# Core Welfare Indicators Questionnaire (CWIQ) Survey (1997)

## CWIQ Regional Profiles and CWIQ CD-ROM

**Statistical Service**
**Accra, Ghana**
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# Contents

# Acknowledgements

# Preface

This report presents a detailed regional analysis of the welfare profile for Ghana in 1997, based on the results of the Core Welfare Indicators Questionnaire (CWIQ) survey. The CWIQ is an off-the-shelf survey package developed by the World Bank to produce standardized monitoring indicators of welfare. This survey instrument essentially collects information on social indicators that measure access utilization and satisfaction with social services in a single visit to households. The CWIQ programme was conceived as an integral part of the national welfare monitoring system to complement the Ghana Living Standards Survey (GLSS).

Basic descriptive analysis on the first round of the CWIQ, carried out by the Ghana Statistical Service, was published as the main report in 1998. Details of the survey methodology are described in this report. The present report also includes a CD-ROM that contains primary survey data and survey documentation, and both reports (the main and the regional reports) and is the product of the Ghana Statistical Service. In addition to preparing the main report, the Statistical Service is interested in carrying out further analysis of the CWIQ data at the regional level, and would like to encourage others to use the data for deriving policy-relevant results to the understanding of development challenges of the regions. Thus, for the first time in the history of the Statistical Service, a detailed welfare profile based on the CWIQ survey result is presented in this report by region and available to the general public for policy work and further analysis.

The report provides analysis, at the regional level, of the pattern of welfare using key socio-economic indicators. This analysis, along with the main report of 1997 and the GLSS data/publications, should lead to a better understanding of the living conditions in Ghana, and enable planners and policymakers to design and implement appropriate poverty reduction strategies consistent with the development challenges facing the various regions of Ghana. The national commitment to reduce poverty and raise standards of living by the year 2020 in all regions of the country as indicated in the blueprint for the country's development, Ghana: Vision 2020, may be facilitated through the information provided in this report.

# Key Results

The CWIQ survey collected information on a number of key indicators that can be disaggregated by gender and socio-economic grouping. Some of the key results are presented in the following tables. Further analysis of the CWIQ data suggests that some of the results have changed. The survey results not only show significant gender differences for certain indicators, but also show evidence of improvements in the status of women for others.

For instance, female literacy (which may be perceived as an indication of the level of gender equality in education in earlier decades) is only 37 percent for the country as a whole, compared with a male literacy level of 62 percent. By comparison, when school enrollment rates (which are an indication of the gender equality of current educational efforts) are examined, there is a very significant reduction in the levels of inequality. Slightly less than two-thirds of the boys of primary school age are enrolled with almost the same proportion of girls (66 percent) enrolled in primary school.

Further disaggregation by region shows a much higher literacy rate (73.4 percent) for the Greater Accra Region than the national average (48.3 percent) and the lowest rate for Northern Region (16.8 percent). Access to primary school is generally at an acceptable level, except in Upper East and Upper West Regions, where less than one-half of school-age children have access to both primary and secondary education.

In spite of a national average of 20 percent access to secondary school, access remains unequal, particularly in the Upper West Region where only 6.4 percent of the population have access to secondary school. There is also a marked reduction in the level of access (only 9 percent) for the poorest rural households, and a commensurate drop in the level of enrollments (43 percent for the country and 25 percent for poorest rural households).

The survey also reveals significant differences in the levels of satisfaction with secondary school services, according to the socio-economic group of the household and the type of facility (government, private, church, etc.).

Findings of the survey indicate that, for the country as a whole, households in the Greater Accra Region have better access to health facilities than elsewhere in the country. The need for health services is lowest among households in the Greater Accra Region (14.1 percent) while it is highest in the Brong Ahafo Region (26 percent); Eastern and Volta Regions show the highest usage rate of 26 percent. For those not using health facilities, the main reason given was the high cost of treatment. About one-fifth of those not using medical facilities do not use them because they find such facilities to be too far away.

While there have been attempts by the Government of Ghana to improve access to safe water throughout the country, regional disaggregation of the CWIQ results indicates that almost all households (94 percent) in the Greater Accra Region have access to safe water, while slightly less than one-half of the households in Volta, Eastern, and Northern Regions have access. The majority of the households in the Northern Region and other rural areas of the country rely on natural sources (unprotected well, lakes, or rivers) for their

water supply. Households in the rural areas of the regions in the north are more likely to spend more time fetching water, than elsewhere in the south.

# Some Key Indicators for Ghana

## Core Welfare Indicators

| | All Ghana | Margin of error (+/-%) | All Rural | Rural poor | All Urban | Urban poor |
|---|---|---|---|---|---|---|
| Land owned compared to one year ago | | | | | | |
| Decreasing | 4.5 | 0.6 | 5.8 | 5.4 | 1.8 | 2.7 |
| Increasing | 4.2 | 0.6 | 5.7 | 7.1 | 1.4 | 2.2 |
| Access to water | 82.1 | 2.8 | 77.9 | 74.5 | 90.1 | 85.8 |
| Safe water source | 65.2 | 6.8 | 51.3 | 43.2 | 92.0 | 83.2 |
| Adult literacy rate | 48.3 | 2.1 | 40.4 | 36.9 | 63.3 | 51.7 |
| Employment | | | | | | |
| Unemployed | 4.6 | 0.5 | 2.9 | 3.2 | 7.9 | 10.0 |
| Male | 5.5 | 0.7 | 3.1 | | 9.7 | |
| Female | 4.1 | 0.9 | 2.7 | | 6.4 | |
| Underemployed | 1.1 | 0.2 | 0.8 | 0.8 | 1.6 | 2.0 |
| Male | 1.5 | 0.2 | 1.0 | | 2.2 | |
| Female | 0.8 | 0.2 | 0.7 | | 1.1 | |
| Primary school | | | | | | |
| Access to School | 81.2 | 2.8 | 78.9 | 74.7 | 86.9 | 81.8 |
| Primary Enrollment | 67.0 | 3.1 | 65.1 | 60.0 | 71.9 | 67.1 |
| Male | 67.9 | 3.4 | 65.6 | | 74.0 | |
| Female | 66.0 | 3.1 | 64.4 | | 69.9 | |
| Satisfaction | 40.4 | 3.3 | 31.1 | 26.0 | 61.9 | 52.2 |
| Secondary school | | | | | | |
| Access to School | 19.9 | 2.8 | 11.9 | 9.0 | 34.8 | 25.9 |
| Secondary Enrollment | 40.0 | 2.4 | 36.2 | 34.0 | 47.3 | 43.4 |
| Male | 43.6 | 2.8 | 39.9 | | 51.3 | |
| Female | 36.4 | 3.0 | 32.1 | | 43.9 | |
| Satisfaction | 43.9 | 3.4 | 31.7 | 25.0 | 61.5 | 47.8 |
| Medical services | | | | | | |
| Health access | 37.2 | 3.4 | 25.8 | 23.2 | 62.1 | 49.7 |
| Need | 18.6 | 0.8 | 18.8 | 16.7 | 17.9 | 16.0 |
| Use | 21.6 | 1.1 | 21.2 | 16.7 | 22.4 | 18.9 |
| Satisfaction | 57.0 | 2.0 | 55.3 | 51.7 | 60.5 | 55.6 |
| Child nutrition | | | | | | |
| Stunted | 29.9 | 2.2 | 32.9 | 34.7 | 21.0 | 31.2 |
| Wasted | 6.5 | 0.8 | 6.1 | 7.6 | 7.5 | 8.3 |
| Underweight | 26.0 | 1.9 | 28.8 | 31.2 | 18.0 | 24.8 |
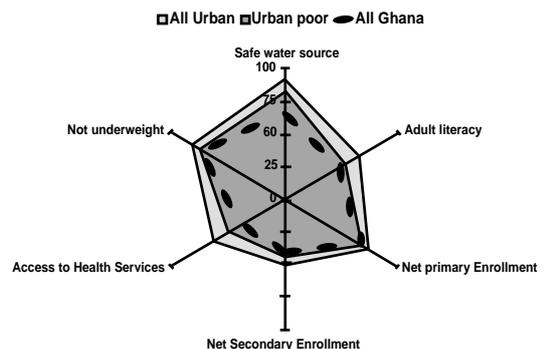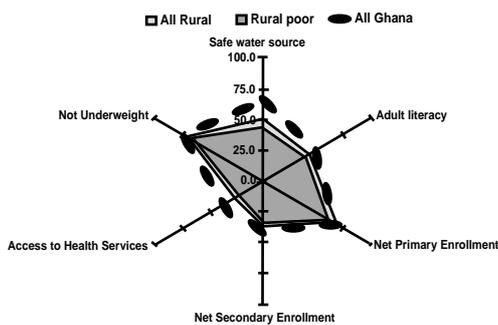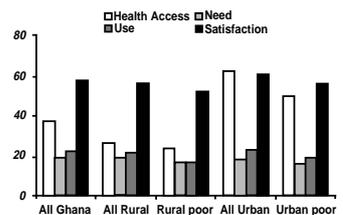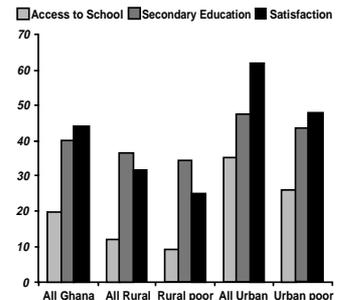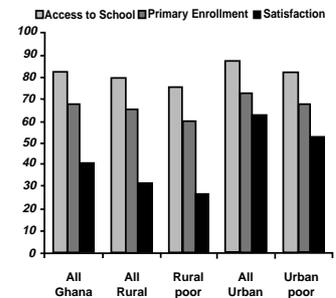
## Regional Core Welfare Indicators

| | Total | Western | Central | Greater Accra | Volta | Eastern | Brong Ashanti | Ahafo | Northern | Upper East | Upper West |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Land owned compared with one year ago** | | | | | | | | | | | |
| *Decreasing* | 4.5 | 2.1 | 2.7 | 0.3 | 1.2 | 6.3 | 5.8 | 6.4 | 2.9 | 14.5 | 12.8 |
| *Increasing* | 4.2 | 1.7 | 3.8 | 0.1 | 1.6 | 6.2 | 4.6 | 4.5 | 6.6 | 8.7 | 15.4 |
| **Access to water** | 82.1 | 89.0 | 89.4 | 93.7 | 77.2 | 76.5 | 86.3 | 74.7 | 64.6 | 80.9 | 85.4 |
| **Safe water source** | 65.2 | 54.0 | 80.1 | 94.3 | 35.3 | 45.1 | 75.5 | 68.4 | 44.0 | 78.9 | 84.7 |
| **Adult literacy rate** | 48.3 | 55.4 | 47.2 | 73.4 | 57.7 | 56.1 | 45.4 | 44.2 | 16.8 | 17.2 | 22.4 |
| **Employment** | | | | | | | | | | | |
| *Unemployed* | 4.6 | 4.8 | 3.2 | 7.8 | 3.9 | 4.9 | 7.0 | 3.0 | 2.9 | 0.4 | 0.5 |
| *Male* | 5.5 | 7.1 | 4.0 | 10.1 | 4.7 | 3.5 | 7.2 | 4.1 | 3.9 | 0.3 | 0.6 |
| *Female* | 4.1 | 2.7 | 2.6 | 5.8 | 3.3 | 5.8 | 6.8 | 2.2 | 2.0 | 0.5 | 0.3 |
| *Underemployed* | 1.1 | 1.2 | 1.4 | 2.0 | 2.4 | 0.9 | 0.5 | 0.6 | 0.4 | 0.1 | 0.5 |
| *Male* | 1.5 | 1.5 | 1.8 | 2.8 | 2.6 | 1.7 | 0.8 | 0.8 | 0.0 | 0.3 | 0.8 |
| *Female* | 0.8 | 0.9 | 1.2 | 1.3 | 2.2 | 0.4 | 0.3 | 0.5 | 0.7 | 0.0 | 0.3 |
| **Primary school** | | | | | | | | | | | |
| *Access to School* | 81.2 | 86.1 | 83.0 | 92.8 | 88.0 | 78.5 | 89.9 | 84.2 | 70.1 | 45.7 | 56.8 |
| *Primary Enrollment* | 67.0 | 74.6 | 72.0 | 70.4 | 70.2 | 78.1 | 72.2 | 72.4 | 40.0 | 45.1 | 36.0 |
| *Male* | 67.9 | 76.3 | 71.9 | 73.6 | 70.3 | 80.1 | 71.3 | 72.0 | 43.4 | 48.7 | 32.9 |
| *Female* | 66.0 | 72.8 | 72.0 | 67.3 | 70.1 | 76.1 | 73.2 | 72.8 | 36.0 | 41.0 | 39.5 |
| *Satisfaction* | 40.4 | 23.2 | 45.4 | 76.9 | 19.5 | 38.3 | 50.1 | 34.3 | 34.5 | 35.9 | 35.2 |
| **Secondary school** | | | | | | | | | | | |
| *Access to School* | 19.9 | 12.8 | 15.2 | 44.9 | 22.0 | 23.4 | 17.9 | 12.1 | 10.2 | 8.4 | 6.4 |
| *Secondary Enrollment* | 40.0 | 40.4 | 42.8 | 48.9 | 46.7 | 40.4 | 38.0 | 36.1 | 29.3 | 31.7 | 32.4 |
| *Male* | 43.6 | 43.0 | 47.5 | 51.7 | 50.7 | 49.4 | 42.1 | 38.2 | 35.7 | 33.8 | 23.1 |
| *Female* | 36.4 | 37.5 | 37.4 | 46.5 | 42.9 | 33.3 | 34.2 | 33.7 | 21.3 | 29.2 | 44.1 |
| *Satisfaction* | 43.9 | 32.8 | 48.1 | 77.0 | 21.9 | 33.1 | 48.2 | 35.3 | 39.3 | 40.9 | 39.0 |
| **Medical services** | | | | | | | | | | | |
| *Health access* | 37.2 | 28.0 | 35.9 | 77.6 | 41.7 | 32.8 | 43.2 | 31.9 | 18.4 | 8.2 | 19.8 |
| *Need* | 18.6 | 23.8 | 14.9 | 14.1 | 19.6 | 20.4 | 16.2 | 25.9 | 18.1 | 11.8 | 13.9 |
| *Use* | 21.6 | 20.1 | 20.0 | 17.8 | 25.6 | 26.5 | 17.1 | 33.6 | 20.0 | 11.0 | 10.9 |
| *Satisfaction* | 57.0 | 41.2 | 66.8 | 59.8 | 53.8 | 66.5 | 61.9 | 49.8 | 55.6 | 59.4 | 55.8 |
| **Child nutrition** | | | | | | | | | | | |
| *Stunted* | 29.9 | 27.3 | 30.7 | 13.4 | 27.9 | 24.5 | 30.2 | 25.1 | 40.2 | 53.4 | 46.8 |
| *Wasted* | 6.5 | 4.7 | 4.7 | 8.4 | 5.0 | 4.4 | 5.3 | 5.7 | 10.5 | 11.4 | 10.4 |
| *Underweight* | 26.0 | 22.4 | 23.5 | 10.8 | 21.7 | 22.5 | 24.3 | 21.0 | 41.8 | 48.8 | 42.4 |

*Access to water* is defined for households with a water source less than 30 minutes away.

*Safe water source* is defined for households using piped, well, or purchased water.

*Adult literacy rate* is defined for persons age 15 and above.

*Unemployed* is defined for persons age 15 and above. It includes persons who did not work in the four-week period preceding the survey and who looked for work in the same period. The inactive population, primarily students and retired persons, is not included.

*Underemployed* is defined for persons age 15 and above. It includes persons who worked part time in the four-week period preceding the survey because no other work was available.

*Health need* is defined for persons who were ill or injured in the four-week period preceding the survey.

*Health use* is defined for persons who consulted a health practitioner in the four-week period preceding the survey. Note that need is not taken into account.

*Health satisfaction* is defined for persons who consulted a health practitioner in the four-week period preceding the survey and who cited no problems.

*Stunted* children are short for their age. Their height is more than two standard deviations below the standard (NCHS) height for age.

*Wasted* children are underweight for their height. Their weight is more than two standard deviations below the standard (NCHS) weight for height.

*Margin of error* expresses the error attributed to sampling. It is expressed as an absolute percentage and indicates the range of a 95 percent confidence interval for the estimate.

*Primary school* estimates are defined for children age 6–13.

Access is defined for children living in households with a primary school less than 30 minutes away.

Enrollment (net) is defined for children currently in primary school (grades P1 to P6).

Satisfaction is defined for children currently in primary school who cited no problems.

*Secondary school* estimates are defined for children age 14–18.

Access is defined for children living in households with a secondary school less than 30 minutes away.

Enrollment (net) is defined for children currently in junior or senior secondary school.

Satisfaction is defined for children currently in secondary school who cited no problems.

*Health access* is defined for persons living in households with a health facility less than 30 minutes away.

*Poor (Rural and Urban)* A composite index of indicators closely correlated to household consumption is computed and used to rank households from "least poor" to "poorest." The "poor" are then identified as households falling into the lowest quintile. These households are then separated into urban poor and rural poor according to the location of the enumeration area in which they reside.

# Introduction

## All Ghana

The CWIQ canvassed 14,514 households (9,162 rural and 5,352 urban) covering the 10 administrative regions. The survey is based on a two-stage stratified, nationally representative sample of households chosen from 588 Enumeration Areas (EAs). The 1984 population census EAs constituted the sampling frame. The frame was first stratified into three ecological zones (namely, forest, savannah, and coastal) and were later stratified into the 10 administrative regions. The sampled EAs were selected with probability proportional to size (PPS method). Households within the selected EAs were subsequently listed, and a systematic sample of 25 households per EA was selected. The total numbers of EAs covered in each region are presented in table 1.

The CWIQ was designed to collect the minimum amount of information needed to identify and classify target groups and to provide basic welfare monitoring information. Pre-coded, multiple-choice response questionnaires were used. Modules of this instrument include Health, Education, and Household Assets. They require the interviewer to fill in "bubbles" corresponding to the response. The questions were designed to be quicker and easier to administer and to process.

Field returns (Questionnaires) were first checked by supervisors for completeness, sorted by EAs, and then scanned using NCS Opscan 5 Scanners. The quality of the scanned data was monitored closely through a series of consistency and range checks to detect errors. Clean data sets generated by the "bubble-shop" application were then transformed to ASCII files using the ACCESS application. The output data file was further converted into an SPSS format for data analysis. A standardized output table, or bulletin, was generated two weeks after the fieldwork. Findings of the survey were presented in the CWIQ Main Report of 1998; however, further cleaning and editing of the data means that some of the results have changed. This report is a continuation of the basic welfare indicator presentation by region using standard definitions (for example, net enrollment rate in this report is defined for children ages 6–13).

## Housing and Household

This module collects basic demographic information on individuals in a household and determines whether or not an individual is a member of the household. A household is defined as: "A person or group of persons who live together in the same

### Table 1. Total Enumeration Areas Covered by Each Team

| Team | Region(s) Covered | Total Number of EAs Covered |
|------|-------------------|------------------------------|
| 1 | Western | 43 |
| 2 | Central & Western | 50 |
| 3 | Greater Accra | 51 |
| 4 | Greater Accra & Southern Volta | 50 |
| 5 | Volta | 45 |
| 6 | Eastern | 41 |
| 7 | Eastern & Ashanti | 40 |
| 8 | Eastern & Central | 44 |
| 9 | Ashanti | 50 |
| 10 | Ashanti | 47 |
| 11 | Brong Ahafo | 50 |
| 12 | Northern | 39 |
| 13 | Upper East & West | 38 |
| **Total** | | **588** |

**Table 2. Comparison of Mean Household Size by Survey Instrument**

| | Mean Household Size | | |
|---|---|---|---|
| | Census (March 1984) | GLSS III (March 1992) | CWIQ (Nov. 1997) |
| National | 4.9 | 4.5 | 4.1 |
| Western | 4.4 | 4.3 | 4.9 |
| Central | 3.8 | 4.1 | 4.0 |
| Greater Accra | 3.9 | 3.8 | 3.7 |
| Eastern | 4.8 | 4.0 | 3.7 |
| Volta | 4.8 | 4.4 | 4.7 |
| Ashanti | 4.7 | 4.4 | 3.6 |
| Brong Ahafo | 5.1 | 5.3 | 3.6 |
| Northern | 8.7 | 5.7 | 5.3 |
| Upper East | 7.1 | 5.9 | 5.1 |
| Upper West | 8.4 | 5.8 | 5.0 |

house or compound, share the same house-keeping arrangements, and are catered for as one unit. Members of a household are not necessarily related by blood or marriageg" (Ghana Statistical Service 1984). This section analyzes individual details of the household members, age 5 or older. The focus of this survey is to monitor key welfare changes as they affect household members individually. While the CWIQ focuses mainly on the household, certain key dimensions can only be observed at the individual level. This is especially true for education, health, nutrition, and employment. Thus, the remainder of this section addresses household-level results. The two major aspects of the household characteristics presented in this section include household composition and age structure. Changes in household composition and age structure, if carefully monitored, may help determine resource allocation by policymakers or planners.

Of the 14,514 households surveyed, results indicate that the average household size was 4.1 members, although rural households and poorer households were generally larger. Rural poor households recorded the largest household size (8.4 members) followed by the urban poor (7.3 members). Table 2 shows the regional distribution of households according to size (in percentages). A comparison of the changes in the mean household size over time (from the 1984 census, GLSS III, and the CWIQ) shows a slight decline from

4.9 in 1984 to 4.1 in 1997. Households in the northern regions (Northern, Upper East, and Upper West) have a household size above the national average. Female-headed households accounted for 35 percent of all households in Ghana. There was little difference between rural and urban areas; however, a significantly larger percentage was to be found among the poorer households.

## Age and Gender

Migration, fertility level, and mortality are among the factors known to affect variations in the age and gender structures of countries in Sub-Saharan Africa, particularly Ghana (Ghana Statistical Services 1995). This section examines the age and gender structure of Ghanaian households, and presents summary indicators for all households as well as the rural and urban populations.

While males headed most households (64 percent), poorer households in rural and urban areas were headed by females, except in urban areas of the Central Region where female-headed households accounted for about one-half of all household heads. This may be explained by male out-migration in search of job opportunities. Rural areas of the savannah zone recorded the least number of households headed by females.

The survey also shows that Ghana's population is still "young," with 41.8 percent of the population under age 15. The youthful age structure of the population is reflected in the seemingly high dependency ratio of 1.9 (the number of children age 0–14 years and adults 65 years and above, to the number of persons age 15–64 in a population). In other words, each economically active person is responsible for two non-active persons. This ratio remains relatively constant across all quintiles, but varies by rural or urban location. Rural households have dependency ratios higher than their urban counterparts, perhaps because of increased fertility rates in rural areas and migration of the working-age population to urban areas.

## Socio-economic Characteristics of Households

The second section of this report provides a socio-economic profile of households surveyed. The survey collected information on a number of indicators, which can be disaggregated by gender. Topics covered in this section include:

Education
Employment
Health
Housing
Households Assets.

## Education

The importance of education (a basic needs indicator) and its effect on other socio-economic indicators, such as the health status of children, employment, reproductive behavior, and infant and child mortality cannot be overemphasized. Education is essential for providing people with the basic knowledge and necessary skills to improve their quality of life. Policies and programmes that help to expand access to and the proper utilization of educational opportunities will also assist in reducing poverty. Important input variables necessary for education analysis within the structural adjustment framework include access to primary and secondary schools, and enrollment rates.

Ghana's educational policy since Independence includes the provision of universal basic education and the eradication of adult illiteracy. This goal was further echoed in the Vision 2020 (National Development Plan) which emphasizes the need to make all citizens functionally literate and productive by the year 2020.

The CWIQ examines individuals' use and satisfaction with educational services. The survey questions can also be used to prepare three widely accepted and used indicators: net enrollment, drop-out rate, and repeat rate. These same indicators were collected in the Priority and Integrated Surveys of the SDA. The net enrollment rate compares the total number of children of appropriate school age (primary or secondary) with the number of children in that cohort who actually attend school. Dropouts are defined as children not currently in school, who were attending school one year ago, and have not completed studies. Questions on the reasons for non-attendance and for dissatisfaction with schools are also included in the CWIQ survey. Further educational indicators are the highest grade attended, and the type of school attended (private or public).

Current educational efforts are best captured by the responses given with

### Figure 1. Access to Primary and Secondary Education by Location
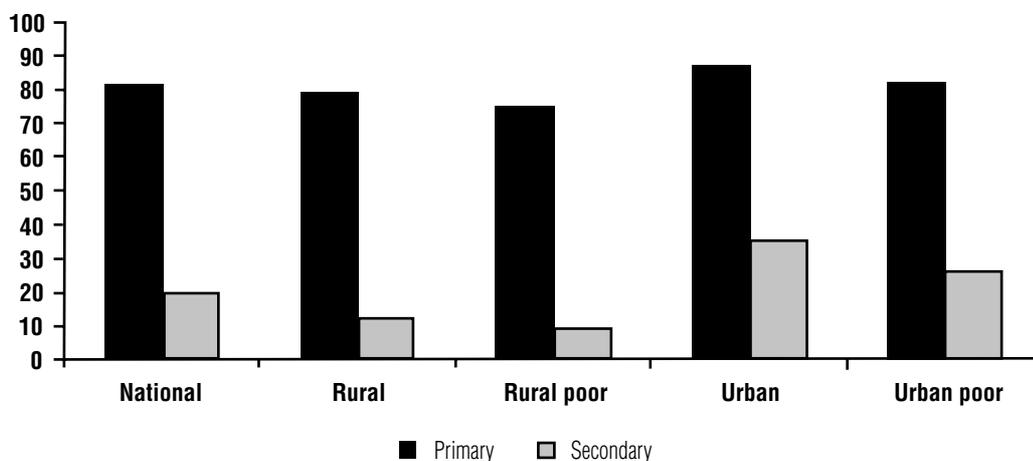


*Source: GLSS I, II, and III GCWIQ I; Ghana Statistical Service.*

**Figure 2. Net Primary/Secondary Enrollment Rates by Gender
(1987–88 to 1997–98)**



■ Male (primary)　□ Female (primary)　▨ Male (secondary)　▨ Female (secondary)
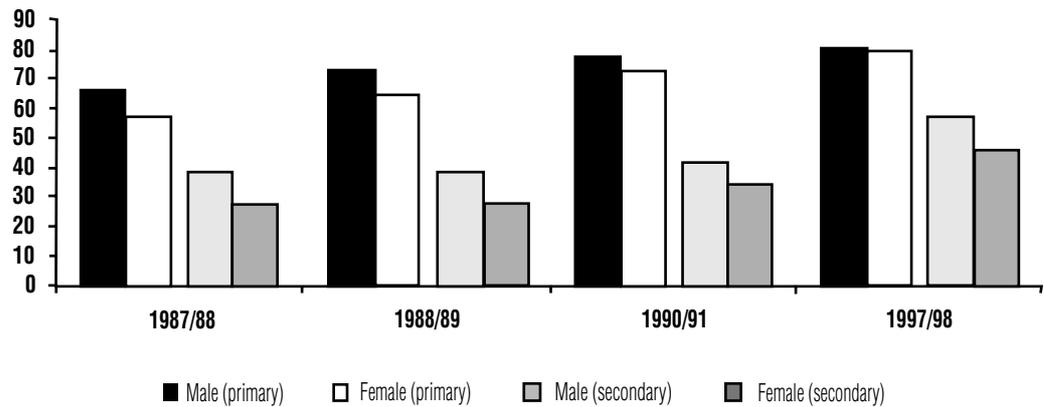
*Source: GLSS III, GCWIQ I; Ghana Statistical Service.*

**Figure 3. Reasons for Dissatisfaction with Primary Education by Location**



■ Lack of books/supplies　□ Poor teaching
▨ Lack of teachers/overcrowding　▨ Facilities in bad condition
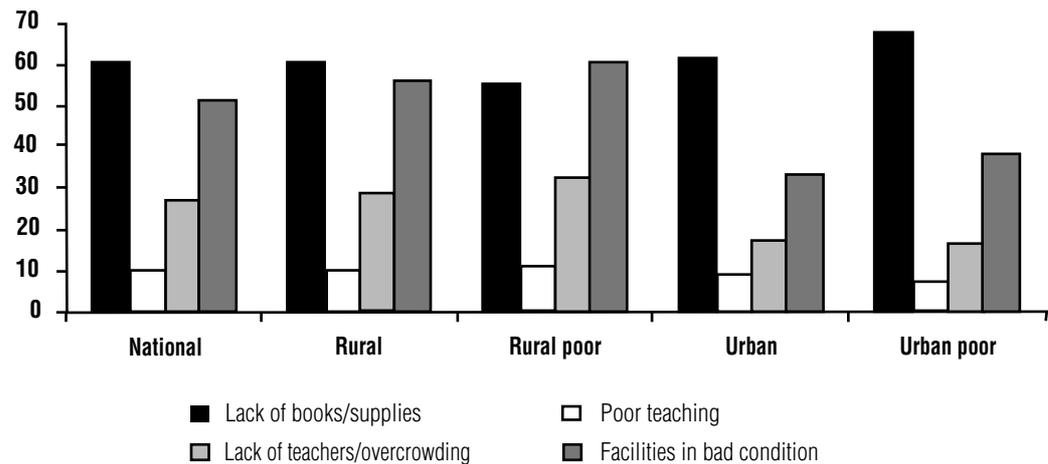
*Source: GLSS III, GCWIQ I; Ghana Statistical Service.*

regard to access to educational services and enrollment rates. As indicated in figure 1, access to primary education appears high across geographical areas (for example, a national average of 81.2 percent) except for poor households in the rural areas with about 75 percent of the households having access to primary education.

Applying the standard definition in estimating primary and secondary enrollment rates (for example, primary enrollment rate is defined for children age 6–13), approximately 67 percent of children

age 6–13 were enrolled in primary school. Similarly, 40 percent of secondary school-age boys and girls are enrolled in secondary school.

It is worth noting that the provision of education as measured by enrollment rates (using the GLSS definitions) has improved over the years as shown in figure 2. Satisfaction with the quality of education was noticeably low in the rural areas, particularly among poorer households (satisfaction with primary education was 61.9 percent for urban households and

26 percent for rural poor households. See figure 3.). The primary reasons for dissatisfaction were the poor condition of the school facilities servicing the rural poor and shortage of books, supplies, or both.

## Health

The most useful health indicators are those relating to health status. Health status, however, is extremely difficult to measure using a short survey like the CWIQ. Attention is therefore focused on the use and satisfaction of health services in the four weeks prior to the interview. These indicators were selected because of their sensitivity to changes in health policies arising out of national adjustment programs. Indicators in this section include the type of health provider, type of consultation, and medical condition. Wide ranges of medical conditions were listed and cover the most frequent reasons for seeking medical care.

Health sector policies in Ghana often aim at increasing life expectancy and reducing infant and child mortality. The strategy adopted in achieving health sector goals involves a reduction in the incidence of communicable and preventable diseases and a reduction in water-borne diseases.

The Primary Health Care (PHC) programs in Ghana sought to ensure access to health services for all (Ghana Statistical Service 1995).

Results of the survey indicate that for the country as a whole, 21 percent of ill or injured persons received formal medical care, out of the 18 percent that needed medical help. For the rural-poor households, the rate drops to 16.7 percent (figure 4). The gap between rural and urban is, however, much larger for formal medical care. More than one-half (60 percent) of urban households have access to formal health facilities (23.2 percent of the rural poor have access), of which less than 22.4 percent use these facilities. Figure 4 also reveals that the usage of health services in Ghana is low among all households, particularly in the rural areas. The primary reason for the low usage is the high cost of treatment. Cutbacks in health programs lead to the increasing cost of health services in Ghana. Additionally, the introduction of user fees for public hospitals has made it necessary for most poor households to seek alternative medicine (for example, traditional healers). About one-fifth do not use medical services because such facilities are too far from their homes.

**Figure 4. Access, Use, and Satisfaction with Formal Health Services**



Legend: ■ Access  □ Use formal health service  ▨ Satisfied
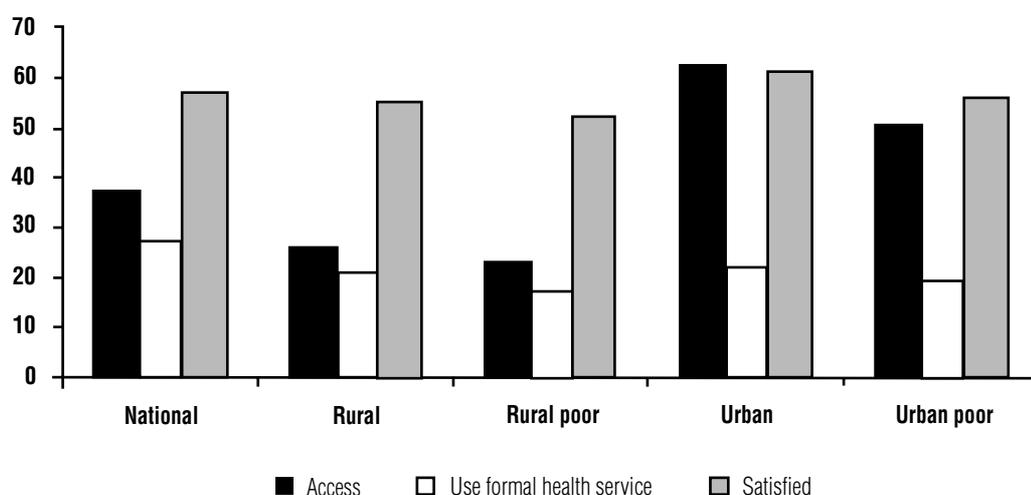
*Source: GLSS III, GCWIQ I; Ghana Statistical Service.*

## Employment

The welfare of a household depends, to a large extent, upon the employment status of the main income earners. There are difficulties, however, in trying to measure a household's earning potential and vulnerability using a limited number of questions. Thus, in designing the CWIQ, a decision was made to limit the detailed employment question to two people: the head of the household and the spouse. Unfortunately, in a survey such as the CWIQ, it is not always easy to establish the main income earners. Knowing who is the head of the household and who is the main income earner would provide a more complete picture of the household economic status.

The employment status categories are based on UN (1991) terms and definitions. An employer is one who operates an economic activity with or without partners, with regular assistance from one or more regular employees. Employees are persons engaged for wage, salary, or commission. Casual employees are persons continuously engaged for less than a month. An own-account worker is one who operates his or her own economic activity with or without partners, without the assistance of regular employees. The person may use unpaid family workers or casual employees. An unpaid family worker is a member of a household who works in the household economic activity operated by a member of the household without any payment of wage or salary.

The categorization of employment by sector and status follows standard international practice in terms of the naming of categories. The CWIQ approach divides the task into two questions: one concerning the nature of the work and the other the type of sector. For the former, six categories are used. The categories primarily identify those involved in primary, secondary, and tertiary sectors of employment. A separate question identifies the type of organization for which the individual works. Four categories are used in this section: Public sector, Semi-public sector, Private Formal, and Private Informal.

Examination of employment characteristics of individuals indicates that slightly more than half of the sampled individuals were employed (59 percent); however about one-tenth of the population (9.1 percent) was underemployed and about 26.9 percent economically inactive. Roughly two-thirds of the population were self-employed and about 10 percent were unpaid workers. Agriculture sector employment accounts for 52 percent of all employed households, followed by trade (21.7 percent) and the service sector (13.6 percent). Poor households in the rural areas form the majority of the self-employed agriculture workers, while the urban dwellers work mainly in the service industries and in trade (13 percent and 41 percent, respectively).

## Household Assets

Household assets are important indicators of welfare and, as such, provide a direct measure of economic welfare. The acquisition or loss of assets may be a significant indicator of changing economic conditions. If income has declined relative to the cost of basic needs, households may have to sell or not replace assets to maintain minimum living standards. Alternatively, improved conditions are likely to be reflected in the acquisition of additional assets. Household assets include productive assets used for farming or for non-farming enterprises, and those used for household consumption.

The CWIQ survey does not collect data on an exhaustive list of household assets; instead, it collects limited data on selected assets such as land, live livestock, and consumer durable goods such as a refrigerator, stove, car, or sewing machine. Other indicators found in this section include tenure and number of rooms in the dwelling occupied by households. Land is a central economic and cultural asset in Africa and is a key determinant of poverty, particularly in rural areas. Although changes in land ownership may be slow, it is still essential to monitor current ownership, and changes in ownership.

Slightly less than one-forth of the households in Ghana own land, 25 percent own small animals, and about 15.9 percent own a bicycle. Land ownership is highest among rural poor households and lowest among urban households. Similarly, about one-half of the rural poor households own small animals and 17 percent own a bicycle. Assets ownership generally is higher among rural dwellers than their urban counterparts, except for the ownership of consumer durable goods. For example, one-third of all urban households own television sets, compared with five percent for rural households.

## Housing and Household Amenities

The CWIQ includes questions on the most important amenities affecting household living standards: water, sanitation, fuel for cooking and light, market, transportation, and school and medical facility access. Types of roofing and wall material of dwellings are some of the key housing quality indicators and, as such, are indicators of welfare. Distance to the nearest water source, food market, etc. is measured in minutes. The CWIQ places greater emphasis on easy availability of facilities in the locality rather than the choices made by different households with regard to having access to the facilities in-question.

Housing tenure, quality of construction material, and facilities available in the housing environment are often used as proxy indicators of welfare levels of the households occupying the unit. Some of the direct housing indicators are the quality of drinking water available to households, type of sanitation, availability of electricity, etc.

Distribution of housing tenure indicates that about one-forth of the households surveyed owned their dwelling, 18.4 percent rent, and 44 percent live rent-free. Self-employed agriculture workers living in the rural areas constituted the majority of the homeowners. Females headed the majority of rent-free households. Almost one-half of all private formal sector workers rent their dwelling and enjoy better housing conditions than homeowners. The average house in Ghana was roofed with iron sheets (68 percent) with walls constructed of mud-bricks.

One-third of all housing units in Ghana have piped-water; however, less than 10 percent of the rural poor have access to piped-water, compared with 75 percent for urban households. A flush toilet is almost non-existent in the rural areas and is present in only 16 percent of urban households. Electricity is available in one percent of the households surveyed. The most common types of lighting and cooking fuel reported were kerosene/gas and oil; and nearly all the rural poor households (93 percent) use wood as their cooking fuel.

