorded the least NAR in JSS for 2016/17 (14.0 percent for boys and 17.0 percent for girls). There was no improvement in NAR for boys enrolled in JSS in the Upper West Region in 2016/17 (Figure 7.14). The Western Region recorded a marginal decline in NAR for females in JSS (from 30.9 percent in 2012/13 to 30.6 percent in 2016/17). With the exception of girls in the highest quintile, there were increases in the NAR across all quintiles for both boys and girls in 2016/17 (Figure 7.15). Figure 7.15 further shows that NAR increased across all quintiles, an indication that those in low levels of the quintile (the poor) are able to enroll their children in JSS. However, there still remains a large gap in NAR among the rich and poor.

The story on GAR in JSS for 2016/17 is a mixed one; while some localities recorded an increase in GAR between 2012/13 and 2016/17, others recorded a decline (Figure 7.16). The GAR in JSS for boys in Urban Coastal dropped from 105 in 2012/13 to 91 in 2016/17 and that for Urban Savannah too dropped from 104 in 2012/13 to 98 in 2016/17. Accra (GAMA) also recorded a drop in GAR for girls between 2012/13 and 2016/17 (112 against 108). The GAR in JSS for girls in the top quintile dropped from 107 in 2012/13 to 98 in 2016/17, the only drop recorded between the two survey periods across all quintiles for both boys and girls (Figure 7.17). The GAR in JSS for both boys and girls in the lowest quintile is still low. Additional efforts need to be made to assist the poorest of the poor to get their children into JSS.

The Net School Attendance Rate (NAR) for girls in Senior Secondary High School (SHS) in Accra increased significantly from the 33.0 percent recorded in 2012/13 to 47.0 percent in 2016/17 (Figure 7.18). It is refreshing to note that NAR for SHS across all localities show some improvements in 2016/17. Urban Coastal, Urban Forest, Urban Savanna, Rural Coastal, and Rural Forest show significant improvements in NAR for boys. However, Figure 7.18 shows that NAR in SHS for boys in Accra dropped from the 37.0 percent recorded in 2012/13 to 32.0 percent in 2016/17. A careful look at Figure 7.19 reveals that NAR for SHS for both boys and girls across all quintiles recorded increases, with girls in the highest quintile registering the highest increase (from 27.0 percent in 2012/13 to 43.0 percent in 2016/17).

The GAR for SHS registered improvements for both boys and girls in some quintiles while other quintiles recorded reductions. Figure 7.20 shows that the GAR for SHS only increased for boys in the lowest, second, and third quintiles. The GAR decreased significantly for boys

in the highest quintile (from 110 in 2012/13 to 68 in 2016/17). Girls experienced an increase in the GAR in all consumption quintiles, with the exception of the third quintile which recorded a decrease.

Figure 7.12: Gross primary school attendance rate by sex and locality, 2005/06–2016/17

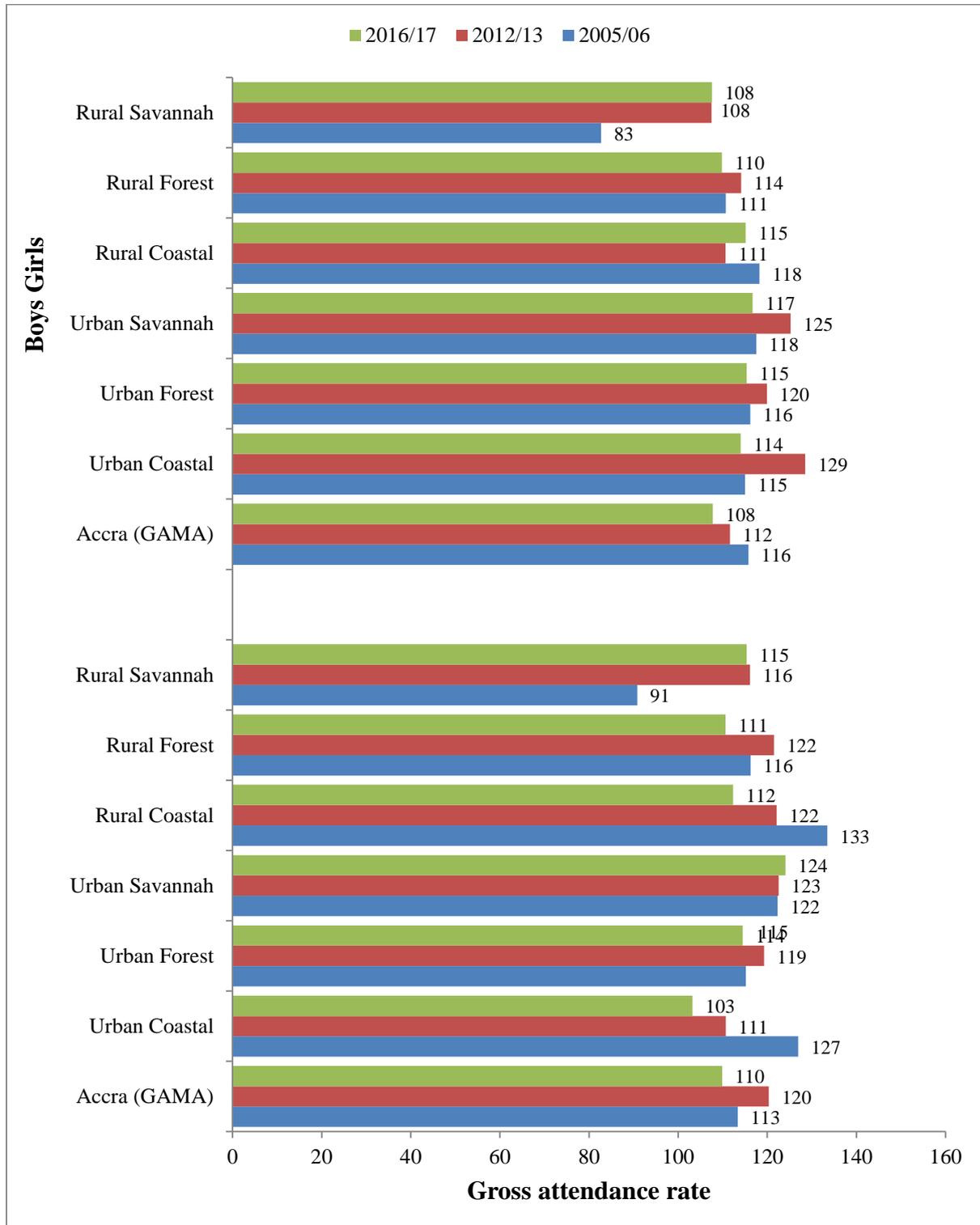


Figure 7.13: Net JSS school attendance rate by sex and locality, 2005/06–2016/17

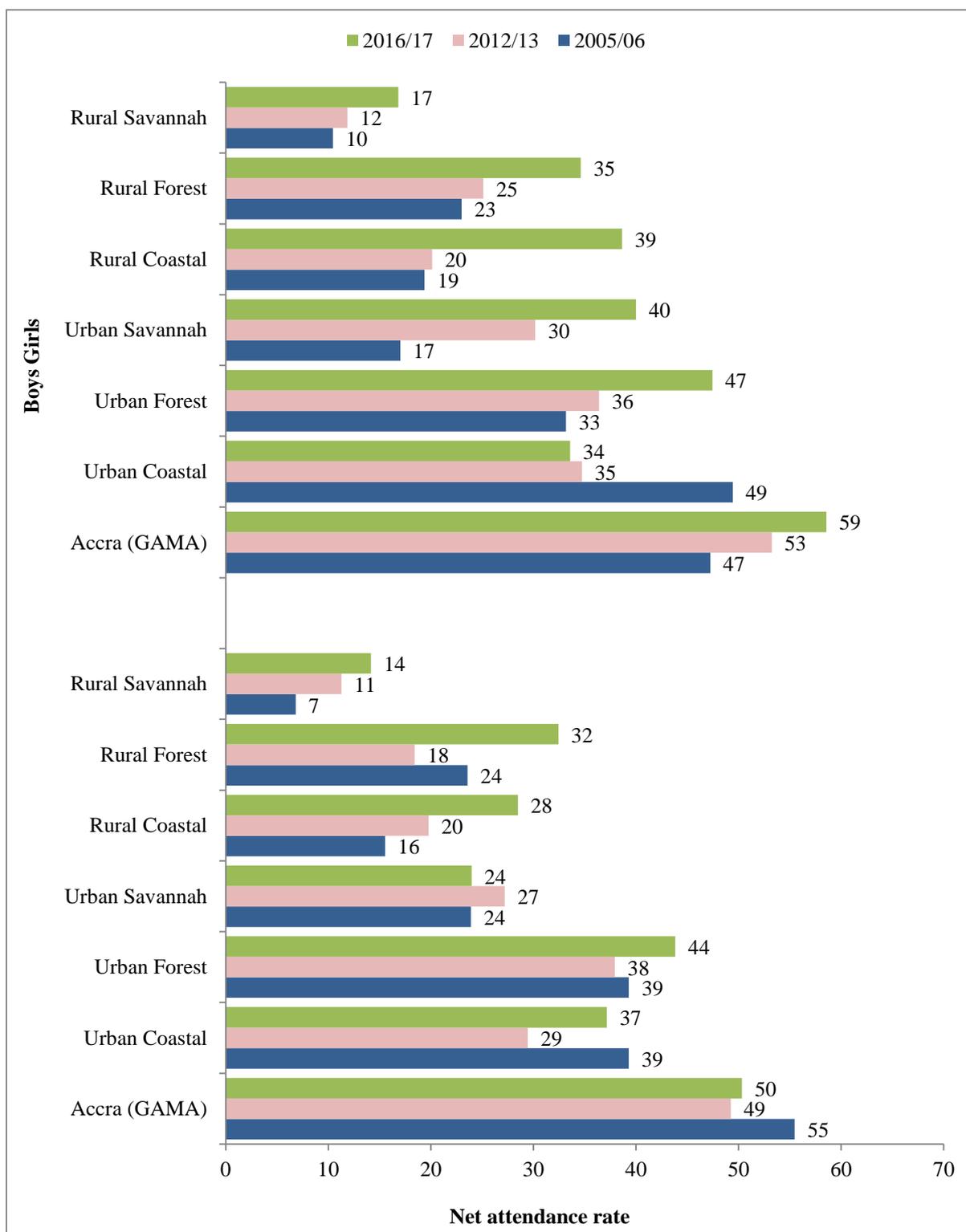


Figure 7.14: Net JSS school attendance rate by sex and region, 2005/06–2016/17

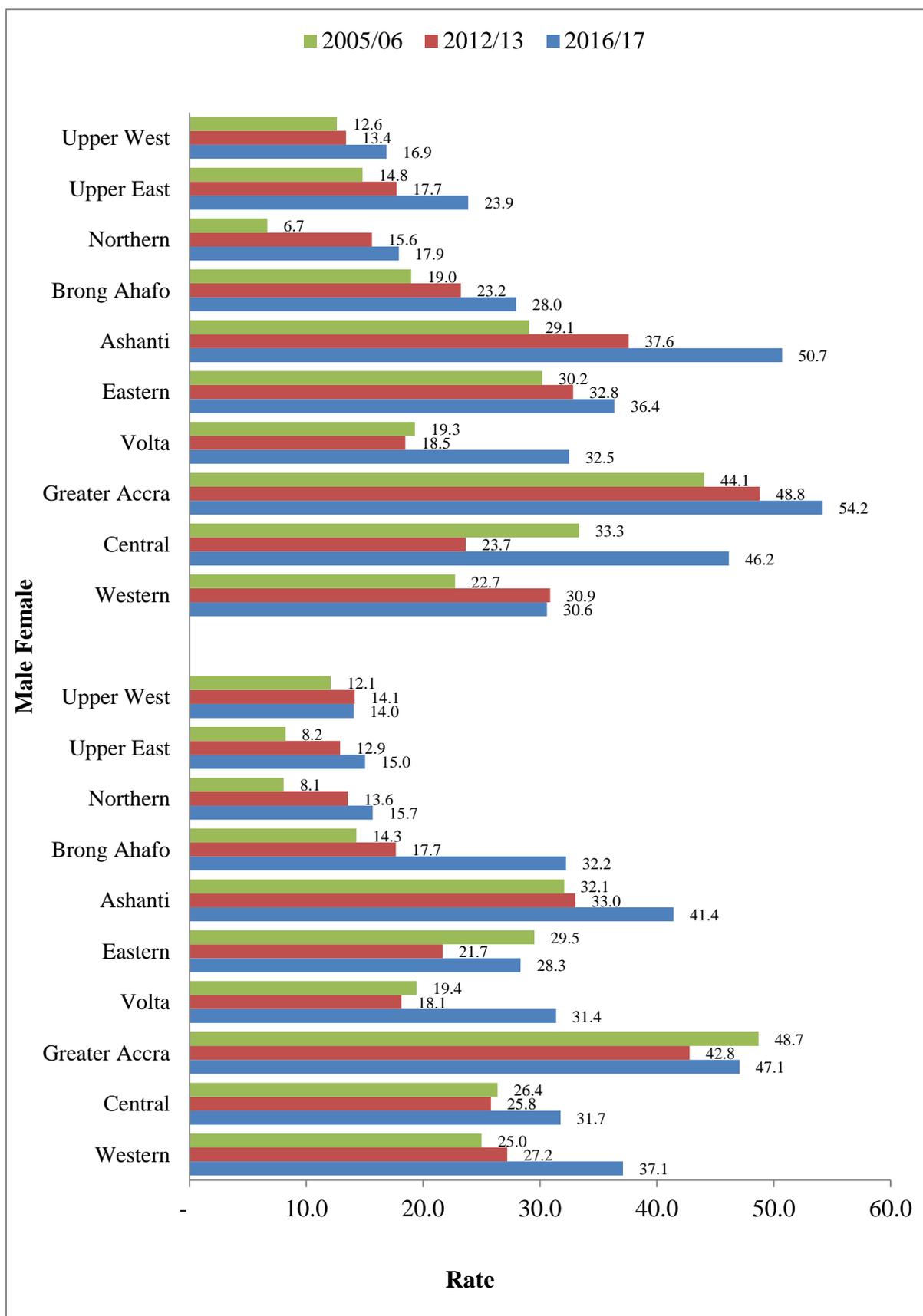


Figure 7.15: Net JSS school attendance rate by sex and quintile, 2005/06–2016/17

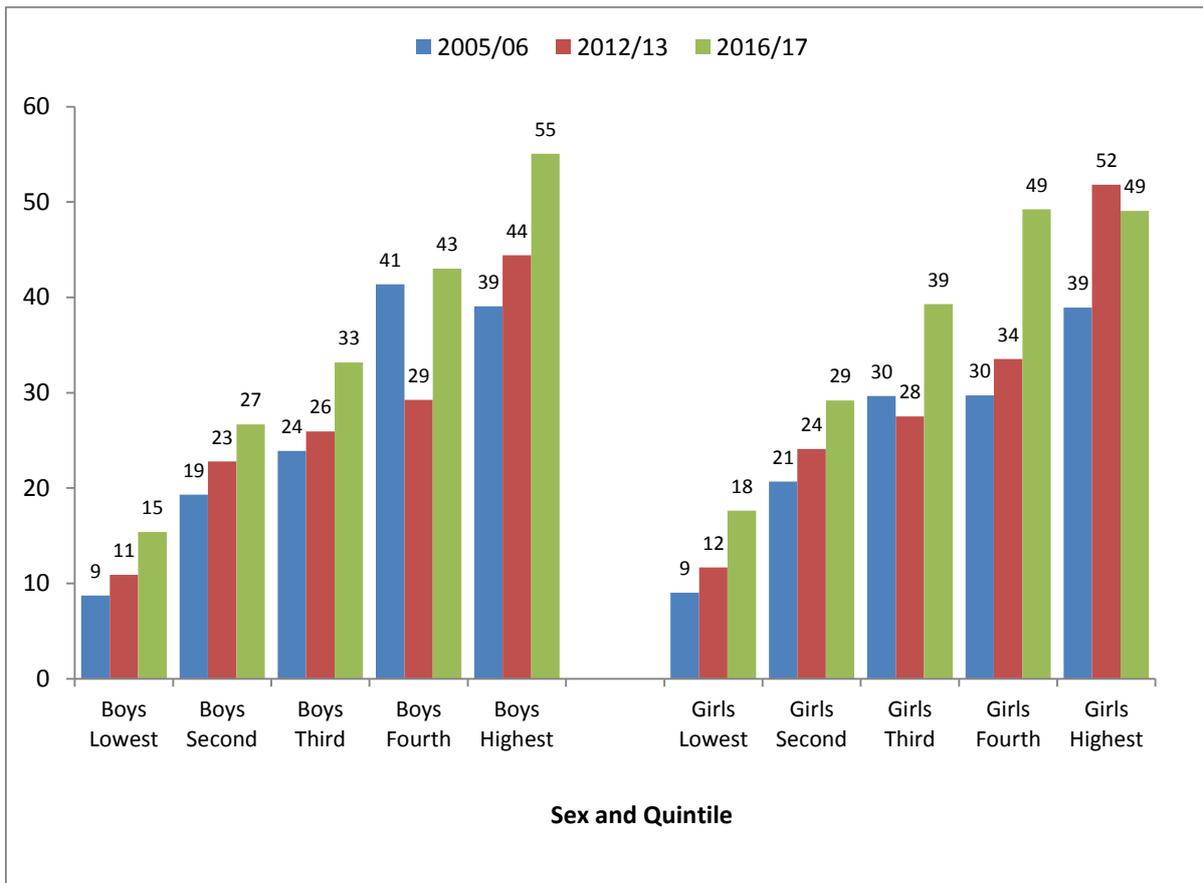


Figure 7.16: Gross JSS school attendance rate by sex and locality, 2005/06–2016/17

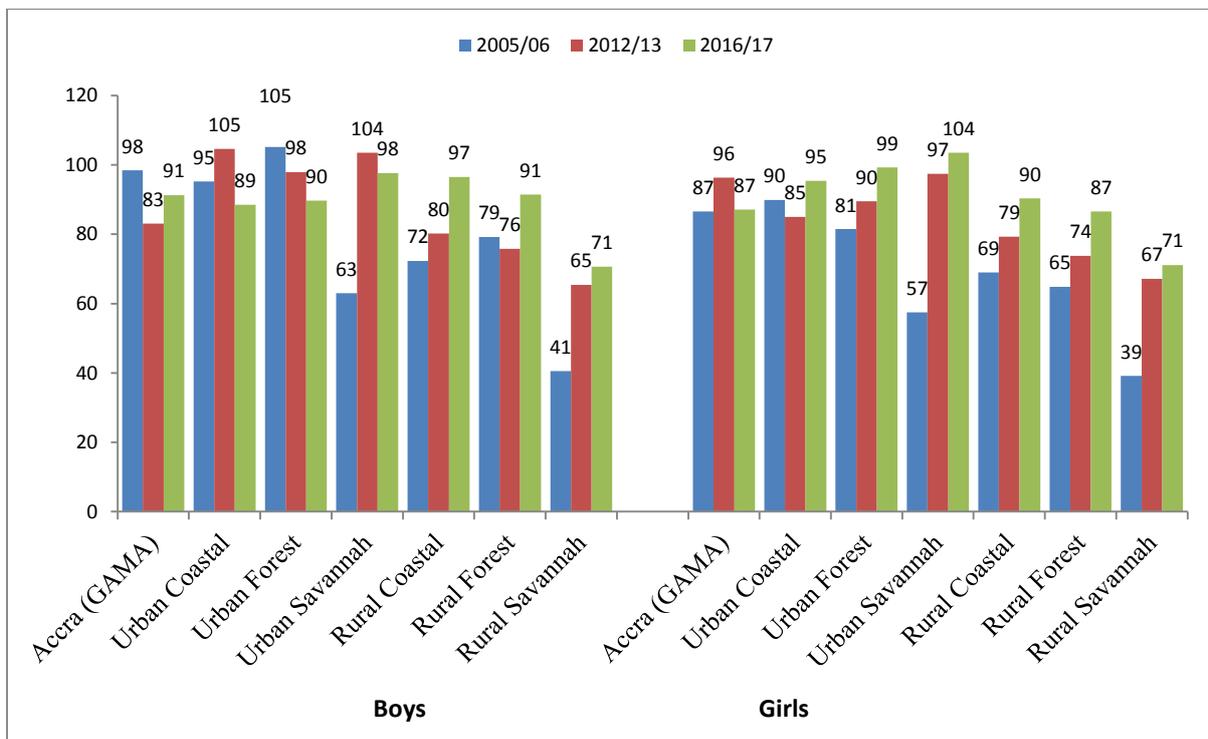


Figure 7.17: Gross JSS school attendance rate by sex and quintile, 2005/06–2016/17