## GHANA Regional Core Welfare Indicators (percent margin of error)

| | Total | Western | Greater Central | Accra | Volta | Eastern | Ashanti | Brong Ahafo | Northern | Upper East | Upper West |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Land owned compared with one year ago** | | | | | | | | | | | |
| *Decreasing* | 0.6 | 0.9 | 1.0 | 0.3 | 0.8 | 1.9 | 1.2 | 1.4 | 1.6 | 3.7 | 3.8 |
| *Increasing* | 0.6 | 0.7 | 1.3 | 0.1 | 0.9 | 1.9 | 1.2 | 1.3 | 3.2 | 4.1 | 7.9 |
| **Access to water** | 2.8 | 3.1 | 2.4 | 4.0 | 5.8 | 13.7 | 3.7 | 3.7 | 10.9 | 6.7 | 6.0 |
| **Safe water source** | 6.8 | 11.3 | 7.4 | 4.0 | 9.3 | 34.4 | 7.1 | 18.4 | 20.1 | 8.6 | 16.1 |
| **Adult literacy rate** | 2.1 | 3.9 | 3.4 | 3.2 | 4.5 | 3.1 | 3.0 | 3.4 | 7.4 | 6.6 | 11.4 |
| **Employment** | | | | | | | | | | | |
| *Unemployed* | 0.5 | 1.3 | 1.1 | 1.1 | 1.0 | 2.8 | 1.3 | 0.7 | 2.3 | 0.4 | 0.6 |
| *Male* | 0.7 | 1.8 | 1.7 | 1.8 | 1.5 | 1.4 | 1.5 | 2.8 | 3.4 | 0.4 | 0.8 |
| *Female* | 0.9 | 1.3 | 0.9 | 1.1 | 1.0 | 5.3 | 1.6 | 1.5 | 1.4 | 0.5 | 0.6 |
| *Underemployed* | 0.2 | 0.4 | 0.5 | 0.5 | 0.9 | 0.6 | 0.2 | 0.4 | 0.7 | 0.2 | 0.4 |
| *Male* | 0.2 | 0.7 | 0.9 | 0.7 | 1.0 | 0.7 | 0.4 | 0.6 | 0.0 | 0.3 | 0.8 |
| *Female* | 0.2 | 0.4 | 0.6 | 0.5 | 0.9 | 0.4 | 0.2 | 0.4 | 1.3 | 0.0 | 0.5 |
| **Primary school** | | | | | | | | | | | |
| *Access to School* | 2.8 | 5.9 | 6.9 | 3.1 | 5.3 | 13.8 | 3.2 | 4.6 | 9.5 | 10.0 | 22.4 |
| *Primary Enrollment* | 3.1 | 2.9 | 3.2 | 3.0 | 3.5 | 13.0 | 2.4 | 2.5 | 9.7 | 7.3 | 11.8 |
| *Male* | 3.4 | 3.4 | 4.0 | 3.4 | 4.1 | 14.7 | 3.2 | 5.0 | 10.4 | 7.4 | 13.3 |
| *Female* | 3.1 | 3.8 | 3.6 | 4.0 | 4.9 | 11.5 | 3.2 | 6.8 | 9.7 | 8.5 | 12.3 |
| *Satisfaction* | 3.3 | 7.6 | 7.5 | 4.1 | 5.8 | 18.5 | 6.3 | 7.2 | 14.2 | 9.9 | 17.9 |
| **Secondary school** | | | | | | | | | | | |
| *Access to School* | 2.8 | 6.8 | 5.5 | 8.9 | 8.4 | 7.6 | 5.4 | 9.3 | 6.0 | 8.4 | 6.3 |
| *Secondary Enrollment* | 2.4 | 4.7 | 4.2 | 3.7 | 4.8 | 10.6 | 3.5 | 13.4 | 7.8 | 7.5 | 18.5 |
| *Male* | 2.8 | 6.7 | 5.4 | 4.3 | 6.7 | 5.1 | 4.7 | 16.0 | 11.1 | 8.0 | 12.3 |
| *Female* | 3.0 | 5.1 | 5.5 | 5.1 | 5.0 | 15.6 | 5.1 | 11.2 | 8.3 | 10.2 | 26.4 |
| *Satisfaction* | 3.4 | 8.8 | 7.2 | 6.4 | 7.1 | 8.5 | 8.2 | 11.5 | 12.6 | 10.7 | 16.9 |
| **Medical services** | | | | | | | | | | | |
| *Health access* | 3.4 | 8.9 | 8.6 | 5.7 | 9.8 | 9.9 | 7.2 | 9.6 | 10.2 | 5.6 | 19.0 |
| *Need* | 0.8 | 2.3 | 1.3 | 1.5 | 1.6 | 1.2 | 0.9 | 2.1 | 2.1 | 2.2 | 3.4 |
| *Use* | 1.1 | 1.8 | 1.5 | 1.4 | 2.2 | 1.5 | 1.1 | 3.6 | 2.8 | 2.0 | 3.1 |
| *Satisfaction* | 2.0 | 7.2 | 4.0 | 5.8 | 4.6 | 3.9 | 3.3 | 2.8 | 6.7 | 7.7 | 14.4 |
| **Child nutrition** | | | | | | | | | | | |
| *Stunted* | 2.2 | 4.5 | 4.2 | 3.0 | 3.7 | 10.6 | 3.5 | 3.5 | 7.3 | 6.2 | 5.1 |
| *Wasted* | 0.8 | 1.2 | 2.0 | 2.6 | 1.6 | 2.2 | 1.6 | 2.8 | 3.0 | 3.5 | 4.7 |
| *Underweight* | 1.9 | 3.6 | 3.9 | 3.2 | 3.1 | 3.7 | 2.9 | 4.9 | 7.1 | 6.1 | 5.2 |

# WESTERN REGION

## Introduction

The Western Region is situated on the southwestern corner of Ghana, and is bordered to the west by the Republic of Côte d'Ivoire, to the east by Ashanti, Brong Ahafo, and Central Regions, and on the south by the Gulf of Guinea. About two-thirds of the Region lies within the wet equatorial rain forest with double maxima rainfall regime, mean annual rainfall of about 190 cm and monthly temperatures of between 26 and 30 degree Celsius. The southern part, which falls within the savannah coastal zone, extends eastward from the Ivorian border to the western part of the Central Region.

The Western Region is greatly endowed with natural resources including gold, timber, and cocoa, among others. Sekondi-Takoradi, the Regional capital, houses the oldest and second largest seaport in the country (opened in 1928 and enlarged in 1953 to handle export products). Takoradi port is primarily used to export minerals and timber. The geographical and economic activities of the Western Region have brought about improved infrastructure, access to facilities, and a significant number of industries, such as timber processing plants and rubber factories.

The Western Region accounts for slightly less than 10 percent of the total population of the country, with a significant majority of the population (80 percent, a number much higher than the national average of 69 percent) living in the rural areas (Ghana Statistical Service 1995).

## Household Characteristics

Households in the Western Region are slightly larger than in the rest of the country. A little over 25 percent of the households in the Region have more than seven members. The overwhelming majority (85 percent) of rural poor households have more than seven members compared with 22 percent for the non-poor households. The rate of male household heads is among the highest in the country, accounting for about two-thirds of all household heads in the Region in both rural and urban areas. While most household heads in the rural areas are employed in the agriculture sector, distribution of the household heads within the various employment sectors shows significant variation in the employment pattern.

Over one-half of all household heads in the rural areas have completed at least lower secondary education, while this number increases to over 60 percent for urban household heads. Female household heads with no education outnumber their male counterparts. It should be noted that the gender gap in education among household heads is greatest in the Western Region (only 29 percent of the male household heads attended or completed primary school, compared with the national average of 39 percent).

Sekondi

## Education

Literacy rate in the Western Region is 55 percent slightly below the national average (57 percent), but the gender gap is quite striking. Two-thirds of all males can read and write but less than one-half of the female population are literate. Improved access to primary education (86 percent) may help explain the high primary enrollment rate in the Western Region (at 74 percent, it is eight percentage points higher than the national average). Similarly, enrollment rates in lower secondary school are also at par with the national average (40 percent), although access was reported to be a problem (only 12 percent have access to secondary education) as is the case of the other Regions. Gender differences in enrollment rates for primary and secondary schools are quite noticeable. Enrollment for boys in both primary and secondary schools is, on average, about five percentage points higher than that of girls. High dissatisfaction with the quality of education in the Region was attributed to the poor quality of school facilities and the lack of teachers.

## Health

The number of people who reported injured or ill is higher in the Western Region than (24 percent) for the rest of the country as a whole (19 percent). Urban households have better access to health facilities, and as a result have an increased usage of health services. Limited access to health services of the rural households in the Region is highlighted in Figure 6, which also shows low usage of health services. The cost of treatment is the primary reason for not using health care facilities among those household members who reported being ill or injured. The second most important reason for not receiving treatment is the limited access to health facilities in the rural areas. Satisfaction with the use of public hospitals is lower in the Western Region (41 percent) than for the rest of the country as a whole (57 percent).

## Housing and Household Amenities

One-half of households in the Western Region owned their dwelling, while 21 percent paid rent, with the remaining 28

**Figure 5. Access, Usage, and Satisfaction with Education**
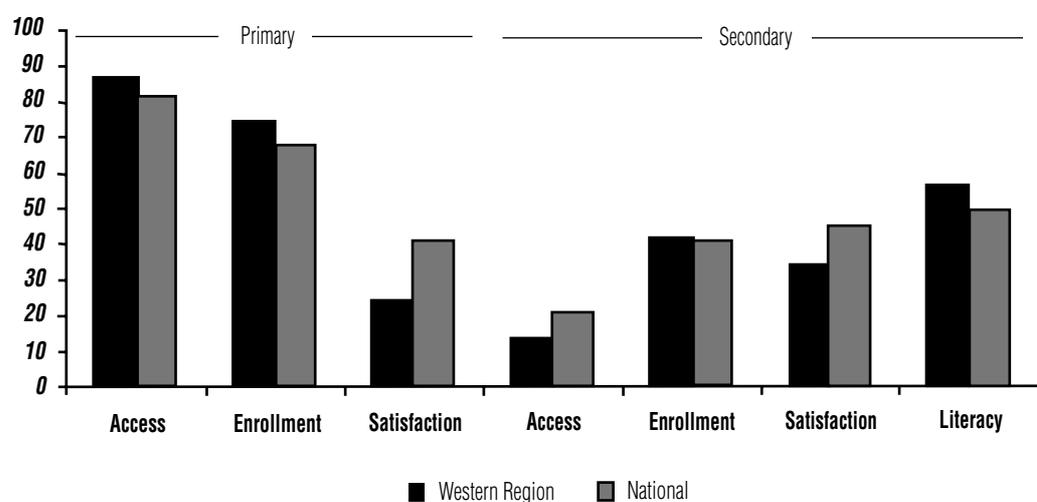


*Source: GLSS III, GCWIQ I; Ghana Statistical Service.*

**Figure 6. Access, Usage, and Satisfaction with Health Services**
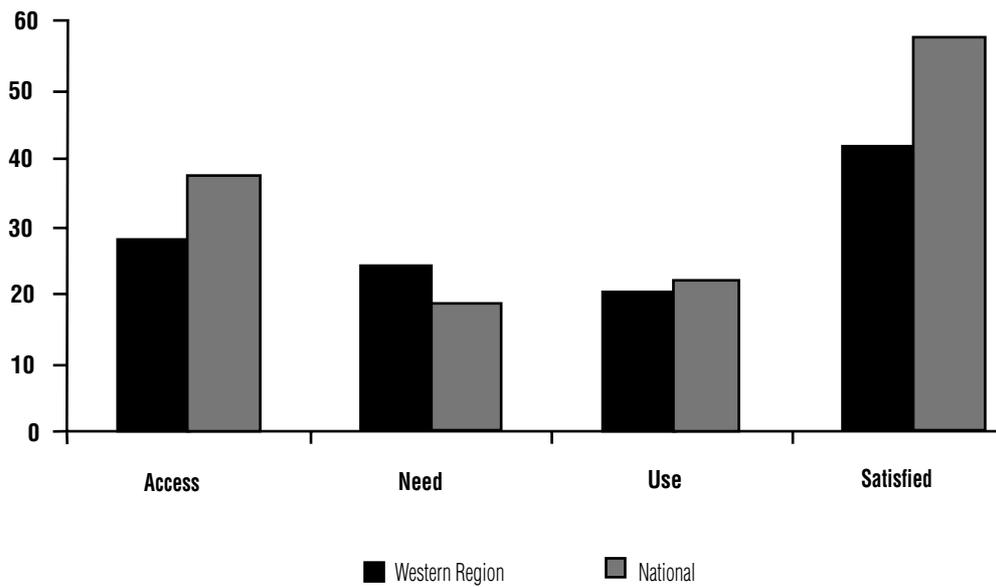


Source: GLSS III, GCWIQ I; Ghana Statistical Service.

percent being rent-free. The majority of the rent-free household live in urban areas and works in the private informal sector. More than 60 percent of homeowners work in the agriculture sector. The most common consumer durable items possessed by families in the region includes a watch or clock, a sewing machine, a bed, or a pressing iron.

Houses in the Region were mainly constructed of mud and iron sheets as is the case of most houses in the country. Households in urban areas have improved access to sanitation, electricity, and food markets, but have poor access to safe water. Households in the rural areas have poor

**Figure 7. Access to Facilities in the Western Region**
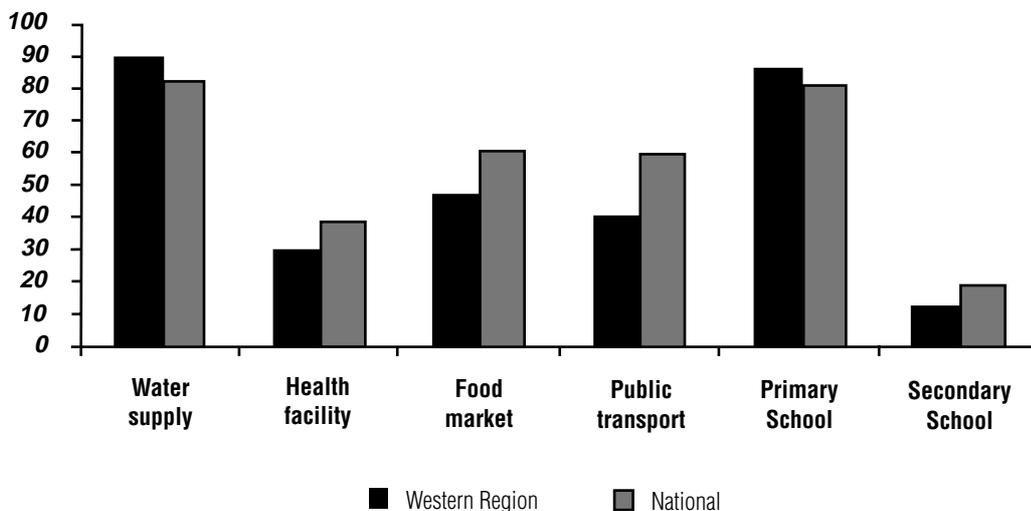


Source: GLSS I, II, and III GCWIQ I; Ghana Statistical Service.

access to services, except safe drinking water. A flush toilet can be found in about 18 percent of the urban households while the number sharply decreases for the rural communities (2.1 percent).

## Employment

Improved transport and communication facilities in the urban areas of the Western Region have helped in the development of industries in the Region. While a significant proportion of residents engage in agricultural activities (56 percent), employment in the formal sector, service, or retail trade industries is quite common in the urban areas of the Region. A majority of the workforce in the Region (62.4 percent) is employed but less than two percent are underemployed. The proportion of the inactive population is higher in the Western Region (31 percent) than in the rest of the country (26 percent); individuals between the ages of 15 and 29, and 65 and above constitute a majority of the inactive population. Fishing in the southern part of the Region is a key industry of the residents along the coast, particularly in Sekondi.

**Table 3. Households by Place of Residence**

|  | Unweighted | Percentage | Weighted | Percentage |
|---|---|---|---|---|
| **Type of Residence** | | | | |
| Rural | 1205 | 77.8 | 216,604 | 77.9 |
| Urban | 344 | 22.2 | 61,545 | 22.1 |
| Total | 1549 | 100.0 | 278,149 | 100.0 |

**Table 4. Percent Distribution of the Rural and Urban Households by Characteristics of the Head of Household**

|  | Rural | | | | Urban | | | |
|---|---|---|---|---|---|---|---|---|
|  | Unweighted | Percentage | Weighted | Percentage | Unweighted | Percentage | Weighted | Percentage |
| **Socio-economic group** | | | | | | | | |
| Public | 96 | 8.0 | 16,577 | 7.7 | 62 | 18.0 | 11,599 | 18.8 |
| Private formal | 88 | 7.3 | 15,780 | 7.3 | 41 | 11.9 | 7,785 | 12.7 |
| Private informal | 32 | 2.7 | 5,534 | 2.6 | 20 | 5.8 | 3,038 | 4.9 |
| Self-agriculture | 739 | 61.3 | 136,142 | 62.9 | 23 | 6.7 | 4,005 | 6.5 |
| Self-other | 149 | 12.4 | 24,269 | 11.2 | 117 | 34.0 | 20,967 | 34.1 |
| Unemployed | 101 | 8.4 | 18,303 | 8.4 | 81 | 23.5 | 14,151 | 23.0 |
| Other | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Total | 1205 | 100.0 | 216,605 | 100.0 | 344 | 100.0 | 61,545 | 100.0 |
| **Gender** | | | | | | | | |
| Male | 911 | 75.6 | 166,289 | 76.8 | 235 | 68.3 | 41,921 | 68.1 |
| Female | 294 | 24.4 | 50,315 | 23.2 | 109 | 31.7 | 19,624 | 31.9 |
| Total | 1205 | 100.0 | 216,604 | 100.0 | 344 | 100.0 | 61,545 | 100.0 |
| **Marital status** | | | | | | | | |
| Single | 75 | 6.2 | 13,172 | 6.1 | 40 | 11.6 | 6,675 | 10.8 |
| Monogamous | 696 | 57.8 | 126,179 | 58.3 | 182 | 52.9 | 33,244 | 54.0 |
| Polygamous | 128 | 10.6 | 22,632 | 10.4 | 38 | 11.0 | 6,539 | 10.6 |
| Widowe/div/sep | 306 | 25.4 | 54,621 | 25.2 | 84 | 24.4 | 15,087 | 24.5 |
| Total | 1205 | 100.0 | 216,605 | 100.0 | 344 | 100.0 | 61,545 | 100.0 |
| **Highest level of education** | | | | | | | | |
| None | 420 | 34.9 | 75,125 | 34.7 | 99 | 28.8 | 16,674 | 27.1 |
| Some Primary | 69 | 5.7 | 12,244 | 5.7 | 12 | 3.5 | 2,104 | 3.4 |
| Comp. Primary | 42 | 3.5 | 7,804 | 3.6 | 9 | 2.6 | 1,642 | 2.7 |
| Comp. JSS | 523 | 43.4 | 95,400 | 44.0 | 144 | 41.9 | 26,065 | 42.4 |
| Comp. SSS | 3 | 0.2 | 537 | 0.2 | 0 | 0.0 | 0 | 0.0 |
| Other | 148 | 12.3 | 25,493 | 11.8 | 80 | 23.3 | 15,059 | 24.5 |

## Table 5. Education Indicators

| | Literacy rate | Primary | | | Secondary | | |
|---|---|---|---|---|---|---|---|
| | | Access | Enrollment | Satisfaction | Access | Enrollment | Satisfaction |
| **Place of residence** | | | | | | | |
| Rural | 51.9 | 84.9 | 74.4 | 12.5 | 7.8 | 38.6 | 22.7 |
| Rural poor | 47.7 | 83.6 | 70.4 | 10.5 | 1.9 | 33.7 | 24.4 |
| Urban | 67.2 | 91.3 | 75.1 | 68.6 | 31.6 | 46.9 | 64.1 |
| Urban poor | 48.4 | 88.0 | 77.3 | 58.0 | 9.4 | 45.5 | 50.8 |
| **Socio-economic group** | | | | | | | |
| Public | 77.1 | 88.7 | 77.7 | 42.7 | 18.7 | 47.1 | 41.2 |
| Private formal | 65.5 | 83.1 | 74.9 | 40.0 | 17.3 | 37.8 | 38.7 |
| Private informal | 64.4 | 75.4 | 74.3 | 38.4 | 29.0 | 53.8 | 59.7 |
| Self-agriculture | 47.0 | 86.3 | 75.8 | 9.5 | 4.8 | 37.2 | 20.5 |
| Self-other | 62.3 | 89.6 | 72.3 | 45.5 | 29.9 | 44.4 | 52.7 |
| Unemployed | 53.3 | 81.7 | 65.4 | 34.5 | 19.4 | 42.4 | 41.4 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | | | |
| Male | 71.6 | 85.2 | 76.3 | 23.0 | 12.8 | 43.0 | 34.8 |
| Female | 40.1 | 87.0 | 72.8 | 23.4 | 12.9 | 37.5 | 30.3 |

## Table 6. Percentage of Students Not Satisfied with School by Reason for Dissatisfaction

| | Percent dissatisfied | Books/ supplies | Teaching | Lack of space | Facilities | Other |
|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | |
| Rural | 82.6 | 43.5 | 10.8 | 44.3 | 66.5 | 1.6 |
| Rural poor | 82.9 | 41.9 | 10.3 | 42.5 | 70.7 | 1.8 |
| Urban | 33.8 | 56.2 | 11.3 | 20.4 | 26.2 | 16.3 |
| Urban poor | 46.8 | 52.1 | 1.1 | 31.1 | 37.6 | 16.0 |
| **Socio-economic group** | | | | | | |
| Public | 58.2 | 51.4 | 6.9 | 28.2 | 63.6 | 2.6 |
| Private formal | 58.4 | 58.3 | 10.3 | 25.9 | 39.2 | 2.1 |
| Private informal | 54.7 | 73.3 | 4.3 | 16.6 | 60.8 | 6.8 |
| Self-agriculture | 86.7 | 42.4 | 11.9 | 48.1 | 66.8 | 1.5 |
| Self-other | 51.9 | 43.0 | 7.0 | 36.2 | 57.7 | 8.9 |
| Unemployed | 59.3 | 38.9 | 14.5 | 36.8 | 52.5 | 8.5 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | | |
| Male | 72.7 | 45.3 | 11 | 42.4 | 61.3 | 2.6 |
| Female | 73.2 | 44 | 10.7 | 41.8 | 64.4 | 3.4 |

## Table 7. Health Indicators

| | Medical Services | | | |
| --- | --- | --- | --- | --- |
| | Access | Need | Use | Satisfaction |
| **Place of residence** | | | | |
| Rural | 20.4 | 25.2 | 20.1 | 36.4 |
| Rural poor | 15.8 | 24.0 | 17.4 | 32.6 |
| Urban | 57.8 | 18.1 | 19.9 | 60.4 |
| Urban poor | 49.9 | 16.3 | 17.8 | 51.8 |
| **Socio-economic group** | | | | |
| Public | 41.5 | 18.1 | 16.7 | 55.5 |
| Private formal | 31.6 | 17.3 | 18.8 | 44.7 |
| Private informal | 47.0 | 24.2 | 21.1 | 68.6 |
| Self-agriculture | 16.3 | 25.2 | 19.2 | 35.3 |
| Self-other | 47.0 | 24.6 | 23.6 | 39.0 |
| Unemployed | 41.6 | 26.5 | 24.7 | 49.8 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | |
| Male | 27.2 | 22.6 | 19.4 | 42.8 |
| Female | 28.7 | 24.9 | 20.8 | 39.8 |

## Table 8. Percentage of Sick or Injured Who Did Not Consult a Health Provider and the Reason for Not Consulting

| | % not consulting | No need | Cost | Distance | Other |
| --- | --- | --- | --- | --- | --- |
| **Place of residence** | | | | | |
| Rural | 79.8 | 84.0 | 15.6 | 4.1 | 0.3 |
| Rural poor | 82.5 | 80.8 | 19.2 | 4.9 | 0.1 |
| Urban | 80.1 | 97.1 | 2.0 | 0.0 | 0.9 |
| Urban poor | 82.2 | 96.4 | 3.0 | 0.0 | 0.6 |
| **Socio-economic group** | | | | | |
| Public | 83.2 | 94.7 | 4.1 | 2.2 | 0.4 |
| Private formal | 81.2 | 97.7 | 1.7 | 0.1 | 0.4 |
| Private informal | 78.9 | 84.9 | 15.1 | 2.2 | 0.0 |
| Self-agriculture | 80.8 | 80.8 | 19.2 | 5.0 | 0.2 |
| Self-other | 76.4 | 93.8 | 4.0 | 0.9 | 1.3 |
| Unemployed | 75.2 | 91.2 | 8.8 | 1.1 | 0.4 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | |
| Male | 80.6 | 87.1 | 12.4 | 3.1 | 0.4 |
| Female | 79.1 | 86.3 | 13.2 | 3.5 | 0.4 |

**Table 9. Percentage of Sick Who Consulted a Health Provider and Were Not Satisfied by the Reason for Dissatisfaction**

| | Percent dissatisfied | Facilities not clean | Long wait | No trained professionals | Cost | No drugs available | Treatment unsuccessful | Other |
|---|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | | |
| Rural | 63.6 | 98.5 | 76.0 | 95.8 | 37.1 | 79.6 | 73.7 | 98.9 |
| Rural poor | 67.4 | 98.9 | 77.4 | 95.5 | 35.2 | 76.5 | 76.1 | 97.8 |
| Urban | 39.6 | 100.0 | 75.3 | 99.4 | 42.0 | 79.0 | 77.7 | 100.0 |
| Urban poor | 48.2 | 100.0 | 100.0 | 100.0 | 20.1 | 91.8 | 83.0 | 100.0 |
| **Socio-economic group** | | | | | | | | |
| Public | 44.5 | 97.7 | 74.9 | 95.4 | 40.5 | 81.2 | 75.9 | 95.4 |
| Private formal | 55.3 | 100.0 | 60.8 | 100.0 | 44.6 | 75.3 | 81.1 | 100.0 |
| Private informal | 31.4 | 100.0 | 77.3 | 100.0 | 46.0 | 47.4 | 86.7 | 100.0 |
| Self-agriculture | 64.7 | 98.4 | 75.9 | 96.4 | 38.1 | 76.1 | 74.4 | 99.1 |
| Self-other | 61.0 | 99.0 | 78.5 | 93.3 | 31.8 | 90.6 | 75.9 | 99.4 |
| Unemployed | 50.2 | 100.0 | 82.2 | 98.3 | 37.6 | 86.3 | 64.2 | 100.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | | | | |
| Male | 57.2 | 99.1 | 78.9 | 96.1 | 37.4 | 78.7 | 72.2 | 100.0 |
| Female | 60.2 | 98.4 | 73.2 | 96.4 | 38.1 | 80.3 | 76.0 | 98.2 |

**Table 10. Percentage Distribution of the Population by Work Status (age 15 and above)**

| | Working | | | Not working | | |
|---|---|---|---|---|---|---|
| | Employed | Under emp. | Total | Unemploy. | Inactive | Total |
| **Place of residence** | | | | | | |
| Rural | 65.7 | 1.1 | 66.7 | 3.5 | 29.8 | 33.3 |
| Rural poor | 55.8 | 0.7 | 56.5 | 5.6 | 37.9 | 43.5 |
| Urban | 51.4 | 1.6 | 53.0 | 9.2 | 37.8 | 47.0 |
| Urban poor | 37.2 | 2.6 | 39.8 | 16.8 | 43.4 | 60.2 |
| **Gender/age** | | | | | | |
| Male | 64.3 | 1.5 | 65.8 | 7.2 | 27.0 | 34.2 |
| 15-29 | 34.2 | 2.0 | 36.2 | 11.6 | 52.2 | 63.8 |
| 30-49 | 91.9 | 1.8 | 93.7 | 4.0 | 2.3 | 6.3 |
| 50-64 | 90.0 | 0.0 | 90.0 | 4.3 | 5.7 | 10.0 |
| 65+ | 66.8 | 0.0 | 66.8 | 0.8 | 32.4 | 33.2 |
| Female | 66.9 | 0.9 | 67.8 | 2.8 | 29.5 | 32.2 |
| 15-29 | 48.1 | 1.5 | 49.6 | 4.8 | 45.5 | 50.4 |
| 30-49 | 85.8 | 0.5 | 86.3 | 1.4 | 12.3 | 13.7 |
| 50-64 | 88.2 | 0.3 | 88.5 | 0.3 | 11.2 | 11.5 |
| 65+ | 48.6 | 0.6 | 49.2 | 1.1 | 49.7 | 50.8 |

**Table 11. Percentage Distribution of the Working Population by Activity**

| | Agri-culture | Mining | Manu-fact. | Con-struct. | Trans-port. | Trade | Services |
|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | |
| Rural | 71.8 | 1.8 | 4.9 | 1.0 | 0.6 | 10.8 | 9.0 |
| Rural poor | 83.1 | 0.7 | 1.8 | 0.5 | 0.4 | 8.8 | 4.8 |
| Urban | 10.3 | 1.0 | 4.0 | 4.8 | 6.0 | 45.1 | 28.8 |
| Urban poor | 9.2 | 1.0 | 2.9 | 7.7 | 17.7 | 43.9 | 17.5 |
| **Gender/age** | | | | | | | |
| Male | 64.1 | 3.5 | 5.5 | 3.4 | 3.2 | 4.2 | 16.1 |
| 15-29 | 60.4 | 4.3 | 6.3 | 6.9 | 4.9 | 2.9 | 14.3 |
| 30-49 | 61.2 | 3.9 | 5.4 | 2.7 | 3.0 | 4.7 | 19.1 |
| 50-64 | 68.7 | 1.9 | 6.6 | 2.2 | 1.2 | 4.7 | 14.7 |
| 65+ | 87.5 | 1.2 | 0.0 | 0.0 | 3.6 | 4.2 | 3.5 |
| Female | 56.5 | 0.1 | 4.0 | 0.3 | 0.2 | 29.2 | 9.7 |
| 15-29 | 48.1 | 0.0 | 8.1 | 0.0 | 0.2 | 30.8 | 12.8 |
| 30-49 | 55.4 | 0.2 | 2.3 | 0.2 | 0.2 | 32.1 | 9.6 |
| 50-64 | 71.6 | 0.0 | 1.6 | 0.4 | 0.0 | 20.0 | 6.5 |
| 65+ | 73.3 | 0.0 | 1.9 | 1.5 | 0.0 | 21.4 | 1.9 |

# CENTRAL REGION

## Introduction

Situated on the Gulf of Guinea, west of Greater Accra, the Central Region (with its capital as Cape Coast) was carved out of the Western Region before the 1970 census. The entire Region falls within the dry equatorial climatic zone. It has a single rainy season from May to October, with a mean annual rainfall of about 102 to 114 cm, followed by a prolonged dry season. The geographical and economic characteristics of the Central Region have resulted in most settlement being along the coastline. The capital Cape Coast, located on the Gulf coast, enjoys good transportation and communications; it also has a predominance of trade, service, fishing, and farming industries, albeit on a small scale. Cape Coast is famous as an educational center, for it is the location of numerous secondary institutions and a major university (Ghana Statistical Service 1995).

## Household Characteristics

Examination of the demographic characteristics of household heads in the Central Region reveals a slightly different pattern from that of other Regions. More than one-half of all household heads in the Region are female (compared with about 38 percent nationally) who have no formal education (73 percent of the female household heads never attended school). While the incidence of female-headed households surpasses that of males, they tend to have fewer members than their male counterparts (the average number of persons in female-headed households is 3.4 compared with 4.5 for males). The dependency ratio for male-headed households, however, is less than that of female-headed households (0.8 for males and 1.0 for females).

## Education

In spite of the large number of educational institutions in the Region, the adult literacy rate is slightly lower than the national average (national literacy stands at 48.3 percent and 47.2 percent for Central Region) with significant gender disparities (literacy rate for males is 67 percent and 32 percent for females). Access (81 percent) and enrollment rates (67 percent) for primary education are quite high and consistent with the national averages without significant gender differences. Satisfaction level with the primary educational system are low and almost the same as the national average (of 45.4 percent).

Although access to secondary education is low for the Central Region (15.2 percent), girls have a higher access rate than boys (16.6 percent and 13.9 percent, respectively), but a lower enrollment rate (37.4 percent and 47.5 percent, respectively) and almost the same satisfaction level (48.1 percent for both boys and girls). Reasons for dissatisfaction with the current educational system include a lack of books, supplies, or both, inadequate facilities, and a lack of teachers, space, or both.

## Health

Among households (14.9 percent) that reported being in need of medical assistance within the four weeks preceding the survey period, only 20 percent sought professional medical help. The low usage of health facilities may be explained by the corresponding poor access to those facilities. The number of households with access to health facilities in the Central Region varies by geographic location and socio-economic group. Less than one-half of the people surveyed in the Central Region have access to health facilities and about one-third of households in the rural areas have access.

Improved access in the urban areas (51 percent) is reflected in the increased usage of health facilities in those areas (24.1 percent). The level of satisfaction with usage of health facilities is quite high in the Central Region (67 percent), particularly among private formal sector employees (83.5 percent). Satisfaction levels seemed high without significant differences by location and gender (66 percent reported being satisfied), but vary by socio-economic status. Of all households not consulting health facilities, the overwhelming majority (95.8 percent) thought there was no need and about 3.4 percent of those remaining indicated that

cost was the reason for not consulting health facilities.

## Housing and Household Amenities

Housing tenure in the Central Region, an important housing quality indicator, varies by location and socio-economic status. Nearly 40 percent of all households in the region own their dwelling, 16 percent rent, and the remaining 45 percent live rent-free. Rural poor households and self-employed agriculture sector employees have higher home ownership rates than urban households (54 percent for rural poor and 24 percent for urban). Housing units occupied by various households in the Central Region were constructed of inferior quality materials compared with the rest of the country. Typical roofing and wall construction materials were iron sheet (68 percent) and mud (66 percent).

The housing environment of the Central Region may be characterized as one with improved access to amenities and services (90 percent have access to water, 77 percent have access to a food market, and 64 percent have access to public transportation) with the exception of sanitation

**Figure 8. Access, Usage, and Satisfaction with Education**
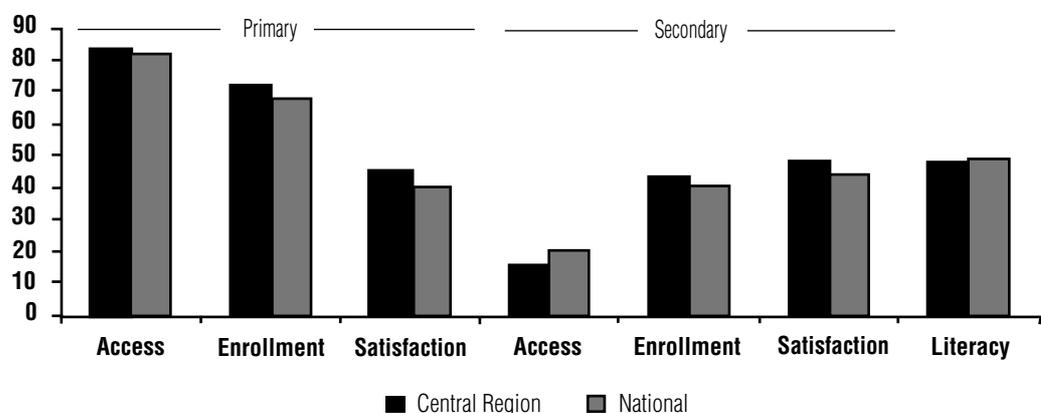


*Source: GLSS III, GCWIQ I; Ghana Statistical Service.*

**Figure 9. Access, Usage, and Satisfaction with Health Services**
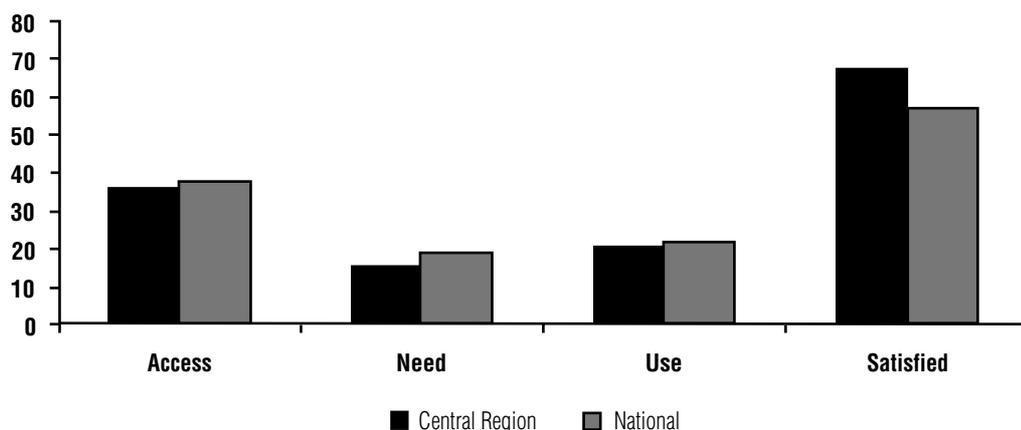


*Source: GLSS III, GCWIQ I; Ghana Statistical Service.*

(only 2 percent have access to a flush toilet). Less than three percent of the households surveyed owned items such as a car, a motorcycle, or both.

## Employment

The distribution of economic activities for individuals between 15 and 64 by quintile and socio-economic group are highlighted in this section. The distribution of individ-

uals' economic activities by socio-economic group mirrors that of the national level. Approximately 59 percent of all individuals surveyed were employed, and nearly 80 percent are self-employed agricultural workers. The overwhelming majority (about two-thirds) of the agriculture sector employees are unpaid workers.

Finally, five percent of the workforce was classified as unemployed with little less than one-third classified as

**Figure 10. Access to Facilities**
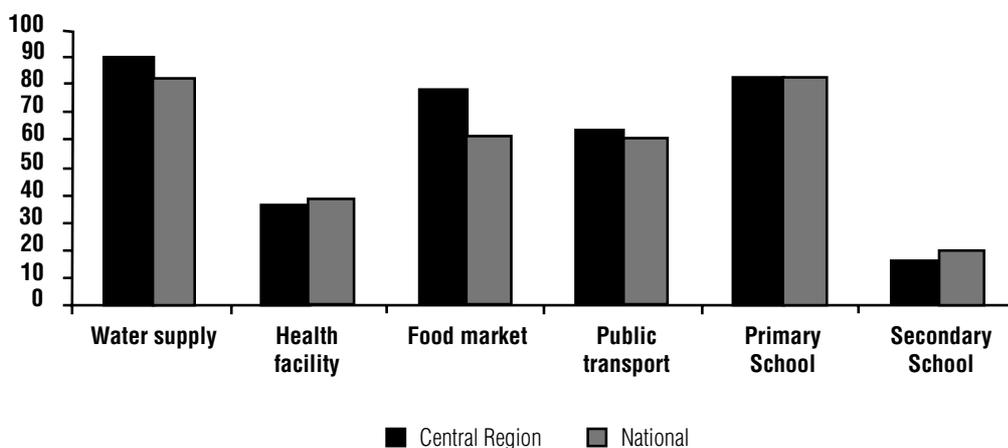


*Source: GLSS III, GCWIQ I; Ghana Statistical Service.*

being inactive. Unemployment rates in the Central Region are among the lowest in the country, but are significantly high- er among urban poor households (38 per- cent unemployment rate in the urban areas).

### Table 12. Households by Place of Residence

|  | Unweighted | Percentage | Weighted | Percentage |
|---|---|---|---|---|
| **Type of residence** | | | | |
| Rural | 1015 | 65.9 | 184,570 | 66.3 |
| Urban | 525 | 34.1 | 93,799 | 33.7 |
| Total | 1540 | 100.0 | 278,369 | 100.0 |

### Table 13. Percent Distribution of the Rural and Urban Households by Characteristics of the Head of Household

|  | Rural | | | | Urban | | | |
|---|---|---|---|---|---|---|---|---|
|  | Unweighted | Percentage | Weighted | Percentage | Unweighted | Percentage | Weighted | Percentage |
| **Socio-economic group** | | | | | | | | |
| Public | 48 | 4.7 | 8,410 | 4.6 | 42 | 8.0 | 7,711 | 8.2 |
| Private formal | 32 | 3.2 | 5,888 | 3.2 | 16 | 3.0 | 2,958 | 3.2 |
| Private informal | 32 | 3.2 | 5,985 | 3.2 | 32 | 6.1 | 5,515 | 5.9 |
| Self-agriculture | 625 | 61.6 | 115,065 | 62.3 | 125 | 23.8 | 21,773 | 23.2 |
| Self-other | 170 | 16.7 | 30,259 | 16.4 | 203 | 38.7 | 36,453 | 38.9 |
| Unemployed | 96 | 9.5 | 16,811 | 9.1 | 104 | 19.8 | 18,957 | 20.2 |
| Other | 12 | 1.2 | 2,152 | 1.2 | 3 | 0.6 | 433 | 0.5 |
| Total | 1015 | 100.0 | 184,570 | 100.0 | 525 | 100.0 | 93,799 | 100.0 |
| **Gender** | | | | | | | | |
| Male | 603 | 59.4 | 111,282 | 60.3 | 256 | 48.8 | 46,103 | 49.2 |
| Female | 412 | 40.6 | 73,288 | 39.7 | 269 | 51.2 | 47,696 | 50.8 |
| Total | 1015 | 100.0 | 184,570 | 100.0 | 525 | 100.0 | 93,799 | 100.0 |
| **Marital status** | | | | | | | | |
| Single | 47 | 4.6 | 8,720 | 4.7 | 45 | 8.6 | 8,272 | 8.8 |
| Monogamous | 506 | 49.9 | 92,585 | 50.2 | 240 | 45.7 | 43,103 | 46.0 |
| Polygamous | 141 | 13.9 | 25,399 | 13.8 | 54 | 10.3 | 9,832 | 10.5 |
| Widowe/div/sep | 321 | 31.6 | 57,867 | 31.4 | 186 | 35.4 | 32,593 | 34.7 |
| Total | 1015 | 100.0 | 184,570 | 100.0 | 525 | 100.0 | 93,799 | 100.0 |
| **Highest level of education** | | | | | | | | |
| None | 465 | 45.8 | 84,498 | 45.8 | 211 | 40.2 | 37,555 | 40.0 |
| Some Primary | 79 | 7.8 | 15,312 | 8.3 | 32 | 6.1 | 5,657 | 6.0 |
| Comp. Primary | 40 | 3.9 | 7,314 | 4.0 | 21 | 4.0 | 3,572 | 3.8 |
| Comp. JSS | 364 | 35.9 | 65,634 | 35.6 | 190 | 36.2 | 33,794 | 36.0 |
| Comp. SSS | 1 | 0.1 | 184 | 0.1 | 2 | 0.4 | 410 | 0.4 |
| Other | 66 | 6.5 | 11,628 | 6.3 | 69 | 13.1 | 12,811 | 13.7 |
| Total | 1015 | 100.0 | 184,570 | 100.0 | 525 | 100.0 | 93,799 | 100.0 |

## Table 14. Education Indicators

| | Literacy rate | Primary | | | Secondary | | |
|---|---|---|---|---|---|---|---|
| | | Access | Enrollment | Satisfaction | Access | Enrollment | Satisfaction |
| Total | 47.2 | 83.0 | 72.0 | 45.4 | 15.2 | 42.8 | 48.1 |
| **Place of residence** | | | | | | | |
| Rural | 44.0 | 82.1 | 71.9 | 42.1 | 9.1 | 42.5 | 46.1 |
| Rural poor | 43.1 | 83.1 | 69.9 | 41.5 | 6.8 | 36.3 | 28.7 |
| Urban | 53.9 | 85.3 | 72.1 | 54.4 | 32.0 | 43.6 | 53.3 |
| Urban poor | 51.4 | 86.8 | 71.3 | 48.8 | 30.1 | 43.2 | 41.0 |
| **Socio-economic group** | | | | | | | |
| Public | 71.7 | 87.1 | 74.9 | 54.6 | 17.6 | 65.8 | 43.7 |
| Private formal | 66.1 | 89.0 | 83.1 | 40.4 | 28.6 | 40.0 | 40.7 |
| Private informal | 44.2 | 83.7 | 76.2 | 68.2 | 40.8 | 47.8 | 56.2 |
| Self-agriculture | 41.4 | 82.1 | 70.6 | 39.5 | 9.5 | 40.1 | 43.7 |
| Self-other | 52.2 | 81.9 | 71.2 | 50.1 | 22.2 | 47.5 | 61.1 |
| Unemployed | 47.4 | 87.5 | 75.1 | 61.0 | 27.8 | 35.9 | 42.4 |
| Other | 25.2 | 78.6 | 84.8 | 47.6 | 0.0 | 64.4 | 100.0 |
| **Gender** | | | | | | | |
| Male | 67.1 | 82.9 | 71.9 | 42.9 | 13.9 | 47.5 | 48.1 |
| Female | 32.4 | 83.1 | 72.0 | 47.9 | 16.6 | 37.4 | 48.1 |

## Table 15. Percentage of Students Not Satisfied with School by Reasons for Dissatisfaction

| | Percent dissatisfied | Books/ supplies | Teaching | Lack of space | Facilities | Other |
|---|---|---|---|---|---|---|
| Total | 51.4 | 51.8 | 13.5 | 24.2 | 43.7 | 5.9 |
| **Place of residence** | | | | | | |
| Rural | 55.0 | 48.3 | 15.8 | 28.5 | 46.6 | 5.5 |
| Rural poor | 56.4 | 43.8 | 10.3 | 28.4 | 45.8 | 8.3 |
| Urban | 41.9 | 63.6 | 5.8 | 9.8 | 33.8 | 7.0 |
| Urban poor | 49.8 | 58.3 | 6.7 | 4.8 | 36.4 | 8.5 |
| **Socio-economic group** | | | | | | |
| Public | 47.2 | 53.5 | 4.1 | 25.2 | 45.0 | 1.3 |
| Private formal | 55.3 | 49.2 | 15.2 | 32.4 | 24.9 | 16.5 |
| Private informal | 41.4 | 47.9 | 3.1 | 40.1 | 29.7 | 6.4 |
| Self-agriculture | 57.5 | 49.5 | 17.1 | 26.1 | 46.2 | 6.5 |
| Self-other | 42.8 | 58.5 | 9.0 | 16.9 | 39.3 | 5.3 |
| Unemployed | 39.3 | 60.4 | 4.4 | 14.9 | 40.8 | 0.0 |
| Other | 38.7 | 17.6 | 0.0 | 31.5 | 82.4 | 0.0 |
| **Gender** | | | | | | |
| Male | 52.1 | 53.9 | 13.3 | 26.3 | 40.5 | 5.1 |
| Female | 50.7 | 49.5 | 13.7 | 22.1 | 47.1 | 6.7 |

## Table 16. Health Indicators

| | Medical Services | | | |
|---|---|---|---|---|
| | Access | Need | Use | Satisfaction |
| **Place of residence** | | | | |
| Rural | 29.6 | 14.1 | 18.3 | 67.1 |
| Rural poor | 29.8 | 9.2 | 12.8 | 65.1 |
| Urban | 50.7 | 16.9 | 24.1 | 66.2 |
| Urban poor | 48.6 | 11.7 | 15.3 | 63.3 |
| **Socio-economic group** | | | | |
| Public | 36.7 | 11.5 | 19.6 | 61.9 |
| Private formal | 35.1 | 13.0 | 20.4 | 83.5 |
| Private informal | 47.0 | 10.8 | 18.8 | 71.6 |
| Self-agriculture | 29.9 | 14.0 | 17.9 | 65.8 |
| Self-other | 43.6 | 16.0 | 22.5 | 71.7 |
| Unemployed | 48.4 | 21.4 | 27.0 | 59.2 |
| Other | 19.3 | 22.0 | 25.8 | 53.8 |
| **Gender** | | | | |
| Male | 34.5 | 14.0 | 18.9 | 69.7 |
| Female | 37.0 | 15.8 | 21.0 | 64.6 |

## Table 17. Percentage of Persons Who Did Not Consult a Health Provider and the Reason for Not Consulting

| | % not consulting | No need | Cost | Distance | Other |
|---|---|---|---|---|---|
| **Place of residence** | | | | | |
| Rural | 81.6 | 95.5 | 3.5 | 0.8 | 0.7 |
| Rural poor | 87.2 | 95.7 | 3.1 | 1.2 | 0.2 |
| Urban | 75.6 | 96.4 | 3.2 | 0.1 | 0.2 |
| Urban poor | 83.5 | 95.1 | 4.2 | 0.0 | 0.3 |
| **Socio-economic group** | | | | | |
| Public | 80.4 | 99.8 | 0.2 | 0.2 | 0.0 |
| Private formal | 79.6 | 99.1 | 0.9 | 0.0 | 0.0 |
| Private informal | 81.2 | 99.3 | 0.7 | 0.0 | 0.0 |
| Self-agriculture | 82.1 | 94.7 | 4.2 | 0.9 | 0.7 |
| Self-other | 77.0 | 97.3 | 2.3 | 0.0 | 0.4 |
| Unemployed | 73.0 | 93.5 | 5.3 | 0.4 | 0.8 |
| Other | 74.2 | 93.4 | 6.6 | 0.0 | 0.0 |
| **Gender** | | | | | |
| Male | 81.0 | 95.6 | 3.4 | 0.6 | 0.6 |
| Female | 78.8 | 95.9 | 3.4 | 0.5 | 0.5 |

**Table 18. Percentage of Persons Sick who Consulted a Health Provider and Were Not Satisfied by the Reason for Dissatisfaction.**

| | Percent dissatisfied | Facilities not clean | Long wait | No trained professionals | Cost | No drugs available | Treatment unsuccessful | Other |
|---|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | | |
| Rural | 32.9 | 98.9 | 75.7 | 96.7 | 68.6 | 87.9 | 58.0 | 94.4 |
| Rural poor | 34.9 | 97.3 | 80.8 | 97.3 | 61.3 | 94.3 | 50.1 | 92.4 |
| Urban | 33.8 | 98.5 | 78.4 | 99.1 | 49.7 | 86.9 | 67.7 | 97.6 |
| Urban poor | 36.8 | 100.0 | 75.3 | 100.0 | 46.8 | 92.3 | 70.8 | 97.0 |
| **Socio-economic group** | | | | | | | | |
| Public | 38.1 | 100.0 | 75.1 | 92.7 | 64.8 | 68.6 | 85.3 | 95.9 |
| Private formal | 16.5 | 100.0 | 61.3 | 100.0 | 18.3 | 100.0 | 80.7 | 100.0 |
| Private informal | 28.4 | 91.7 | 71.2 | 88.7 | 79.3 | 91.7 | 40.9 | 100.0 |
| Self-agriculture | 34.2 | 99.0 | 78.7 | 96.9 | 65.8 | 88.9 | 59.9 | 93.4 |
| Self-other | 28.3 | 99.1 | 72.4 | 100.0 | 43.8 | 89.2 | 70.4 | 97.1 |
| Unemployed | 40.8 | 98.0 | 78.5 | 100.0 | 71.5 | 86.5 | 50.6 | 98.6 |
| Other | 46.2 | 100.0 | 85.1 | 100.0 | 75.4 | 100.0 | 0.0 | 100.0 |
| **Gender** | | | | | | | | |
| Male | 30.3 | 99.4 | 73.8 | 97.8 | 63.9 | 86.0 | 59.2 | 96.2 |
| Female | 35.4 | 98.3 | 78.5 | 97.5 | 60.3 | 88.5 | 63.1 | 95.2 |

**Table 19. Percentage Distribution of the Population by Work Status (age 15 and above)**

| | Working | | | Not working | | |
|---|---|---|---|---|---|---|
| | Employed | Under emp. | Total | Unemploy. | Inactive | Total |
| **Place of residence** | | | | | | |
| Rural | 70.4 | 1.1 | 71.5 | 1.9 | 26.7 | 28.5 |
| Rural poor | 63.0 | 0.8 | 63.8 | 2.4 | 33.8 | 36.2 |
| Urban | 60.4 | 2.2 | 62.6 | 6.1 | 31.3 | 37.4 |
| Urban poor | 50.8 | 3.3 | 54.1 | 7.4 | 38.5 | 45.9 |
| **Gender and age** | | | | | | |
| Male | 67.7 | 1.8 | 69.5 | 4.2 | 26.3 | 30.5 |
| 15-29 | 43.7 | 2.2 | 45.8 | 7.6 | 46.6 | 54.2 |
| 30-49 | 89.6 | 2.4 | 92.0 | 2.3 | 5.7 | 8.0 |
| 50-64 | 85.4 | 0.8 | 86.1 | 1.2 | 12.6 | 13.9 |
| 65+ | 71.4 | 0.0 | 71.4 | 0.0 | 28.6 | 28.6 |
| Female | 72.3 | 1.1 | 73.5 | 2.6 | 23.9 | 26.5 |
| 15-29 | 57.8 | 1.5 | 59.3 | 3.8 | 36.9 | 40.7 |
| 30-49 | 88.8 | 1.3 | 90.1 | 2.6 | 7.3 | 9.9 |
| 50-64 | 84.7 | 0.8 | 85.5 | 0.9 | 13.6 | 14.5 |
| 65+ | 53.2 | 0.0 | 53.2 | 1.1 | 45.8 | 46.8 |

**Table 20. Percentage Distribution of the Working Population by Activity**

| | Agri-culture | Mining | Manu-fact. | Con-struct. | Trans-port. | Trade | Services |
|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | |
| Rural | 70.9 | 0.1 | 2.3 | 1.1 | 1.3 | 14.8 | 9.5 |
| Rural poor | 79.7 | 0.3 | 2.6 | 1.2 | 0.3 | 7.9 | 8.1 |
| Urban | 32.4 | 0.1 | 6.6 | 2.9 | 1.1 | 37.4 | 19.5 |
| Urban poor | 39.0 | 0.0 | 5.2 | 3.0 | 0.0 | 39.4 | 13.4 |
| **Gender and age** | | | | | | | |
| Male | 66.6 | 0.4 | 4.6 | 3.5 | 3.0 | 4.8 | 17.1 |
| 15-29 | 59.8 | 0.3 | 4.5 | 3.8 | 3.6 | 10.0 | 18.0 |
| 30-49 | 62.7 | 0.5 | 6.3 | 3.8 | 2.9 | 3.4 | 20.5 |
| 50-64 | 75.2 | 0.4 | 1.1 | 3.7 | 2.9 | 1.3 | 15.4 |
| 65+ | 87.3 | 0.0 | 3.6 | 1.6 | 1.8 | 2.4 | 3.3 |
| Female | 55.1 | 0.0 | 2.9 | 0.4 | 0.0 | 32.8 | 8.9 |
| 15-29 | 44.4 | 0.0 | 4.0 | 0.7 | 0.0 | 35.9 | 15.0 |
| 30-49 | 54.1 | 0.0 | 3.0 | 0.4 | 0.0 | 36.3 | 6.3 |
| 50-64 | 68.4 | 0.0 | 1.4 | 0.0 | 0.0 | 23.6 | 6.6 |
| 65+ | 68.7 | 0.0 | 1.5 | 0.0 | 0.0 | 25.2 | 4.6 |

# GREATER ACCRA REGION

## Introduction

The Greater Accra Region, located in the southern part of Ghana on the Gulf Coast, is the smallest of the ten Regions and the most densely populated. It lies within the dry Coastal savannah ecological zone, marked by two rainy seasons and a dry season. Average annual rainfall is between 74 cm and 90 cm. Two of the most important towns in the country are located in this Region: Accra, the capital of Ghana, and Tema, one of the most developed industrial cities. The city of Tema has one of the largest industrial complexes in the nation (VALCO).

The city of Accra is the largest urban settlement in the nation and has a predominance of service, trade, and manufacturing industries. Fishing and small-scale farming are carried out in the rural areas. The main fishing towns include Labadi, Tema, Teshi, and Nungua. Accra became the nation's capital in 1877 when the British transferred the capital from Cape Coast, and has since grown to be a major administrative, commercial, and political center, housing the headquarters of most major organizations. The city of Accra provides a wider range of medical and educational facilities and employment opportunities than any other urban center in the nation. With its position as the nation's capital and the center of trade and industries, the Greater Accra Region attracts people from all parts of the nation (Ghana Statistical Service 1995).
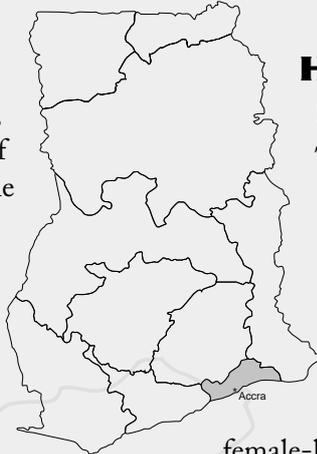
## Household Characteristics

The Greater Accra Region has one of the smallest household sizes in the country with an average of 3.7 members. Less than 11 percent of households in this Region have seven or more members. Male-headed households outnumber female-headed households and tend to be larger. Household heads in the Greater Accra Region are better educated than those in the rest of the country—75 percent of all household heads in the Region have at least a secondary school education compared with the 53 percent national average. However, there is a noticeable gender gap in the educational attainment level among household heads in the Region.

## Education

Improvements in the educational system in the Greater Accra Region surpass those of the other nine regions in the country. It has the highest number of both public and private primary and secondary institutions than any other region in the nation, and the highest number of post- secondary institutions.

The literacy rate in the Greater Accra Region is the highest in the country with some gender differences. More than two-thirds of the adult population is literate. Much of the education system in the Region may be described as one with high

**Figure 11. Access, Usage, and Satisfaction with Education**
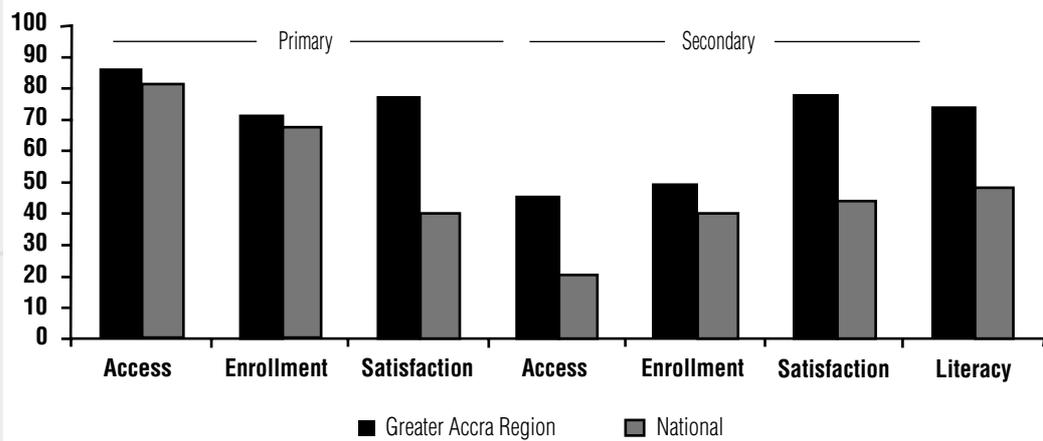


*Source: GLSS III, GCWIQ I; and Ghana Statistical Service.*

access, enrollment rates, and satisfaction. Greater Accra has nearly achieved universal access to primary education (92 percent of all the households have access). Primary enrollment rates are comparable with the rest of the country (70 percent). Secondary enrollment rates, at 49 percent, are higher than the national average of 40 percent. Satisfaction with primary and secondary schools are highest among households in the Greater Accra Region. Gender differences in the secondary enrollment rate are lower than in other parts of the country.

## Health

Greater Accra has the second largest proportion of all health facilities in Ghana and about one-third of all hospitals in the nation. Improved access to health facilities (77.6 percent have access) for households in the Region may explain the high level of usage by residents. Similarly, of the reported cases of illness and injury (14 percent), about 17 percent of the patients received some treatment. Almost all births in the five years preceding the survey took place in a hospital. Only 13 percent of the residents that delivered within the reference period did so at home. Although the satisfaction level with the use of health facilities was low, it is higher than those reported for

the rest of the country. Reasons for dissatisfaction with the health system range from lack of trained medical practitioners, to the user fees charged.

## Housing and Household Amenities

Inadequate affordable housing and an excess demand for housing in the urban areas have driven the cost of home ownership beyond the means of the average person in the Greater Accra Region leading to low home ownership rates among the residents (only 14 percent of the population own their home, even though homeownership is the tenure of choice in the Region). Renter households account for roughly 40 percent of housing tenure, with the same proportion living rent-free in the Region. While the quality of housing in this Region is far from ideal, it still remains one of the best in the country. Mud houses account for less than 12 percent of the dwellings in the Region. More than 90 percent of the residents have piped-water in their dwellings, and about 30 percent have a flush toilet. Ownership of household items such as refrigerators, stoves, watches, etc. is high in the Region with high access to services such as food markets and public transportation.

## Employment

The employed population in the Greater Accra Region constituted one-half of the economically active population in 1997. Less than one-tenth of the population is employed in agriculture, unlike the rest of the country where a significantly higher proportion of the labor force works in the agriculture sector. About one-third of the workforce is employed in service industries and slightly more than one-fourth are involved in trade. Public and private formal sector employees account for about 16 percent and 70 percent of the workforce, respectively. At 7.8 percent, overall unemployment in the Greater Accra Region is the highest in the country. Urban poor households have the highest unemployment and underemployment rates (15.9 percent and 3.4 percent, respectively) and the rural poor, the highest rate of inactive population.

**Figure 12. Access, Usage, and Satisfaction with Health Services**
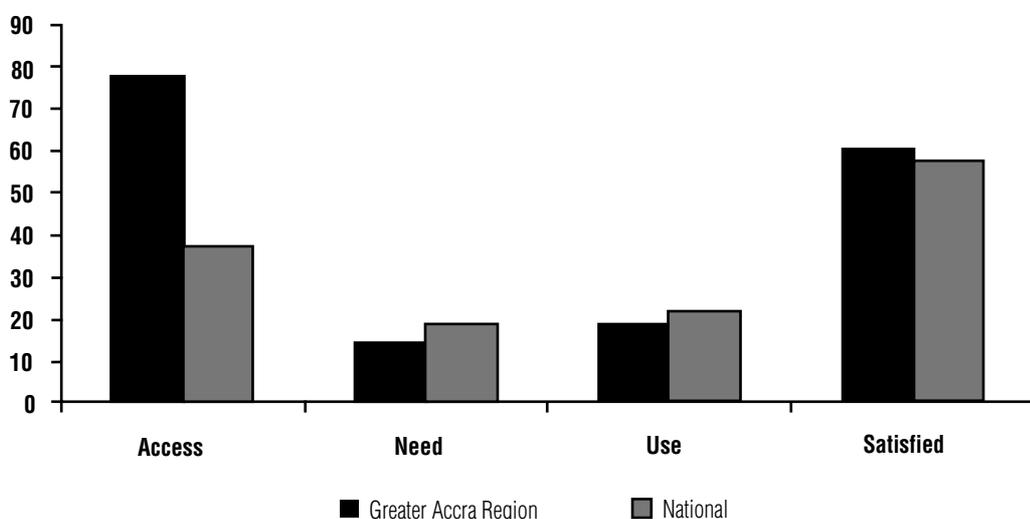


*Source: GLSS III; GCWIQ I; and Ghana Statistical Service.*

**Figure 13. Access to Facilities**
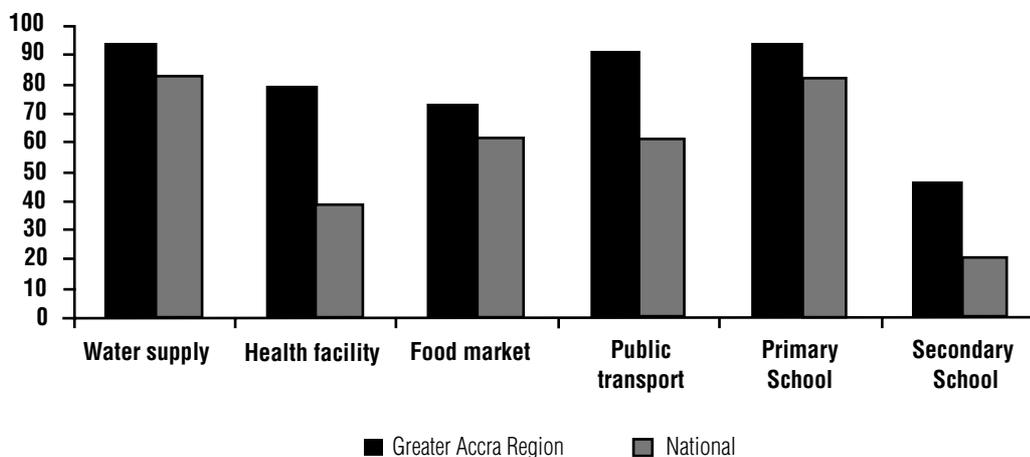


*Source: GLSS III; GCWIQ I; and Ghana Statistical Service.*

### Table 21: Households by place of residence

|  | Unweighted | Percentage | Weighted | Percentage |
|---|---|---|---|---|
| **Type of Residence** | | | | |
| Rural | 225 | 10.6 | 32,157 | 7.9 |
| Urban | 1895 | 89.4 | 374,029 | 92.1 |
| Total | 2120 | 100.0 | 406,186 | 100.0 |

### Table 22: Percent Distribution of the Rural and Urban Households by Characteristics of the Head of Household

|  | Rural | | | | Urban | | | |
|---|---|---|---|---|---|---|---|---|
|  | Unweighted | Percentage | Weighted | Percentage | Unweighted | Percentage | Weighted | Percentage |
| **Socio-economic group** | | | | | | | | |
| Public | 15 | 6.7 | 2,249 | 7.0 | 342 | 18.0 | 66,926 | 17.9 |
| Private formal | 2 | 0.9 | 281 | 0.9 | 247 | 13.0 | 49,555 | 13.2 |
| Private informal | 5 | 2.2 | 700 | 2.2 | 105 | 5.5 | 20,733 | 5.5 |
| Self-agriculture | 113 | 50.2 | 16,060 | 49.9 | 44 | 2.3 | 8,699 | 2.3 |
| Self-other | 62 | 27.6 | 8,842 | 27.5 | 809 | 42.7 | 160,131 | 42.8 |
| Unemployed | 27 | 12.0 | 3,901 | 12.1 | 337 | 17.8 | 65,984 | 17.6 |
| Other | 1 | 0.4 | 125 | 0.4 | 11 | 0.6 | 2,000 | 0.5 |
| Total | 225 | 100.0 | 32,157 | 100.0 | 1895 | 100.0 | 374,028 | 100.0 |
| **Gender** | | | | | | | | |
| Male | 154 | 68.4 | 22,185 | 69.0 | 1244 | 65.6 | 244,641 | 65.4 |
| Female | 71 | 31.6 | 9,972 | 31.0 | 651 | 34.4 | 129,387 | 34.6 |
| Total | 225 | 100.0 | 32,157 | 100.0 | 1895 | 100.0 | 374,028 | 100.0 |
| **Marital status** | | | | | | | | |
| Single | 21 | 9.3 | 3,250 | 10.1 | 286 | 15.1 | 57,744 | 15.4 |
| Monogamous | 105 | 46.7 | 14,958 | 46.5 | 983 | 51.9 | 193,197 | 51.7 |
| Polygamous | 35 | 15.6 | 4,708 | 14.6 | 140 | 7.4 | 27,264 | 7.3 |
| Widowe/div/sep | 64 | 28.4 | 9,241 | 28.7 | 486 | 25.6 | 95,822 | 25.6 |
| Total | 225 | 100.0 | 32,157 | 100.0 | 1895 | 100.0 | 374,028 | 100.0 |
| **Highest level of education** | | | | | | | | |
| None | 117 | 52.0 | 16,502 | 51.3 | 369 | 19.5 | 73,871 | 19.8 |
| Some Primary | 14 | 6.2 | 2,044 | 6.4 | 49 | 2.6 | 9,856 | 2.6 |
| Comp. Primary | 17 | 7.6 | 2,560 | 8.0 | 49 | 2.6 | 9,647 | 2.6 |
| Comp. JSS | 57 | 25.3 | 8,169 | 25.4 | 779 | 41.1 | 154,360 | 41.3 |
| Comp. SSS | 1 | 0.4 | 116 | 0.4 | 12 | 0.6 | 2,565 | 0.7 |
| Other | 19 | 8.4 | 2,766 | 8.6 | 637 | 33.6 | 123,728 | 33.1 |
| Total | 225 | 100.0 | 32,157 | 100.0 | 1895 | 100.0 | 374,028 | 100.0 |

## Table 23. Education Indicators

| | Literacy rate | Primary | | | Secondary | | | % dissatisfied |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | Access | Enrollment | Satisfaction | Access | Enrollment | Satisfaction | |
| Total | 73.4 | 92.8 | 70.4 | 76.9 | 44.9 | 48.9 | 77.0 | 23.6 |
| **Place of residence** | | | | | | | | |
| Rural | 40.5 | 92.7 | 56.7 | 63.4 | 5.9 | 34.2 | 52.4 | 39.2 |
| Rural poor | 43.9 | 100.0 | 50.0 | 43.5 | 15.8 | 38.2 | 30.1 | 61.3 |
| Urban | 75.9 | 92.8 | 71.8 | 78.0 | 48.3 | 50.2 | 78.5 | 22.4 |
| Urban poor | 60.4 | 91.4 | 60.2 | 74.5 | 36.9 | 37.9 | 66.0 | 28.7 |
| **Socio-economic group** | | | | | | | | |
| Public | 87.6 | 94.5 | 71.2 | 77.6 | 57.3 | 60.5 | 84.0 | 22.0 |
| Private formal | 80.7 | 93.5 | 79.2 | 76.5 | 41.3 | 51.6 | 75.9 | 24.7 |
| Private informal | 74.3 | 95.7 | 67.0 | 85.2 | 34.7 | 39.2 | 95.1 | 17.5 |
| Self-agriculture | 43.2 | 93.5 | 54.9 | 60.9 | 11.7 | 36.7 | 61.8 | 40.4 |
| Self-other | 70.5 | 92.6 | 72.2 | 80.9 | 45.7 | 46.4 | 79.8 | 19.2 |
| Unemployed | 69.0 | 89.4 | 66.2 | 66.9 | 45.7 | 43.9 | 56.4 | 35.1 |
| Other | 44.9 | 80.1 | 56.8 | 100.0 | 0.0 | 58.1 | 100.0 | 0.0 |
| **Gender** | | | | | | | | |
| Male | 83.6 | 93.4 | 73.6 | 77.7 | 45.9 | 51.7 | 77.7 | 23.3 |
| Female | 64.5 | 92.3 | 67.3 | 76.1 | 44.0 | 46.5 | 76.3 | 24.0 |

## Table 24. Percentage of students not satisfied with school by reasons for dissatisfaction

| | Books/ supplies | Teaching | Lack of space | Lack of Facilities | Other |
| --- | --- | --- | --- | --- | --- |
| Total | | 15.1 | 19.2 | 26.9 | 32.3 |
| **Place of residence** | | | | | |
| Rural | 51.5 | 5.1 | 36.5 | 51.0 | 11.9 |
| Rural poor | 62.5 | 0.0 | 11.3 | 62.5 | 0.0 |
| Urban | 39.3 | 16.5 | 16.9 | 23.6 | 35.0 |
| Urban poor | 55.9 | 30.0 | 13.1 | 29.7 | 23.4 |
| **Socio-economic group** | | | | | |
| Public | 49.7 | 15.3 | 18.4 | 16.6 | 23.2 |
| Private formal | 26.0 | 9.1 | 23.6 | 25.7 | 42.5 |
| Private informal | 30.8 | 11.8 | 31.0 | 31.2 | 31.4 |
| Self-agriculture | 39.4 | 11.8 | 27.1 | 49.0 | 9.6 |
| Self-other | 34.4 | 15.1 | 17.5 | 27.2 | 41.5 |
| Unemployed | 53.3 | 21.3 | 14.7 | 27.3 | 31.9 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | |
| Male | 39.3 | 14.5 | 18.2 | 23.2 | 33.9 |
| Female | 42.2 | 15.8 | 20.3 | 30.7 | 30.6 |

## Table 25. Health Indicators

| | Medical Services | | | |
|---|---|---|---|---|
| | Access | Need | Use | Satisfaction |
| Total | 78 | 14 | 18 | 60 |
| **Place of residence** | | | | |
| Rural | 37 | 11 | 12 | 64 |
| Rural poor | 19 | 8 | 8 | 84 |
| Urban | 81 | 14 | 18 | 60 |
| Urban poor | 78 | 18 | 19 | 61 |
| **Socio-economic group** | | | | |
| Public | 80 | 10 | 15 | 73 |
| Private formal | 83 | 13 | 16 | 68 |
| Private informal | 76 | 16 | 16 | 50 |
| Self-agriculture | 54 | 14 | 16 | 54 |
| Self-other | 79 | 15 | 18 | 59 |
| Unemployed | 76 | 19 | 23 | 48 |
| Other | 100 | 21 | 21 | 100 |
| **Gender** | | | | |
| Male | 78 | 14 | 16 | 60 |
| Female | 77 | 15 | 19 | 59 |

## Table 26. Reasons for Not Consulting

| | Percent not consulting | No need | Cost | Distance | Other |
|---|---|---|---|---|---|
| Total | 82 | 99 | 1 | 0 | 0 |
| **Place of residence** | | | | | |
| Rural | 88 | 98 | 1 | 0 | 0 |
| Rural poor | 91 | 100 | 0 | 0 | 0 |
| Urban | 81 | 99 | 1 | 0 | 0 |
| Urban poor | 81 | 96 | 4 | 0 | 0 |
| **Socio-economic group** | | | | | |
| Public | 85 | 99 | 0 | 0 | 0 |
| Private formal | 83 | 99 | 1 | 0 | 0 |
| Private informal | 83 | 99 | 1 | 0 | 0 |
| Self-agriculture | 84 | 98 | 1 | 0 | 0 |
| Self-other | 82 | 99 | 1 | 0 | 1 |
| Unemployed | 77 | 97 | 3 | 0 | 0 |
| Other | 79 | 100 | 0 | 0 | 0 |
| **Gender** | | | | | |
| Male | 83 | 99 | 1 | 0 | 0 |
| Female | 81 | 99 | 1 | 0 | 0 |

## Table 27: Percentage of Persons Sick, Sought Treatment and Not Satisfied

| | Percent dissatisfied | Facilities not clean | Long wait | No trained professionals | Cost | No drugs available | Treatment unsuccessful | Other |
|---|---|---|---|---|---|---|---|---|
| Total | 40 | 99 | 76 | 100 | 24 | 89 | 93 | 98 |
| **Place of residence** | | | | | | | | |
| Rural | 36 | 100 | 89 | 100 | 31 | 88 | 82 | 100 |
| Rural poor | 16 | 100 | 100 | 100 | 0 | 100 | 100 | 100 |
| Urban | 40 | 99 | 75 | 100 | 24 | 89 | 94 | 98 |
| Urban poor | 39 | 100 | 79 | 100 | 14 | 96 | 97 | 98 |
| **Socio-economic group** | | | | | | | | |
| Public | 27 | 99 | 77 | 100 | 33 | 79 | 95 | 99 |
| Private formal | 32 | 99 | 70 | 98 | 32 | 80 | 90 | 100 |
| Private informal | 50 | 100 | 61 | 100 | 14 | 92 | 97 | 96 |
| Self-agriculture | 46 | 100 | 84 | 100 | 14 | 97 | 98 | 100 |
| Self-other | 41 | 99 | 72 | 100 | 23 | 89 | 95 | 98 |
| Unemployed | 52 | 97 | 83 | 100 | 23 | 95 | 89 | 99 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Gender** | | | | | | | | |
| Male | 40 | 98 | 75 | 100 | 29 | 87 | 92 | 98 |
| Female | 41 | 100 | 76 | 100 | 20 | 91 | 94 | 98 |

## Table 28: Percentage Distribution of the Population by Work Status (age 15 and above)

| | Working | | | Not working | | |
|---|---|---|---|---|---|---|
| | Employed | Under emp. | Total | Unemploy. | Inactive | Total |
| Total | 55.0 | 2.0 | 57.0 | 7.8 | 35.2 | 43.0 |
| **PLACE OF RESIDENCE** | | | | | | |
| Rural | 66.3 | 0.2 | 66.5 | 2.0 | 31.5 | 33.5 |
| Rural poor | 42.6 | 0.0 | 42.6 | 0.0 | 57.4 | 57.4 |
| Urban | 54.1 | 2.1 | 56.2 | 8.3 | 35.5 | 43.8 |
| Urban poor | 30.8 | 3.4 | 34.2 | 15.9 | 49.9 | 65.8 |
| **GENDER AND AGE** | | | | | | |
| Male | 56.0 | 2.9 | 58.8 | 10.3 | 30.9 | 41.2 |
| 15-29 | 27.6 | 3.7 | 31.3 | 16.0 | 52.7 | 68.7 |
| 30-49 | 88.1 | 2.2 | 90.3 | 6.8 | 2.8 | 9.7 |
| 50-64 | 77.4 | 2.0 | 79.4 | 4.6 | 16.0 | 20.6 |
| 65+ | 38.9 | 2.3 | 41.2 | 1.2 | 57.6 | 58.8 |
| Female | 57.9 | 1.3 | 59.2 | 6.0 | 34.7 | 40.8 |
| 15-29 | 36.2 | 1.7 | 37.9 | 8.9 | 53.1 | 62.1 |
| 30-49 | 83.4 | 1.2 | 84.6 | 4.3 | 11.1 | 15.4 |
| 50-64 | 71.3 | 0.7 | 72.0 | 3.3 | 24.7 | 28.0 |
| 65+ | 34.9 | 0.0 | 34.9 | 0.4 | 64.7 | 65.1 |

**Table 29. Percentage Distribution of the Working Population by Activity**

| | Agri-culture | Mining | Manu-fact. | Con-struct. | Trans-port. | Trade | Services |
|---|---|---|---|---|---|---|---|
| Total | 6.7 | 0.2 | 7.3 | 5.6 | 4.7 | 44.0 | 31.5 |
| **Place of residence** | | | | | | | |
| Rural | 48.4 | 0.0 | 3.5 | 3.6 | 2.2 | 33.0 | 9.3 |
| Rural poor | 49.2 | 0.0 | 0.0 | 3.9 | 0.0 | 32.5 | 14.4 |
| Urban | 2.9 | 0.2 | 7.7 | 5.7 | 4.9 | 45.0 | 33.6 |
| Urban poor | 11.0 | 0.0 | 2.6 | 4.7 | 2.7 | 62.1 | 16.9 |
| **Gender and age** | | | | | | | |
| Male | 10.4 | 0.5 | 8.7 | 11.3 | 8.9 | 15.6 | 44.6 |
| 15-29 | 6.8 | 0.3 | 9.2 | 13.3 | 7.5 | 19.6 | 43.3 |
| 30-49 | 8.9 | 0.6 | 9.4 | 10.3 | 9.7 | 14.6 | 46.6 |
| 50-64 | 15.6 | 0.6 | 5.5 | 11.7 | 10.1 | 13.4 | 43.0 |
| 65+ | 25.6 | 0.0 | 11.3 | 11.7 | 2.2 | 15.6 | 33.7 |
| Female | 3.3 | 0.0 | 6.1 | 0.6 | 1.1 | 68.6 | 20.3 |
| 15-29 | 2.5 | 0.0 | 8.3 | 0.7 | 1.5 | 61.4 | 25.6 |
| 30-49 | 2.9 | 0.0 | 5.2 | 0.3 | 0.8 | 72.0 | 18.8 |
| 50-64 | 4.7 | 0.0 | 6.0 | 1.6 | 1.5 | 69.9 | 16.2 |
| 65+ | 11.4 | 0.0 | 3.5 | 0.0 | 0.0 | 70.3 | 14.8 |

# VOLTA REGION

## Introduction

The Volta Region is bound on the west by Greater Accra, Eastern, and Brong Ahafo Regions, on the north by the Northern Region, and on the south by the Gulf of Guinea. The Volta Region straddles three ecological zones (coastal, forest, and savannah) and as a result has varying weather and settlement patterns. The southern part of the Volta Region has two rainy seasons with a marked dry season. The middle belt lies within the semi-equatorial forest zone with two maximum rainy seasons of 127 cm to 178 cm and a pronounced dry season. The northern belt of the Region lies within the savannah woodland zone with a single rainy season and a prolonged dry season with average temperatures between 21 and 32 degrees Celsius.