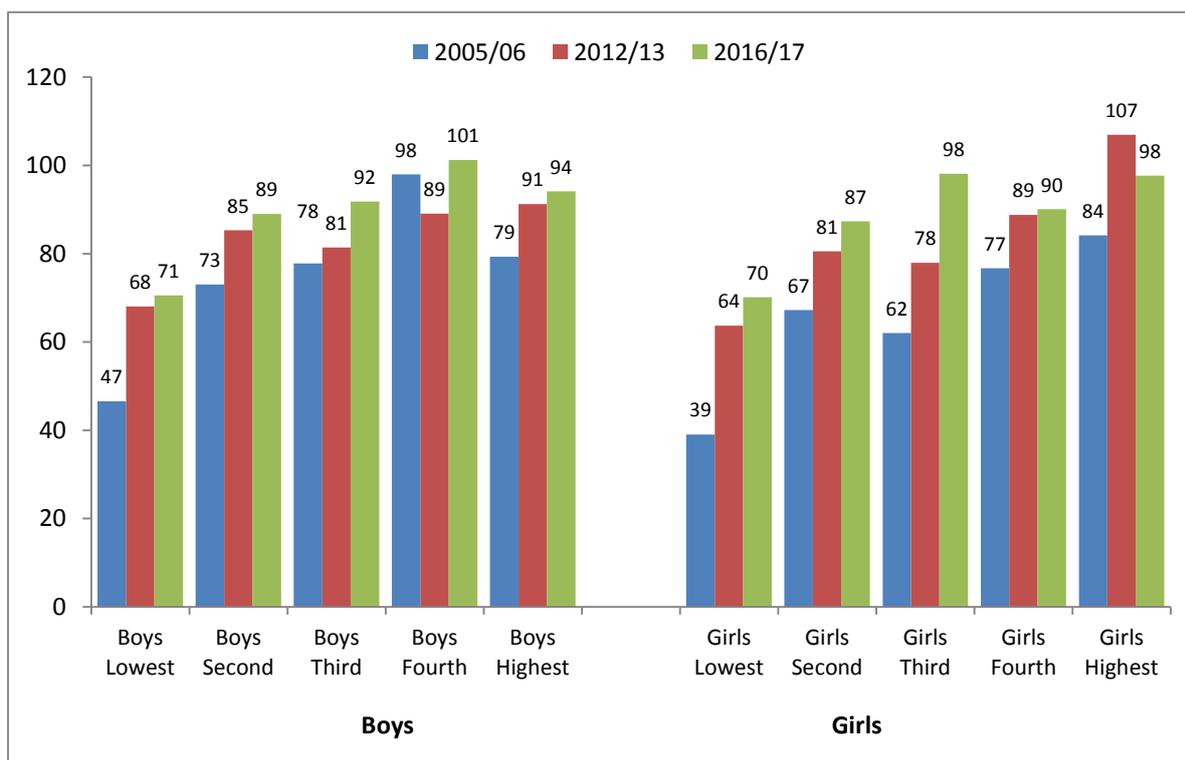
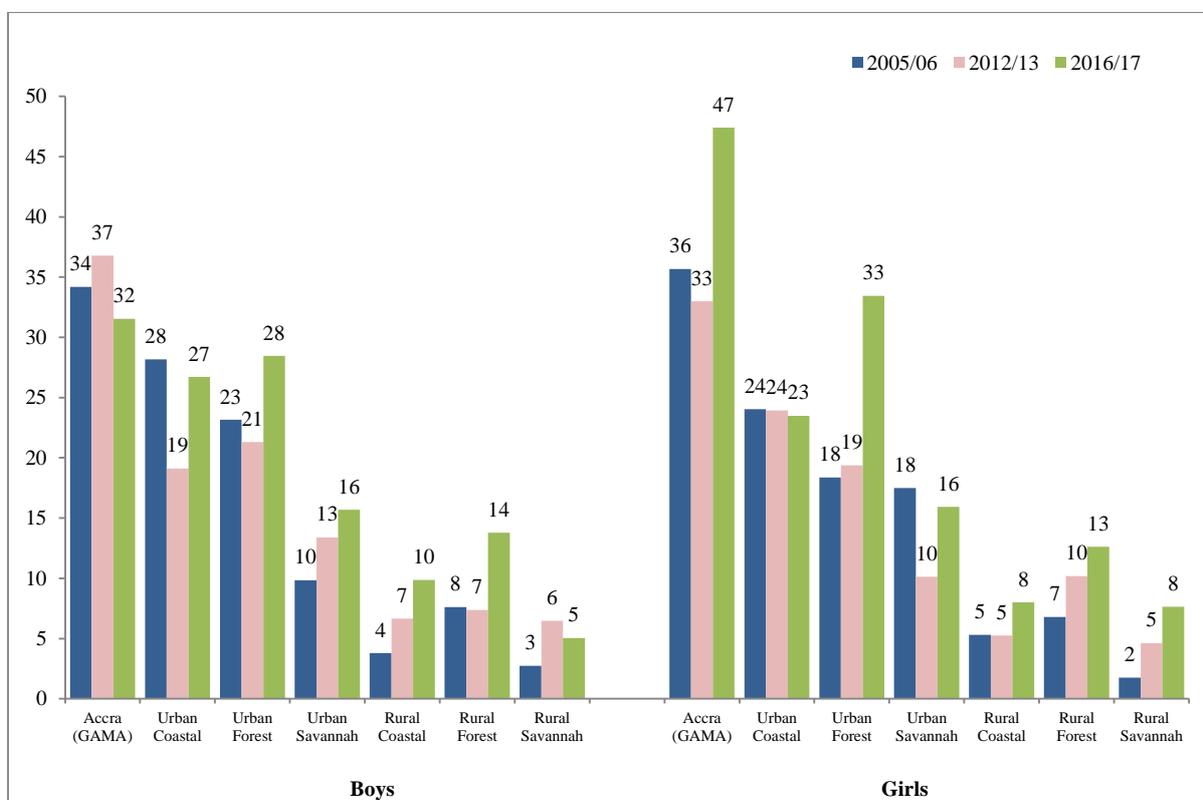
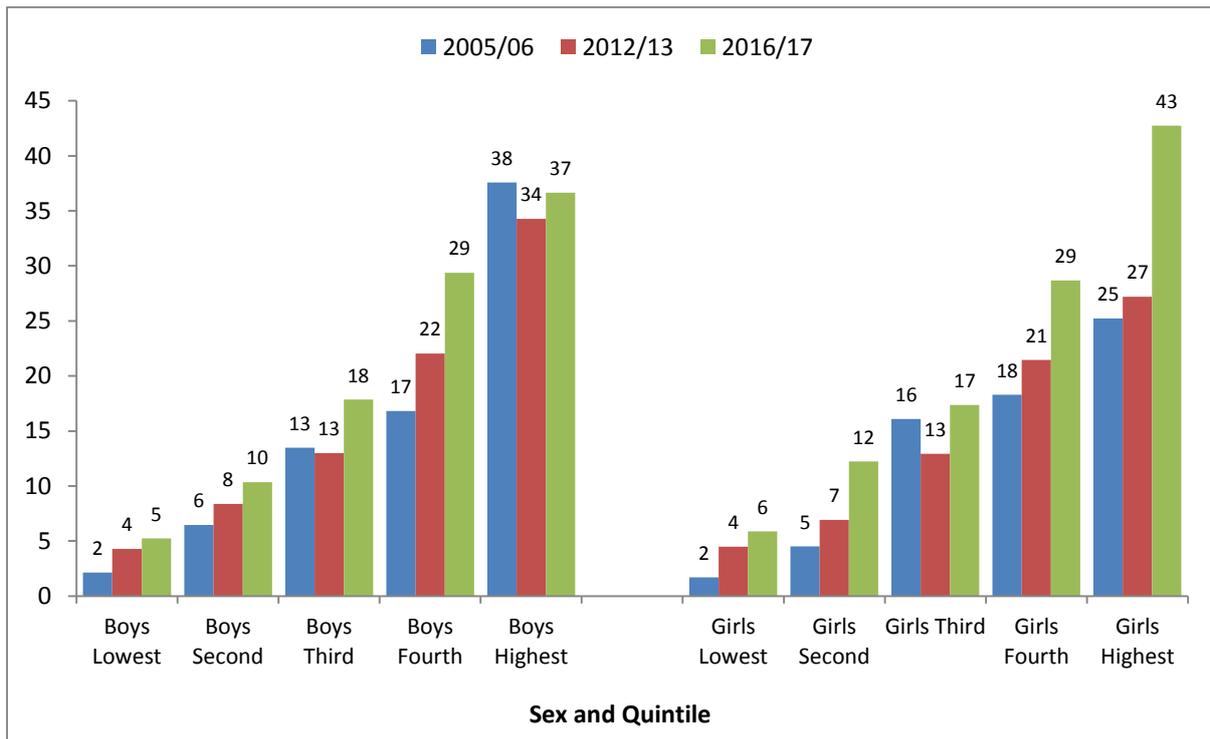