While access to basic needs (education, health, and housing) and improved infrastructure are below the national average, the Region has a significant number of service industries, a beach resort near Ada (at the southern part of the region), and a large number of fishing and farming communities in the southern part of the region.

## Household Characteristics

The Volta Region accounts for about 10 percent of the country's population and has a majority of its people living in rural areas (85 percent). Male-headed households account for about two-thirds of all household heads, with the remaining one-third headed by females. With an average size of 4.7 members, households in the Volta Region are larger than in the rest of the nation. The proportion of household heads in this Region who are literate is much higher than in the rest of the country. More than one-half of all household heads have at least a secondary education, with almost the same proportion engaged in agricultural activities in the rural areas. In the urban areas, approximately 14 percent of household heads were employed in agriculture and the public sector, and fewer than one-fourth of all household heads have no education.
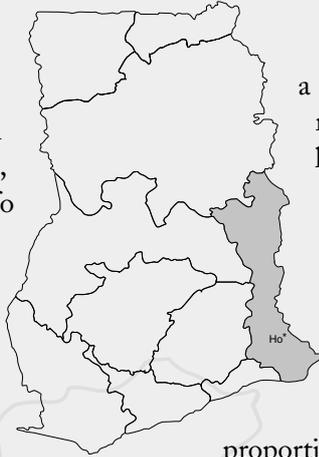
## Education

Improved access to education in the Volta Region is reflected in the high adult literacy rate (57 percent) and in spite of the gender gap, 71 percent of adult males and 46 percent of adult females are literate (above the national average of 62 percent for males and 37 percent for females). Primary and secondary enrollment rates in the Region are slightly higher than the national averages of 67 percent and 40 percent, respectively, and a majority of children not attending school are from rural poor households.

While school enrollment in the Volta Region is higher than the national average, satisfaction with both primary and secondary education is the lowest in Ghana (the proportion satisfied with primary and secondary education in the Volta Region is 19 percent and 21 percent, respectively, compared with 40 and 43 respectively, for the nation). The poor condition of the educational facilities ranks highest among reasons for dissatisfaction, followed by a lack of books, supplies, or both, and a lack of teachers.

## Health

Less than 12 percent of the health facilities in the country are located in the Volta Region, and about 41.7 percent of the residents are less than 30 minutes from the nearest health facility. The proportion of households with access to health facilities in the urban areas is higher than in the rest of the Region (53 percent in the urban area); however, less than one-fourth of the rural poor households have access to a health facility. Of the 19.6 percent of the respondents that reported being ill in the four weeks prior to being interviewed, 25 percent received treatment from a health center. Satisfaction with the use of health facilities is slightly below the national aver-age (57 percent nationally compared with 53 percent in the Volta Region).

## Housing and Household Amenities

The types of dwelling units occupied by households in the Volta Region vary from rural to urban areas and by tenure. For example, about one-half of the residents of the Volta Region own their dwelling and most of these homeowners are self-employed agriculture workers who live in the rural areas. Most renters are public sector employees who live in the urban areas. Dwelling units in the rural areas of the Volta Region are mostly mud houses with thatch roofing, while those found in the urban areas were built with sancrete and aluminum or asbestos roofing.

Access to amenities and services (for example, access to safe water, electricity, improved sanitation, and public transport) of households in the Volta Region falls below the national average with the widest disparity in access to safe water. More than two-thirds of the urban households have access to a safe water source compared with 57 percent for rural dwellers; access to sanitation is 42 percent for urban dwellers and 23 percent for rural dwellers.



**Figure 14. Access, Usage, and Satisfaction with Education**
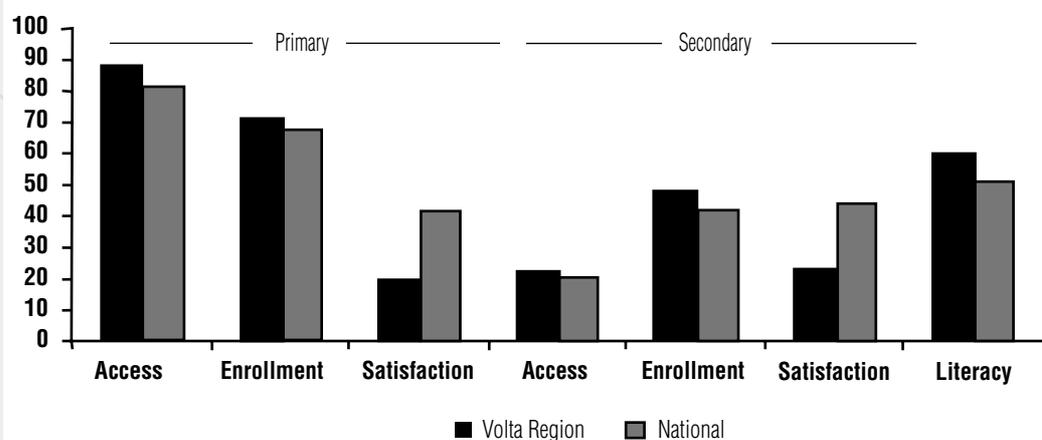
*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

## Employment

The total percentage of the workforce employed in the Volta Region (53 percent) is below the national average of 59 percent. The Volta Region has a large inactive population (35 percent compared with the 26 percent national average) and a relatively low unemployment rate (3.9 percent). Agriculture sector employment accounts for about 50 percent of the total workforce, with the same proportion engaged in agricultural activities in the rural areas. Agricultural workers in the south of the Volta Region engage in shallot farming and fishing along the Volta River, while those in the north produce cash crops such as cocoa. In the urban areas, agriculture sector employment accounts for only 14 percent of the workforce, with the remainder employed mainly in the public sector

**Figure 15. Access, Usage, and Satisfaction with Health Services**
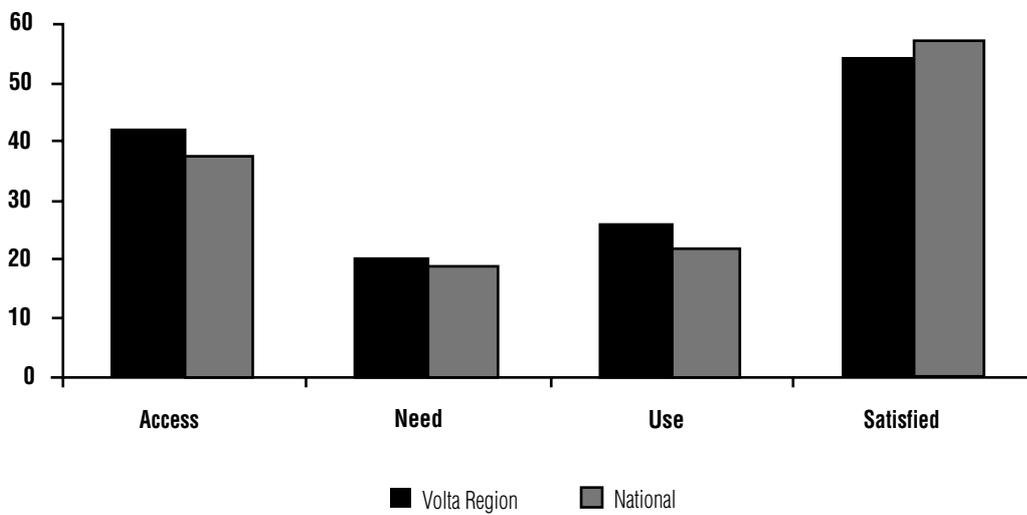


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

**Figure 16. Access to Facilities in the Volta Region**
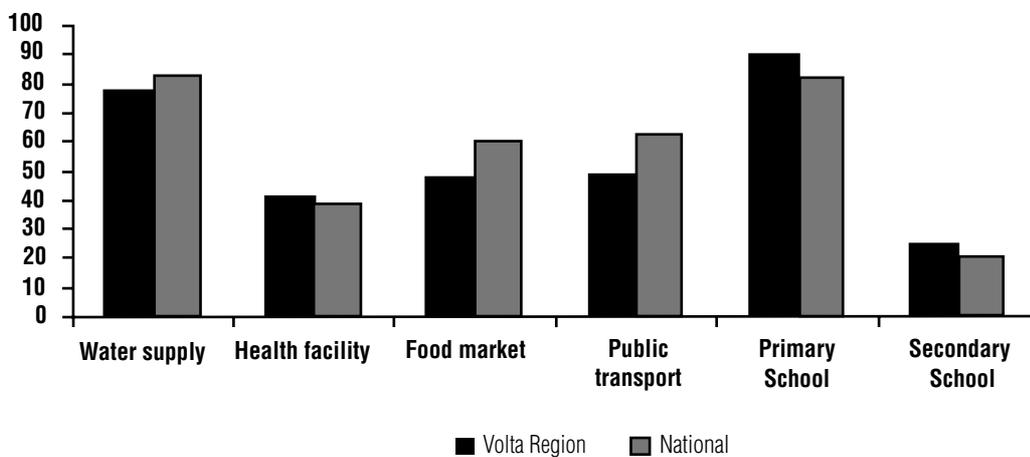


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

(15 percent) and the service industries or trade (43 percent). Significant numbers of the non-poor households are employed in the private informal sector, whereas the majority of the poor are employed in the agriculture sector.

### Table 30. Households by Place of Residence

|  | Unweighted | Percentage | Weighted | Percentage |
|---|---|---|---|---|
| **Type of residence** | | | | |
| Rural | 1248 | 81.9 | 223,003 | 82.6 |
| Urban | 275 | 18.1 | 46,978 | 17.4 |
| Total | 1523 | 100.0 | 269,981 | 100.0 |

### Table 31. Percent Distribution of the Rural and Urban Households by Characteristics of the Head of Household

|  | Rural | | | | Urban | | | |
|---|---|---|---|---|---|---|---|---|
|  | Unweighted | Percentage | Weighted | Percentage | Unweighted | Percentage | Weighted | Percentage |
| **Socio-economic group** | | | | | | | | |
| Public | 84 | 6.7 | 16,135 | 7.2 | 43 | 15.6 | 6,884 | 14.7 |
| Private formal | 20 | 1.6 | 3,464 | 1.6 | 9 | 3.3 | 1,447 | 3.1 |
| Private informal | 8 | 0.6 | 1,479 | 0.7 | 9 | 3.3 | 1,383 | 2.9 |
| Self-agriculture | 745 | 59.7 | 130,773 | 58.6 | 39 | 14.2 | 6,876 | 14.6 |
| Self-other | 260 | 20.8 | 47,063 | 21.1 | 120 | 43.6 | 20,557 | 43.8 |
| Unemployed | 128 | 10.3 | 23,644 | 10.6 | 55 | 20.0 | 9,831 | 20.9 |
| Other | 3 | 0.2 | 444 | 0.2 | 0 | 0.0 | 0 | 0.0 |
| Total | 1248 | 100.0 | 223,002 | 100.0 | 275 | 100.0 | 46,979 | 100.0 |
| **Gender** | | | | | | | | |
| Male | 821 | 65.8 | 145,848 | 65.4 | 176 | 64.0 | 30,096 | 64.1 |
| Female | 427 | 34.2 | 77,155 | 34.6 | 99 | 36.0 | 16,882 | 35.9 |
| Total | 1248 | 100.0 | 223,002 | 100.0 | 275 | 100.0 | 46,979 | 100.0 |
| **Marital status** | | | | | | | | |
| Single | 42 | 3.4 | 7,474 | 3.4 | 28 | 10.2 | 4,692 | 10.0 |
| Monogamous | 593 | 47.5 | 107,281 | 48.1 | 127 | 46.2 | 21,731 | 46.3 |
| Polygamous | 293 | 23.5 | 51,435 | 23.1 | 47 | 17.1 | 8,216 | 17.5 |
| Widowe/div/sep | 320 | 25.6 | 56,812 | 25.5 | 73 | 26.5 | 12,340 | 26.3 |
| Total | 1248 | 100.0 | 223,002 | 100.0 | 275 | 100.0 | 46,978 | 100.0 |
| **Highest level of education** | | | | | | | | |
| None | 474 | 38.0 | 84,975 | 38.1 | 72 | 26.2 | 13,107 | 27.9 |
| Some Primary | 103 | 8.3 | 17,617 | 7.9 | 12 | 4.4 | 1,888 | 4.0 |
| Comp. Primary | 50 | 4.0 | 8,734 | 3.9 | 7 | 2.5 | 1,220 | 2.6 |
| Comp. JSS | 465 | 37.3 | 83,072 | 37.3 | 116 | 42.2 | 19,612 | 41.7 |
| Comp. SSS | 9 | 0.7 | 1,505 | 0.7 | 5 | 1.8 | 932 | 2.0 |
| Other | 147 | 11.8 | 27,099 | 12.2 | 63 | 22.9 | 10,218 | 21.8 |
| Total | 1248 | 100.0 | 223,002 | 100.0 | 275 | 100.0 | 46,979 | 100.0 |

## Table 32. Education Indicators

| | Literacy rate | Primary | | | Secondary | | |
|---|---|---|---|---|---|---|---|
| | | Access | Enrollment | Satisfaction | Access | Enrollment | Satisfaction |
| **Place of residence** | | | | | | | |
| Rural | 56.2 | 87.4 | 70.5 | 15.9 | 19.6 | 45.3 | 19.0 |
| Rural poor | 56.4 | 87.5 | 68.6 | 14.2 | 20.9 | 41.4 | 13.6 |
| Urban | 65.4 | 92.2 | 68.0 | 43.4 | 34.7 | 54.4 | 34.9 |
| Urban poor | 58.2 | 93.9 | 65.3 | 36.9 | 35.4 | 48.6 | 40.2 |
| **Socio-economic group** | | | | | | | |
| Public | 84.9 | 92.0 | 70.2 | 15.7 | 36.5 | 53.9 | 34.6 |
| Private formal | 83.4 | 89.9 | 77.1 | 27.0 | 53.7 | 71.6 | 34.1 |
| Private informal | 71.4 | 89.1 | 66.2 | 13.1 | 0.0 | 66.8 | 0.0 |
| Self-agriculture | 50.5 | 85.7 | 70.2 | 16.1 | 17.4 | 44.1 | 17.4 |
| Self-other | 62.3 | 90.4 | 70.5 | 31.2 | 27.3 | 48.0 | 27.0 |
| Unemployed | 55.6 | 94.0 | 68.0 | 15.3 | 15.5 | 44.7 | 16.4 |
| Other | 17.4 | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | | | |
| Male | 71.5 | 86.8 | 70.3 | 18.8 | 21.5 | 50.7 | 20.4 |
| Female | 46.3 | 89.3 | 70.1 | 20.2 | 22.5 | 42.9 | 23.7 |

## Table 33. Percentage of Students Not Satisfied with School by Reasons for Dissatisfaction

| | Percent dissatisfied | Books/ supplies | Teaching | Lack of space | Facilities | Other |
|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | |
| Rural | 82.2 | 59.1 | 8.9 | 31.5 | 77.4 | 1.1 |
| Rural poor | 83.4 | 58.8 | 9.2 | 30.6 | 77.7 | 0.8 |
| Urban | 60.0 | 67.0 | 2.9 | 16.9 | 46.9 | 5.1 |
| Urban poor | 63.4 | 73.1 | 3.6 | 4.3 | 51.2 | 0.0 |
| **Socio-economic group** | | | | | | |
| Public | 80.4 | 64.9 | 3.6 | 23.8 | 69.2 | 2.3 |
| Private formal | 72.2 | 69.8 | 6.0 | 11.9 | 47.9 | 0.0 |
| Private informal | 65.6 | 35.9 | 22.8 | 36.6 | 71.0 | 0.0 |
| Self-agriculture | 83.0 | 57.6 | 9.2 | 30.6 | 78.2 | 0.9 |
| Self-other | 68.7 | 62.3 | 8.7 | 30.1 | 66.1 | 2.9 |
| Unemployed | 81.1 | 64.2 | 5.1 | 35.8 | 74.5 | 2.6 |
| Other | 100.0 | 100.0 | 0.0 | 0.0 | 100.0 | 0.0 |
| **Gender** | | | | | | |
| Male | 79.1 | 59.7 | 8.4 | 30.3 | 73.6 | 2.0 |
| Female | 79.0 | 60.2 | 8.0 | 29.5 | 74.6 | 1.0 |

**Table 34. Health Indicators**

| | Medical Services | | | |
|---|---|---|---|---|
| | Access | Need | Use | Satisfaction |
| **Place of residence** | | | | |
| Rural | 39.6 | 19.8 | 25.4 | 52.5 |
| Rural poor | 40.2 | 20.3 | 23.9 | 45.7 |
| Urban | 53.7 | 18.5 | 26.9 | 60.6 |
| Urban poor | 33.1 | 15.5 | 20.4 | 64.6 |
| **Socio-economic group** | | | | |
| Public | 63.3 | 18.4 | 26.2 | 61.0 |
| Private formal | 69.2 | 16.7 | 34.7 | 67.4 |
| Private informal | 45.1 | 15.2 | 24.4 | 57.9 |
| Self-agriculture | 31.0 | 18.5 | 24.1 | 52.8 |
| Self-other | 53.6 | 20.8 | 26.7 | 56.5 |
| Unemployed | 50.7 | 24.5 | 29.5 | 43.5 |
| Other | 18.2 | 43.4 | 32.0 | 64.2 |
| **Gender** | | | | |
| Male | 40.3 | 18.5 | 23.2 | 52.5 |
| Female | 42.9 | 20.5 | 27.8 | 54.7 |

**Table 35. Percentage of Persons Sick Who Did Not Consult a Health Provider and the Reason for Not Consulting**

| | % not consulting | No need | Cost | Distance | Other |
|---|---|---|---|---|---|
| **Place of residence** | | | | | |
| Rural | 74.5 | 97.9 | 1.6 | 0.2 | 0.2 |
| Rural poor | 75.7 | 96.7 | 2.2 | 0.2 | 0.3 |
| Urban | 72.8 | 99.3 | 0.7 | 0.1 | 0.0 |
| Urban poor | 79.6 | 99.7 | 0.3 | 0.3 | 0.0 |
| **Socio-economic group** | | | | | |
| Public | 73.7 | 99.8 | 0.2 | 0.0 | 0.0 |
| Private formal | 65.3 | 100.0 | 0.0 | 0.0 | 0.0 |
| Private informal | 75.6 | 100.0 | 0.0 | 0.0 | 0.0 |
| Self-agriculture | 75.7 | 97.5 | 1.9 | 0.3 | 0.3 |
| Self-other | 73.0 | 98.6 | 1.1 | 0.1 | 0.0 |
| Unemployed | 70.5 | 98.5 | 1.4 | 0.2 | 0.2 |
| Other | 68.0 | 100.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | |
| Male | 76.6 | 98.0 | 1.4 | 0.3 | 0.3 |
| Female | 72.1 | 98.2 | 1.5 | 0.2 | 0.1 |

**Table 36. Percentage of Persons Sick Who Consulted a Health Provider and Were Not Satisfied by the Reason for Dissatisfaction**

| | Percent dissatisfied | Facilities not clean | Long wait | No trained professionals | Cost | No drugs available | Treatment unsuccessful | Other |
|---|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | | |
| Rural | 47.5 | 98.5 | 80.4 | 95.7 | 43.5 | 85.5 | 72.2 | 98.9 |
| Rural poor | 54.3 | 100.0 | 77.7 | 96.0 | 37.4 | 83.9 | 75.7 | 100.0 |
| Urban | 39.4 | 98.5 | 48.5 | 98.5 | 47.9 | 86.7 | 80.8 | 98.0 |
| Urban poor | 35.4 | 97.4 | 37.2 | 96.3 | 58.8 | 84.8 | 81.3 | 100.0 |
| **Socio-economic group** | | | | | | | | |
| Public | 39.0 | 96.7 | 63.3 | 95.8 | 51.9 | 78.2 | 84.9 | 98.5 |
| Private formal | 32.6 | 87.1 | 57.8 | 100.0 | 76.2 | 86.0 | 51.9 | 100.0 |
| Private informal | 42.1 | 100.0 | 35.7 | 100.0 | 36.5 | 74.9 | 100.0 | 100.0 |
| Self-agriculture | 47.2 | 98.8 | 80.3 | 94.4 | 40.2 | 85.7 | 73.1 | 99.3 |
| Self-other | 43.5 | 98.2 | 67.7 | 98.5 | 45.6 | 87.7 | 77.9 | 98.8 |
| Unemployed | 56.5 | 100.0 | 85.2 | 98.1 | 48.8 | 87.6 | 61.8 | 96.6 |
| Other | 35.8 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 0.0 | 100.0 |
| **Gender** | | | | | | | | |
| Male | 47.5 | 98.0 | 74.9 | 96.4 | 43.6 | 84.6 | 74.6 | 98.9 |
| Female | 45.3 | 98.9 | 77.2 | 95.8 | 44.4 | 86.6 | 72.3 | 98.7 |

**Table 37. Percentage Distribution of the Population by Work Status (age 15 and above)**

| | Working | | | Not working | | |
|---|---|---|---|---|---|---|
| | Employed | Under emp. | Total | Unemploy. | Inactive | Total |
| **Place of residence** | | | | | | |
| Rural | 58.9 | 2.3 | 61.2 | 3.3 | 35.5 | 38.8 |
| Rural poor | 46.6 | 2.6 | 49.2 | 4.6 | 46.2 | 50.8 |
| Urban | 53.5 | 2.7 | 56.2 | 6.7 | 37.1 | 43.8 |
| Urban poor | 42.3 | 2.4 | 44.7 | 9.6 | 45.7 | 55.3 |
| **Gender and age** | | | | | | |
| Male | 60.6 | 2.7 | 63.3 | 4.8 | 31.9 | 36.7 |
| 15-29 | 32.0 | 2.9 | 34.9 | 8.6 | 56.5 | 65.1 |
| 30-49 | 89.9 | 3.3 | 93.2 | 2.6 | 4.2 | 6.8 |
| 50-64 | 86.5 | 2.6 | 89.1 | 2.2 | 8.7 | 10.9 |
| 65+ | 54.0 | 0.6 | 54.6 | 0.0 | 45.4 | 45.4 |
| Female | 60.7 | 2.3 | 63.0 | 3.2 | 33.8 | 37.0 |
| 15-29 | 37.2 | 1.5 | 38.7 | 6.6 | 54.7 | 61.3 |
| 30-49 | 81.9 | 4.2 | 86.1 | 1.8 | 12.2 | 13.9 |
| 50-64 | 80.9 | 1.7 | 82.6 | 0.0 | 17.4 | 17.4 |
| 65+ | 52.6 | 0.4 | 53.0 | 0.0 | 47.0 | 47.0 |

**Table 38. Percentage Distribution of the Working Population by Activity**

|  | Agri-culture | Mining | Manu-fact. | Con-struct. | Trans-port. | Trade | Services |
|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | |
| Rural | 62.6 | 0.0 | 3.6 | 1.6 | 0.8 | 21.2 | 10.2 |
| Rural poor | 69.3 | 0.0 | 3.5 | 1.3 | 0.6 | 19.9 | 5.4 |
| Urban | 15.5 | 0.0 | 6.8 | 4.8 | 4.4 | 44.5 | 24.0 |
| Urban poor | 22.1 | 0.0 | 5.2 | 2.0 | 0.9 | 49.7 | 20.1 |
| **Gender and age** | | | | | | | |
| Male | 64.1 | 0.0 | 4.9 | 4.5 | 2.8 | 6.8 | 17.0 |
| 15-29 | 62.3 | 0.0 | 3.2 | 5.1 | 3.5 | 11.5 | 14.4 |
| 30-49 | 59.9 | 0.0 | 6.0 | 4.5 | 3.1 | 5.8 | 20.7 |
| 50-64 | 69.1 | 0.0 | 2.8 | 4.5 | 2.6 | 3.7 | 17.4 |
| 65+ | 80.8 | 0.0 | 7.0 | 2.7 | 0.0 | 5.6 | 3.9 |
| Female | 48.5 | 0.0 | 3.4 | 0.2 | 0.2 | 39.3 | 8.5 |
| 15-29 | 37.2 | 0.0 | 6.2 | 0.3 | 0.7 | 46.6 | 9.0 |
| 30-49 | 46.9 | 0.0 | 3.5 | 0.2 | 0.0 | 38.7 | 10.8 |
| 50-64 | 56.6 | 0.0 | 0.9 | 0.0 | 0.0 | 37.8 | 4.8 |
| 65+ | 69.0 | 0.0 | 1.6 | 0.0 | 0.0 | 25.5 | 3.9 |

# EASTERN REGION

## Introduction

The Eastern Region lies east of Ashanti, north of Central and Greater Accra, and west of Volta. Tropical rain forest covers much of the Eastern Region with an annual rainfall of between 127 cm and 178 cm, followed by a prolonged dry season. While the climatic conditions found in this Region are similar to those found in the southwestern equatorial ecological zone of Ghana, the primary difference is the pronounced dry season. The geographical and economic characteristics of this Region have brought about uneven population distribution. About one-third of the population lives in rural areas and the remaining two-thirds live in urban areas. The Eastern Region has the highest net immigration rate in the nation. Improved access to infrastructure, social services, and an increasing number of service industries are among the factors contributing to the high rate of migration to the region in search of job opportunities in the urban areas. Economic activities have developed around important resources such as cocoa, diamonds, and timber (Ghana Statistical Service 1995).

## Household Characteristics

Most households in the Eastern Region are headed by males (53 percent), however, together with Ashanti and Central Regions they have the highest number of female-headed households in Ghana. The majority of the households in the urban areas of the Eastern Region (54 percent) are headed by females (compared with 45 percent headed by males), while in the rural areas the majority are headed by males. The matrilineal structure of kinship groups may account for the high level of female-headed households in the Region. Variations in household size are observed for both rural and urban areas and for gender. The average household size for the Eastern Region is 3.7—4.5 for male-headed households and 3.4 for households headed by females. Well over one-half of all household heads have a secondary education and are working in the agricultural sector, while less than one-third have no education.
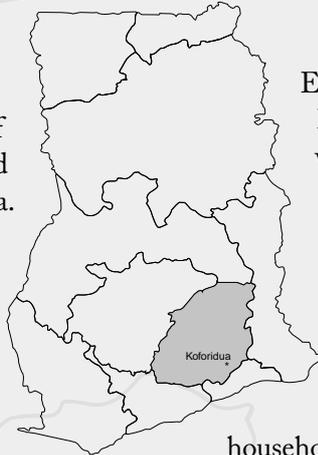
## Education

Primary education is accessible to a majority of households in the Eastern Region (78 percent). Access to secondary education remains low at 23.4 percent. Secondary educational opportunities, as measured by access and enrollment rates, for females lag behind those for males (with a net primary enrollment rate for males of 80 percent compared with 76 percent for females). The adult literacy rate in the Eastern Region (56 percent) is above the national average (48 percent) and remains among the highest in the country.

The gender gap in the literacy rate in the Eastern Region is one of the widest for all southern regions (male literacy rate is 62 percent and for females, 37 percent). Enrollment rates in primary and lower sec-

ondary schools, as well as accessibility and satisfaction, are fairly consistent with national figures except in the case of the satisfaction level with secondary schools (33 percent), which falls below the national average. Reasons for dissatisfaction with secondary education include inadequate books and school supplies and, to a lesser extent, the poor condition of school facilities. It is worth noting that the lack of teachers is less of a problem in the Eastern Region at both the primary and secondary levels.

## Health

The number of health facilities in the southern regions of Ghana is considerably larger than in the northern part of the country. The concentration of health facilities in the southern regions contributes significantly toward prevention and treatment of diseases in this region of Ghana. The Eastern Region accounts for roughly 13 percent of all the health facilities in the country compared with 13 percent for all the northern regions (Northern, Upper East and Upper West); however, only 32 percent of the households sampled have access to health facilities. Given the high number of health facilities available in the

Eastern Region, only 26 percent of all ill or injured persons, in the four weeks preceding the survey, consulted a physician; 96 percent of those who did not consult a physician thought there was no need. The majority of people (36 percent) who consulted physicians did so at a public health facility; satisfaction with the use of the health facilities is the highest in the nation (at 66.5 percent). The level of medical consultation by locality is almost the same but varies by gender. Of all ill or injured people, 26 percent of both rural and urban residents, 21 percent of males and 30 percent of females, consulted a physician.

## Household and Housing Amenities

In discussing adequacy of the dwelling unit occupied by households, the issues of tenure and quality are considered important because of the health implications associated with those indicators. In the Eastern Region, the percentage of homeowners (31.6 percent) is significantly higher than that of renters (17.1 percent), while the remaining households (51 percent) live rent-free. The percentage of rented households is significantly higher in the urban

**Figure 17. Access, Usage, and Satisfaction with Education**
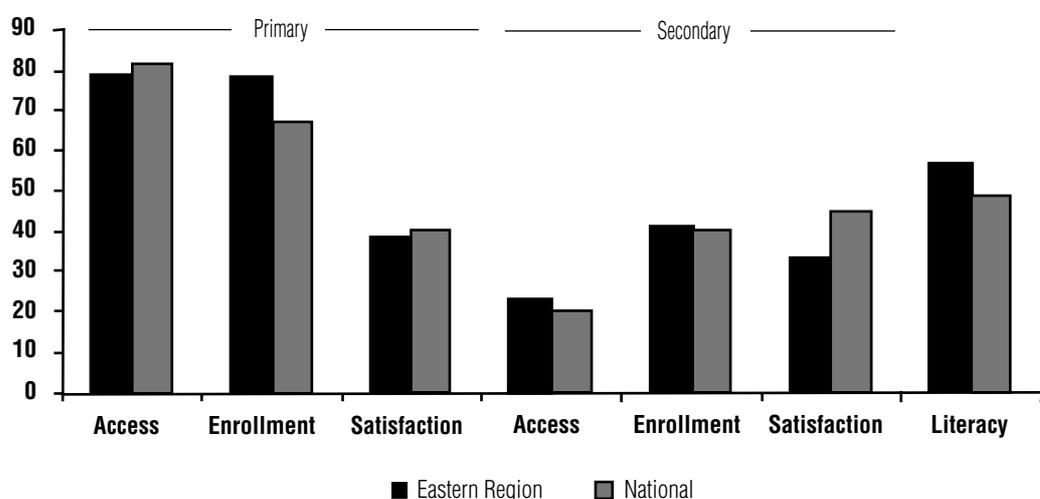


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

**Figure 18. Access, Usage, and Satisfaction with Health Services**
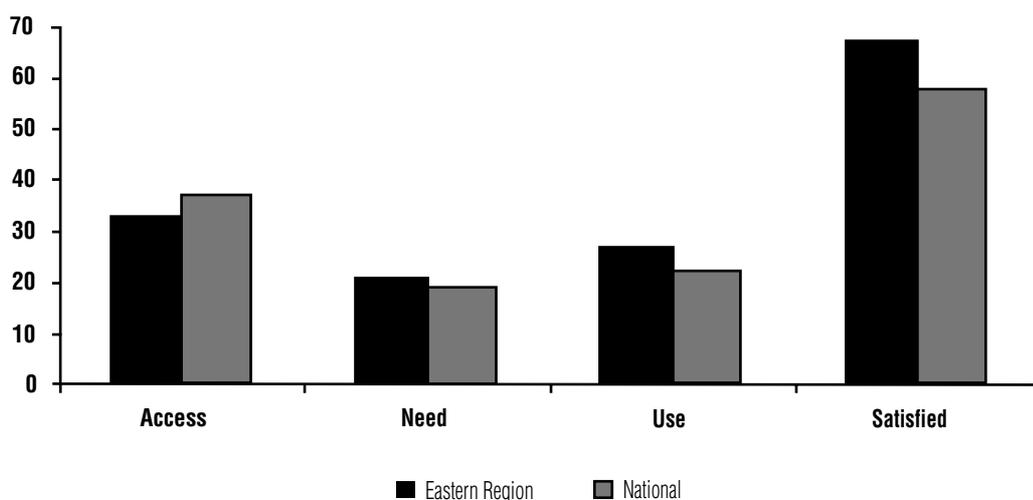


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

areas compared with the rural areas. This is also true for male household heads working in the agriculture sector than their counterparts. Low quality housing materials were used to construct most of the houses in this Region (for example, 65 percent the materials of walls are made of mud) with little or no proper sanitation facilities (only 2.2 percent of the houses have flush toilet). The two main lighting sources in the urban areas are electricity and kerosene/oil, while the primary lighting source in the rural areas is kerosene.

Ownership of household assets is quite low among households in the Eastern Region. Very few households own cars, motorcycles, or bicycles. About one-third of the respondents in the sample owned only small animals, while three percent own both small and large animals.

**Figure 19. Access to Facilities in the Eastern Region**
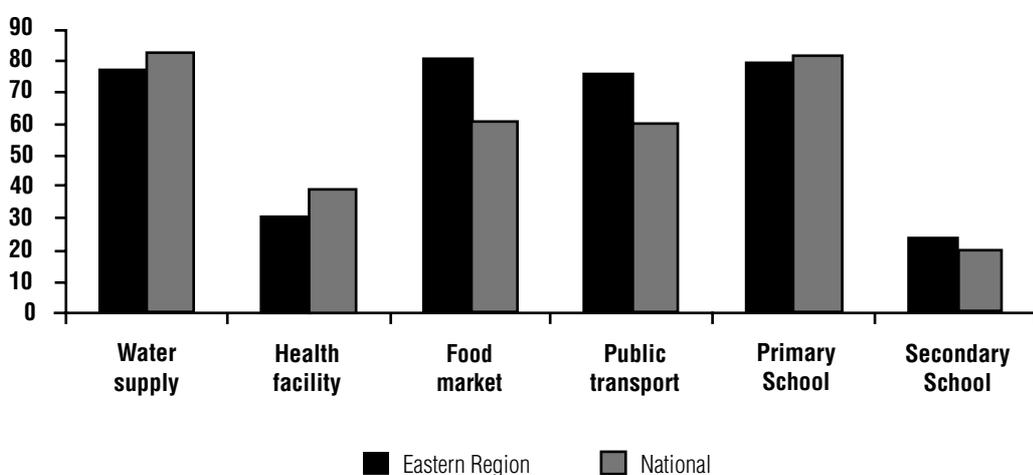


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

## Employment

The distribution of the principal economic activity of individuals age 15–64 in the Eastern Region indicates that nearly 60 percent of the workforce are employed mainly in the agricultural sector (58 percent). Of the remaining 40 percent, 9.9 percent work in the manufacturing or trade sector (13 percent). Unemployment, at 4.9 percent, is slightly above the national average (of about 4.6 percent) and higher among males than females (1.8 compared with 0.4). Also, unemployment among the urban poor is higher than their rural counterparts. Finally, the Eastern Region has one of the highest underemployment (10 percent) and inactive workforce rates (26.7 percent).

### Table 39. Households by Place of Residence

|  | Unweighted | Percentage | Weighted | Percentage |
|---|---|---|---|---|
| **Type of residence** | | | | |
| Rural | 1397 | 68.8 | 359,044 | 77.5 |
| Urban | 634 | 31.2 | 104,126 | 22.5 |
| Total | 2031 | 100.0 | 463,169 | 100.0 |

### Table 40. Percent Distribution of the Rural and Urban Households by Characteristics of the Head of Household

|  | Rural | | | | Urban | | | |
|---|---|---|---|---|---|---|---|---|
|  | Unweighted | Percentage | Weighted | Percentage | Unweighted | Percentage | Weighted | Percentage |
| **Socio-economic group** | | | | | | | | |
| Public | 103 | 7.4 | 16,908 | 4.7 | 80 | 12.6 | 12,774 | 12.3 |
| Private formal | 35 | 2.5 | 5,777 | 1.6 | 39 | 6.2 | 5,423 | 5.2 |
| Private informal | 38 | 2.7 | 6,102 | 1.7 | 30 | 4.7 | 4,263 | 4.1 |
| Self-agriculture | 851 | 60.9 | 236,626 | 65.9 | 171 | 27.0 | 30,809 | 29.6 |
| Self-other | 233 | 16.7 | 50,316 | 14.0 | 207 | 32.6 | 33,385 | 32.1 |
| Unemployed | 129 | 9.2 | 42,204 | 11.8 | 100 | 15.8 | 16,493 | 15.8 |
| Other | 8 | 0.6 | 1,112 | 0.3 | 7 | 1.1 | 980 | 0.9 |
| Total | 1397 | 100.0 | 359,044 | 100.0 | 634 | 100.0 | 104,126 | 100.0 |
| **Gender** | | | | | | | | |
| Male | 917 | 65.6 | 189,262 | 52.7 | 376 | 59.3 | 61,872 | 59.4 |
| Female | 480 | 34.4 | 169,782 | 47.3 | 258 | 40.7 | 42,253 | 40.6 |
| Total | 1397 | 100.0 | 359,044 | 100.0 | 634 | 100.0 | 104,126 | 100.0 |
| **Marital status** | | | | | | | | |
| Single | 59 | 4.2 | 20,242 | 5.6 | 47 | 7.4 | 7,427 | 7.1 |
| Monogamous | 769 | 55.0 | 169,583 | 47.2 | 326 | 51.4 | 54,014 | 51.9 |
| Polygamous | 176 | 12.6 | 35,188 | 9.8 | 56 | 8.8 | 9,331 | 9.0 |
| Widowe/div/sep | 393 | 28.1 | 134,031 | 37.3 | 205 | 32.3 | 33,354 | 32.0 |
| Total | 1397 | 100.0 | 359,044 | 100.0 | 634 | 100.0 | 104,126 | 100.0 |
| **Highest level of education** | | | | | | | | |
| None | 470 | 33.6 | 128,771 | 35.9 | 178 | 28.1 | 28,729 | 27.6 |
| Some Primary | 91 | 6.5 | 25,500 | 7.1 | 30 | 4.7 | 4,997 | 4.8 |
| Comp. Primary | 67 | 4.8 | 16,096 | 4.5 | 21 | 3.3 | 3,713 | 3.6 |
| Comp. JSS | 625 | 44.7 | 164,934 | 45.9 | 269 | 42.4 | 44,868 | 43.1 |
| Comp. SSS | 1 | 0.1 | 200 | 0.1 | 2 | 0.3 | 302 | 0.3 |
| Other | 143 | 10.2 | 23,543 | 6.6 | 134 | 21.1 | 21,517 | 20.7 |
| Total | 1397 | 100.0 | 359,044 | 100.0 | 634 | 100.0 | 104,126 | 100.0 |

## Table 41. Education Indicators

| | Literacy rate | Primary | | | Secondary | | |
|---|---|---|---|---|---|---|---|
| | | Access | Enrollment | Satisfaction | Access | Enrollment | Satisfaction |
| **Place of residence** | | | | | | | |
| Rural | 52.4 | 75.7 | 78.9 | 38.2 | 15.8 | 37.3 | 29.6 |
| Rural poor | 40.4 | 59.3 | 76.7 | 42.3 | 10.2 | 39.1 | 25.2 |
| Urban | 66.6 | 89.6 | 75.1 | 38.6 | 43.0 | 48.2 | 40.1 |
| Urban poor | 59.9 | 82.9 | 69.4 | 31.8 | 26.1 | 50.4 | 40.2 |
| **Socio-economic group** | | | | | | | |
| Public | 85.1 | 91.2 | 78.6 | 33.5 | 32.8 | 53.4 | 40.7 |
| Private formal | 71.4 | 95.1 | 82.8 | 36.5 | 20.6 | 59.7 | 27.4 |
| Private informal | 64.4 | 89.5 | 59.3 | 39.5 | 56.6 | 47.1 | 64.0 |
| Self-agriculture | 52.0 | 71.8 | 80.6 | 39.6 | 16.4 | 35.9 | 28.8 |
| Self-other | 61.7 | 93.3 | 73.6 | 35.1 | 38.7 | 43.5 | 39.6 |
| Unemployed | 43.8 | 89.3 | 66.1 | 37.0 | 27.4 | 43.8 | 31.3 |
| Other | 55.2 | 79.7 | 37.8 | 25.3 | 17.1 | 32.8 | 52.0 |
| **Gender** | | | | | | | |
| Male | 73.5 | 77.4 | 80.1 | 39.8 | 22.6 | 49.4 | 34.6 |
| Female | 44.7 | 79.7 | 76.1 | 36.6 | 24.1 | 33.3 | 31.3 |

## Table 42. Reasons for Dissatisfaction in Percentages

| | Percent dissatisfied | Books/ supplies | Teaching | Lack of space | Facilities | Other |
|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | |
| Rural | 60.7 | 72.3 | 8.7 | 11.7 | 45.5 | 5.4 |
| Rural poor | 61.2 | 54.6 | 14.4 | 20.7 | 53.1 | 10.3 |
| Urban | 60.1 | 65.9 | 5.2 | 17.5 | 44.4 | 7.8 |
| Urban poor | 64.9 | 66.3 | 5.2 | 22.2 | 51.5 | 1.4 |
| **Socio-economic group** | | | | | | |
| Public | 60.9 | 70.5 | 2.7 | 18.3 | 39.0 | 8.7 |
| Private formal | 60.6 | 42.2 | 10.6 | 5.4 | 53.9 | 21.0 |
| Private informal | 52.6 | 77.3 | 6.2 | 30.5 | 41.4 | 0.0 |
| Self-agriculture | 60.9 | 73.4 | 7.6 | 13.5 | 47.8 | 5.0 |
| Self-other | 59.3 | 62.9 | 7.2 | 10.3 | 40.3 | 5.5 |
| Unemployed | 61.8 | 74.6 | 19.2 | 7.5 | 34.9 | 8.6 |
| Other | 57.7 | 100.0 | 21.0 | 0.0 | 58.0 | 0.0 |
| **Gender** | | | | | | |
| Male | 58.0 | 70.1 | 8.9 | 14.1 | 46.6 | 5.7 |
| Female | 63.3 | 71.5 | 7.0 | 12.0 | 43.9 | 6.2 |

## Table 43. Health Indicators

| | Medical Services | | | |
| --- | --- | --- | --- | --- |
| | Access | Need | Use | Satisfaction |
| **Place of residence** | | | | |
| Rural | 26.5 | 20.2 | 26.5 | 67.5 |
| Rural poor | 16.8 | 21.4 | 22.4 | 62.4 |
| Urban | 52.5 | 21.0 | 26.4 | 63.3 |
| Urban poor | 46.9 | 15.3 | 18.5 | 57.3 |
| **Socio-economic group** | | | | |
| Public | 55.6 | 18.7 | 24.5 | 63.3 |
| Private formal | 57.7 | 27.3 | 33.1 | 66.8 |
| Private informal | 46.4 | 16.0 | 27.3 | 80.5 |
| Self-agriculture | 24.2 | 17.4 | 24.4 | 68.9 |
| Self-other | 45.9 | 23.0 | 27.5 | 71.2 |
| Unemployed | 35.1 | 35.6 | 38.2 | 48.2 |
| Other | 31.7 | 26.2 | 23.4 | 65.2 |
| **Gender** | | | | |
| Male | 33.1 | 17.4 | 21.2 | 68.0 |
| Female | 32.5 | 22.7 | 30.5 | 65.6 |

## Table 44. Reasons for Not Consulting Health Provider

| | % not consulting | No need | Cost | Distance | Other | % dissatisfied |
| --- | --- | --- | --- | --- | --- | --- |
| Total | | | | | | 33.5 |
| **Place of residence** | | | | | | |
| Rural | 73.5 | 96.1 | 3.7 | 0.9 | 0.1 | 32.5 |
| Rural poor | 77.6 | 96.4 | 3.7 | 0.2 | 0.2 | 37.6 |
| Urban | 73.5 | 96.6 | 2.9 | 0.1 | 0.7 | 36.7 |
| Urban poor | 81.2 | 94.3 | 5.3 | 0.0 | 0.4 | 42.7 |
| **Socio-economic group** | | | | | | |
| Public | 75.5 | 98.9 | 0.7 | 0.0 | 0.6 | 36.7 |
| Private formal | 66.9 | 98.0 | 0.1 | 0.0 | 1.3 | 33.2 |
| Private informal | 72.7 | 97.8 | 2.2 | 0.0 | 0.0 | 19.5 |
| Self-agriculture | 75.6 | 96.5 | 3.3 | 0.8 | 0.1 | 31.1 |
| Self-other | 72.3 | 93.8 | 6.1 | 0.6 | 0.4 | 28.8 |
| Unemployed | 61.6 | 94.5 | 4.3 | 0.8 | 0.5 | 51.8 |
| Other | 75.1 | 98.3 | 0.0 | 0.0 | 0.0 | 34.8 |
| **Gender** | | | | | | |
| Male | 78.8 | 96.8 | 3.1 | 0.6 | 0.2 | 32.0 |
| Female | 69.4 | 95.7 | 3.9 | 0.7 | 0.4 | 34.4 |

**Table 45. Percentage of Persons Sick Who Consulted a Health Provider and Were Not Satisfied by the Reason for Dissatisfaction.**

|  | Facilities not clean | Long wait | No trained professionals | No drugs available | Treatment unsuccessful | Other |
|---|---|---|---|---|---|---|
| Total | 98.9 | 79.8 | 98.7 | 93.1 | 72.1 | 96.9 |
| **Place of residence** | | | | | | |
| Rural | 99.3 | 80.4 | 98.4 | 93.4 | 68.0 | 96.3 |
| Rural poor | 98.7 | 54.5 | 98.4 | 91.6 | 58.7 | 94.2 |
| Urban | 97.7 | 78.1 | 99.6 | 92.3 | 83.2 | 98.8 |
| Urban poor | 100.0 | 82.5 | 100.0 | 98.8 | 73.4 | 100.0 |
| **Socio-economic group** | | | | | | |
| Public | 98.2 | 63.5 | 96.4 | 91.0 | 89.0 | 97.3 |
| Private formal | 100.0 | 85.6 | 97.1 | 82.6 | 96.9 | 100.0 |
| Private informal | 100.0 | 68.6 | 100.0 | 93.9 | 83.2 | 100.0 |
| Self-agriculture | 98.1 | 78.1 | 98.4 | 93.1 | 72.8 | 95.7 |
| Self-other | 100.0 | 79.2 | 100.0 | 89.5 | 83.3 | 100.0 |
| Unemployed | 100.0 | 90.4 | 99.4 | 98.6 | 50.6 | 97.4 |
| Other | 100.0 | 100.0 | 100.0 | 100.0 | 19.2 | 80.8 |
| **Gender** | | | | | | |
| Male | 98.1 | 78.0 | 97.8 | 89.3 | 79.0 | 96.7 |
| Female | 99.3 | 80.7 | 99.1 | 95.1 | 68.6 | 97.1 |

**Table 46. Percentage Distribution of the Population by Work Status (age 15 and above)**

|  | Working | | | Not working | | |
|---|---|---|---|---|---|---|
|  | Employed | Under emp. | Total | Unemploy. | Inactive | Total |
| **Place of residence** | | | | | | |
| Rural | 70.5 | 0.8 | 71.3 | 4.8 | 23.9 | 28.7 |
| Rural poor | 66.8 | 0.4 | 67.2 | 2.2 | 30.6 | 32.8 |
| Urban | 58.9 | 1.3 | 60.2 | 5.0 | 34.8 | 39.8 |
| Urban poor | 52.7 | 1.3 | 54.0 | 4.8 | 41.3 | 46.0 |
| **Gender and age** | | | | | | |
| Male | 71.7 | 1.8 | 73.5 | 3.6 | 22.9 | 26.5 |
| 15-29 | 39.2 | 2.2 | 41.5 | 7.3 | 51.2 | 58.5 |
| 30-49 | 93.0 | 2.3 | 95.3 | 2.0 | 2.7 | 4.7 |
| 50-64 | 92.5 | 0.6 | 93.1 | 1.3 | 5.6 | 6.9 |
| 65+ | 75.6 | 0.7 | 76.3 | 0.3 | 23.4 | 23.7 |
| Female | 68.5 | 0.4 | 68.9 | 5.8 | 25.3 | 31.1 |
| 15-29 | 45.9 | 0.9 | 46.8 | 12.7 | 40.5 | 53.2 |
| 30-49 | 90.1 | 0.3 | 90.4 | 1.6 | 8.0 | 9.6 |
| 50-64 | 87.4 | 0.0 | 87.4 | 5.2 | 7.4 | 12.6 |
| 65+ | 45.3 | 0.0 | 45.3 | 0.0 | 54.7 | 54.7 |

**Table 47. Percentage Distribution of the Working Population by Activity**

|  | Agri-culture | Mining | Manu-fact. | Con-struct. | Trans-port. | Trade | Services |
|---|---|---|---|---|---|---|---|
| **Place of residence** |  |  |  |  |  |  |  |
| Rural | 71.8 | 0.2 | 3.4 | 1.1 | 0.6 | 15.9 | 7.0 |
| Rural poor | 81.0 | 0.0 | 1.6 | 1.7 | 0.0 | 12.1 | 3.6 |
| Urban | 31.0 | 0.3 | 4.7 | 3.0 | 1.5 | 34.9 | 24.7 |
| Urban poor | 44.4 | 0.0 | 4.2 | 2.5 | 0.1 | 38.0 | 10.8 |
| **Gender and age** |  |  |  |  |  |  |  |
| Male | 71.0 | 0.4 | 3.7 | 3.5 | 2.0 | 4.9 | 14.4 |
| 15-29 | 67.7 | 0.6 | 3.8 | 5.7 | 1.8 | 9.4 | 11.0 |
| 30-49 | 63.9 | 0.6 | 4.5 | 4.3 | 2.6 | 5.3 | 18.8 |
| 50-64 | 78.6 | 0.2 | 3.1 | 1.1 | 1.6 | 0.9 | 14.5 |
| 65+ | 90.1 | 0.0 | 1.7 | 1.2 | 0.4 | 2.8 | 3.8 |
| Female | 56.4 | 0.0 | 3.7 | 0.2 | 0.1 | 30.8 | 8.8 |
| 15-29 | 37.7 | 0.0 | 11.0 | 0.4 | 0.0 | 36.2 | 14.7 |
| 30-49 | 48.2 | 0.0 | 2.4 | 0.2 | 0.1 | 39.6 | 9.5 |
| 50-64 | 79.8 | 0.0 | 0.3 | 0.0 | 0.0 | 16.1 | 3.9 |
| 65+ | 85.7 | 0.0 | 0.9 | 0.0 | 0.0 | 10.7 | 2.7 |

# ASHANTI REGION

## Introduction

The Ashanti Region is economically the second most important Region in the nation. It is well endowed with both mineral and agricultural wealth, as well as considerable urban and commercial development. Much of the Region lies within the wet, semi-equatorial forest zone, with annual rainfall of 127 cm and average daily temperatures of about 27 degrees Celsius. The Region is surrounded by Western, Eastern, Central, and Brong Ahafo Regions. Most principal roads and railroads connecting the northern and the southern part of the country converge in its capital of Kumasi. Kumasi also serves as the commercial and traditional capital of the Ashantis, and has developed into an educational center with several schools and colleges. Among the most important towns in this Region is Obuasi, the richest mining town in Ghana.

Given the Region's natural resource wealth, its position as a market hub for the north and south, and its employment opportunities, the Region attracts a rather diverse group of people from other regions of Ghana, particularly from the savannah regions. It accounts for well over 15 percent of the country's total population, with roughly 35 percent of its population living in the urban areas (Ghana Statistical Service 1995).

## Household Characteristics

Households in the Ashanti Region are among the smallest in Ghana (average of about 3.6 members); however, 67 percent of the rural poor live in households with seven or more members. Most non-poor households, on average, have less than two members. Male-headed households account for about 57 percent of all households in the urban areas and 60 percent in the rural areas.

The educational status of male household heads is higher than it is for the rest of the country (69 percent have attended school: the national average is 61 percent) and the level of education of female household heads is almost the same as the rest of the country.

## Education

Given the educational opportunities present in the Ashanti Region, the literacy rate, (as a measure of past educational effort) is among the lowest in the south, with a notably high gender gap (literacy rate for males is 62 percent, and 33 percent for females). Public and private formal sector employees have the highest literacy rate among socio-economic groups, while self-employed agriculture workers are the least educated.

Improvements in the current educational system are reflected in the high access to primary education and high enrollment rates. For example, 89 percent of primary school age children have access to primary school, out of which 72 percent are enrolled. Access to secondary education, however, is still a problem in the Ashanti Region (17 percent have access), although it is better than in the rest of the

country. Secondary enrollment rates are among the lowest in the nation (38 percent) while satisfaction was consistent with the national average. Although there were no significant differences in satisfaction with primary education by gender, examination of the survey data indicated that boys were more satisfied with secondary education than girls. Reasons for dissatisfaction with the educational system were a lack of books, supplies, or both, and poor educational facilities.

## Health

Examination of the distribution of health facilities in Ghana indicates that the Ashanti Region has the largest number of health facilities in the country (about 17 percent of all operational health facilities). About 43.2 percent of households in the survey live within 30 minutes of the nearest health facility. Yet, only 17 percent of those who were ill or injured in the four weeks preceding the survey used the health facilities, and those who did not use health facilities thought there was no need. Of those that used health facilities, 61.9 percent were satisfied with the services offered.

There were no significant gender differences in the access, use, and satisfaction with health services in the Region. Access to health facilities is higher in the urban areas than in the rural areas and, private informal sector employees have the highest access, usage, and satisfaction with the use of the health system in the Region.

## Household and Household Amenities

Given the level of urbanization in the Region, it has one of the most complicated housing tenure systems in the country. About 27 percent of the households owned their dwelling, 20 percent rent, and 52 percent live rent-free. Most of the rent-free households are found in the rural areas, often headed by females. Renters dominate the housing tenure system in the urban areas. Most homeowners are rural poor and work in the agriculture sector, with about 46 percent of the households surveyed living less than 30 minutes from the nearest food market.

Materials used in building houses in the Ashanti Region are mainly sandcrete and iron sheets. Most buildings in the Region are of better building material than those found in the rest of the country, except in Greater Accra Region. Water is connected to 37 percent of the houses, yet only 4.3 percent of the households have a

**Figure 20. Access, Usage, and Satisfaction with Education**
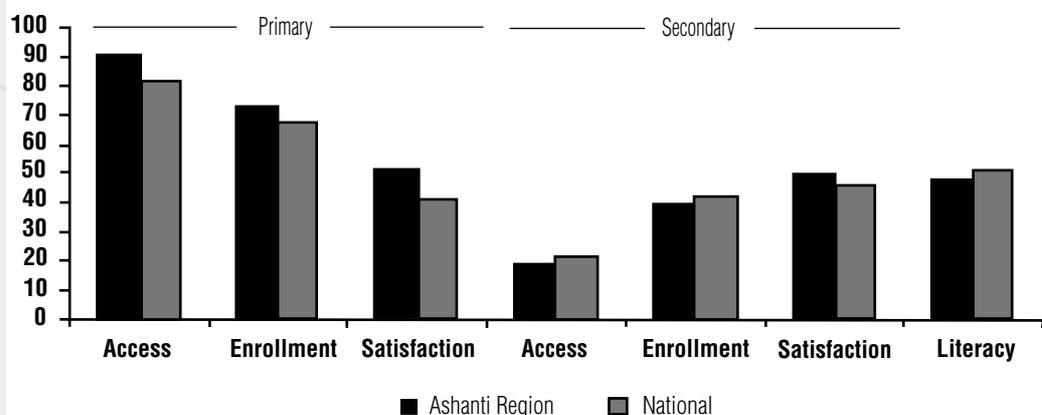


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

**Figure 21. Access, Usage, and Satisfaction with Health Services**
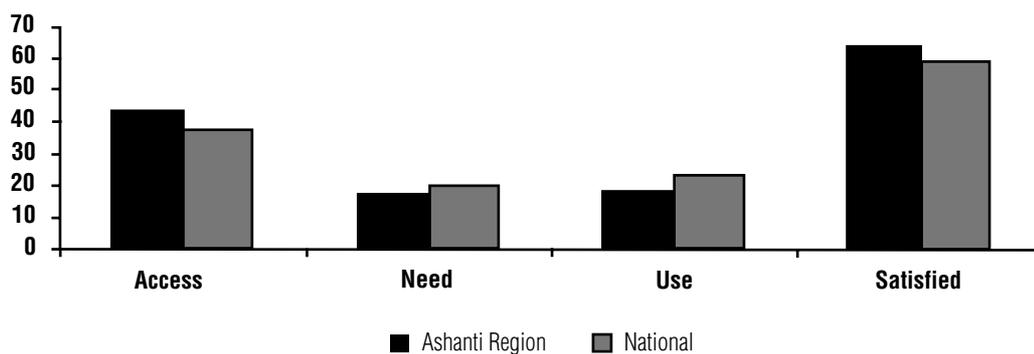


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

flush toilet in their homes. Assets range from a watch or clock, to a radio, clothes iron, and a sewing machine.

## Employment

Employment patterns in the Ashanti Region mirror the national trend, with 59 percent of the workforce employed, about 26 percent unemployed, 10 percent under-employed, and about one-half of all the employed labor force working in the agriculture sector. Agriculture and retail trades are the two dominant occupation groups of the Ashantis. A leading industry in the Region is gold mining, which takes place primarily in two towns: Obuasi and Konongo.

**Figure 22. Access to Facilities in Ashanti Region**
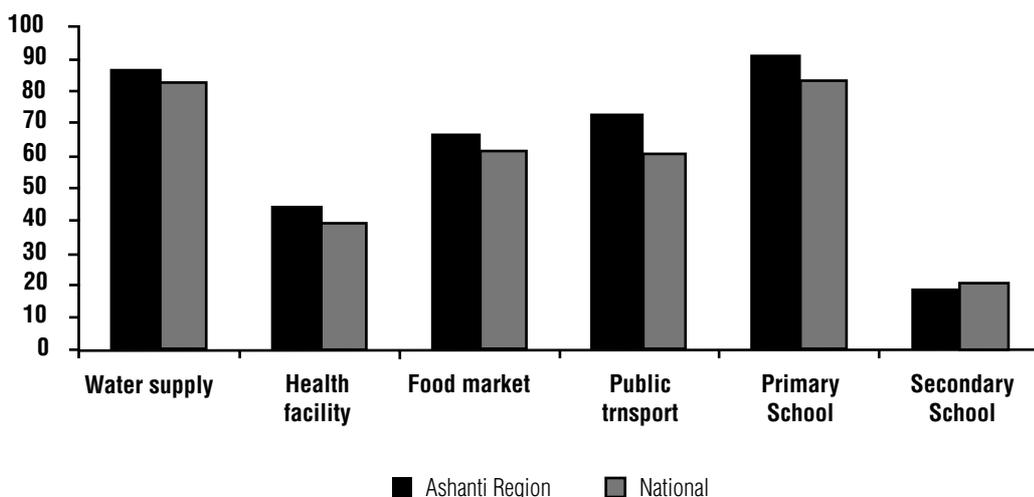


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

### Table 48. Households by Place of Residence

|  | Unweighted | Percentage | Weighted | Percentage |
|---|---|---|---|---|
| **Type of residence** |  |  |  |  |
| Rural | 1632 | 62.7 | 331,994 | 64.5 |
| Urban | 972 | 37.3 | 182,445 | 35.5 |
| Total | 2604 | 100.0 | 514,439 | 100.0 |

### Table 49: Percent Distribution of the Rural and Urban Households by Characteristics of the Head of Household

|  | Rural | | | | Urban | | | |
|---|---|---|---|---|---|---|---|---|
|  | Unweighted | Percentage | Weighted | Percentage | Unweighted | Percentage | Weighted | Percentage |
| **Socio-economic group** |  |  |  |  |  |  |  |  |
| Public | 83 | 5.1 | 16,350 | 4.9 | 61 | 6.3 | 11,282 | 6.2 |
| Private formal | 32 | 2.0 | 7,445 | 2.2 | 51 | 5.2 | 9,907 | 5.4 |
| Private informal | 40 | 2.5 | 7,613 | 2.3 | 45 | 4.6 | 8,715 | 4.8 |
| Self-agriculture | 932 | 57.1 | 188,162 | 56.7 | 138 | 14.2 | 27,029 | 14.8 |
| Self-other | 332 | 20.3 | 70,446 | 21.2 | 473 | 48.7 | 86,545 | 47.4 |
| Unemployed | 205 | 12.6 | 40,428 | 12.2 | 203 | 20.9 | 38,768 | 21.2 |
| Other | 8 | 0.5 | 1,550 | 0.5 | 1 | 0.1 | 199 | 0.1 |
| Total | 1632 | 100.0 | 331,994 | 100.0 | 972 | 100.0 | 182,445 | 100.0 |
| **Gender** |  |  |  |  |  |  |  |  |
| Male | 982 | 60.2 | 200,251 | 60.3 | 550 | 56.6 | 103,353 | 56.6 |
| Female | 650 | 39.8 | 131,743 | 39.7 | 422 | 43.4 | 79,092 | 43.4 |
| Total | 1632 | 100.0 | 331,994 | 100.0 | 972 | 100.0 | 182,445 | 100.0 |
| **Marital status** |  |  |  |  |  |  |  |  |
| Single | 153 | 9.4 | 30,266 | 9.1 | 165 | 17.0 | 30,080 | 16.5 |
| Monogamous | 896 | 54.9 | 183,141 | 55.2 | 507 | 52.2 | 95,763 | 52.5 |
| Polygamous | 183 | 11.2 | 37,166 | 11.2 | 81 | 8.3 | 14,618 | 8.0 |
| Widowe/div/sep | 400 | 24.5 | 81,421 | 24.5 | 219 | 22.5 | 41,984 | 23.0 |
| Total | 1632 | 100.0 | 331,994 | 100.0 | 972 | 100.0 | 182,445 | 100.0 |
| **Highest level of education** |  |  |  |  |  |  |  |  |
| None | 666 | 40.8 | 134,627 | 40.6 | 359 | 36.9 | 68,483 | 37.5 |
| Some Primary | 77 | 4.7 | 14,638 | 4.4 | 23 | 2.4 | 4,281 | 2.3 |
| Comp. Primary | 66 | 4.0 | 13,372 | 4.0 | 47 | 4.8 | 8,920 | 4.9 |
| Comp. JSS | 680 | 41.7 | 139,343 | 42.0 | 394 | 40.5 | 73,677 | 40.4 |
| Comp. SSS | 5 | 0.3 | 813 | 0.2 | 6 | 0.6 | 1,205 | 0.7 |
| Other | 138 | 8.5 | 29,201 | 8.8 | 143 | 14.7 | 25,879 | 14.2 |
| Total | 1632 | 100.0 | 331,994 | 100.0 | 972 | 100.0 | 182,445 | 100.0 |

## Table 50. Education Indicators

| | Literacy rate | Primary | | | Secondary | | |
|---|---|---|---|---|---|---|---|
| | | Access | Enrollment | Satisfaction | Access | Enrollment | Satisfaction |
| **Place of residence** | | | | | | | |
| Rural | 41.2 | 91.0 | 73.9 | 43.3 | 18.4 | 38.7 | 44.9 |
| Rural poor | 34.1 | 87.0 | 66.0 | 30.9 | 8.1 | 33.7 | 27.9 |
| Urban | 52.6 | 87.6 | 68.8 | 64.7 | 17.0 | 37.0 | 54.0 |
| Urban poor | 52.4 | 89.2 | 62.5 | 56.1 | 21.4 | 35.6 | 41.7 |
| **Socio-economic group** | | | | | | | |
| Public | 73.0 | 90.9 | 77.0 | 49.3 | 16.7 | 57.3 | 48.7 |
| Private formal | 71.3 | 88.1 | 78.7 | 63.7 | 20.2 | 62.0 | 65.4 |
| Private informal | 42.8 | 79.3 | 73.7 | 42.4 | 16.4 | 28.7 | 58.1 |
| Self-agriculture | 38.2 | 90.0 | 72.6 | 42.3 | 14.6 | 36.4 | 42.8 |
| Self-other | 50.0 | 90.4 | 71.1 | 61.9 | 19.2 | 37.2 | 57.0 |
| Unemployed | 41.7 | 92.0 | 69.6 | 52.7 | 25.4 | 30.2 | 35.1 |
| Other | 27.0 | 28.4 | 50.3 | 0.0 | 100.0 | 33.3 | 0.0 |
| **Gender** | | | | | | | |
| Male | 61.8 | 90.0 | 71.3 | 50.5 | 16.4 | 42.1 | 49.6 |
| Female | 32.9 | 89.7 | 73.2 | 49.7 | 19.2 | 34.2 | 46.6 |

## Table 51. Percentage of Students Not Satisfied with School by Reasons for Dissatisfaction

| | Percent dissatisfied | Books/ supplies | Teaching | Lack of space | Facilities | Other |
|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | |
| Rural | 53.0 | 71.6 | 14.5 | 26.6 | 34.9 | 2.8 |
| Rural poor | 66.1 | 69.1 | 16.8 | 31.6 | 42.3 | 5.5 |
| Urban | 36.9 | 76.4 | 12.2 | 11.8 | 20.0 | 4.9 |
| Urban poor | 48.5 | 77.2 | 6.8 | 12.6 | 28.2 | 5.7 |
| **Socio-economic group** | | | | | | |
| Public | 47.1 | 64.8 | 13.9 | 28.8 | 38.5 | 3.7 |
| Private formal | 33.0 | 65.3 | 2.1 | 26.3 | 21.2 | 0.0 |
| Private informal | 47.1 | 65.9 | 33.2 | 13.0 | 29.5 | 4.6 |
| Self-agriculture | 54.2 | 73.9 | 12.0 | 27.9 | 34.6 | 3.6 |
| Self-other | 37.3 | 77.3 | 17.7 | 11.1 | 26.0 | 1.3 |
| Unemployed | 50.8 | 65.4 | 16.5 | 20.0 | 24.4 | 7.0 |
| Other | 91.4 | 100.0 | 0.0 | 0.0 | 7.6 | 0.0 |
| **Gender** | | | | | | |
| Male | 47.1 | 71.3 | 13.3 | 22.8 | 30.3 | 3.3 |
| Female | 48.1 | 74.5 | 14.6 | 22.7 | 31.8 | 3.5 |

**Table 52. Health Indicators**

| | Medical Services | | | |
| --- | --- | --- | --- | --- |
| | Access | Need | Use | Satisfaction |
| **Place of residence** | | | | |
| Rural | 34.3 | 15.8 | 16.2 | 59.1 |
| Rural poor | 29.3 | 12.0 | 10.8 | 57.2 |
| Urban | 59.8 | 17.1 | 18.8 | 66.4 |
| Urban poor | 56.9 | 12.3 | 13.3 | 59.6 |
| **Socio-economic group** | | | | |
| Public | 48.4 | 13.6 | 15.1 | 57.0 |
| Private formal | 46.5 | 16.2 | 18.5 | 66.7 |
| Private informal | 60.5 | 22.3 | 26.7 | 63.5 |
| Self-agriculture | 34.4 | 14.6 | 15.0 | 59.4 |
| Self-other | 53.5 | 14.8 | 16.2 | 68.9 |
| Unemployed | 46.1 | 24.9 | 24.8 | 57.3 |
| Other | 0.0 | 22.9 | 19.0 | 67.9 |
| **Gender** | | | | |
| Male | 42.4 | 15.0 | 16.2 | 61.3 |
| Female | 43.8 | 17.3 | 17.8 | 62.3 |

**Table 53. Percentage of Persons Who Did Not Consult
a Health Provider**

| | No need | Cost | Distance | Other |
| --- | --- | --- | --- | --- |
| **Place of residence** | | | | |
| Rural | 95.1 | 4.3 | 0.3 | 0.6 |
| Rural poor | 93.5 | 5.8 | 0.4 | 0.3 |
| Urban | 94.9 | 4.3 | 0.2 | 0.7 |
| Urban poor | 91.9 | 5.9 | 1.0 | 1.1 |
| **Socio-economic group** | | | | |
| Public | 98.2 | 1.6 | 0.0 | 0.4 |
| Private formal | 98.3 | 1.4 | 0.0 | 0.3 |
| Private informal | 91.2 | 7.5 | 0.0 | 1.3 |
| Self-agriculture | 94.4 | 4.7 | 0.6 | 0.6 |
| Self-other | 96.7 | 2.9 | 0.0 | 0.6 |
| Unemployed | 91.4 | 7.6 | 0.0 | 1.1 |
| Other | 91.5 | 8.5 | 0.0 | 0.0 |
| **Gender** | | | | |
| Male | 95.5 | 4.0 | 0.3 | 0.5 |
| Female | 94.6 | 4.6 | 0.3 | 0.8 |

## Table 54. Percentage of Persons Sick Who Consulted a Health Provider and Were Not Satisfied by the Reason for Dissatisfaction

| | Percent dissatisfied | Facilities not clean | Long wait | No trained professionals | Cost | No drugs available | Treatment unsuccessful | Other |
|---|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | | |
| Rural | 40.9 | 99.1 | 84.5 | 97.5 | 58.7 | 86.8 | 60.8 | 95.4 |
| Rural poor | 42.8 | 98.0 | 79.8 | 100.0 | 62.7 | 86.3 | 73.3 | 90.6 |
| Urban | 33.6 | 93.2 | 61.2 | 99.6 | 59.3 | 88.2 | 82.5 | 97.9 |
| Urban poor | 40.4 | 92.8 | 61.7 | 100.0 | 51.0 | 85.5 | 91.4 | 95.1 |
| **Socio-economic group** | | | | | | | | |
| Public | 43.0 | 100.0 | 72.1 | 100.0 | 48.2 | 90.6 | 79.5 | 96.9 |
| Private formal | 33.3 | 100.0 | 71.7 | 100.0 | 53.2 | 96. 4 | 69.3 | 94.6 |
| Private informal | 36.5 | 63.8 | 76.4 | 100.0 | 71.5 | 96.6 | 78.1 | 97.5 |
| Self-agriculture | 40.6 | 99.6 | 82.3 | 98.1 | 57.2 | 82.3 | 65.2 | 96.7 |
| Self-other | 31.1 | 94.7 | 74.3 | 97.4 | 60.3 | 86.0 | 71.8 | 97.5 |
| Unemployed | 42.7 | 99.3 | 69.1 | 97.9 | 62.2 | 94.5 | 65.8 | 94.6 |
| Other | 32.1 | 100.0 | 100.0 | 100.0 | 80.2 | 100.0 | 19.8 | 54.8 |
| **Gender** | | | | | | | | |
| Male | 38.7 | 97.8 | 77.1 | 97.1 | 58.0 | 86.0 | 67.4 | 96.4 |
| Female | 37.7 | 96.6 | 76.3 | 99.0 | 59.6 | 88.2 | 68.7 | 96.2 |

## Table 55. Percentage Distribution of the Population by Work Status (age 15 and above)

| | Working | | | Not working | | |
|---|---|---|---|---|---|---|
| | Employed | Under emp. | Total | Unemploy. | Inactive | Total |
| **Place of residence** | | | | | | |
| Rural | 71.0 | 0.5 | 71.5 | 4.4 | 24.0 | 28.5 |
| Rural poor | 63.9 | 0.4 | 64.3 | 6.3 | 29.5 | 35.7 |
| Urban | 58.3 | 0.6 | 58.8 | 11.2 | 29.9 | 41.2 |
| Urban poor | 51.0 | 0.6 | 51.5 | 14.2 | 34.3 | 48.5 |
| **Gender and age** | | | | | | |
| Male | 70.0 | 0.8 | 70.8 | 7.4 | 21.7 | 29.2 |
| 15-29 | 45.2 | 1.4 | 46.6 | 12.9 | 40.5 | 53.4 |
| 30-49 | 93.8 | 0.7 | 94.5 | 3.7 | 1.9 | 5.5 |
| 50-64 | 87.4 | 0.0 | 87.4 | 3.8 | 8.8 | 12.6 |
| 65+ | 69.3 | 0.0 | 69.3 | 0.9 | 29.8 | 30.7 |
| Female | 67.7 | 0.3 | 68.1 | 6.9 | 25.0 | 31.9 |
| 15-29 | 50.8 | 0.3 | 51.1 | 11.2 | 37.8 | 48.9 |
| 30-49 | 86.5 | 0.7 | 87.2 | 4.9 | 7.9 | 12.8 |
| 50-64 | 83.2 | 0.0 | 83.2 | 2.1 | 14.7 | 16.8 |
| 65+ | 51.3 | 0.0 | 51.3 | 0.7 | 48.1 | 48.7 |

**Table 56. Percentage Distribution of the Working Population by Activity**

| | Agri-culture | Mining | Manu-fact. | Con-struct. | Trans-port. | Trade | Services |
|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | |
| Rural | 68.2 | 0.2 | 3.5 | 1.8 | 1.9 | 15.2 | 9.2 |
| Rural poor | 83.4 | 0.0 | 1.7 | 1.3 | 0.8 | 9.8 | 3.0 |
| Urban | 16.7 | 1.8 | 6.6 | 3.0 | 5.7 | 46.0 | 20.2 |
| Urban poor | 29.3 | 0.0 | 2.8 | 0.5 | 3.9 | 37.5 | 26.0 |
| **Gender and age** | | | | | | | |
| Male | 52.3 | 1.5 | 7.0 | 4.8 | 6.8 | 11.4 | 16.2 |
| 15-29 | 44.8 | 0.8 | 9.9 | 5.1 | 6.4 | 14.1 | 19.0 |
| 30-49 | 49.2 | 2.3 | 6.7 | 5.1 | 8.7 | 12.3 | 15.7 |
| 50-64 | 64.2 | 1.4 | 3.9 | 3.9 | 3.4 | 7.0 | 16.1 |
| 65+ | 72.4 | 0.0 | 5.2 | 3.4 | 4.8 | 5.2 | 9.0 |
| Female | 50.6 | 0.1 | 2.6 | 0.2 | 0.2 | 36.3 | 10.0 |
| 15-29 | 36.1 | 0.0 | 5.3 | 0.3 | 0.5 | 40.7 | 17.2 |
| 30-49 | 50.7 | 0.2 | 1.3 | 0.1 | 0.2 | 39.6 | 7.9 |
| 50-64 | 68.1 | 0.0 | 0.4 | 0.3 | 0.0 | 26.6 | 4.6 |
| 65+ | 79.1 | 0.0 | 3.4 | 0.0 | 0.0 | 14.8 | 2.8 |

# BRONG AHAFO REGION

## Introduction

The Brong Ahafo Region was part of the Ashanti Region until 1959, and was generally known as "Western Ashanti." The Region consists of a broad stretch of land lying roughly across the middle of the country, bounded by Northern, Western, Ashanti, Eastern and Volta Regions. Much of the northern half of the Region falls within the savannah woodland zone and the southwestern half in the wet forest equatorial zone. The level of development and variations in the economic activities are largely due to the nature of resources found in this Region. Economic activities in the Region have developed around such important resources as cocoa, timber, and minerals. The forest of western Ashanti and Brong Ahafo forms the largest cocoa producing area of the country. Other crops in this area are rubber, coffee, and tobacco. The Brong Ahafo Region accounts for about 11 percent of the country's population, which is predominantly rural, with only about 21 percent of its population living in the urban areas. In spite of the predominance of rural settlements, there are a few towns of note, such as Sunyani (the administrative capital of the Region), Kete Krachi, Yeji, Techiman, and Berekum which have an improved physical infrastructure and access to facilities (Ghana Statistical Service 1995).
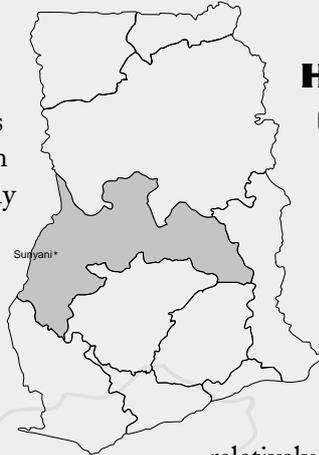
## Household Characteristics

Households in Brong Ahafo tend to be smaller than the rest of the country, with 3.6 members, compared with the national average of 4.1 members. The proportion of female-headed households in the Brong Ahafo Region is relatively higher than the national average but lags behind male-headed households of 56 percent. Generally, household heads in Brong Ahafo are well educated, especially in the urban areas where more than one-half of the household heads have more than secondary education. The primary occupation of most household heads in the urban areas ranges from agriculture to other services or retail trade self-employment. The predominant occupation of household heads in the rural areas is in the agriculture sector.