Figure 7.18: Net SSS school attendance rate by sex and locality, 2005/06–2016/17



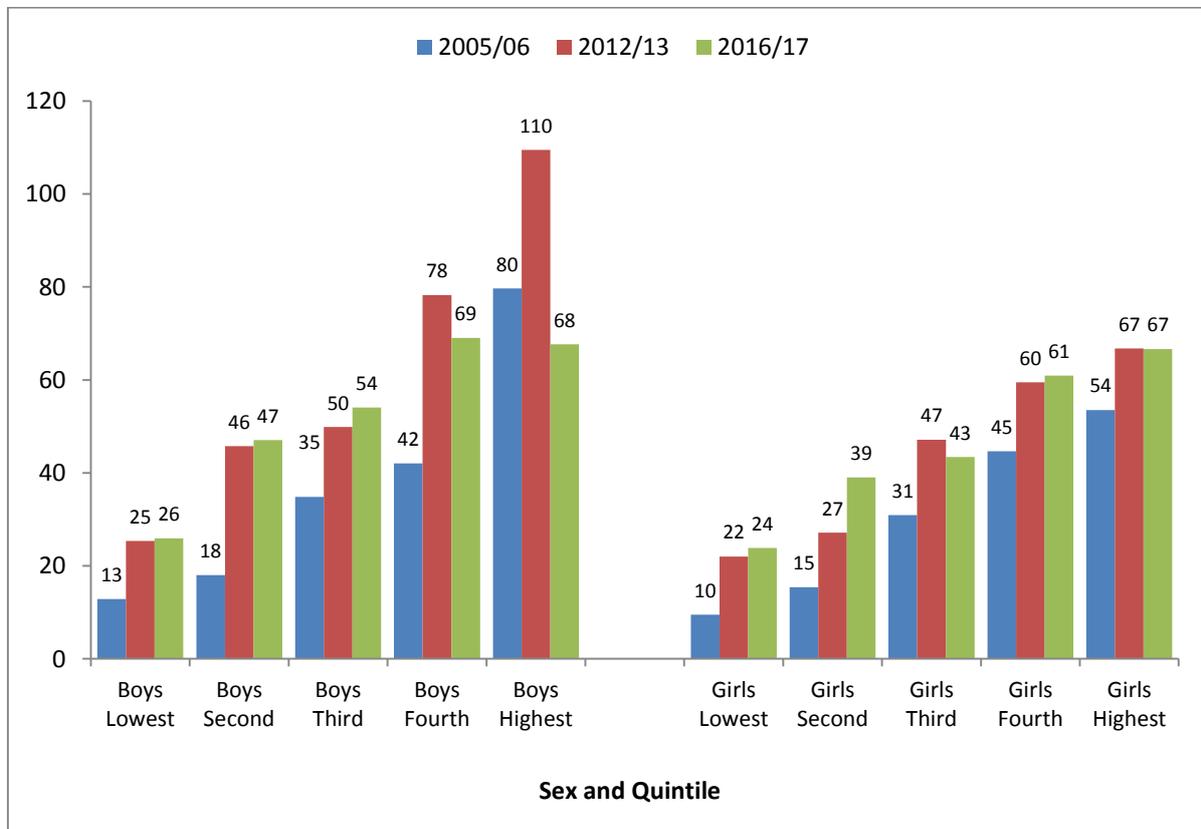
Note: SSS = Senior secondary school.

Figure 7.19: Net SSS school attendance rate by sex and quintile, 2005/06–2016/17



Note: SSS = Senior secondary school.

Figure 7.20: Gross SSS school attendance rate by sex and quintile, 2005/06–2016/17



Note: SSS = Senior secondary school.

7.4 Summary

Access to health services had declined over the years. Relatively, there has been an increase in the proportion of the ill or injured that are likely not to consult a doctor or even visit a health facility for treatment. This situation is quite worrying since a healthy population assures increasing economic productivity. It is important to know why a good number of the population would not consult a doctor or even visit any health facility when ill or injured. The reduction in the proportion of the injured/ill who consulted a doctor or visited any health facility in 2016/17 was more pronounced in rural localities of the country.

School attendance rate at all levels has increased between 2012/13 and 2016/17. There have been appreciable improvements in both GAR and NAR at primary, JHS, and SHS levels. The improvements in school attendance favored the female child in most localities compared to the male child.

CHAPTER EIGHT

CONCLUSION

Ghana's economic performance has improved significantly over the years. The country registered a record high GDP growth rate of 14.0 percent in 2012. The Ghanaian economy expanded by 8.5 percent in 2017 (GSS 2018). Over the four-year period (2013 to 2017), inflation assumed a downward trend. All these positive improvements in the performance of the economy are expected to translate into poverty reduction and general well-being of the citizenry. Despite these recent improvements in the performance of the economy, poverty levels declined marginally and inequality also appears to have worsened marginally.

The GLSS7 is the seventh in the series of living standard surveys conducted in the country. Field data collection which lasted for 12 months started in October 2016. Interviews were conducted with 14,009 households in 1,000 enumeration areas (clusters) selected across the country based on probability sampling. The survey covered a wide range of issues including demography, education, health, employment, disability, migration, housing conditions, water and sanitation, household assets, and agriculture, among others.

The profile of consumption poverty based on surveys (2005/06, 2012/13 and 2016/17) shows that slightly less than a quarter of Ghanaians are poor while less than one out of every nine of the population are extremely poor. Compared to previous surveys, it is an indication that over the four-year period absolute poverty marginally declined between 2012/13 and 2016/17. Although the level of extreme poverty is relatively low, it is concentrated in Rural Savannah, where more than one-third of the people deemed to be extremely poor reside. Overall, the dynamics of poverty in Ghana over the 12-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 reach the desired levels for Ghana as a middle-income country.

The results from the survey show that five regions (the Western, Volta, Northern, Upper East, and Upper West Regions) experienced worsening poverty rates. The Northern and Upper East Regions recorded significant increases in poverty rates, by 10.7 percent and 10.4 percent, respectively. Even though the Upper West Region recorded a marginal increase in the poverty rate (from 70.7 percent in 2012/13 to 70.9 percent in 2016/17), it is the region with the highest incidence of poverty in 2016/17 while the Greater Accra Region is the least poor.

Inequality in monetary and some non-monetary measures worsened between 2012/13 and 2016/17. The Gini coefficient which has been mainly used as Ghana's inequality measure rose from 42.3 in 2012/13 to 43.0 in 2016/17, an indication that the nation's income is concentrated among a few groups of people. If the challenge with inequality in the country is not resolved, all efforts aimed at spurring up economic growth may not translate into poverty reduction at the expected rate. Perhaps, the worsening of some other indicators (such as access to health care and ownership of some household assets) even though poverty reduced, could be attributed to the inequality effect.

On the other hand, school attendance has seen a tremendous improvement between 2012/13 and 2016/17. Both gross and net attendance witnessed appreciable increases at all school levels. Female children benefited most from the increase in attendance recorded in 2016/17. Net enrolment increased much more for households with higher income relative to households in the lower quintiles. Household ownership of different transportation assets reduced in urban households in 2016/17. Again, a lot more injured or persons that are ill are more likely not to consult a doctor today than in 2012/13.

In general, however, there have been improvements in access to electricity, potable water, and improved toilet facilities, among others. These and many others are symptoms of the steady poverty reduction in the country that has been reported over the years.

REFERENCES

- GSS (Ghana Statistical Service). 2014. *Poverty Profile in Ghana (2005–2013)*.
- GSS (Ghana Statistical Service). 2007. *Poverty Profile in Ghana*
- GSS (Ghana Statistical Service). 2018. *GDP Quarterly Bulletin*.
- GSS (Ghana Statistical Service). 2018. *Consumer Price Index Monthly Bulletin*.
- Lewin, K. 2015. *Education access, equity, and development: Planning to make rights realities*.
Paris: International Institute for Education Planning.
- Madan, S. 2012. “Human Development and Poverty - a Perspective Across Indian States.”
Statistika 49 (4): 81–94.
- World Bank. 2005. *Introduction to Poverty Analysis (2005)*.

APPENDIX TABLES AND METHODOLOGY

Appendix 1: Consumption Poverty Indexes

**Table A1.1a: Indexes of poverty by locality and region;
Poverty line = GH¢1,314.00**

2005/06									
Locality	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P₀	P₁	P₂	P₁/P₀	C₀	C₁	C₂
Accra	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	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	23.3	1,311.60	64.2	28.0	15.6	43.7	46.9	59.4	68.1
Ghana	100.0	2,431.43	31.9	11.0	5.4	34.5	100.0	100.0	100.0

2012/13									
Locality	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P₀	P₁	P₂	P₁/P₀	C₀	C₁	C₂
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	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	18.0	1,611.62	55.0	22.0	11.5	40.1	40.8	51.1	58.3
Ghana	100.0	2,926.86	24.2	7.8	3.6	32.0	100.0	100.0	100.0

2016/17									
Locality	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P₀	P₁	P₂	P₁/P₀	C₀	C₁	C₂
Accra (GAMA)	6.0	7,780.06	0.8	0.2	0.0	17.8	0.2	0.1	0.1
Urban Coastal	15.6	5,967.28	5.3	1.1	0.4	22.6	3.6	2.1	1.4
Urban Forest	22.3	5,162.18	6.1	1.2	0.4	19.2	5.8	3.1	1.9
Urban Savannah	6.8	3,225.35	24.9	7.0	2.8	28.0	7.2	5.6	4.4
Rural Coastal	7.6	3,406.82	25.8	7.6	3.1	29.6	8.3	6.9	5.4
Rural Forest	24.6	3,372.05	24.1	6.3	2.4	26.1	25.3	18.4	13.9
Rural Savannah	17.1	1,740.88	67.7	31.2	18.2	46.0	49.6	63.7	72.8
Ghana	100.0	4,155.27	23.4	8.4	4.3	23.4	100.0	100.0	100.0

**Table A1.1b: Indexes of poverty by locality and region;
Poverty line = GH¢1,314.00**

2005/06									
Region	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
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
Ghana	100.0	2,431.43	31.9	11.0	5.4	34.5	100.0	100.0	100.0