## Education

Adult literacy (43 percent) in the Brong Ahafo Region is below the national average. The gender differences in literacy rates across the country are also reflected in the low literacy rate among women in the Region. At 64 percent, male literacy slightly exceeds the national average, while at 28 percent, female literacy rate is noticeably below the national average of 36 percent. Enrollment rates in primary schools and lower secondary schools are somewhat

**Figure 23. Access, Usage, and Satisfaction with Education**
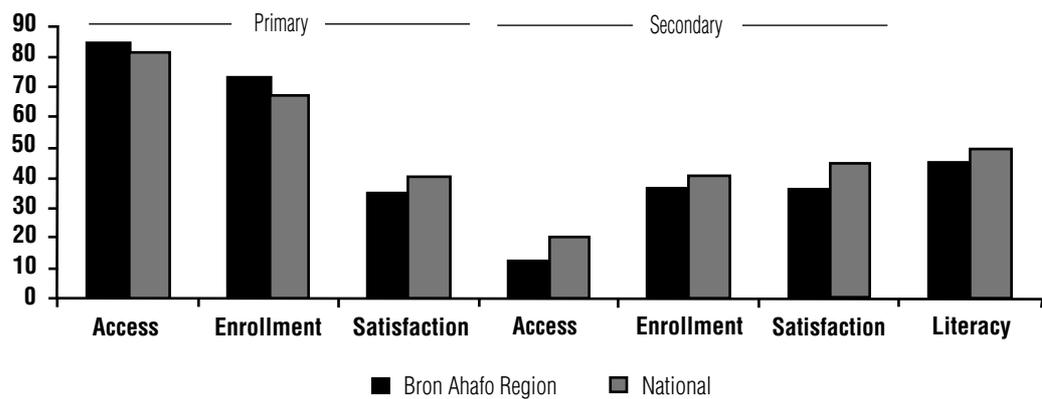


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

lower than the national averages by five and nine percentage points, respectively. Gender differences in primary school enrollment rates in this Region are almost insignificant. Results of the survey show that the male enrollment rate in lower secondary schools leads that of their female counterparts.

In the case of lower secondary education, low enrollment rates (at 36 percent, it is the lowest in the southern region) may be explained by the low level of access to educational facilities. Satisfaction with both primary and secondary education (at about 35 percent for each) is below the national average.

The most commonly cited reasons for dissatisfaction with education in this Region include the poor condition of the educational facilities for both primary and secondary education and a lack of books and supplies, particularly for primary education. A lack of teachers is less of a problem in this Region than in some of the other Regions.

## Health

Less than one-third of the people in the Brong Ahafo Region (26 percent) reported being ill in the four weeks preceding the survey, and 36 percent of the ill or injured received treatment from a professional health facility. There appear to be significant locational differences in the access, usage, and satisfaction with health services in the Brong Ahafo Region. While access to health facilities is below the national average (31.9 percent), it is high in the urban areas (52.6 percent). Urban poor households have the greatest need and use of health facilities in the Region (37 percent had the need, of which 43 percent used a health facility). The rural poor, however, indicated the highest level of satisfaction with the health system.

The most notable reason for dissatisfaction with the use of health services is cost. Most respondents thought the fees for the use of the health facilities were too high. Of equal importance is the number of women age 13–49 who had live births in the year preceding the survey that received pre-natal care. Almost all women who had live births in the year preceding the survey had some pre-natal care in this Region.

## Housing and Household Amenities

Distribution of housing tenure in Ghana shows high home ownership rates in the savannah regions and in the rural areas across the country. The Brong Ahafo Region, however, has one of the lowest home ownership rates in the nation (31.3

**Figure 24. Access, Usage, and Satisfaction with Health Services**
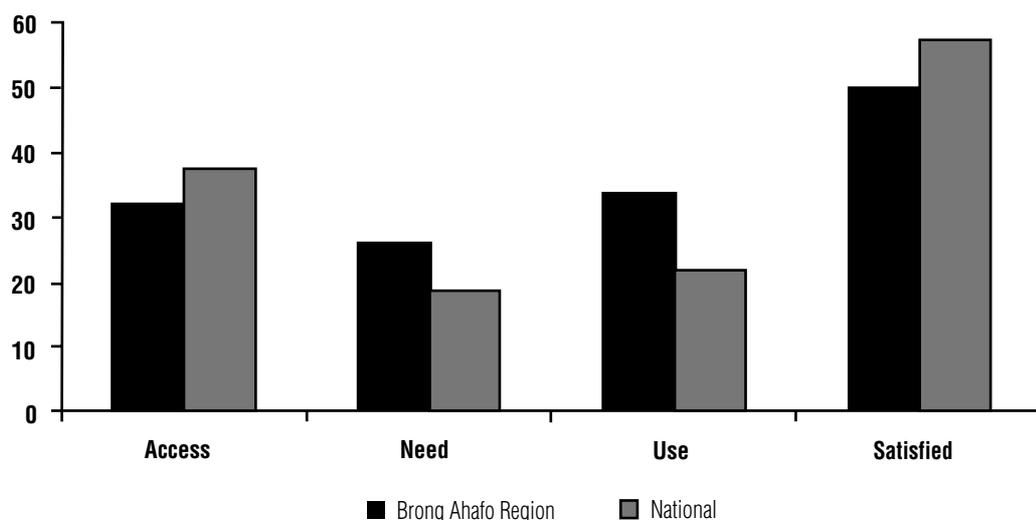


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

percent) with only 11 percent renters. It has the highest number of households in the country living in their dwelling rent-free (57 percent).

The majority of the rent-free household heads are unemployed females, living alone or in two-member households in the urban areas. Dwellings occupied by the various households in the Region were built with non-durable materials (for example, mud) and roofed with iron sheets. Poor sanitation (only 0.7 percent of the households have access to a flush toilet), unsanitary drinking water facilities, and a lack of improved access to transportation characterized the housing environment.

**Figure 25. Access to Facilities in Brong Ahafo Region**
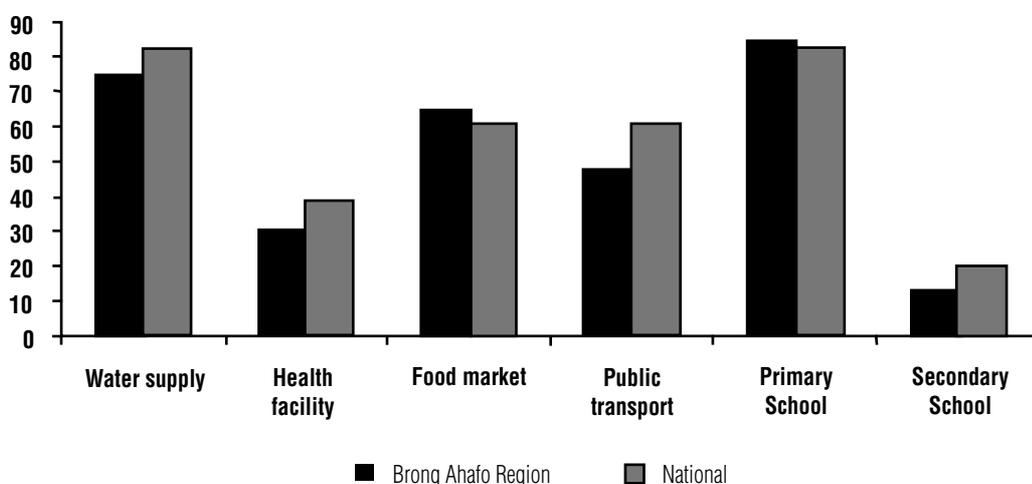


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

## Employment

The unemployment rate in the Brong Ahafo Region is one of the lowest in the country (3 percent) with about 10 percent of the workforce underemployed. The proportion of the population classified as inactive is around 10 percent. Nearly two-thirds of the workforce (64 percent) are employed as own-account agriculture workers, except in the urban areas where most of the workers are retail traders. About one-tenth of the population is employed in the public and semi-public sectors. Most of the farmers among the agriculture sector employees cultivate cocoa. The economic importance of this Region lies in its cocoa production and timber logging industries. Gold mines in this Region also provide employment opportunities to the residents.

### Table 57. Households by Place of Residence

|  | Unweighted | Percentage | Weighted | Percentage |
|---|---|---|---|---|
| **Type of residence** |  |  |  |  |
| Rural | 1023 | 72.2 | 295,265 | 78.1 |
| Urban | 393 | 27.8 | 82,909 | 21.9 |
| Total | 1416 | 100.0 | 378,175 | 100.0 |

### Table 58. Percent Distribution of the Rural and Urban Households by Characteristics of the Head of Household

|  | Rural | | | | Urban | | | |
|---|---|---|---|---|---|---|---|---|
|  | Unweighted | Percentage | Weighted | Percentage | Unweighted | Percentage | Weighted | Percentage |
| **Socio-economic group** | 1023 | 72.2 | 295,265 | 78.1 | 393 | 27.8 | 82,909 | 21.9 |
| Public | 67 | 6.5 | 24,343 | 8.2 | 27 | 6.9 | 5,728 | 6.9 |
| Private formal | 12 | 1.2 | 5,389 | 1.8 | 13 | 3.3 | 2,963 | 3.6 |
| Private informal | 20 | 2.0 | 3,941 | 1.3 | 9 | 2.3 | 1,919 | 2.3 |
| Self-agriculture | 702 | 68.6 | 195,454 | 66.2 | 141 | 35.9 | 30,127 | 36.3 |
| Self-other | 137 | 13.4 | 42,505 | 14.4 | 148 | 37.7 | 30,073 | 36.3 |
| Unemployed | 83 | 8.1 | 23,337 | 7.9 | 55 | 14.0 | 12,099 | 14.6 |
| Other | 2 | 0.2 | 296 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| Total | 1023 | 100.0 | 295,266 | 100.0 | 393 | 100.0 | 82,909 | 100.0 |
| **Gender** |  |  |  |  |  |  |  |  |
| Male | 593 | 58.0 | 167,906 | 56.9 | 226 | 57.5 | 47,116 | 56.8 |
| Female | 430 | 42.0 | 127,360 | 43.1 | 167 | 42.5 | 35,794 | 43.2 |
| Total | 1023 | 100.0 | 295,266 | 100.0 | 393 | 100.0 | 82,909 | 100.0 |
| **Marital status** |  |  |  |  |  |  |  |  |
| Single | 107 | 10.5 | 27,564 | 9.3 | 59 | 15.0 | 12,865 | 15.5 |
| Monogamous | 551 | 53.9 | 152,473 | 51.6 | 193 | 49.1 | 40,586 | 49.0 |
| Polygamous | 112 | 10.9 | 47,676 | 16.1 | 50 | 12.7 | 11,095 | 13.4 |
| Widowe/div/sep | 253 | 24.7 | 67,553 | 22.9 | 91 | 23.2 | 18,363 | 22.1 |
| Total | 1023 | 100.0 | 295,267 | 100.0 | 393 | 100.0 | 82,909 | 100.0 |
| **Highest level of education** |  |  |  |  |  |  |  |  |
| None | 420 | 41.1 | 110,049 | 37.3 | 145 | 36.9 | 30,102 | 36.3 |
| Some Primary | 87 | 8.5 | 27,050 | 9.2 | 33 | 8.4 | 6,736 | 8.1 |
| Comp. Primary | 60 | 5.9 | 18,748 | 6.3 | 12 | 3.1 | 2,484 | 3.0 |
| Comp. JSS | 367 | 35.9 | 109,346 | 37.0 | 152 | 38.7 | 32,473 | 39.2 |
| Comp. SSS | 6 | 0.6 | 1,441 | 0.5 | 6 | 1.5 | 1,344 | 1.6 |
| Other | 83 | 8.1 | 28,633 | 9.7 | 45 | 11.5 | 9,771 | 11.8 |
| Total | 1023 | 100.0 | 295,267 | 100.0 | 393 | 100.0 | 82,909 | 100.0 |

## Table 59: Education Indicators

| | Literacy rate | Primary | | | Secondary | | |
|---|---|---|---|---|---|---|---|
| | | Access | Enrollment | Satisfaction | Access | Enrollment | Satisfaction |
| **Place of residence** | | | | | | | |
| Rural | 41.8 | 86.2 | 71.8 | 32.6 | 6.3 | 34.9 | 27.9 |
| Rural poor | 42.7 | 79.0 | 69.8 | 27.5 | 6.2 | 39.8 | 41.1 |
| Urban | 52.3 | 75.9 | 74.9 | 41.6 | 32.8 | 40.4 | 58.2 |
| Urban poor | 57.1 | 69.1 | 78.6 | 43.7 | 44.5 | 40.1 | 55.3 |
| **Socio-economic group** | | | | | | | |
| Public | 72.8 | 98.4 | 89.1 | 28.4 | 17.9 | 37.9 | 21.8 |
| Private formal | 68.0 | 95.8 | 37.8 | 41.1 | 41.4 | 58.3 | 67.6 |
| Private informal | 47.6 | 78.1 | 68.2 | 52.1 | 0.0 | 28.9 | 100.0 |
| Self-agriculture | 38.3 | 81.9 | 73.4 | 34.9 | 8.5 | 36.5 | 31.8 |
| Self-other | 44.2 | 80.2 | 67.4 | 40.6 | 26.0 | 42.6 | 52.8 |
| Unemployed | 42.7 | 93.6 | 54.5 | 18.9 | 4.6 | 20.8 | 38.4 |
| Other | 64.2 | 100.0 | 66.5 | 0.0 | 0.0 | 50.0 | 0.0 |
| **Gender** | | | | | | | |
| Male | 63.6 | 83.6 | 72.0 | 36.5 | 11.8 | 38.2 | 33.6 |
| Female | 29.1 | 85.0 | 72.9 | 31.8 | 12.3 | 33.7 | 37.6 |

## Table 60. Percentage of persons dissatisfied/reasons

| | Percent dissatisfied | Books/ supplies | Teaching | Lack of space | Facilities | Other |
|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | |
| Rural | 69.1 | 59.2 | 6.7 | 16.5 | 67.9 | 4.7 |
| Rural poor | 69.6 | 55.1 | 8.0 | 20.6 | 65.4 | 7.9 |
| Urban | 58.2 | 55.2 | 4.3 | 18.2 | 48.8 | 12.8 |
| Urban poor | 56.4 | 47.9 | 0.0 | 18.3 | 73.7 | 3.0 |
| **Socio-economic group** | | | | | | |
| Public | 75.4 | 55.4 | 6.8 | 20.2 | 73.6 | 5.0 |
| Private formal | 51.5 | 35.0 | 0.0 | 7.5 | 47.1 | 61.6 |
| Private informal | 53.0 | 79.9 | 43.1 | 0.0 | 36.2 | 13.2 |
| Self-agriculture | 66.4 | 58.0 | 5.6 | 17.0 | 65.4 | 4.8 |
| Self-other | 58.5 | 58.1 | 6.1 | 15.3 | 58.8 | 5.5 |
| Unemployed | 77.7 | 73.6 | 5.5 | 15.2 | 51.4 | 10.5 |
| Other | 100.0 | 0.0 | 59.8 | 0.0 | 100.0 | 59.8 |
| **Gender** | | | | | | |
| Male | 66.6 | 59.5 | 8.3 | 16.7 | 63.9 | 5.9 |
| Female | 67.0 | 57.2 | 3.7 | 16.9 | 64.9 | 6.6 |

## Table 61. Health Indicators

| | Medical Services | | | |
| --- | --- | --- | --- | --- |
| | Access | Need | Use | Satisfaction |
| **Place of residence** | | | | |
| Rural | 26.3 | 25.0 | 32.6 | 50.8 |
| Rural poor | 34.1 | 15.1 | 19.4 | 61.1 |
| Urban | 52.6 | 28.9 | 37.3 | 46.5 |
| Urban poor | 47.0 | 37.7 | 43.2 | 48.2 |
| **Socio-economic group** | | | | |
| Public | 28.6 | 18.3 | 28.2 | 35.3 |
| Private formal | 27.7 | 11.7 | 20.2 | 62.7 |
| Private informal | 65.0 | 20.4 | 21.4 | 49.4 |
| Self-agriculture | 29.1 | 23.6 | 30.8 | 53.8 |
| Self-other | 43.7 | 29.2 | 39.6 | 55.9 |
| Unemployed | 31.2 | 55.0 | 58.8 | 30.7 |
| Other | 29.6 | 23.7 | 47.2 | 100.0 |
| **Gender** | | | | |
| Male | 30.8 | 24.6 | 30.6 | 44.2 |
| Female | 33.0 | 27.1 | 36.4 | 54.2 |

## Table 62. Percentage of Persons Who Did Not Consult and Reason for Not Consulting

| | % not consulting | No need | Cost | Distance | Other |
| --- | --- | --- | --- | --- | --- |
| **Place of residence** | | | | | |
| Rural | 67.3 | 97.4 | 2.0 | 0.5 | 0.2 |
| Rural poor | 80.6 | 99.7 | 0.6 | 0.0 | 0.0 |
| Urban | 62.4 | 95.6 | 4.4 | 0.0 | 0.0 |
| Urban poor | 56.8 | 94.1 | 6.9 | 0.0 | 0.0 |
| **Socio-economic group** | | | | | |
| Public | 71.8 | 97.3 | 1.4 | 1.5 | 0.0 |
| Private formal | 79.8 | 98.0 | 2.0 | 0.0 | 0.0 |
| Private informal | 78.6 | 100.0 | 0.0 | 0.0 | 0.0 |
| Self-agriculture | 69.1 | 96.8 | 2.7 | 0.4 | 0.2 |
| Self-other | 59.9 | 98.2 | 1.8 | 0.2 | 0.1 |
| Unemployed | 41.2 | 94.7 | 5.3 | 0.0 | 0.0 |
| Other | 52.8 | 100.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | |
| Male | 69.3 | 97.2 | 2.4 | 0.3 | 0.1 |
| Female | 63.4 | 96.9 | 2.5 | 0.6 | 0.1 |

## Table 63. Percentage of Persons Dissatisfied by Reason

| | Percent dissatisfied | Facilities not clean | Long wait | No trained professionals | Cost | No drugs available | Treatment unsuccessful | Other |
|---|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | | |
| Rural | 49.2 | 99.0 | 93.3 | 96.5 | 21.2 | 95.5 | 77.7 | 97.8 |
| Rural poor | 38.9 | 100.0 | 96.9 | 98.2 | 31.8 | 95.1 | 64.2 | 100.0 |
| Urban | 53.5 | 98.5 | 81.2 | 98.5 | 32.6 | 84.4 | 81.8 | 97.9 |
| Urban poor | 51.8 | 97.6 | 63.0 | 100.0 | 58.3 | 81.1 | 91.2 | 100.0 |
| **Socio-economic group** | | | | | | | | |
| Public | 64.7 | 100.0 | 94.1 | 97.2 | 9.2 | 93.3 | 90.4 | 99.4 |
| Private formal | 37.3 | 91.5 | 92.4 | 100.0 | 14.2 | 100.0 | 72.6 | 89.3 |
| Private informal | 50.6 | 100.0 | 66.4 | 100.0 | 24.6 | 85.2 | 100.0 | 90.2 |
| Self-agriculture | 46.2 | 98.4 | 91.7 | 96.8 | 26.7 | 93.1 | 79.4 | 97.0 |
| Self-other | 44.1 | 99.4 | 78.7 | 97.4 | 29.9 | 88.6 | 83.0 | 98.9 |
| Unemployed | 69.3 | 99.5 | 95.2 | 96.6 | 21.2 | 94.9 | 64.4 | 99.4 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | | | | |
| Male | 55.8 | 99.0 | 90.3 | 97.0 | 24.2 | 91.9 | 81.0 | 98.0 |
| Female | 45.8 | 98.7 | 90.3 | 97.0 | 23.9 | 93.5 | 76.5 | 97.7 |

## Table 64. Percentage Distribution of the Population by Work Status (age 15 and above)

| | Working | | | | Not working | | |
|---|---|---|---|---|---|---|---|
| | Employed | Under emp. | Total | | Unemploy. | Inactive | Total |
| **Place of residence** | | | | | | | |
| Rural | 75.4 | 0.6 | 76.0 | | 2.6 | 21.3 | 24.0 |
| Rural poor | 66.6 | 0.4 | 67.0 | | 0.6 | 32.4 | 33.0 |
| Urban | 70.0 | 0.7 | 70.7 | | 4.2 | 25.1 | 29.3 |
| Urban poor | 64.5 | 0.0 | 64.5 | | 7.8 | 27.7 | 35.5 |
| **Gender and age** | | | | | | | |
| Male | 75.1 | 0.8 | 75.9 | | 4.2 | 19.9 | 24.1 |
| 15-29 | 49.2 | 1.1 | 50.3 | | 7.1 | 42.6 | 49.7 |
| 30-49 | 97.0 | 0.6 | 97.7 | | 0.8 | 1.6 | 2.3 |
| 50-64 | 95.6 | 1.2 | 96.8 | | 0.0 | 3.2 | 3.2 |
| 65+ | 71.1 | 0.0 | 71.1 | | 10.9 | 18.0 | 28.9 |
| Female | 79.6 | 0.4 | 80.0 | | 2.0 | 17.9 | 20.0 |
| 15-29 | 67.2 | 0.6 | 67.8 | | 3.8 | 28.4 | 32.2 |
| 30-49 | 92.3 | 0.6 | 92.8 | | 1.0 | 6.2 | 7.2 |
| 50-64 | 95.0 | 0.0 | 95.0 | | 0.9 | 4.2 | 5.0 |
| 65+ | 63.0 | 0.0 | 63.0 | | 0.0 | 37.0 | 37.0 |

**Table 65. Percentage Distribution of the Working Population by Activity**

| | Agri-culture | Mining | Manu-fact. | Con-struct. | Trans-port. | Trade | Services |
|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | |
| Rural | 74.1 | 0.0 | 2.8 | 1.0 | 0.3 | 9.9 | 11.8 |
| Rural poor | 80.2 | 0.0 | 2.8 | 0.0 | 0.0 | 13.0 | 4.0 |
| Urban | 39.1 | 0.0 | 6.5 | 1.6 | 2.4 | 30.9 | 19.5 |
| Urban poor | 58.8 | 0.0 | 4.8 | 1.6 | 0.0 | 27.0 | 7.8 |
| **Gender and age** | | | | | | | |
| Male | 67.1 | 0.0 | 3.7 | 2.6 | 1.7 | 6.8 | 18.2 |
| 15-29 | 56.7 | 0.0 | 5.0 | 2.9 | 1.9 | 14.6 | 18.9 |
| 30-49 | 67.4 | 0.0 | 3.2 | 3.3 | 1.9 | 5.1 | 19.1 |
| 50-64 | 69.3 | 0.0 | 3.8 | 1.2 | 1.8 | 2.7 | 21.2 |
| 65+ | 92.6 | 0.0 | 2.3 | 0.0 | 0.0 | 0.0 | 5.1 |
| Female | 66.3 | 0.0 | 3.6 | 0.2 | 0.1 | 19.9 | 9.9 |
| 15-29 | 56.8 | 0.0 | 4.2 | 0.3 | 0.2 | 28.9 | 9.6 |
| 30-49 | 67.2 | 0.0 | 3.7 | 0.0 | 0.1 | 18.8 | 10.3 |
| 50-64 | 80.7 | 0.0 | 1.9 | 0.4 | 0.0 | 8.8 | 8.2 |
| 65+ | 73.8 | 0.0 | 4.3 | 0.0 | 0.0 | 8.3 | 13.7 |

# NORTHERN REGION

## Introduction

The Northern Region is the largest in land area of the ten Regions in Ghana. It is situated between the two Upper Regions and Brong Ahafo and Volta Regions. Together with Upper East and West, they form the savannah woodland. A prolonged dry season and low rainfall, with average temperatures between 21 and 32 degrees Celsius, and low population density characterize much of the savannah woodland. During the last population census in 1984, the Northern Region recorded the lowest population density in Ghana (17 persons per km$^2$).

Tamale, the capital of the Northern Region, recorded a density of 696 persons per km2, and is the main business center of the entire northern part of the country. It is endowed with modern infrastructure services, thereby drawing people from other parts of the Region to support business activities. Throughout the rest of the Northern Region, inadequate infrastructure amenities, inaccessibility, lack of employment opportunities, and unfavorable weather conditions are among factors contributing to its low population density (Ghana Statistical Services 1995).
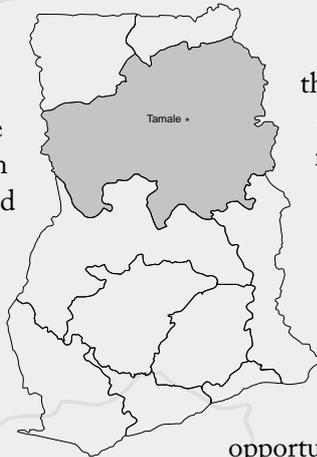
## Household Characteristics

The Northern Region accounts for about 10 percent of the country's population, 77 percent of whom live in rural areas. The

**Figure 26. Household Size by Locality**
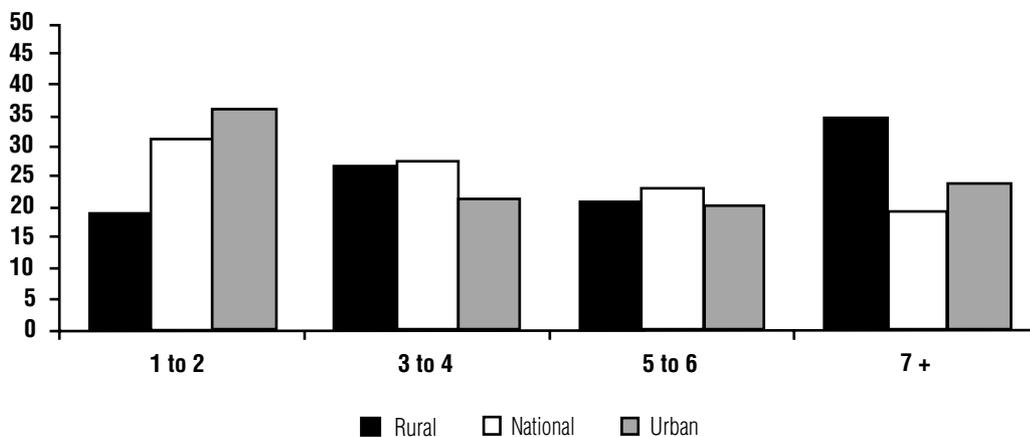
*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

incidence of poverty is perhaps greatest in this Region with an average household size of 5.3 (the largest in the nation). Males with very little or no formal education (about 60 percent), working in the agriculture sector, constitute the vast majority of household heads in the Northern Region.

Household heads in urban areas exhibit variations in the employment sector distribution, compared with their rural counterparts. Nearly 26 percent of household heads in the urban localities work in agriculture, 12 percent in the public sector, and 33.8 percent are self-employed. While in the rural areas, only 1.9 percent work in the public sector, the majority (86.2 percent) work in the agriculture sector.

## Education

In spite of programmes by various post-Independence governments in Ghana to increase educational attainment rates, literacy still remains low in the Northern Region. Nearly 58 percent of all urban household heads surveyed in 1997 had never attended school.

High primary enrollment rates, however, point to the effectiveness of the current educational efforts to improve access to primary education—70 percent of households have access to primary education. Similarly, the literacy rate (as a measure of past educational efforts) at 16.8 percent for the Northern Region, is very low, the lowest of all the Regions. Other educational indicators are also troublesome; satisfaction with primary and secondary education systems and secondary enrollment rates (satisfaction at 40 percent and secondary enrollment at 30 percent) are among the lowest in the country.

Other indicators in the Northern Region also merit mentioning. Access to secondary education is the second lowest in the country (10 percent). Satisfaction with primary education is highest among households headed by private formal sector employees, perhaps due to the better quality of education received by their children in private primary schools. Lack of books appears to be the leading cause of dissatisfaction with the public school system.

Figure 28 graphically depicts several major comparisons of the northern Region with all of Ghana.

**Figure 27. Access, Usage, and Satisfaction with Education**
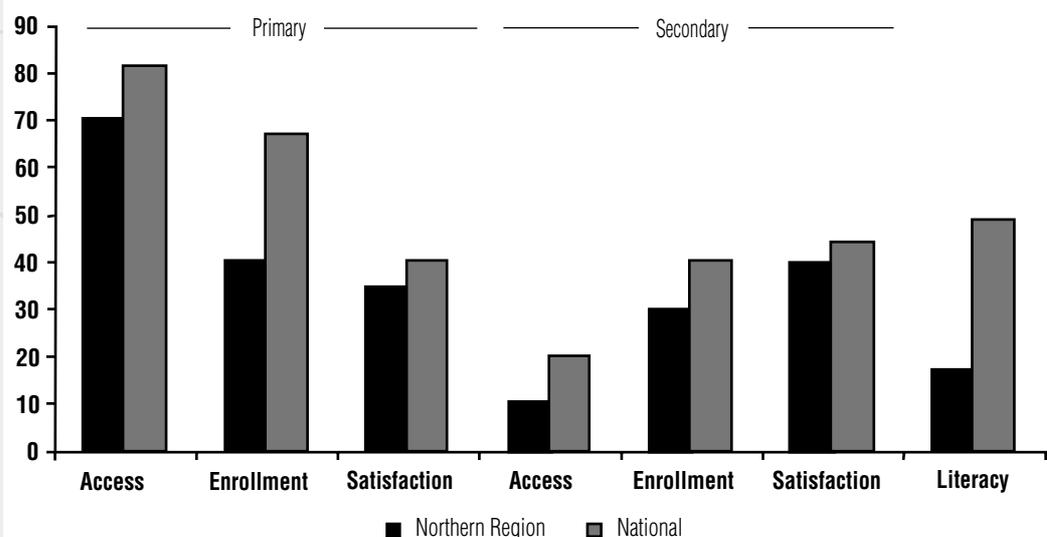


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

**Figure 28. Access, Usage, and Satisfaction with Health Services**
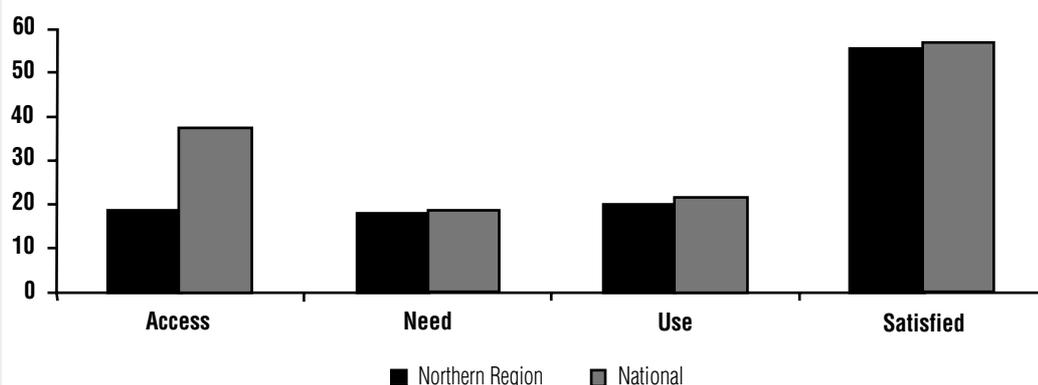


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

## Health

Medical consultation during illness depends in part on the severity of the illness, accessibility to a health facility, and the ability to pay for necessary medical services. Most modern medical facilities in Ghana tend to be concentrated in the southern part of the country, and the few that are available in the northern part are primarily located in the urban areas. This requires those living in the north to travel long distances (more than an hour) to receive medical treatment. Poor transport facilities, coupled with some of the problems mentioned previously, make it necessary for Northerners to seek alternative treatment from herbalists or traditional healers found in local communities.

Access to health facilities in the North is among the poorest in the country (only 18 percent have access). Among the respondents who reported being ill or injured in the four weeks prior to the survey, the majority (80 percent) did not consult any health provider because they thought it was unnecessary. Those who consulted health providers (44 percent) were dissatisfied with the treatment because of unsanitary conditions and the lack of trained medical professionals at the facilities. The use of maternal and child health services during and after pregnancy helped increase the survival chances of infants; however, a significant number of childbirths (85.9 percent) occurred at home.

## Housing and Household Amenities

High home ownership rates, poor access to amenities (electricity, indoor plumbing, and lack of proper sanitation), and a predominance of mud houses characterized much of the Northern Region's housing environment. Significant numbers of Northerners (43 percent) live in dwellings with no form of payment, and about five percent rent. Renters in Ghana tend to enjoy better quality housing than homeowners. It is worth noting that only 0.4 percent of households in the Northern Region have a flush toilet, and roughly 17.4 percent have piped water. Wood is the dominant cooking fuel used in the majority of households and gas/oil the dominant lighting fuel.

Ownership of other consumer durable goods such as refrigerators and television sets is uncommon among northerners. One-half of the population, however, owns a bicycle, which is their major means of transportation. About one-third of households own radios, or a watch, or clocks, and 6 percent own television sets.

**Figure 29. Access to water and public services (percent)**
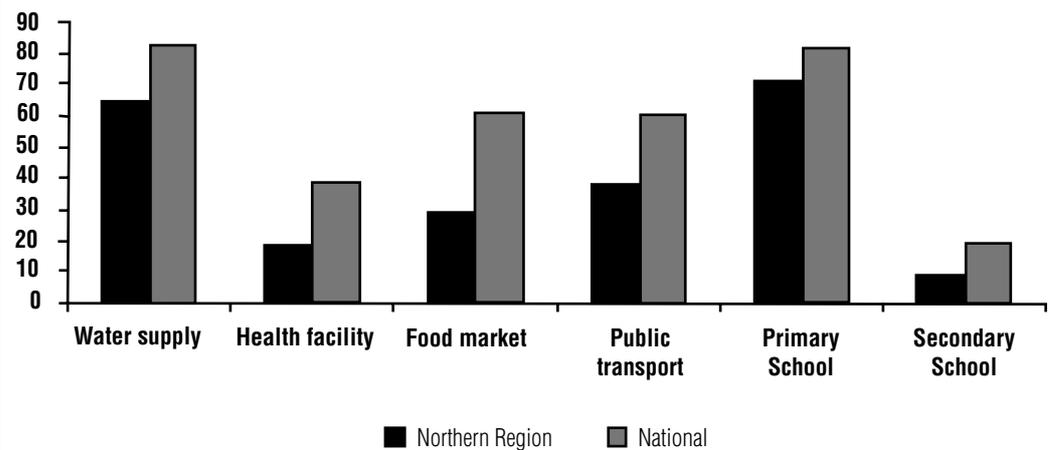


Source: GLSS III; GCWIQ I; Ghana Statistical Service.