2012/13									
Region	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
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
Ghana	100.0	2,926.86	24.2	7.8	3.6	32.0	100.0	100.0	100.0

2016/17									
Region	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
Western	10.1	3,588.36	21.1	4.9	1.7	23.0	9.1	5.9	4.1
Central	8.6	4,176.61	13.8	3.6	1.3	25.9	5.0	3.6	2.6
Greater Accra	16.4	7,160.63	2.5	0.5	0.1	18.8	1.7	0.9	0.4
Volta	8.5	2,759.04	37.3	13.0	6.4	34.9	13.6	13.3	12.7
Eastern	10.7	4,163.08	12.6	3.1	1.2	24.4	5.8	3.9	2.9
Ashanti	19.2	4,788.42	11.6	2.7	1.0	23.0	9.5	6.1	4.3
Brong Ahafo	9.4	3,352.90	26.8	8.8	4.2	32.8	10.8	9.9	9.2
Northern	10.0	2,072.56	61.1	26.7	14.9	43.7	26.1	31.9	34.8
Upper East	4.2	2,170.65	54.8	23.8	13.2	43.4	9.8	11.9	12.9
Upper West	2.8	1,588.06	70.9	37.6	24.6	53.0	8.5	12.6	16.1
Ghana	100.0	4,155.27	23.4	8.4	4.3	35.8	100.0	100.0	100.0

Table A1.2a: Indexes of extreme poverty by locality and region;**Poverty line = GH¢792.05****2005/06**

Locality	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
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	16.0	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

2012/13

Locality	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
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

2016/17

Locality	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
Accra (GAMA)	6.0	7,780.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Urban Coastal	15.6	5,967.28	0.4	0.2	0.1	36.8	0.8	0.9	1.1
Urban Forest	22.3	5,162.18	0.3	0.1	0.0	19.7	0.9	0.5	0.3
Urban Savannah	6.8	3,225.35	5.4	1.1	0.4	20.9	4.4	2.7	1.9
Rural Coastal	7.6	3,406.82	5.9	1.2	0.4	20.5	5.4	3.3	2.1
Rural Forest	24.6	3,372.05	4.3	0.9	0.3	21.3	13.0	8.2	5.8
Rural Savannah	17.1	1,740.88	36.1	13.6	7.0	37.6	75.4	84.3	88.8
Ghana	100.0	4,155.27	8.2	2.8	1.3	33.6	100.0	100.0	100.0

Table A1.2b: Indexes of extreme poverty by locality and region;

Poverty line = GH¢792.05

2005/06

Region	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
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	12.1	5.4	33.6	26.3	29.1	28.4
Upper East	4.8	984.18	56.9	21.3	10.6	37.5	16.4	20.2	22.1
Upper West	3.6	682.31	76.0	35.4	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

2012/13

Region	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
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	15.3	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

2016/17

Region	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
Western	10.1	3,588.36	2.3	0.6	0.3	27.4	2.8	2.3	2.1
Central	8.6	4,176.61	2.1	0.4	0.1	19.5	2.2	1.3	0.8
Greater Accra	16.4	7,160.63	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Volta	8.5	2,759.04	11.4	3.8	1.9	33.3	11.9	11.7	12.1
Eastern	10.7	4,163.08	1.7	0.4	0.2	23.2	2.3	1.6	1.3
Ashanti	19.2	4,788.42	1.6	0.3	0.1	18.8	3.8	2.1	1.4
Brong Ahafo	9.4	3,352.90	8.7	2.4	1.0	27.5	10.0	8.2	6.8
Northern	10.0	2,072.56	30.7	10.6	4.9	34.5	37.5	38.4	36.4
Upper East	4.2	2,170.65	27.7	9.2	4.3	33.2	14.2	14.0	13.4
Upper West	2.8	1,588.06	45.2	20.1	12.4	44.4	15.5	20.4	25.8
Ghana	100.0	4,155.27	8.2	2.8	1.3	33.6	100.0	100.0	100.0

Table A1.3: Indexes 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 indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
Urban	37.7	3,467.05	12.4	3.7	1.6	29.5	14.7	12.6	11.1
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
Rural	62.3	1,805.43	12.4	3.7	1.6	29.5	85.3	87.5	88.9
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
Ghana	100.0	2,431.43	31.9	11.0	5.4	34.5	100.0	100.0	100.0
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 indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
Urban	50.1	3,761.43	10.6	2.5	0.9	23.2	22.0	15.9	12.0
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
Rural	49.9	2,088.41	37.9	13.1	6.3	34.5	78.0	84.1	88.0
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
Ghana	100.0	2,926.86	24.2	7.8	3.6	32.0	100.0	100.0	100.0
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

2016/17									
Locality/Sex of head	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
Urban	50.7	5,462.09	7.8	1.8	0.7	23.4	16.8	11.0	7.8
Male	34.2	5,433.02	7.8	2.0	0.7	24.9	11.5	8.0	5.8
Female	16.5	5,522.49	7.6	1.5	0.5	20.2	5.3	3.0	2.0
Rural	49.3	2,810.40	39.5	15.1	8.0	38.3	83.2	89.0	92.2
Male	37.1	2,703.22	42.3	16.7	9.0	39.5	67.0	74.0	77.9
Female	12.2	3,136.79	31.1	10.3	5.0	33.2	16.2	15.0	14.3
Ghana	100.0	4,155.27	23.4	8.4	4.3	35.8	100.0	100.0	100.0
Male	71.3	4,013.42	25.8	9.6	5.0	37.4	78.5	82.0	83.7
Female	28.7	4,508.38	17.6	5.3	2.4	29.9	21.5	18.0	16.3

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

2005/06

Employment status	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
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
Ghana	100.0	2,431.43	31.9	11.0	5.4	34.5	100.0	100.0	100.0

2012/13

Employment status	Population share	Average Welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
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-agric)	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
Ghana	100.0	2,926.86	24.2	7.8	3.6	32.0	100.0	100.0	100.0

2016/17

Employment status	Population share	Average Welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
Public Employee	6.8	6,278.81	4.8	1.2	0.5	25.9	1.4	1.0	0.8
Private Employee	18.0	5,249.54	11.4	3.2	1.4	27.6	8.8	6.8	5.7
Self-employed (non-agric)	24.7	5,158.91	8.9	2.1	0.8	23.6	9.4	6.2	4.7
Self-employed (agric)	33.8	2,507.16	42.7	16.1	8.4	37.7	61.6	64.8	65.8
Unemployed	7.1	3,760.03	29.4	11.9	6.5	40.6	9.0	10.2	10.8
Retired	1.1	7,378.52	1.6	0.9	0.5	56.8	0.1	0.1	0.1
Other Inactive	8.5	3,697.44	26.8	10.7	6.1	39.7	9.8	10.9	12.1
Ghana	100.0	4,155.27	23.4	8.4	4.3	35.8	100.0	100.0	100.0

Table A1.5: Indexes of extreme poverty by employment status of household head, Poverty line = GH¢792.05

2005/06

Employment Status	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P₀	P₁	P₂	P₁/P₀	C₀	C₁	C₂
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-agric)	19.6	2,424.37	9.2	3.0	1.4	32.4	8.9	9.1	9.1
Self-employed (agric)	49.0	1,383.36	28.5	8.8	3.9	30.8	69.2	67.3	65.0
Unemployed	2.0	2,326.97	12.2	4.7	2.5	38.9	1.2	1.5	1.7
Retired	0.7	2,987.11	2.8	1.0	0.4	34.0	0.1	0.1	0.1
Other Inactive	9.6	1,793.94	29.6	11.5	6.3	38.9	14.2	17.4	20.6
Ghana	100.0	2,136.71	16.5	5.0	2.3	30.4	100.0	100.0	100.0

2012/13

Employment Status	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P₀	P₁	P₂	P₁/P₀	C₀	C₁	C₂
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-agric)	26.2	3,458.20	8.2	2.3	1.1	28.4	9.7	9.1	9.1
Self-employed (agric)	42.8	1,977.22	23.2	6.8	3.0	29.3	68.9	66.5	63.9
Unemployed	2.2	2,752.89	10.7	4.0	2.1	37.4	1.3	1.6	1.8
Retired	1.1	4,970.15	2.8	0.8	0.3	26.4	0.1	0.1	0.1
Other Inactive	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

2016/17

Employment Status	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P₀	P₁	P₂	P₁/P₀	C₀	C₁	C₂
Public Employee	6.8	6,278.81	0.9	0.2	0.1	22.6	0.7	0.5	0.5
Private Employee	18.0	5,249.54	2.5	0.7	0.3	28.3	5.4	4.5	4.0
Self-employed (non-agric)	24.7	5,158.91	1.3	0.3	0.1	25.6	4.0	3.0	2.7
Self-employed (agric)	33.8	2,507.16	16.4	5.5	2.6	33.3	67.6	66.9	65.2
Unemployed	7.1	3,760.03	11.9	4.3	2.2	36.1	10.4	11.2	11.7
Retired	1.1	7,378.52	1.6	0.4	0.1	22.7	0.2	0.1	0.1
Other Inactive	8.5	3,697.44	11.3	4.5	2.5	39.5	11.7	13.8	15.8
Ghana	100.0	4,155.27	8.2	2.8	1.3	33.6	100.0	100.0	100.0

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

2005/06

Educational level of head	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
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

2012/13

Educational level of head	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
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

2016/17

Educational level of head	Population share	Average Welfare	Poverty indexes				Contribution to national poverty		
			P ₀	P ₁	P ₂	P ₁ /P ₀	C ₀	C ₁	C ₂
None	49.8	2,920.34	37.0	14.0	7.5	37.9	78.7	83.5	86.9
BECE	14.2	4,498.30	12.4	3.4	1.4	27.7	7.5	5.8	4.5
MSLC	17.1	4,508.58	13.6	3.6	1.4	26.8	9.9	7.4	5.7
SSS/Secondary	8.3	5,735.25	7.5	2.4	1.1	31.9	2.7	2.4	2.2
Voc/Tech/Teacher	6.5	6,531.75	3.8	1.0	0.5	27.7	1.0	0.8	0.7
Tertiary	4.2	9,462.32	0.9	0.3	0.1	28.1	0.2	0.1	0.1
Ghana	100.0	4,155.27	23.4	8.4	4.3	35.8	100.0	100.0	100.0

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

2005/06									
Educational level of head	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P₀	P₁	P₂	P₁/P₀	C₀	C₁	C₂
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

2012/13									
Educational level of head	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P₀	P₁	P₂	P₁/P₀	C₀	C₁	C₂
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	100.0	2,926.86	8.4	2.3	0.9	27.2	100.0	100.0	100.0

2016/17									
Educational level of head	Population share	Average welfare	Poverty indexes				Contribution to national poverty		
			P₀	P₁	P₂	P₁/P₀	C₀	C₁	C₂
None	49.8	2,920.34	14.4	5.1	2.5	35.1	87.4	91.2	93.1
BECE	14.2	4,498.30	2.6	0.5	0.2	20.4	4.5	2.7	1.8
MSLC	17.1	4,508.58	2.4	0.6	0.2	24.1	5.0	3.6	3.0
SSS/Secondary	8.3	5,735.25	2.2	0.6	0.3	29.7	2.2	1.9	1.7
Voc/Tech/Teacher	6.5	6,531.75	1.1	0.2	0.1	21.4	0.9	0.5	0.4
Tertiary	4.2	9,462.32	0.0	0.0	0.0	41.2	0.0	0.0	0.0
Ghana	100.0	4,155.27	8.2	2.8	1.3	33.6	100.0	100.0	100.0

Appendix 2: Household Assets

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

2005/06								
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

2012/13								
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

2016/17								
Asset	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Sewing machine	14.9	15.2	9.5	11.4	11.2	7.1	10.2	10.6
Stove	55.8	55.2	39.4	19.9	27.6	14.2	4.0	30.8
Refrigerator	56.5	55.4	48.9	26.6	27.8	21.8	6.4	36.0
Fan	79.2	75.8	73.0	62.9	47.6	39.0	18.6	56.8
Radio	47.8	52.6	58.8	43.7	50.7	61.5	43.3	54.3
TV	83.2	79.6	76.0	63.1	48.3	48.3	24.0	62.1
Camera	0.8	1.2	0.9	0.6	0.6	0.5	0.2	0.7
Mobile phone	97.2	97.9	97.6	97.9	92.3	88.4	87.7	93.8
Computer	19.1	17.2	12.4	8.7	6.8	4.6	3.6	10.1
Bicycle	3.3	6.1	5.5	31.5	8.2	8.3	53.3	13.4
Motorcycle	1.2	2.7	3.1	29.3	6.0	4.5	22.4	7.3
Car	6.5	9.5	4.5	2.6	3.2	2.7	1.4	4.4

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

2005/06

Asset	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	All
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			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	All
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

2016/17

Asset	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	All
Sewing machine	7.6	8.9	11.9	11.8	10.9	6.3	8.5	11.0	10.6
Stove	2.2	10.7	21.6	34.7	53.3	0.5	3.3	35.6	30.8
Refrigerator	3.9	16.6	29.1	40.7	57.6	1.4	7.1	41.2	36.0
Fan	15.9	36.5	52.2	65.2	78.2	7.9	23.0	63.3	56.8
Radio	45.5	53.3	56.7	54.4	56.7	43.4	23.0	63.3	54.3
TV	22.9	45.2	58.6	70.7	80.6	13.4	31.0	68.3	62.1
Camera	0.0	0.1	0.3	0.5	1.6	0.0	0.1	0.8	0.7
Mobile phone	86.4	91.2	93.8	95.2	96.9	82.8	88.6	95.0	93.8
Computer	1.1	2.4	5.8	9.0	20.1	0.3	1.7	11.5	10.1
Bicycle	34.9	18.8	13.0	9.8	5.7	45.9	26.9	10.2	13.4
Motorcycle	11.1	10.0	6.9	5.9	5.8	11.0	11.1	6.7	7.3
Car	0.1	0.9	1.5	2.9	10.4	0.0	0.4	5.1	4.4

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

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

2016/17									
Asset	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
Sewing machine	7.3	10.1	13.0	13.5	11.6	2.8	8.8	12.2	12.0
Stove	8.1	18.5	30.3	41.8	59.2	0.0	9.3	45.7	43.9
Refrigerator	13.6	27.2	39.1	47.9	62.0	1.0	17.2	51.0	49.3
Fan	37.9	55.5	66.5	74.7	82.4	24.4	40.6	75.2	73.5
Radio	46.0	52.7	55.9	51.3	55.7	38.4	52.0	54.2	54.0
TV	47.7	60.3	70.3	78.5	83.9	34.7	50.3	77.9	76.5
Camera	0.0	0.2	0.2	0.4	1.8	0.0	0.0	1.0	0.9
Mobile phone	94.1	96.7	97.4	97.7	98.2	91.5	93.6	97.9	97.7
Computer	0.5	2.8	8.0	10.5	22.6	0.0	1.6	14.9	14.2
Bicycle	24.6	13.0	10.9	7.9	5.1	32.7	17.1	7.7	8.3
Motorcycle	9.3	8.6	5.8	5.3	4.8	6.7	9.4	5.5	5.6
Car	0.4	1.0	1.4	2.8	11.2	0.0	1.2	6.2	6.0

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

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	

2016/17										
Asset	Quintile					Poverty status				All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor		
Sewing machine	7.6	8.2	10.6	8.6	8.6	6.6	8.4	9.0	8.6	
Stove	1.1	5.8	11.9	21.8	34.6	0.5	1.6	18.6	13.9	
Refrigerator	2.1	9.9	17.8	27.4	43.7	1.5	4.0	24.7	18.8	
Fan	11.8	24.6	36.2	47.7	64.7	6.4	17.7	43.2	35.2	
Radio	45.4	53.6	57.6	60.2	59.9	43.8	48.0	57.9	54.8	
TV	18.2	35.7	45.7	56.3	70.1	11.4	25.3	52.0	43.4	
Camera	0.0	0.1	0.4	0.7	1.2	0.0	0.1	0.6	0.4	
Mobile phone	85.0	87.8	89.8	90.7	92.7	82.0	87.1	90.3	88.9	
Computer	1.2	2.1	3.4	6.3	12.1	0.3	1.8	6.0	4.7	
Bicycle	36.9	22.4	15.3	13.4	7.6	47.1	29.8	14.3	20.1	
Motorcycle	11.4	10.9	8.2	7.0	9.1	11.4	11.6	8.7	9.5	
Car	0.1	0.9	1.5	3.0	8.0	0.0	0.1	3.4	2.5	

Appendix 3: Household Access to Services

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

2005/06								
Facility	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Inside pipe	42.2	30.8	25.2	13.4	3.7	1.8	2.2	14.5
Water vendor	14.3	10.2	4.6	1.0	3.0	0.3	0.0	4.0
Neighbor/private	37.6	24.6	20.1	24.3	11.5	2.9	2.5	14.3
Public standpipe	4.5	16.2	21.0	28.2	14.6	7.2	1.2	10.7
Borehole	0.1	4.3	8.8	16.6	27.6	55.5	53.4	30.4
Well	1.1	11.3	17.3	8.8	10.2	11.9	8.7	10.3
Natural sources	0.1	2.7	3.0	7.7	29.5	20.3	32.0	15.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012/13								
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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2016/17								
Facility	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Inside pipe	6.8	13.6	13.9	12.9	4.8	3.5	2.6	8.7
Water vendor	89.5	65.8	43.1	17.6	32.4	15.0	2.8	36.1
Neighbor/private	2.6	7.9	10.8	16.4	9.1	4.0	0.5	7.1
Public standpipe	1.2	7.0	11.9	18.9	23.3	13.2	7.8	11.5
Borehole	0.0	3.8	13.2	20.1	12.0	42.7	61.6	23.9
Well	0.0	1.3	4.4	12.6	7.4	4.7	6.6	4.6
Natural sources	0.0	0.8	2.6	1.5	11.0	17.0	18.2	8.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

2005/06

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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.

2012/13

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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.

2016/17

Facility	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
Inside pipe	3.0	6.9	8.8	10.0	10.8	1.2	4.1	9.7	8.7
Water vendor	3.7	11.9	26.3	42.7	61.4	0.4	5.8	41.7	36.1
Neighbor/private	4.5	8.2	11.1	7.9	4.7	2.1	6.7	7.4	7.1
Public standpipe	10.5	14.8	15.1	12.1	7.8	7.1	12.1	11.7	11.5
Borehole	49.6	34.4	25.6	19.7	11.0	59.0	43.6	19.7	23.9
Well	8.6	8.8	4.8	3.2	2.0	8.2	9.8	3.8	4.6
Natural sources	20.2	15.0	8.3	4.4	2.4	22.0	18.0	6.1	8.1
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 - 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

2016/17									
Facility	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	All
Inside pipe	10.4	14.0	14.0	13.1	12.1	6.0	9.9	13.0	12.8
Water vendor	12.3	21.0	39.2	54.6	68.3	2.6	13.8	54.9	52.8
Neighbor/private	12.7	15.8	16.5	9.4	5.0	9.6	17.6	9.2	9.5
Public standpipe	17.5	17.2	13.3	9.9	6.1	17.8	14.3	9.6	9.9
Borehole	21.3	16.0	11.4	9.3	6.4	23.0	18.5	9.1	9.5
Well	17.8	11.7	3.9	2.5	1.6	34.7	17.0	3.1	3.8
Natural sources	8.0	4.4	1.7	1.2	0.6	6.3	9.0	1.3	1.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table A3.4: 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

2016/17

Facility	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	All
Inside pipe	1.6	2.5	3.1	4.2	6.8	0.8	2.4	4.1	3.5
Water vendor	2.1	6.2	11.9	20.7	40.0	0.2	3.5	19.6	14.8
Neighbor/private	3.0	3.5	5.0	5.0	3.5	1.4	3.5	4.4	4.0
Public standpipe	9.2	13.3	17.1	16.3	13.0	6.2	11.4	15.1	13.6
Borehole	54.7	45.9	41.4	38.9	25.3	62.1	50.9	37.4	42.3
Well	6.9	6.9	5.9	4.6	3.3	5.9	7.7	5.1	5.7
Natural sources	22.5	21.7	15.6	10.3	8.1	23.4	20.6	14.3	16.3
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

2005/06								
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 ^a	1.2	10.7	3.1	17.4	27.7	7.5	68.9	19.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2012/13								
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 ^a	3.5	15.5	3.0	27.1	31.2	13.4	72.7	19.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2016/17								
Facility type	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Flush	36.8	32.8	28.2	9.5	9.3	4.4	1.4	18.0
Pit latrine	3.1	13.4	17.2	10.8	21.5	35.1	14.2	19.6
Pan/bucket	0.1	0.1	0.7	0.1	0.0	0.2	0.4	0.3
KVIP	14.2	17.4	15.9	9.3	12.6	14.7	5.3	13.8
Public	44.1	30.0	36.5	42.5	28.5	32.5	15.0	32.2
Other ^a	1.7	6.4	1.7	27.9	28.1	13.1	63.7	16.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: a. Other includes bush, beaches, and so on.