A simple visual (figure 30) shows the proportion of households within 30 minutes of walking distance to the nearest facilities. That is, on average, 60 percent of Northerners are within 30 minutes from the nearest source of water (for example, borehole) compared with 80 percent for the country as a whole.

## Employment

Although the northern part of Ghana (comprising the Northern, Upper East, and Upper West Regions) accounts for about 40 percent of the land area, it is less densely populated, but still accounts for 14 percent of agricultural production in the country (Ghana Statistical Service 1995). Low rainfall and the prolonged dry season permit one main cropping cycle during the year. A majority of the Northerners (70 percent) are employed in the agriculture sector, and about 10 percent of the workforce is underemployed. The remaining 20 percent are economically inactive. The proportion of individuals engaged in agriculture falls sharply according to the income quintile, from around two-thirds in the first quintile to around one-third in the fifth, while those working in wage employment in the public and private sector are uniformly distributed within the income quintile.

**Table 66. Households by Place of Residence**

|  | Unweighted | Percentage | Weighted | Percentage |
|---|---|---|---|---|
| **Type of residence** | | | | |
| Rural | 592 | 75.0 | 173,978 | 72.6 |
| Urban | 197 | 25.0 | 65,776 | 27.4 |
| Total | 789 | 100.0 | 239,755 | 100.0 |

## Table 67. Percent Distribution of the Rural and Urban Households by Characteristics of the Head of Household

| | Rural | | | | Urban | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Unweighted | Percentage | Weighted | Percentage | Unweighted | Percentage | Weighted | Percentage |
| **Socio-economic group** | 592 | 75.0 | 173,978 | 72.6 | 197 | 25.0 | 65,776 | 27.4 |
| Public | 14 | 2.4 | 3,325 | 1.9 | 26 | 13.2 | 7,940 | 12.1 |
| Private formal | 2 | 0.3 | 533 | 0.3 | 3 | 1.5 | 1,797 | 2.7 |
| Private informal | 5 | 0.8 | 1,440 | 0.8 | 3 | 1.5 | 2,025 | 3.1 |
| Self-agriculture | 505 | 85.3 | 149,910 | 86.2 | 75 | 38.1 | 16,893 | 25.7 |
| Self-other | 48 | 8.1 | 13,952 | 8.0 | 66 | 33.5 | 22,222 | 33.8 |
| Unemployed | 18 | 3.0 | 4,818 | 2.8 | 24 | 12.2 | 14,899 | 22.7 |
| Other | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Total | 592 | 100.0 | 173,979 | 100.0 | 197 | 100.0 | 65,776 | 100.0 |
| **Gender** | | | | | | | | |
| Male | 551 | 93.1 | 163,374 | 93.9 | 153 | 77.7 | 50,830 | 77.3 |
| Female | 41 | 6.9 | 10,604 | 6.1 | 44 | 22.3 | 14,946 | 22.7 |
| Total | 592 | 100.0 | 173,979 | 100.0 | 197 | 100.0 | 65,776 | 100.0 |
| **Marital status** | | | | | | | | |
| Single | 62 | 10.5 | 17,859 | 10.3 | 26 | 13.2 | 10,175 | 15.5 |
| Monogamous | 327 | 55.2 | 96,582 | 55.5 | 92 | 46.7 | 28,783 | 43.8 |
| Polygamous | 143 | 24.2 | 42,818 | 24.6 | 36 | 18.3 | 10,721 | 16.3 |
| Widowe/div/sep | 60 | 10.1 | 16,719 | 9.6 | 43 | 21.8 | 16,097 | 24.5 |
| Total | 592 | 100.0 | 173,979 | 100.0 | 197 | 100.0 | 65,776 | 100.0 |
| **Highest level of education** | | | | | | | | |
| None | 487 | 82.3 | 142,178 | 81.7 | 126 | 64.0 | 38,579 | 58.7 |
| Some Primary | 28 | 4.7 | 9,457 | 5.4 | 10 | 5.1 | 3,891 | 5.9 |
| Comp. Primary | 15 | 2.5 | 4,486 | 2.6 | 5 | 2.5 | 1,185 | 1.8 |
| Comp. JSS | 38 | 6.4 | 11,412 | 6.6 | 27 | 13.7 | 10,652 | 16.2 |
| Comp. SSS | 3 | 0.5 | 870 | 0.5 | 4 | 2.0 | 2,020 | 3.1 |
| Other | 21 | 3.5 | 5,576 | 3.2 | 25 | 12.7 | 9,451 | 14.4 |
| Total | 592 | 100.0 | 173,979 | 100.0 | 197 | 100.0 | 65,776 | 100.0 |

## Table 68. Education Indicators

| | | Primary | | | Secondary | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | Literacy rate | Access | Enrollment | Satisfaction | Access | Enrollment | Satisfaction |
| **Place of residence** | | | | | | | |
| Rural | 9.5 | 72.0 | 33.8 | 24.4 | 9.3 | 21.8 | 26.7 |
| Rural poor | 10.1 | 67.0 | 34.8 | 17.1 | 9.9 | 26.1 | 21.8 |
| Urban | 37.6 | 61.4 | 68.1 | 57.3 | 12.4 | 47.6 | 53.4 |
| Urban poor | 28.6 | 54.2 | 67.2 | 59.4 | 12.7 | 44.9 | 51.9 |
| **Socio-economic group** | | | | | | | |
| Public | 54.4 | 63.7 | 63.5 | 43.1 | 12.8 | 65.4 | 49.2 |
| Private formal | 64.1 | 80.6 | 31.9 | 74.9 | 0.0 | 81.4 | 15.0 |
| Private informal | 25.4 | 100.0 | 75.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Self-agriculture | 9.7 | 71.1 | 35.9 | 30.1 | 9.7 | 25.8 | 36.6 |
| Self-other | 29.9 | 70.2 | 68.1 | 54.9 | 10.1 | 30.4 | 61.4 |
| Unemployed | 39.0 | 25.9 | 51.6 | 25.0 | 20.5 | 28.2 | 11.8 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | | | |
| Male | 24.8 | 70.6 | 43.4 | 30.7 | 10.4 | 35.7 | 40.9 |
| Female | 9.3 | 69.5 | 36.0 | 39.7 | 10.0 | 21.3 | 36.0 |

**Table 69. Percentage of Students Not Satisfied with School by Reason of Dissatisfaction**

| | Percent dissatisfied | Books/ supplies | Teaching | Lack of space | Facilities | Other |
|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | |
| Rural | 73.3 | 66.3 | 8.1 | 42.6 | 35.9 | 0.0 |
| Rural poor | 78.3 | 70.9 | 5.9 | 33.5 | 47.8 | 0.0 |
| Urban | 44.0 | 77.9 | 4.5 | 27.5 | 23.6 | 1.0 |
| Urban poor | 42.2 | 84.0 | 2.2 | 19.7 | 6.9 | 2.3 |
| **Socio-economic group** | | | | | | |
| Public | 57.0 | 72.8 | 1.8 | 25.4 | 26.1 | 3.3 |
| Private formal | 39.9 | 85.2 | 0.0 | 14.8 | 0.0 | 0.0 |
| Private informal | 100.0 | 43.9 | 0.0 | 0.0 | 15.8 | 0.0 |
| Self-agriculture | 67.5 | 67.8 | 7.8 | 41.1 | 35.8 | 0.0 |
| Self-other | 50.1 | 80.9 | 10.6 | 35.7 | 30.6 | 0.0 |
| Unemployed | 48.6 | 49.9 | 0.0 | 53.2 | 5.3 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | | |
| Male | 64.9 | 68.6 | 7.9 | 39.9 | 30.6 | 0.4 |
| Female | 60.0 | 70.2 | 6.2 | 37.2 | 36.6 | 0.0 |

**Table 70. Health Indicators**

| | Medical Services | | | |
|---|---|---|---|---|
| | Access | Need | Use | Satisfaction |
| **Place of residence** | | | | |
| Rural | 14.0 | 17.1 | 17.9 | 51.2 |
| Rural poor | 12.1 | 13.9 | 14.3 | 55.3 |
| Urban | 33.2 | 21.7 | 26.9 | 65.4 |
| Urban poor | 27.1 | 14.5 | 20.5 | 47.6 |
| **Socio-economic group** | | | | |
| Public | 30.8 | 24.2 | 29.2 | 53.0 |
| Private formal | 18.1 | 11.6 | 13.4 | 86.9 |
| Private informal | 42.5 | 19.1 | 19.1 | 79.7 |
| Self-agriculture | 14.7 | 16.5 | 17.4 | 52.8 |
| Self-other | 42.2 | 21.2 | 28.1 | 69.6 |
| Unemployed | 8.3 | 35.3 | 37.9 | 49.7 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | |
| Male | 18.5 | 19.1 | 20.2 | 54.3 |
| Female | 18.3 | 17.2 | 19.7 | 56.9 |

### Table 71. Percentage of Persons Sick Who Did Not Consult a Health Provider and the Reason for Not Consulting

|  | % not consulting | No need | Cost | Distance | Other |
|---|---|---|---|---|---|
| **Place of residence** |  |  |  |  |  |
| Rural | 82.1 | 97.7 | 2.5 | 0.8 | 0.0 |
| Rural poor | 85.6 | 98.0 | 1.9 | 0.3 | 0.0 |
| Urban | 73.0 | 96.6 | 3.4 | 0.0 | 0.0 |
| Urban poor | 79.3 | 99.3 | 2.0 | 0.0 | 0.0 |
| **Socio-economic group** |  |  |  |  |  |
| Public | 70.8 | 98.8 | 0.5 | 1.2 | 0.0 |
| Private formal | 86.6 | 100.0 | 0.0 | 0.0 | 0.0 |
| Private informal | 80.9 | 100.0 | 0.0 | 0.0 | 0.0 |
| Self-agriculture | 82.5 | 97.8 | 2.6 | 0.6 | 0.0 |
| Self-other | 71.9 | 97.3 | 2.3 | 0.3 | 0.0 |
| Unemployed | 62.1 | 85.4 | 11.3 | 0.5 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** |  |  |  |  |  |
| Male | 79.7 | 97.3 | 2.7 | 0.8 | 0.0 |
| Female | 80.2 | 97.6 | 2.7 | 0.4 | 0.0 |

### Table 72. Percentage of Persons Sick Who Consulted a Health Provider

|  | Percent dissatisfied | Facilities not clean | Long wait | No trained professionals | Cost | No drugs available | Treatment unsuccessful | Other |
|---|---|---|---|---|---|---|---|---|
| **Place of residence** |  |  |  |  |  |  |  |  |
| Rural | 48.8 | 100.0 | 92.4 | 98.9 | 37.8 | 94.7 | 68.3 | 97.7 |
| Rural poor | 44.7 | 100.0 | 95.5 | 100.0 | 38.5 | 100.0 | 65.5 | 97.0 |
| Urban | 34.6 | 98.1 | 67.3 | 99.5 | 42.2 | 93.5 | 79.5 | 100.0 |
| Urban poor | 52.4 | 95.7 | 64.1 | 100.0 | 18.3 | 96.8 | 93.2 | 100.0 |
| **Socio-economic group** |  |  |  |  |  |  |  |  |
| Public | 47.0 | 100.0 | 64.4 | 96.9 | 25.6 | 100.0 | 88.4 | 100.0 |
| Private formal | 13.1 | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 |
| Private informal | 20.3 | 100.0 | 0.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 |
| Self-agriculture | 47.2 | 99.4 | 94.0 | 98.9 | 36.0 | 94.0 | 70.9 | 97.6 |
| Self-other | 30.4 | 100.0 | 67.8 | 100.0 | 39.1 | 95.8 | 74.9 | 100.0 |
| Unemployed | 50.3 | 100.0 | 67.3 | 100.0 | 69.8 | 95.9 | 52.8 | 100.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** |  |  |  |  |  |  |  |  |
| Male | 45.7 | 99.3 | 85.7 | 99.4 | 37.9 | 93.5 | 70.8 | 98.4 |
| Female | 43.1 | 99.7 | 87.1 | 98.6 | 40.0 | 95.4 | 71.3 | 98.0 |

**Table 73. Percentage Distribution of the Population by Work Status (age 15 and above)**

| | Working | | | | Not working | | |
|---|---|---|---|---|---|---|---|
| | Employed | Under emp. | Total | | Unemploy. | Inactive | Total |
| **Place of residence** | | | | | | | |
| Rural | 87.0 | 0.0 | 87.0 | | 0.8 | 12.3 | 13.0 |
| Rural poor | 82.2 | 0.0 | 82.2 | | 0.9 | 16.9 | 17.8 |
| Urban | 59.5 | 1.3 | 60.8 | | 9.0 | 30.2 | 39.2 |
| Urban poor | 57.3 | 2.0 | 59.2 | | 4.8 | 36.0 | 40.8 |
| **Gender and age** | | | | | | | |
| Male | 81.3 | 0.0 | 81.3 | | 4.0 | 14.8 | 18.7 |
| 15-29 | 64.0 | 0.0 | 64.0 | | 5.3 | 30.7 | 36.0 |
| 30-49 | 95.0 | 0.0 | 95.0 | | 4.4 | 0.5 | 5.0 |
| 50-64 | 98.5 | 0.0 | 98.5 | | 0.0 | 1.5 | 1.5 |
| 65+ | 77.9 | 0.0 | 77.9 | | 0.9 | 21.2 | 22.1 |
| Female | 81.1 | 0.4 | 81.5 | | 2.1 | 16.4 | 18.5 |
| 15-29 | 75.9 | 0.1 | 76.1 | | 3.0 | 20.9 | 23.9 |
| 30-49 | 92.2 | 0.9 | 93.0 | | 1.5 | 5.4 | 7.0 |
| 50-64 | 76.3 | 0.0 | 76.3 | | 0.0 | 23.7 | 23.7 |
| 65+ | 47.3 | 0.0 | 47.3 | | 3.6 | 49.1 | 52.7 |

**Table 74. Percentage Distribution of the Working Population by Activity**

| | Agri-culture | Mining | Manu-fact. | Con-struct. | Trans-port. | Trade | Services |
|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | |
| Rural | 80.9 | 0.0 | 8.6 | 0.4 | 0.3 | 8.0 | 1.8 |
| Rural poor | 81.9 | 0.0 | 7.2 | 0.0 | 0.0 | 10.3 | 0.6 |
| Urban | 27.5 | 0.0 | 15.0 | 4.2 | 2.5 | 36.3 | 14.6 |
| Urban poor | 38.7 | 0.0 | 23.8 | 0.5 | 1.4 | 28.1 | 7.4 |
| **Gender and age** | | | | | | | |
| Male | 84.0 | 0.0 | 2.4 | 2.4 | 1.4 | 3.2 | 6.7 |
| 15-29 | 86.9 | 0.0 | 0.9 | 1.8 | 2.0 | 4.9 | 3.5 |
| 30-49 | 81.4 | 0.0 | 3.7 | 3.0 | 1.2 | 1.9 | 8.8 |
| 50-64 | 80.3 | 0.0 | 2.7 | 2.5 | 1.5 | 3.9 | 9.1 |
| 65+ | 95.5 | 0.0 | 0.0 | 1.2 | 0.0 | 1.1 | 2.2 |
| Female | 57.0 | 0.0 | 16.9 | 0.1 | 0.1 | 23.2 | 2.6 |
| 15-29 | 57.6 | 0.0 | 13.4 | 0.3 | 0.3 | 25.6 | 2.8 |
| 30-49 | 59.7 | 0.0 | 16.8 | 0.0 | 0.0 | 20.9 | 2.5 |
| 50-64 | 43.3 | 0.0 | 29.1 | 0.0 | 0.0 | 26.0 | 1.6 |
| 65+ | 53.9 | 0.0 | 29.5 | 0.0 | 0.0 | 12.1 | 4.5 |

# UPPER EAST REGION

## Introduction

Upper East Region was created in 1983 by the apportionment of the former Upper Region into Upper East and Upper West Regions. Upper East Region is situated at the northeastern corner of the country and is bound on the east by the Republic of Togo and on the north by the Republic of Burkina Faso. As previously indicated, Upper East Region falls within the savannah woodland ecological zone and is sparsely populated, except in the Regional capital, Bolgatanga. A prolonged dry season and low rainfall with average temperatures between 21 and 32 degrees Celsius characterize much of this Region. Access to basic social services (for example, health and education) and infrastructure is among the least developed in the country, resulting in poor access, utilization, and satisfaction with basic needs attainment.

## Household Characteristics

The average household head in the Upper East Region is male (88 percent), married, and lives in a household of five or more members. Most household heads in this Region (84 percent) are poor, with little or no education and are self-employed agricultural workers. In the rural area, nearly 82 percent of the household heads are employed in the agriculture sector, and 20 percent in the urban areas. Well over two-thirds of the household heads in the rural areas have no formal education.
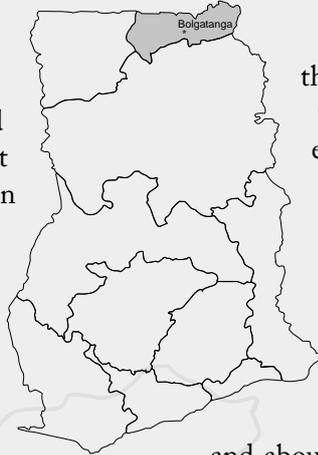
## Education

In the Upper East Region, less than one-half of school-age children are enrolled in primary schools (45 percent) and about one-third are enrolled in secondary school. However, the literacy rate in the Region is very low, especially for females (31 percent). The gap between the primary and secondary enrollment rate by gender is quite small, except for literacy rates where the gap is the widest. However, dropout rates by gender in primary and secondary schools are quite low.

While primary and lower secondary school enrollment rates are consistent with the national averages, accessibility remains a problem. Less than one-half of the Region's inhabitants have access to primary education and only about 8.4 percent have access to secondary education. Perhaps the high primary enrollment rates in this Region may be an indication of the efforts on the part of families to have their children educated regardless of the distance to educational institutions.

Satisfaction with the educational system in the Upper East Region (35.9 percent satisfied with primary and 31.7 percent with secondary school) is well below the national average (40.4 percent and 43.9 percent, respectively). The most common reasons for dissatisfaction are the lack of books and poor facilities.

**Figure 30. Access, Usage, and Satisfaction with Education**
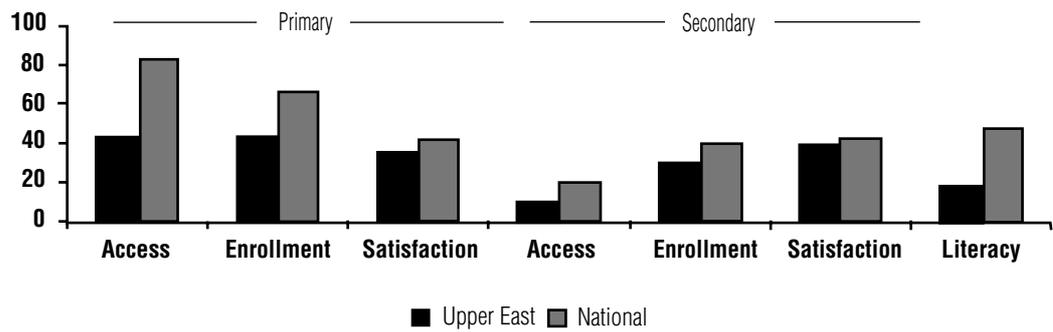


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

## Health

As indicated in figure 32, the Upper East Region has poor access to health facilities. While access to health services remains an important indicator of welfare, only 10 percent of households (national average of 37 percent) have access to such facilities. Of all household members who reported being ill or injured in the four weeks preceding the survey (11.8 percent), 11 percent sought treatment from the nearby primary health center or government health facility.

Examination of the type of illness or injury suffered by respondents indicates that malaria and diarrhea/gastro-intestinal diseases were the most common medical problems reported. Satisfaction with the use of health facilities mirrored national figures of 57 percent, and the main reason attributed to the dissatisfaction was the lack of trained health providers, and unclean facilities. It is worth noting that the use of maternal and child health services during and after pregnancy is very low in the Upper East Region. Less than 13 percent of births in the Upper East Region were attended to by health professionals in hospitals or maternity homes. Most deliveries during the five years preceding the

**Figure 31. Access, Usage, and Satisfaction with Health Services**
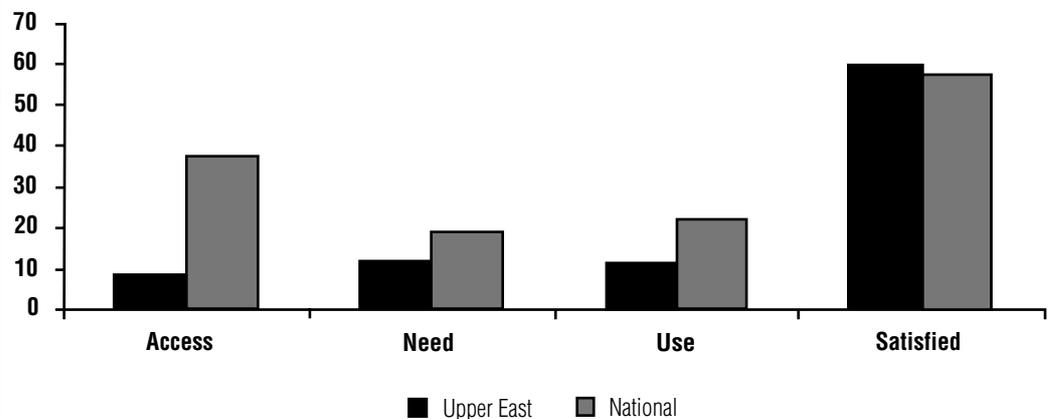


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

survey (87 percent) occurred outside health facilities.

## Housing and Household Amenities

In most developed countries, owner-occupancy to tenancies indicates some economic stress on the part of households, however, the majority of non-poor households in the Upper East Region, as in the rest of the nation, rent their dwelling. Though the home ownership rate is high in the Upper East Region (for both rural and urban households), the quality of dwellings owned and access to amenities is poor. For example, 84 percent of households in the Upper East Region own their dwelling, 5.7 percent rent and the remaining 10.1 percent either live rent-free or stay with relatives or friends. Additionally, 66.9 percent of all the roofing materials in this Region were thatch or wood, 91.7 percent of the wall material was mud, and less than seven percent of the dwellings have water and electricity. The dry season water supply, using wells and bore holes, is insufficient to meet demand and in some cases girls under the age of 15 have to travel more than 12 miles to retrieve water.

Ownership of assets is a direct indicator of well-being. Significant numbers of households owned bicycles and land in the Upper East Region. Ownership of other consumer durable goods such as refrigerators, television sets, and electric irons is very low, perhaps due to the lack of electricity in most northern households.

The slow progress in the development of social services in the Upper East Region is highlighted by the gap in the distance to those services with respect to the national average (figure 33). Distribution of access to basic needs (that is, public transport, health facilities and food market) is relatively poor compared with the national average. The only exception is access to drinking water.

## Employment

The agricultural sector employs approximately 80 percent of the workforce in the Upper East Region. The main crops harvested include yams and millet, with some diversification into vegetable farming during the dry season. About one-tenth of the workforce is underemployed, 2.3 percent unemployed, and 17 percent of the population is inactive. The majority of the inactive population is those age 15–29 (39 percent) or 65 and above (50 percent). Most households in the upper quintile are employed in the formal sector (mainly public or semi-public sector employees), while those in the lower quintile work primarily in the agriculture sector.

**Figure 32. Access to Facilities**
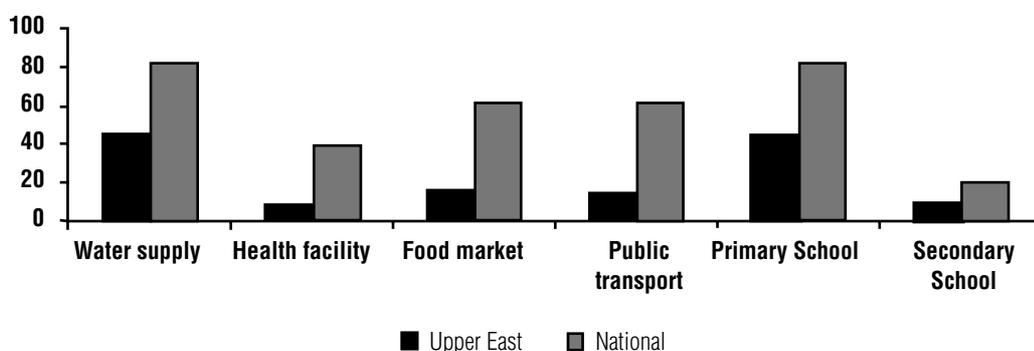


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

### Table 75. Households by Place of Residence

|  | Unweighted | Percentage | Weighted | Percentage |
|---|---|---|---|---|
| **Type of residence** | | | | |
| Rural | 573 | 88.4 | 109,492 | 91.0 |
| Urban | 75 | 11.6 | 10,810 | 9.0 |
| Total | 648 | 100.0 | 120,301 | 100.0 |

### Table 76. Percent Distribution of the Rural and Urban Households by Characteristics of the Head of Household

|  | Rural | | | | Urban | | | |
|---|---|---|---|---|---|---|---|---|
|  | Unweighted | Percentage | Weighted | Percentage | Unweighted | Percentage | Weighted | Percentage |
| **Socio-economic group** | | | | | | | | |
| Public | 43 | 7.5 | 7,493 | 6.8 | 29 | 38.7 | 4,150 | 38.4 |
| Private formal | 2 | 0.3 | 305 | 0.3 | 2 | 2.7 | 302 | 2.8 |
| Private informal | 5 | 0.9 | 896 | 0.8 | 2 | 2.7 | 281 | 2.6 |
| Self-agriculture | 464 | 81.0 | 89,843 | 82.1 | 15 | 20.0 | 2,199 | 20.3 |
| Self-other | 41 | 7.2 | 7,569 | 6.9 | 25 | 33.3 | 3,595 | 33.3 |
| Unemployed | 17 | 3.0 | 3,246 | 3.0 | 2 | 2.7 | 282 | 2.6 |
| Other | 1 | 0.2 | 140 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| Total | 573 | 100.0 | 109,492 | 100.0 | 75 | 100.0 | 10,810 | 100.0 |
| **Gender** | | | | | | | | |
| Male | 507 | 88.5 | 96,682 | 88.3 | 53 | 70.7 | 7,627 | 70.6 |
| Female | 66 | 11.5 | 12,810 | 11.7 | 22 | 29.3 | 3,183 | 29.4 |
| Total | 573 | 100.0 | 109,492 | 100.0 | 75 | 100.0 | 10,809 | 100.0 |
| **Marital status** | | | | | | | | |
| Single | 18 | 3.1 | 3,228 | 2.9 | 2 | 2.7 | 302 | 2.8 |
| Monogamous | 313 | 54.6 | 60,704 | 55.4 | 37 | 49.3 | 5,358 | 49.6 |
| Polygamous | 150 | 26.2 | 28,243 | 25.8 | 14 | 18.7 | 1,968 | 18.2 |
| Widowe/div/sep | 92 | 16.1 | 17,317 | 15.8 | 22 | 29.3 | 3,181 | 29.4 |
| Total | 573 | 100.0 | 109,492 | 100.0 | 75 | 100.0 | 10,810 | 100.0 |
| **Highest level of education** | | | | | | | | |
| None | 480 | 83.8 | 92,478 | 84.5 | 34 | 45.3 | 4,909 | 45.4 |
| Some Primary | 24 | 4.2 | 4,666 | 4.3 | 4 | 5.3 | 586 | 5.4 |
| Comp. Primary | 7 | 1.2 | 1,327 | 1.2 | 0 | 0.0 | 0 | 0.0 |
| Comp. JSS | 27 | 4.7 | 5,143 | 4.7 | 15 | 20.0 | 2,224 | 20.6 |
| Comp. SSS | 1 | 0.2 | 184 | 0.2 | 1 | 1.3 | 150 | 1.4 |
| Other | 34 | 5.9 | 5,693 | 5.2 | 21 | 28.0 | 2,940 | 27.2 |

## Table 77. Education Indicators

| | Literacy rate | Primary | | | Secondary | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | Access | Enrollment | Satisfaction | Access | Enrollment | Satisfaction |
| **Place of residence** | | | | | | | |
| Rural | 13.3 | 43.7 | 42.2 | 37.9 | 9.2 | 27.6 | 40.3 |
| Rural poor | 8.2 | 46.6 | 37.2 | 32.8 | 4.1 | 26.8 | 26.8 |
| Urban | 55.4 | 71.0 | 81.7 | 22.2 | 2.1 | 62.6 | 42.7 |
| Urban poor | 37.3 | 63.0 | 78.2 | 14.0 | 0.0 | 72.2 | 9.3 |
| **Socio-economic group** | | | | | | | |
| Public | 72.1 | 58.9 | 78.2 | 28.5 | 28.2 | 68.0 | 40.7 |
| Private formal | 61.2 | 0.0 | 62.3 | 36.3 | 0.0 | 46.0 | 100.0 |
| Private informal | 28.2 | 17.1 | 63.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| Self-agriculture | 8.6 | 44.3 | 39.0 | 41.0 | 6.0 | 25.6 | 39.9 |
| Self-other | 28.9 | 55.3 | 74.3 | 18.3 | 7.5 | 39.9 | 37.7 |
| Unemployed | 21.4 | 46.3 | 80.2 | 0.0 | 0.0 | 30.1 | 68.4 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | | | |
| Male | 22.7 | 44.2 | 48.7 | 32.4 | 10.0 | 33.8 | 41.3 |
| Female | 11.9 | 47.3 | 41.0 | 40.6 | 6.5 | 29.2 | 40.3 |

## Table 78. Percentage of Students Not Satisfied with School by Reasons for Dissatisfaction

| | Percent dissatisfied | Books/ supplies | Teaching | Lack of space | Facilities | Other |
| --- | --- | --- | --- | --- | --- | --- |
| **Place of residence** | | | | | | |
| Rural | 62.2 | 55.2 | 14.2 | 38.5 | 49.6 | 2.8 |
| Rural poor | 70.5 | 42.8 | 7.3 | 39.2 | 68.1 | 2.7 |
| Urban | 69.7 | 78.1 | 9.7 | 20.6 | 37.6 | 3.4 |
| Urban poor | 87.0 | 59.1 | 16.4 | 36.4 | 16.4 | 0.0 |
| **Socio-economic group** | | | | | | |
| Public | 65.0 | 77.0 | 16.6 | 14.5 | 51.1 | 0.0 |
| Private formal | 53.0 | 77.9 | 0.0 | 0.0 | 100.0 | 22.1 |
| Private informal | 100.0 | 45.9 | 48.9 | 54.1 | 32.4 | 12.8 |
| Self-agriculture | 60.3 | 55.0 | 12.4 | 41.4 | 45.3 | 3.2 |
| Self-other | 76.3 | 57.2 | 8.7 | 27.8 | 58.8 | 3.7 |
| Unemployed | 72.5 | 51.5 | 27.0 | 69.9 | 16.9 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | | |
| Male | 66.0 | 56.4 | 14.7 | 40.6 | 48.1 | 3.3 |
| Female | 59.6 | 63.3 | 11.6 | 27.5 | 46.8 | 2.4 |

**Table 79. Health Indicators**

| | Medical Services | | | |
|---|---|---|---|---|
| | Access | Need | Use | Satisfaction |
| **Place of residence** | | | | |
| Rural | 8.2 | 11.0 | 10.3 | 60.4 |
| Rural poor | 12.4 | 11.6 | 11.0 | 54.9 |
| Urban | 7.7 | 20.6 | 19.4 | 53.4 |
| Urban poor | 8.7 | 19.4 | 16.9 | 31.6 |
| **Socio-economic group** | | | | |
| Public | 15.7 | 19.5 | 19.4 | 55.0 |
| Private formal | 0.0 | 4.3 | 4.3 | 0.0 |
| Private informal | 11.7 | 10.9 | 10.9 | 100.0 |
| Self-agriculture | 5.6 | 10.1 | 9.3 | 62.4 |
| Self-other | 27.5 | 22.2 | 20.7 | 54.9 |
| Unemployed | 12.1 | 12.7 | 11.2 | 22.5 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | |
| Male | 8.6 | 12.1 | 11.5 | 57.8 |
| Female | 7.8 | 11.5 | 10.5 | 61.1 |

**Table 80. Percentage of Persons Sick Who Did Not Consult a Health Provider and the Reason for Not Consulting**

| | % not consulting | No need | Cost | Distance | Other |
|---|---|---|---|---|---|
| **Place of residence** | | | | | |
| Rural | 89.7 | 99.0 | 1.2 | 0.1 | 0.0 |
| Rural poor | 89.0 | 98.6 | 1.2 | 0.2 | 0.1 |
| Urban | 80.6 | 96.3 | 3.7 | 0.0 | 0.0 |
| Urban poor | 83.1 | 97.0 | 3.0 | 0.0 | 0.0 |
| **Socio-economic group** | | | | | |
| Public | 80.6 | 99.7 | 0.3 | 0.0 | 0.0 |
| Private formal | 95.7 | 100.0 | 0.0 | 0.0 | 0.0 |
| Private informal | 89.1 | 100.0 | 0.0 | 0.0 | 0.0 |
| Self-agriculture | 90.7 | 98.8 | 1.4 | 0.2 | 0.0 |
| Self-other | 79.3 | 97.1 | 2.9 | 0.0 | 0.0 |
| Unemployed | 88.8 | 100.0 | 0.8 | 0.0 | 0.0 |
| Other | 100.0 | 100.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | |
| Male | 88.4 | 99.2 | 1.0 | 0.1 | 0.0 |
| Female | 89.5 | 98.4 | 1.7 | 0.1 | 0.0 |

## Table 81. Percentage of Persons Sick Who Consulted a Health Provider

| | Percent dissatisfied | Facilities not clean | Long wait | No trained professionals | Cost | No drugs available | Treatment unsuccessful | Other |
|---|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | | |
| Rural | 39.6 | 96.6 | 78.6 | 100.0 | 26.5 | 84.0 | 81.7 | 98.7 |
| Rural poor | 45.1 | 100.0 | 87.9 | 100.0 | 15.7 | 95.9 | 84.3 | 100.0 |
| Urban | 46.6 | 100.0 | 42.1 | 100.0 | 55.0 | 79.9 | 77.0 | 100.0 |
| Urban poor | 68.4 | 100.0 | 20.0 | 100.0 | 49.2 | 100.0 | 90.8 | 100.0 |
| **Socio-economic group** | | | | | | | | |
| Public | 45.0 | 92.4 | 52.3 | 100.0 | 35.5 | 54.0 | 90.8 | 100.0 |
| Private formal | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 | 100.0 | 100.0 | 100.0 |
| Private informal | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Self-agriculture | 37.6 | 97.7 | 79.7 | 100.0 | 25.0 | 93.4 | 78.0 | 98.3 |
| Self-other | 45.1 | 100.0 | 61.3 | 100.0 | 52.3 | 73.2 | 84.5 | 100.0 |
| Unemployed | 77.5 | 100.0 | 81.6 | 100.0 | 37.8 | 87.2 | 71.2 | 100.0 |
| Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | | | | |
| Male | 42.2 | 97.1 | 65.5 | 100.0 | 38.4 | 83.5 | 80.7 | 99.0 |
| Female | 38.9 | 97.4 | 81.0 | 100.0 | 22.4 | 83.0 | 81.3 | 98.8 |

## Table 82. Percentage Distribution of the Population by Work Status (age 15 and above)

| | Working | | | | Not working | | |
|---|---|---|---|---|---|---|---|
| | Employed | Under emp. | Total | | Unemploy. | Inactive | Total |
| **Place of residence** | | | | | | | |
| Rural | 89.7 | 0.1 | 89.8 | | 0.2 | 10.0 | 10.2 |
| Rural poor | 86.5 | 0.0 | 86.5 | | 0.2 | 13.2 | 13.5 |
| Urban | 75.0 | 0.9 | 75.9 | | 2.8 | 21.3 | 24.1 |
| Urban poor | 73.4 | 1.7 | 75.2 | | 4.0 | 20.8 | 24.8 |
| **Gender and age** | | | | | | | |
| Male | 89.0 | 0.3 | 89.3 | | 0.4 | 10.3 | 10.7 |
| 15-29 | 72.2 | 0.7 | 72.9 | | 0.8 | 26.3 | 27.1 |
| 30-49 | 99.0 | 0.3 | 99.3 | | 0.3 | 0.5 | 0.7 |
| 50-64 | 97.7 | 0.0 | 97.7 | | 0.0 | 2.3 | 2.3 |
| 65+ | 89.4 | 0.0 | 89.4 | | 0.0 | 10.6 | 10.6 |
| Female | 92.1 | 0.0 | 92.1 | | 0.5 | 7.4 | 7.9 |
| 15-29 | 84.9 | 0.0 | 84.9 | | 1.6 | 13.5 | 15.1 |
| 30-49 | 99.5 | 0.0 | 99.5 | | 0.0 | 0.5 | 0.5 |
| 50-64 | 94.3 | 0.0 | 94.3 | | 0.0 | 5.7 | 5.7 |
| 65+ | 53.8 | 0.0 | 53.8 | | 0.0 | 46.2 | 46.2 |

**Table 83. Percentage Distribution of the Working Population by Activity**

| | Agri-culture | Mining | Manu-fact. | Con-struct. | Trans-port. | Trade | Services |
|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | |
| Rural | 78.7 | 0.0 | 1.6 | 0.5 | 0.1 | 8.7 | 10.4 |
| Rural poor | 82.3 | 0.0 | 0.3 | 0.3 | 0.0 | 7.8 | 9.3 |
| Urban | 25.7 | 0.0 | 4.2 | 1.9 | 4.2 | 21.0 | 43.0 |
| Urban poor | 39.0 | 0.0 | 10.0 | 0.0 | 7.3 | 15.0 | 28.6 |
| **Gender and age** | | | | | | | |
| Male | 82.7 | 0.0 | 0.6 | 1.3 | 0.8 | 2.6 | 11.9 |
| 15-29 | 76.3 | 0.0 | 1.3 | 1.5 | 0.4 | 3.6 | 16.9 |
| 30-49 | 81.1 | 0.0 | 0.7 | 1.5 | 0.3 | 2.5 | 13.9 |
| 50-64 | 88.0 | 0.0 | 0.0 | 1.2 | 2.4 | 1.5 | 6.9 |
| 65+ | 94.8 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 2.1 |
| Female | 67.8 | 0.0 | 2.9 | 0.0 | 0.2 | 16.3 | 12.8 |
| 15-29 | 63.3 | 0.0 | 5.3 | 0.0 | 0.0 | 12.8 | 18.5 |
| 30-49 | 68.5 | 0.0 | 1.7 | 0.0 | 0.3 | 19.8 | 9.7 |
| 50-64 | 74.5 | 0.0 | 0.7 | 0.0 | 0.0 | 13.2 | 11.6 |
| 65+ | 69.5 | 0.0 | 11.3 | 0.0 | 0.0 | 6.9 | 12.3 |

# UPPER WEST REGION

## Introduction

Situated in the northwestern part of the country Upper West is bounded on the north by the Republic of Burkina Faso, on the west by Côte d'Ivoire, on the south by the Northern Region and on the east by the Upper East Region. Approximately 87 percent of its population live in rural areas (above the national average of 69 percent). Common features of the physical environment of the Region include prolonged dry seasons, a very hot and humid climate, and a lack of an adequate physical infrastructure. It is perhaps one of the least economically developed Regions in Ghana (Ghana Statistical Services 1995).