Table A3.6: Toilet facility used by households by standard of living quintile and poverty status, 2005/06–2016/17

2005/06									
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 ^a	55.0	26.2	18.7	12.8	7.5	57.1	31.0	13.3	19.6
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			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 ^a	45.8	27.5	20.2	12.8	7.0	55.5	37.9	14.2	19.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2016/17									
Facility type	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
Flush	1.3	5.0	9.9	18.1	35.2	0.2	2.6	20.8	18.0
Pit latrine	24.9	25.3	21.3	20.0	13.4	25.3	25.8	18.5	19.6
Pan/bucket	0.2	0.2	0.8	0.2	0.2	0.2	0.4	0.3	0.3
KVIP	6.8	12.0	14.2	16.9	15.1	3.2	8.5	15.1	13.8
Public	19.6	31.6	38.4	36.2	31.1	11.7	25.4	34.2	32.2
Other ^a	47.2	25.9	15.4	8.6	4.9	59.4	37.3	11.2	16.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: a. Other includes bush, beaches, and so on.

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 ^a	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 ^a	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

2016/17									
Facility type	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	All
Flush	6.8	11.2	16.3	24.2	42.1	0.0	9.6	29.6	28.6
Pit latrine	27.1	21.2	15.8	15.5	8.6	27.5	27.0	12.9	13.6
Pan/bucket	0.0	0.0	1.2	0.3	0.3	0.0	0.0	0.4	0.4
KVIP	3.9	14.7	16.3	17.5	14.9	0.6	4.5	16.0	15.4
Public	28.8	40.1	42.8	38.5	31.8	21.4	35.4	36.3	36.2
Other ^a	33.4	12.8	7.6	4.2	2.4	50.5	23.5	4.8	5.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: a. Other includes bush, beaches, and so on.

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 ^a	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 ^a	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

2016/17									
Facility type	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	All
Flush	0.2	1.1	2.8	6.8	13.8	0.2	0.6	6.0	4.5
Pit latrine	24.5	27.9	27.3	28.3	28.6	25.1	25.5	27.9	27.2
Pan/bucket	0.3	0.3	0.4	0.1	0.2	0.2	0.5	0.2	0.2
KVIP	7.3	10.3	11.9	16.0	15.8	3.4	9.7	13.6	11.9
Public	18.0	26.3	33.5	32.1	28.9	10.9	22.5	30.6	27.2
Other ^a	49.8	34.1	24.1	16.7	12.7	60.2	41.4	21.8	29.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: a. Other includes bush, beaches, and so on.

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
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
2016/17	96.6	91.6	91.9	88.4	81.1	72.6	49.4	81.4

Note: Electricity includes main grid and generator.

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

2016/17

Locality	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
Urban	65.9	83.5	89.5	92.6	96.8	54.8	74.3	93.0	92.0
Rural	46.1	62.5	72.6	81.0	86.0	36.9	55.0	75.4	68.0
Total	49.2	70.6	81.5	88.5	94.2	38.3	59.4	86.5	81.4

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

2005/06								
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 Assistant	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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2012/13								
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 Assistant	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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2016/17								
Type of Health personnel	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Doctor	42.5	40.0	30.8	30.9	21.5	20.2	19.6	26.5
Nurse/midwife	1.9	5.0	6.6	8.3	15.7	15.2	19.8	12.2
Medical Assistant	0.0	2.4	1.8	9.5	0.8	1.6	4.0	2.6
Pharmacist	2.1	5.7	2.7	0.8	1.5	1.2	0.5	2.0
Other	10.6	9.3	9.7	9.0	9.8	11.3	9.6	10.0
Did not consult	43.0	37.7	48.4	41.5	50.7	50.6	46.6	46.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

2005/06									
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 Assistant	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
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			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 Assistant	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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2016/17									
Type of Health personnel	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
Doctor	17.3	22.8	25.7	28.3	37.0	17.1	17.8	29.2	26.5
Nurse/midwife	16.7	16.1	12.1	10.6	6.0	15.4	18.1	10.7	12.2
Medical Assistant	2.4	3.8	3.3	1.8	2.0	2.6	2.2	2.7	2.6
Pharmacist	0.6	1.8	1.7	3.7	2.0	0.4	0.5	2.4	2.0
Other	8.3	9.9	12.1	10.1	10.0	7.8	8.8	10.5	10.0
Did not consult	54.7	45.6	45.0	45.6	43.1	56.6	52.7	44.6	46.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
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			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
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

2016/17									
Type of Health personnel	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
Doctor	25.6	27.6	34.1	34.3	39.5	8.7	26.0	35.6	34.9
Nurse/midwife	5.1	8.7	5.9	6.8	4.4	0.0	9.5	5.7	5.9
Medical Assistant	5.7	7.0	3.5	1.7	2.0	5.4	4.3	3.0	3.1
Pharmacist	1.1	4.1	2.5	5.4	2.0	0.0	0.9	3.4	3.2
Other	8.5	10.1	11.7	10.1	8.0	25.6	7.0	9.6	9.5
Did not consult	54.0	42.4	42.3	41.7	44.0	60.4	52.3	42.7	43.4
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
Doctor	11.8	15.5	16.1	20.9	27.9	11.9	13.3	19.3	16.6
Nurse/midwife	10.3	11.2	11.6	9.2	6.7	10.6	12.1	9.8	10.3
Medical Assistant	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 Assistant	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

2016/17

Type of Health personnel	Quintile					Poverty status			
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	All
Doctor	16.2	20.9	19.1	20.8	30.6	17.4	16.0	22.2	20.2
Nurse/midwife	18.3	19.0	17.1	15.4	10.0	16.0	19.9	16.0	16.9
Medical Assistant	1.9	2.5	3.3	1.8	1.9	2.5	1.7	2.5	2.3
Pharmacist	0.5	0.9	1.0	1.4	1.7	0.4	0.5	1.3	1.0
Other	8.3	9.7	12.4	10.1	15.0	7.2	9.1	11.4	10.4
Did not consult	54.8	46.9	47.1	50.5	40.7	56.5	52.8	46.6	49.2
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

2005/06

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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2012/13

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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2016/17

Place of consultation	Accra (GAMA)	Urban Coastal	Urban Forest	Urban Savannah	Rural Coastal	Rural Forest	Rural Savannah	All
Hospital	11.7	28.9	23.6	26.9	14.6	13.2	14.0	18.4
Dispensary/Pharmacy	12.0	14.3	11.1	9.9	9.2	10.7	4.7	9.9
Clinic/maternity Home	32.7	16.2	15.2	19.4	23.1	23.2	28.9	22.1
Other	0.6	2.8	1.7	2.3	2.5	2.4	5.9	2.9
Did not consult	43.0	37.8	48.4	41.5	50.7	50.6	46.6	46.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

2005/06									
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 Home	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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2012/13									
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 Home	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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2016/17									
Place of consultation	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
Hospital	11.8	16.0	19.2	19.0	25.2	10.7	13.7	20.1	18.4
Dispensary/Pharmacy	5.5	10.0	11.6	12.2	10.1	4.6	5.8	11.2	9.9
Clinic/maternity Home	24.1	25.4	20.9	21.0	19.1	24.4	23.8	21.5	22.1
Other	3.9	3.1	3.2	2.2	2.5	3.7	4.0	2.7	2.9
Did not consult	54.7	45.6	45.1	45.6	43.1	56.6	52.7	44.6	46.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

2005/06

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 Home	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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2012/13

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 Home	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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2016/17

Place of consultation	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
Hospital	21.5	24.1	25.9	22.5	26.0	6.5	26.1	24.6	24.6
Dispensary/Pharmacy	7.2	13.9	13.4	15.0	9.2	21.4	5.4	12.4	12.0
Clinic/maternity Home	11.6	17.6	16.0	19.3	19.1	7.5	10.9	18.5	18.0
Other	5.7	2.1	2.2	1.6	1.7	4.2	5.2	1.8	2.0
Did not consult	54.0	42.4	42.5	41.7	44.0	60.4	52.3	42.7	43.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

2005/06

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	
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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2012/13

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	
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
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

2016/17

Place of consultation	Quintile					Poverty status			All
	Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
	Hospital	10.5	12.7	13.9	14.7	23.2	10.9	11.0	
Dispensary/Pharmacy	5.2	8.4	10.2	8.8	12.6	4.0	5.8	9.9	8.3
Clinic/maternity Home	25.8	28.5	24.9	23.2	19.1	25.0	26.7	24.7	25.2
Other	3.7	3.5	3.9	2.9	4.4	3.7	3.7	3.6	3.6
Did not consult	54.8	46.9	47.1	50.5	40.7	56.5	52.8	46.6	49.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table A4.9: Net enrolment in primary school, by locality, gender, 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	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

2012/13										
Locality	Sex	Quintile					Poverty status			All
		Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
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

2016/17										
Locality	Sex	Quintile					Poverty status			All
		Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
Urban	Male	69.6	76.6	83.1	80.9	84.7	71.4	70.3	81.6	80.2
	Female	76.4	77.1	84.9	89.2	89.6	72.7	80.3	85.4	84.7
	All	72.6	76.8	84.0	85.0	87.4	72.1	74.6	83.5	82.4
Rural	Male	63.3	72.1	72.8	78.4	82.4	59.9	67.1	74.9	68.3
	Female	64.3	74.0	74.3	80.2	76.8	62.4	66.9	76.3	69.6
	All	63.8	73.0	73.5	79.4	79.7	61.1	67.0	75.5	68.9
Total	Male	63.8	73.3	77.8	80.0	84.1	60.2	67.6	78.1	72.0
	Female	65.2	74.9	79.0	85.6	86.7	62.7	68.5	80.8	74.3
	All	64.5	74.1	78.4	82.8	85.4	61.4	68.0	79.4	73.2

Note: 'Very poor' corresponds 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

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

2016/17

Locality	Sex	Quintile					Poverty status			All
		Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
Urban	Male	23.5	27.9	38.6	46.3	55.4	29.2	22.4	41.8	39.4
	Female	29.6	31.8	43.9	55.2	52.7	53.8	20.9	47.5	45.1
	All	25.9	29.7	41.1	50.9	53.9	37.8	21.7	44.6	42.2
Rural	Male	14.6	26.1	28.4	37.4	53.8	11.3	20.0	30.3	21.3
	Female	16.7	28.1	35.6	42.4	35.6	12.7	21.4	34.8	25.4
	All	15.5	27.1	32.0	40.5	44.0	11.9	20.7	32.7	23.3
Total	Male	15.4	26.7	33.2	43.0	55.1	12.1	20.3	36.2	27.1
	Female	17.6	29.2	39.3	49.2	49.1	14.0	21.4	40.9	31.8
	All	16.4	27.9	36.1	46.5	51.9	13.0	20.8	38.6	29.3

Note: 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

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

2016/17

Locality	Sex	Quintile					Poverty status			All
		Lowest	Second	Third	Fourth	Highest	Very poor	Poor	Non-poor	
Urban	Male	5.7	16.0	24.0	34.0	38.7	14.3	4.6	28.3	24.9
	Female	9.6	16.5	26.3	33.1	48.0	0.0	13.4	32.0	29.9
	All	7.2	16.2	25.1	33.5	44.2	9.7	8.4	30.3	27.4
Rural	Male	5.2	8.0	13.1	21.9	29.7	2.3	8.0	13.5	8.7
	Female	5.6	10.1	9.8	21.2	26.3	4.5	6.3	14.0	9.5
	All	5.3	9.0	11.5	21.5	27.7	3.2	7.2	13.7	9.1
Total	Male	5.2	10.4	17.8	29.4	36.6	2.9	7.4	20.6	13.7
	Female	5.9	12.2	17.4	28.7	42.7	4.4	7.4	23.3	17.0
	All	5.5	11.2	17.6	29.0	40.3	3.5	7.4	22.0	15.3

Note: 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: Macroeconomics Indicators

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

ANNEX 1; MAIN MACROECONOMIC STATISTICS AND INDICATORS, 2005-2013									
	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 6: GLSS7 Sample Design

The seventh round of the Ghana Living Standards Survey (GLSS7), 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 EAs.

Given the long period 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 EA is likely to have changed between the survey and the census. The selected EAs will then not have been picked with probability proportional to their *true* sizes.

If the selected EAs were fully listed after their selection, however, then it is possible either (a) to compute weights reflecting differential probabilities of selection of households in different EAs; or (b) to amend the above procedure to restore a self-weighting sample. The former was used for GLSS7. In this survey, the number of primary sampling units and households was 1,000 and 15,000 respectively. Overall, the response rate for the survey was 93.4 percent.

Computation of Weights

The GLSS7 is not a self-weighting sample design because disproportionately larger samples from regions with smaller populations were drawn. Therefore, each sample household did not have the same chance of selection into the survey sample. Hence, weights were computed to reflect the different probabilities of selection in order to obtain the true contribution of each selected EA in the sample based on the first and second stage probabilities of selection. E.g., an observation with a sampling weight of 600 represents six hundred individuals from the target population while another observation with a sampling weight of say 50 represents only fifty individuals.

Let M_{hi} = Number of 2010 Population Census households in the i^{th} selected EA (PSU) in the h^{th} stratum or region

M_{hi}^* = Number of households listed in the i^{th} selected EA in the h^{th} stratum (U/R in the region)

ΣM_{hi} = Total number of households in the i^{th} stratum (i.e. number of households in either an urban or rural areas in a region)

a_{hi} = Number of sample EAs allocated to the h^{th} stratum (urban/rural in the region)

e.g. a_{11} = 41 for urban area in Western Region

and a_{12} = 57 for a rural area in Western Region

$b = 15$ (number of selected households per EA in each stratum)

Then, the first and second stage probabilities of selection are:

$$P_{1hi} = \frac{a_{hi}M_{hi}}{\sum M_{hi}} \quad \text{and} \quad P_{2hi} = \frac{b}{M_{hi}^*}$$

Where,

P_{1hi} is the probability of selecting the i^{th} EA in the h^{th} stratum, and P_{2hi} is the probability of selecting a household in the i^{th} EA of the h^{th} stratum. The overall probability of selection of a household in the i^{th} selected EA of the h^{th} stratum is given by:

$$\begin{aligned} F_{hi} &= P_{1hi} * P_{2hi} \\ &= \frac{a_{hi}b}{\sum M_{hi}} * \frac{M_{hi}}{M_{hi}^*} \end{aligned}$$

The weighting factor (or expansion factor), W_{hi} , for a household in the i^{th} selected EA in the h^{th} stratum is the reciprocal (inverse) of the overall probability of selecting that household.

$$\begin{aligned} \text{That is, } W_{hi} &= \frac{1}{F_{hi}} \\ &= \frac{\sum M_{hi}}{a_{hi}b} * \frac{M_{hi}^*}{M_{hi}} \end{aligned}$$

The number of households successfully interviewed in each EA was used in the computation. Therefore, the final weight for the sample households in the j^{th} cluster and in the i^{th} sample PSU in stratum h is given by:

$$W_{hi}' = W_{hi} * \frac{b'}{b''}$$

Where:

b' = The number of interviews plus the number of no interviews in the sample cluster

b'' = Total number of interviewed sample households selected in the j^{th} sample PSU within the i^{th} sample stratum

Appendix 7: Construction of the Standard of Living Measure¹

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 2017. 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 expenditure²

The methodology used to construct the standard of living measure GLSS7 was the same as that for GLSS6. In addition to the estimation manual used for the previous GLSSs, the Survey-based Harmonized Indicator Program (SHIP) Manual 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 A7.1 sets out in detail how this is done, covering the components, their composition, and sources within the different GLSS7 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 which are considered as lumpy expenditures (for example, purchasing a car, more like an investment rather than consumption).

Total consumption expenditure is estimated for a 12-month period based on information collected with the questionnaire. In the case of frequent purchases (for example, 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. GLSS7 households received seven visits at five-day intervals, while GLSS6 was six visits at regular intervals of five days in the course of the survey (in GLSS3, eight visits at two-day intervals in rural areas and eleven visits at three-day intervals in urban areas; seven visits at

¹ 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 GLSS7.

² Refer to *The Estimation of Components of Household Incomes and Expenditures: A Methodological Guide* based on the GLSS, 1991/92, 1998/99, and 2005/06 and SHIP Manual.

five-day intervals in the case of GLSS4; and eleven visits at three-day intervals in GLSS5). 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 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 12 months was used in GLSS7 to collect information on less-frequently purchased consumption items (for example, 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 two 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.

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:

- a) differences in the cost of living between different localities and regions at a point in time, and
- b) 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 2017 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 indexes reported in Table 2.2 (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 (for example, 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 (for example, 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 A7.2). 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 2017 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 indexes 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. Analyzing education, health, and so on by quintile group 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 A7.1: Estimation of total household consumption expenditure for GLSS7

Element of total household consumption	Composition	Source of data in GLSS questionnaire	Notes
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 the form of food (based on payment interval reported by respondents)	Section 4A	Excluded in GLSS6 and 7 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 and 7
	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 Section 2A	Section 9A	
	Expenditure on household utilities: water, electricity, garbage disposal (based on payment interval reported by respondents)	Section 7	Replaced with information in Sections 9A and 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 GLSS6 and 7 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 A7.2: 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	1,300	0.45
	4–6	1,800	0.62
	7–10	2,000	0.69
Males	11–14	2,500	0.86
	15–18	3,000	1.03
	19–25	2,900	1.00
	25–50	2,900	1.00
	51+	2,300	0.79
Females	11–14	2,200	0.76
	15–18	2,200	0.76
	19–25	2,200	0.76
	25–50	2,200	0.76
	51+	1,900	0.66

Source: Recommended Dietary Allowances, 10th edition (Washington, DC: National Academy Press, 1989).

Appendix 8: Poverty Indexes³

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_α indexes of poverty proposed by Foster, Greer, and Thorbecke⁴ 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 μ_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 α , increased weight is placed on the poorest of the poor; the P_2 index for

³ Note that this Appendix is largely based on the discussion in the *Pattern of Poverty* study (GSS 1995, pp. 97–99).

⁴ Foster, J. E., J. Greer, and E. Thorbecke. 1984. "A Class of Decomposable Poverty Measures." *Econometrica* 52: 761–766.

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_α class of indexes 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 values of the poverty indexes 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_α indexes is used in this study as the basis for examining the geographic and socioeconomic 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 indexes, 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 indexes 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	6.5	3,002.20	29.9	8.9	3.6	29.8	8.2	6.8	5.4

To illustrate the use of poverty indices, take the example of rural coastal in 2016/17, 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 6.5 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 2017. The average standard of living in this locality is GH¢3,002.20.

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 29.9 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, 8.2 percent live in the Rural Coastal Region. 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 Region below the poverty line have an average standard of living 29.8 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 8.9 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 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 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 Rural Coastal to severity of poverty in Ghana decreases.