## Household Characteristics

Most households in the northern part of Ghana have a larger household size, particularly in the Upper West Region where the average household size is five members. Poor households in the Upper West Region have larger household sizes than the non-poor households with no significant rural and urban differences observed. Rural poor households recorded the largest household size of 8.4 members, followed by the urban poor (7.3 members). While a significant number of households in this Region were headed by males (87 percent compared with 13 percent for females), they account for only 25.2 percent of household heads in the fifth quintile (compared with female heads at 40.7 percent). Most household heads in this Region are farmers (70 percent or more) with less than a primary education, if any. Low educational levels are reflected in the seemingly low levels of employment (10 percent) in the public sector.
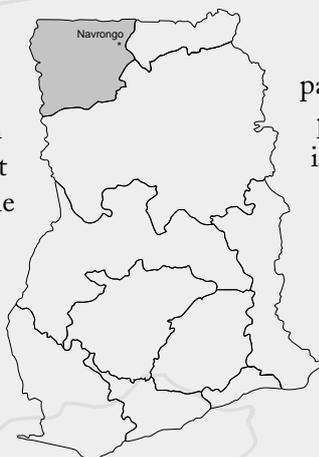
## Education

The adult literacy rate (22 percent) is about one-half the national average, and one of the lowest in Ghana. Roughly 62 percent of adult males and less than 40 percent of adult females are literate. The Upper West Region has the lowest number of school-age children in school (primary enrollment rate of 36 percent), although slightly more than one-half the households interviewed reported having access to primary education. Similarly, 8.4 percent households in the Region had access to secondary education, yet only 31 percent of eligible children were enrolled. The net primary enrollment rate is about one-half the national average (37 percent and 67 percent, respectively) with about one-tenth fewer secondary school age children enrolled in secondary school compared with the national average.

The level of dissatisfaction with the education system is noticeably higher (40 percent) in this Region than in some of the Regions with better access and enrollment rates (that is, Volta and Eastern Region). The main reason for dissatisfaction is a lack of books.

**Figure 33. Access, Usage, and Satisfaction with Education**
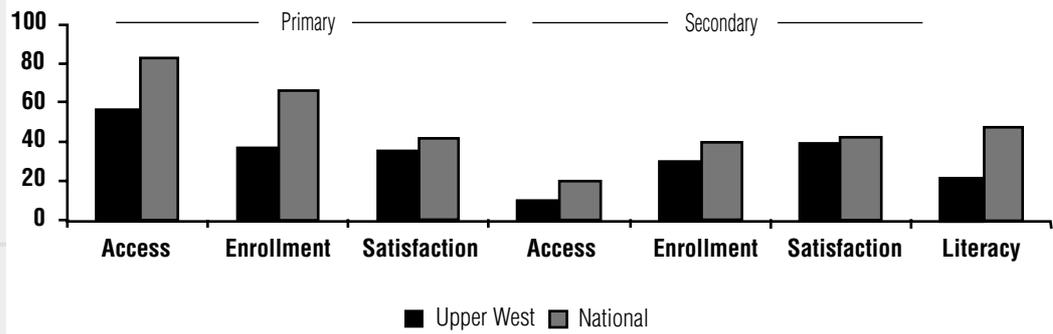


Source: GLSS III; GCWIQ I; Ghana Statistical Service.

## Health

Figure 35 presents information on the access, usage, and satisfaction with the health system. Less than one-fourth of the households in this Region have access to health services and of the people who reported being ill or injured in the four weeks preceding the survey, only two-thirds sought medical treatment at health service centers. Satisfaction with the usage of health service centers is equally low in the Upper West Region. The main reasons for dissatisfaction were the cost and the distance to the facilities. Most public and private health facilities in the Upper West Region are located in the capital (Wa); rural dwellers have to travel for more than an hour to reach the nearest health center.

## Housing and Household Amenities

While home ownership is the tenure of choice in Ghana, the majority of non-poor households rent their dwelling. This phenomenon varies by location (rural or urban). Although overall housing quality is poor in the northern regions, the home ownership rate is very high for both urban and rural households. For example, 80 percent of households in the Upper West Region own their dwelling, while 9.3 percent rent. The remaining 11.6 percent

either live rent-free or stay with relatives or friends. Among the important housing quality indicators that have a direct correlation to socio-economic well-being of households are access to a safe water source, food market, transportation, primary and secondary school, and materials for dwelling construction. An important element of maintaining health is access to safe water. An examination of figure 36 shows that approximately one-half of households in the Upper West Region have access to safe water (compared with the national average of 41 percent); however, less than 48 percent have access to electricity. Access to transportation and food markets is 20 percentage points below the national average. Due to the deterioration of welfare in the Upper West Region, a significant number of households (84 percent) used iron sheet or thatch to roof their dwellings, and 87.9 percent used mud to construct the walls.

Asset ownership is regarded as a good indicator of the economic well-being of households. Ownership of cars and other high-priced consumer durables is a common feature of the southern urban part of Ghana. However, the Upper West Region has a poor infrastructure network and a high poverty rate. These conditions are partly responsible for increasing ownership of assets such as motorcycles and bicycles as alternative means of transportation.

**Figure 34. Access, Usage, and Satisfaction with Health Services**
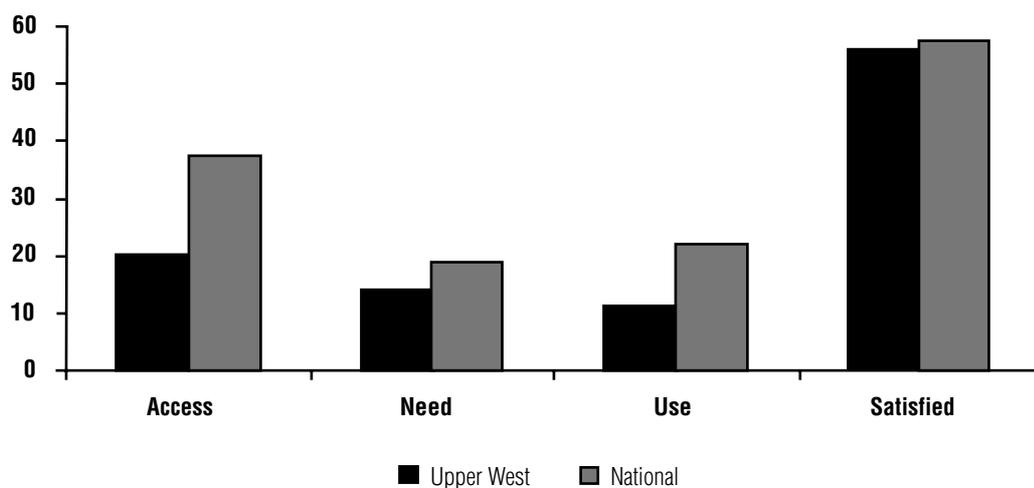


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

Similarly, only one percent of households owns a car in the Upper West Region, yet a significant proportion (91 percent) own land and a bicycle.

**35. Access to Facilities**
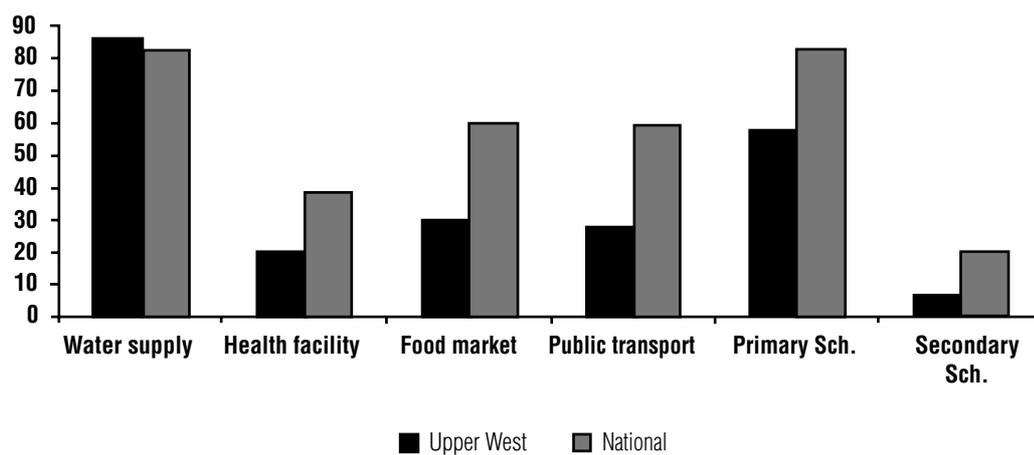


*Source: GLSS III; GCWIQ I; Ghana Statistical Service.*

### Table 84. Households by Place of Residence

| | Unweighted | Percentage | Weighted | Percentage |
|---|---|---|---|---|
| **Type of residence** | | | | |
| Rural | 250 | 85.9 | 62,849 | 85.9 |
| Urban | 41 | 14.1 | 10,335 | 14.1 |
| Total | 291 | 100.0 | 73,185 | 100.0 |

### Table 85. Percent Distribution of the Rural and Urban Households by Characteristics of the Head of Household

| | Rural | | | | Urban | | | |
|---|---|---|---|---|---|---|---|---|
| | Unweighted | Percentage | Weighted | Percentage | Unweighted | Percentage | Weighted | Percentage |
| Private formal | 2 | 0.3 | 305 | 0.3 | 2 | 2.7 | 302 | 2.8 |
| **Socio-economic group** | 250 | 85.9 | 62,849 | 85.9 | 41 | 14.1 | 10,335 | 14.1 |
| Public | 7 | 2.8 | 1,600 | 2.5 | 21 | 51.2 | 5,806 | 56.2 |
| Private formal | 3 | 1.2 | 523 | 0.8 | 1 | 2.4 | 200 | 1.9 |
| Private informal | 0 | 0.0 | 0 | 0.0 | 2 | 4.9 | 668 | 6.5 |
| Self-agriculture | 213 | 85.2 | 53,478 | 85.1 | 6 | 14.6 | 1,197 | 11.6 |
| Self-other | 13 | 5.2 | 3,429 | 5.5 | 9 | 22.0 | 2,065 | 20.0 |
| Unemployed | 13 | 5.2 | 3,530 | 5.6 | 2 | 4.9 | 399 | 3.9 |
| Other | 1 | 0.4 | 291 | 0.5 | 0 | 0.0 | 0 | 0.0 |
| Total | 250 | 100.0 | 62,849 | 100.0 | 41 | 100.0 | 10,335 | 100.0 |
| **Gender** | | | | | | | | |
| Male | 215 | 86.0 | 54,459 | 86.7 | 22 | 53.7 | 5,871 | 56.8 |
| Female | 35 | 14.0 | 8,390 | 13.3 | 19 | 46.3 | 4,465 | 43.2 |
| Total | 250 | 100.0 | 62,849 | 100.0 | 41 | 100.0 | 10,335 | 100.0 |
| **Marital status** | | | | | | | | |
| Single | 7 | 2.8 | 1,854 | 2.9 | 3 | 7.3 | 733 | 7.1 |
| Monogamous | 150 | 60.0 | 37,586 | 59.8 | 16 | 39.0 | 4,404 | 42.6 |
| Polygamous | 62 | 24.8 | 16,583 | 26.4 | 12 | 29.3 | 2,933 | 28.4 |
| Widowe/div/sep | 31 | 12.4 | 6,826 | 10.9 | 10 | 24.4 | 2,265 | 21.9 |
| Total | 250 | 100.0 | 62,849 | 100.0 | 41 | 100.0 | 10,335 | 100.0 |
| **Highest level of education** | | | | | | | | |
| None | 217 | 86.8 | 55,105 | 87.7 | 16 | 39.0 | 3,328 | 32.2 |
| Some Primary | 4 | 1.6 | 950 | 1.5 | 1 | 2.4 | 200 | 1.9 |
| Comp. Primary | 4 | 1.6 | 1,023 | 1.6 | 0 | 0.0 | 0 | 0.0 |
| Comp. JSS | 17 | 6.8 | 3,748 | 6.0 | 5 | 12.2 | 1,267 | 12.3 |
| Comp. SSS | 0 | 0.0 | 0 | 0.0 | 1 | 2.4 | 200 | 1.9 |

## Table 86. Education Indicators

| | Literacy rate | Primary | | | Secondary | | |
|---|---|---|---|---|---|---|---|
| | | Access | Enrollment | Satisfaction | Access | Enrollment | Satisfaction |
| **Place of residence** | | | | | | | |
| Rural | 16.2 | 53.2 | 30.9 | 24.1 | 4.4 | 18.8 | 36.1 |
| Rural poor | 19.1 | 53.0 | 27.7 | 16.4 | 3.7 | 12.7 | 68.3 |
| Urban | 61.9 | 84.2 | 75.7 | 70.4 | 13.3 | 81.6 | 41.4 |
| Urban poor | 33.3 | 77.8 | 55.6 | 100.0 | 0.0 | 75.0 | 50.0 |
| **Socio-economic group** | | | | | | | |
| Public | 72.9 | 80.3 | 88.2 | 59.2 | 17.2 | 76.6 | 39.1 |
| Private formal | 40.1 | 47.9 | 74.0 | 0.0 | 0.0 | 50.0 | 0.0 |
| Private informal | 100.0 | 100.0 | 50.0 | 100.0 | 0.0 | 0.0 | 0.0 |
| Self-agriculture | 15.4 | 51.3 | 29.1 | 26.3 | 3.5 | 20.4 | 41.9 |
| Self-other | 30.7 | 86.3 | 43.3 | 38.3 | 8.0 | 26.3 | 41.5 |
| Unemployed | 6.9 | 54.7 | 38.5 | 40.3 | 0.0 | 47.2 | 0.0 |
| Other | 25.0 | 100.0 | 66.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | | | |
| Male | 24.9 | 55.6 | 32.9 | 42.3 | 3.6 | 23.1 | 43.7 |
| Female | 20.0 | 58.0 | 39.5 | 28.7 | 9.9 | 44.1 | 36.0 |

## Table 87. Percentage of Students Not Satisfied with School by Reasons for Dissatisfaction

| | Percent dissatisfied | Books/ supplies | Teaching | Lack of space | Facilities | Other |
|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | |
| Rural | 72.5 | 65.6 | 16.9 | 48.9 | 30.2 | 1.1 |
| Rural poor | 74.4 | 58.8 | 31.5 | 51.7 | 16.4 | 2.2 |
| Urban | 46.0 | 65.9 | 25.0 | 30.3 | 48.5 | 3.8 |
| Urban poor | 30.8 | 100.0 | 0.0 | 75.0 | 25.0 | 0.0 |
| **Socio-economic group** | | | | | | |
| Public | 53.3 | 66.4 | 29.9 | 45.5 | 43.9 | 4.0 |
| Private formal | 100.0 | 100.0 | 0.0 | 84.7 | 0.0 | 0.0 |
| Private informal | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Self-agriculture | 70.3 | 67.2 | 19.4 | 38.4 | 35.1 | 1.3 |
| Self-other | 68.1 | 64.4 | 0.0 | 73.0 | 11.9 | 0.0 |
| Unemployed | 66.5 | 57.6 | 0.0 | 57.0 | 42.4 | 0.0 |
| Other | 100.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 |
| **Gender** | | | | | | |
| Male | 59.0 | 72.1 | 21.0 | 48.8 | 29.6 | 0.9 |
| Female | 70.5 | 60.4 | 16.6 | 42.0 | 37.5 | 2.2 |

### Table 88. Health Indicators

| | Medical Services | | | |
|---|---|---|---|---|
| | Access | Need | Use | Satisfaction |
| **Place of residence** | | | | |
| Rural | 13.4 | 13.1 | 9.6 | 55.8 |
| Rural poor | 14.9 | 13.7 | 11.3 | 53.7 |
| Urban | 62.1 | 19.2 | 19.2 | 55.8 |
| Urban poor | 32.6 | 21.7 | 21.7 | 10.0 |
| **Socio-economic group** | | | | |
| Public | 50.4 | 16.4 | 16.4 | 42.9 |
| Private formal | 0.0 | 35.2 | 23.3 | 100.0 |
| Private informal | 36.4 | 27.3 | 27.3 | 100.0 |
| Self-agriculture | 13.4 | 11.1 | 8.6 | 49.9 |
| Self-other | 55.6 | 37.3 | 25.8 | 82.2 |
| Unemployed | 24.6 | 18.6 | 10.3 | 58.2 |
| Other | 0.0 | 57.1 | 57.1 | 75.0 |
| **Gender** | | | | |
| Male | 16.7 | 11.5 | 8.9 | 51.3 |
| Female | 22.8 | 16.1 | 12.8 | 58.8 |

### Table 89. Percentage of Persons Who Did Not Consult a Health Provider and the Reason for Not Consulting

| | % not consulting | No need | Cost | Distance | Other |
|---|---|---|---|---|---|
| **Place of residence** | | | | | |
| Rural | 89.9 | 95.2 | 4.2 | 2.7 | 0.2 |
| Rural poor | 88.7 | 96.1 | 3.9 | 3.2 | 0.0 |
| Urban | 80.8 | 96.9 | 4.1 | 0.0 | 0.0 |
| Urban poor | 78.3 | 100.0 | 5.6 | 0.0 | 0.0 |
| **Socio-economic group** | | | | | |
| Public | 83.6 | 100.0 | 0.0 | 0.0 | 0.0 |
| Private formal | 76.7 | 84.5 | 15.5 | 0.0 | 0.0 |
| Private informal | 72.7 | 100.0 | 0.0 | 0.0 | 0.0 |
| Self-agriculture | 90.9 | 96.5 | 3.0 | 1.7 | 0.2 |
| Self-other | 74.2 | 84.5 | 15.5 | 15.5 | 0.0 |
| Unemployed | 89.7 | 73.5 | 28.9 | 9.7 | 0.0 |
| Other | 42.9 | 100.0 | 0.0 | 0.0 | 0.0 |
| **Gender** | | | | | |
| Male | 90.9 | 95.7 | 4.0 | 1.6 | 0.2 |
| Female | 86.7 | 95.2 | 4.5 | 3.1 | 0.2 |

### Table 90. Percentage of Persons Sick Who Consulted a Health Provider and Were Not Satisfied by the Reason for Dissatisfaction

| | Percent dissatisfied | Facilities not clean | Long wait | No trained professionals | Cost | No drugs available | Treatment unsuccessful |
|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | |
| Rural | 44.2 | 100.0 | 90.2 | 100.0 | 34.8 | 86.1 | 75.2 |
| Rural poor | 46.3 | 100.0 | 100.0 | 100.0 | 32.5 | 100.0 | 72.6 |
| Urban | 44.2 | 70.4 | 77.1 | 90.2 | 55.8 | 70.5 | 86.9 |
| Urban poor | 90.0 | 100.0 | 88.9 | 77.8 | 11.1 | 33.3 | 100.0 |
| **Socio-economic group** | | | | | | | |
| Public | 57.1 | 65.3 | 78.8 | 100.0 | 65.5 | 65.5 | 84.6 |
| Private formal | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Private informal | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Self-agriculture | 50.1 | 100.0 | 89.3 | 96.8 | 27.1 | 90.2 | 81.5 |
| Self-other | 17.8 | 100.0 | 76.9 | 100.0 | 56.5 | 57.3 | 43.5 |
| Unemployed | 41.8 | 100.0 | 100.0 | 100.0 | 100.0 | 50.0 | 50.0 |
| Other | 25.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.0 |
| **Gender** | | | | | | | |
| Male | 48.7 | 100.0 | 92.1 | 100.0 | 36.8 | 76.3 | 76.5 |
| Female | 41.2 | 87.7 | 83.3 | 95.9 | 41.9 | 87.5 | 78.9 |

### Table 91. Percentage Distribution of the Population by Work Status (age 15 and above)

| | Working | | | | Not working | | |
|---|---|---|---|---|---|---|---|
| | Employed | Under emp. | Total | | Unemploy. | Inactive | Total |
| **Place of residence** | | | | | | | |
| Rural | 85.9 | 0.6 | 86.5 | | 0.2 | 13.4 | 13.5 |
| Rural poor | 80.7 | 0.9 | 81.6 | | 0.0 | 18.4 | 18.4 |
| Urban | 73.5 | 0.0 | 73.5 | | 2.3 | 24.1 | 26.5 |
| Urban poor | 81.5 | 0.0 | 81.5 | | 0.0 | 18.5 | 18.5 |
| **Gender and age** | | | | | | | |
| Male | 84.5 | 0.8 | 85.3 | | 0.7 | 14.0 | 14.7 |
| 15-29 | 71.6 | 1.4 | 72.9 | | 1.8 | 25.3 | 27.1 |
| 30-49 | 97.7 | 0.0 | 97.7 | | 0.0 | 2.3 | 2.3 |
| 50-64 | 98.0 | 2.0 | 100.0 | | 0.0 | 0.0 | 0.0 |
| 65+ | 72.4 | 0.0 | 72.4 | | 0.0 | 27.6 | 27.6 |
| Female | 87.6 | 0.3 | 87.9 | | 0.3 | 11.8 | 12.1 |
| 15-29 | 77.7 | 0.0 | 77.7 | | 0.8 | 21.5 | 22.3 |
| 30-49 | 98.5 | 0.8 | 99.3 | | 0.0 | 0.7 | 0.7 |
| 50-64 | 95.3 | 0.0 | 95.3 | | 0.0 | 4.7 | 4.7 |
| 65+ | 61.9 | 0.0 | 61.9 | | 0.0 | 38.1 | 38.1 |

**Table 92. Percentage Distribution of the Working Population by Activity**

| | Agri-culture | Mining | Manu-fact. | Con-struct. | Trans-port. | Trade | Services |
|---|---|---|---|---|---|---|---|
| **Place of residence** | | | | | | | |
| Rural | 84.2 | 0.0 | 1.8 | 0.2 | 0.4 | 3.7 | 9.8 |
| Rural poor | 91.8 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 7.2 |
| Urban | 15.9 | 0.0 | 10.5 | 2.5 | 4.1 | 14.7 | 52.2 |
| Urban poor | 31.8 | 0.0 | 0.0 | 4.5 | 0.0 | 22.7 | 40.9 |
| **Gender and age** | | | | | | | |
| Male | 84.1 | 0.0 | 0.5 | 0.6 | 1.8 | 1.5 | 11.6 |
| 15-29 | 75.7 | 0.0 | 0.8 | 0.8 | 3.6 | 2.2 | 16.9 |
| 30-49 | 82.7 | 0.0 | 0.6 | 0.9 | 1.1 | 2.0 | 12.8 |
| 50-64 | 91.8 | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 | 6.8 |
| 65+ | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Female | 69.4 | 0.0 | 4.7 | 0.4 | 0.0 | 8.3 | 17.2 |
| 15-29 | 67.0 | 0.0 | 7.2 | 0.0 | 0.0 | 7.7 | 18.1 |
| 30-49 | 65.6 | 0.0 | 3.8 | 0.8 | 0.0 | 9.4 | 20.3 |
| 50-64 | 82.0 | 0.0 | 3.1 | 0.0 | 0.0 | 8.4 | 6.5 |
| 65+ | 75.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.4 |
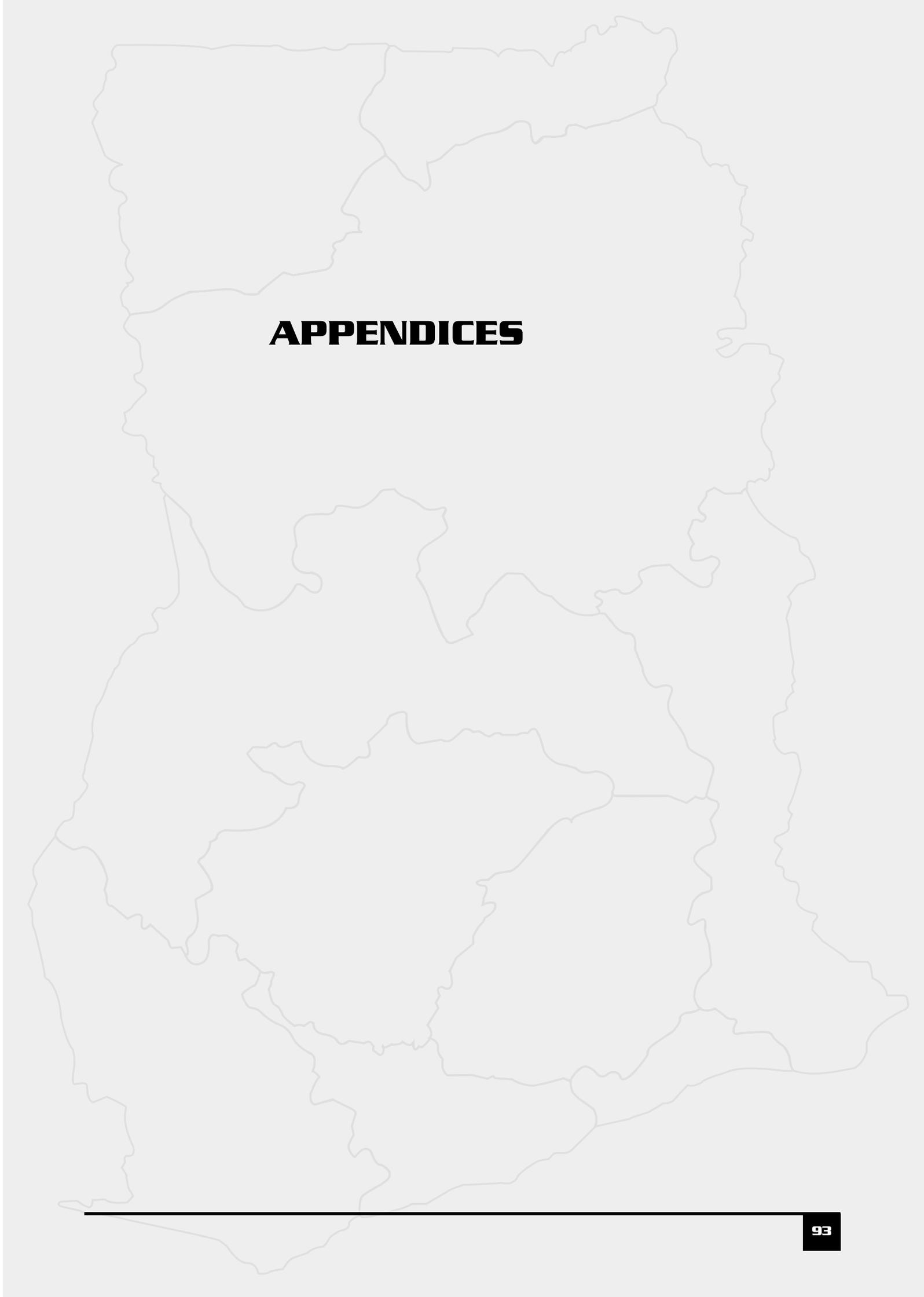
# APPENDICES

# Appendix 1:
# Sampling Error Specifications

## Program: SErrors—Calculate sampling errors using the jack knife method

### 1. Schematic
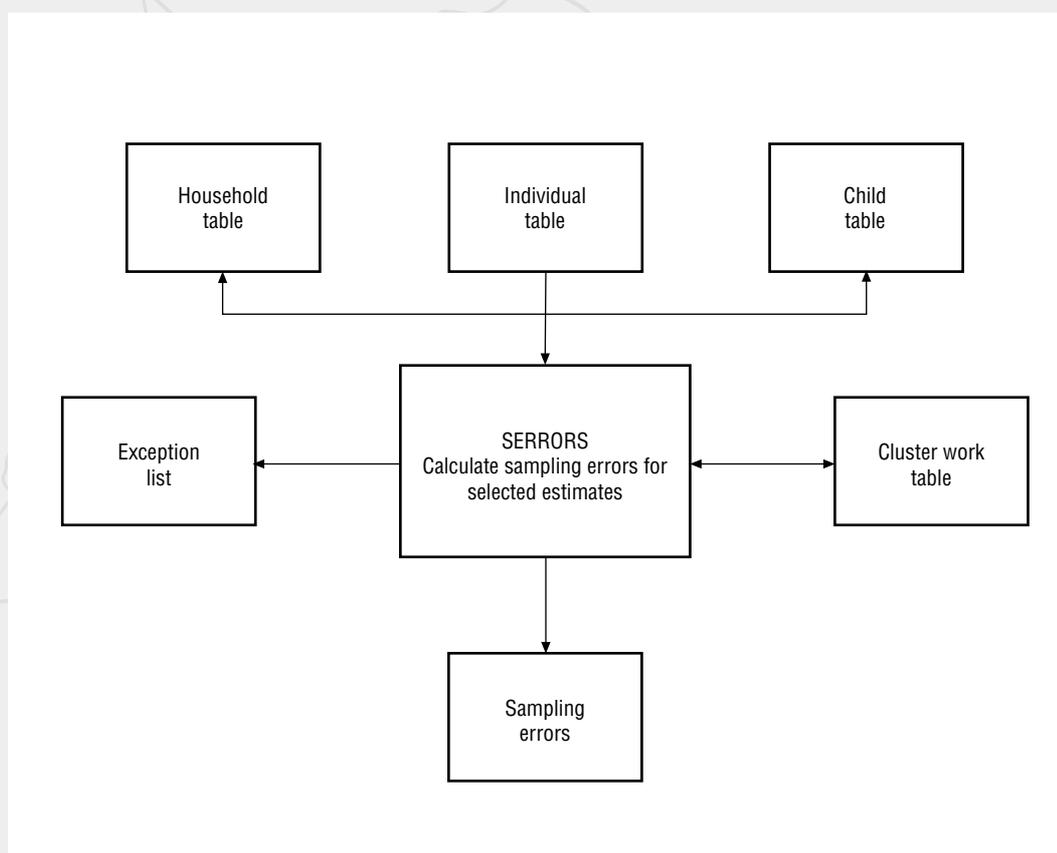


### 2. Function

Calculate sampling errors for the principal estimates presented in the standard CWIQ tables at the national level and for rural, urban, and regional subgroups.

### 3. Input

*A. CWIQ questionnaire database.*

The CWIQ questionnaire database consists of three tables: the household table; the individual table; and the child table.

For each household surveyed there is one record in the household table (HHData), one record for each household member in the individual table (INData) and one record for each child under 5 in the child table (CHData).

### 4. Input/Output
*A. Cluster work table (SErrorsW)*
The cluster work table contains intermediate results needed to calculate the sampling errors. There is an entry in the cluster work table for each cluster and each estimate for which sampling errors are calculated.

### 5. Output
*A. Exception list and summary (EditList)*
This table contains a summary list of the number of questionnaires processed and a list of any exceptional conditions encountered in the data.
*B. Sampling errors for selected estimates (SErrors)*
This table contains the results of the sampling error calculations. These include the estimate name, the domain (subgroup) name, the estimate itself, the variance, the standard error, the relative standard error and the limits of a 95 percent confidence interval for the estimate and similar statistics calculated as if the sample were drawn as a simple random sample (SRS). There is a table entry for each national and subgroup estimate. A complete description of the table appears in Appendix B.

### 6. Processing
This program uses the jack knife method to calculate sampling (standard) errors for ratio estimates of the form r = y / x. For a sample with n clusters, estimates are constructed for $n$ sub-samples, each consisting of $n$-1 clusters. The $n$ sub-sample estimates are used to calculate the standard error according to the formula below.

The method used to construct the $n$ sub-samples of $n$-1 clusters is as follows:

For each estimate and each cluster (note that all estimates are weighted):

- Accumulate cluster totals for the numerator and denominator of each estimate ($y_c$ and $x_c$). Write the cluster totals for each estimate to the cluster work table together with the urban/rural and regional classifications for the cluster.

- Count the number of clusters ($n$).

- Accumulate domain (national, region, urban/rural) totals for the numerator and denominator of each estimate ($y_t$ and $x_t$). Calculate domain estimates ($r_t$) using the accumulated domain totals ($y_t$ , $x_t$).

Read the cluster work table and for each cluster, calculate totals for an $n$-1 cluster sample by subtracting the cluster totals of the numerator and denominator from the domain totals ($y_i$ and $x_i$). Calculate the sample value of the ratio ($r_i$) using the sample numerator and denominator. Accumulate the sum of the sample estimates.

$$y_i = y_t - y_c \; ; \; x_i = x_t - x_c \; ; \; r_i = y_i \, / \, x_i \, .$$
(i = 1 to $n$ is the sample number)

Calculate and accumulate the sample contribution to the variance of the estimate:

$$\mathrm{var}_i = (n * r_t - (n\text{-}1) * r_i)^2$$

The variance of the estimate is calculated using the following formula:

$$\mathrm{Variance} = \frac{\sum\limits_{i=1}^{n} \mathrm{var}_i - n\bar{r}^2}{n(n-1)} \quad \text{where} \quad \bar{r} = \frac{\sum\limits_{i=1}^{n} r_i}{n}$$

The standard error of the estimate is the square root of the variance.

The relative standard error is the standard error expressed as a percentage of the estimate.

The 95% confidence interval is the estimate + or − 2 times the standard error.

The program also calculates sampling errors as if the sample had been drawn as a simple random sample (SRS). The variance of a ratio r = y / x from a simple random sample is computed using the following formula:

$$\text{var}(r) = \frac{1-f}{n\bar{x}^2} \sum_{i=1}^{n} \frac{(y_i - rx_i)^2}{n-1}$$

where $n$ is the unweighted number of observations

The sum of the squares above is calculated as:

$$\sum_{i=1}^{n} y_i^2 - 2r \sum_{i=1}^{n} x_i y_i + r^2 \sum_{i=1}^{n} x_i^2$$

The program accumulates the individual values of x, y, $x^2$, $y^2$ and xy as the database is being processed. When all the data have been processed, the SRS variance is calculated according to the formula above. SRS standard error and relative standard error are derived as described above.

| Estimate | Type | Numerator | Denominator |
|---|---|---|---|
| Average household size | Mean | HhSize | All households |
| % of households owning land | Percentage | F3 > 0 | All households |
| % of households with large livestock | Percentage | F8 > 0 | All households |
| % of households with a radio | Percentage | F12e = 1 | All households |
| % of households with a modern stove | Percentage | F12h = 1 | All households |
| % of households with a bicycle | Percentage | F12i = 1 | All households |
| % of households with a motorcycle | Percentage | F12j = 1 | All households |
| % of households with a car | Percentage | F12k = 1 | All households |
| % of households with safe water source | Percentage | G3 = 1-3 | All households |
| % of households within 30 m. of water | Percentage | G7a = 1-3 | All households |
| % of households within 30 m. of sec sch | Percentage | G7d = 1-3 | All households |
| % of households within 30 m. of pri sch | Percentage | G7e = 1-3 | All households |
| % of households within 30 m. of hlth f. | Percentage | G7f = 1-3 | All households |

# Appendix 2:
# Ancillary Table Formats

## SErrors — Sampling errors

| Name | Description | Type |
|------|-------------|------|
| StatNo | Estimate sequence number | Integer 2 |
| SGVariable | Subgroup variable number | Byte 1 |

0  National
1  Urban/Rural
2  Regional

| | | |
|------|-------------|------|
| SGNumber | Subgroup entry number | Byte 1 |
| SGName | Subgroup entry name | Text 16 |
| EstimateName | Estimate name | Text 12 |
| Estimate | Value of the estimate | Double 8 |
| EstimateN | Number of estimates (n-1 sub-samples) | Long 4 |
| EstimateVar | Variance of the estimate | Double 8 |
| EstimateSE | Standard error of the estimate | Double 8 |
| RelSe | Relative standard error of the estimate | Double 8 |
| CIMin | Minimum for 95% confidence interval | Double 8 |
| CIMax | Maximum for 95% confidence interval | Double 8 |
| NObs | Weighted number of observations | Double 8 |
| Nunw | Unweighted number of observations | Long 4 |
| Runw | Unweighted estimate value | Single 4 |
| srsVar | Variance if simple random sample | Double 8 |
| srsSE | Standard error if simple random sample | Single 4 |
| srsRelSE | Relative standard error if simple random sample | Single 4 |

## SerrorsW — Cluster work table

| | | |
|------|-------------|------|
| A1 | Cluster number | Text 3 |
| SeqNo | Sequence number | Integer 2 |
| Estimate | Estimate name | Text 12 |
| Y | Numerator total | Double 8 |
| X | Denominator total | Double 8 |
| UrbRur | Urban rural code | Text 1 |
| Region | Region code | Text 2 |
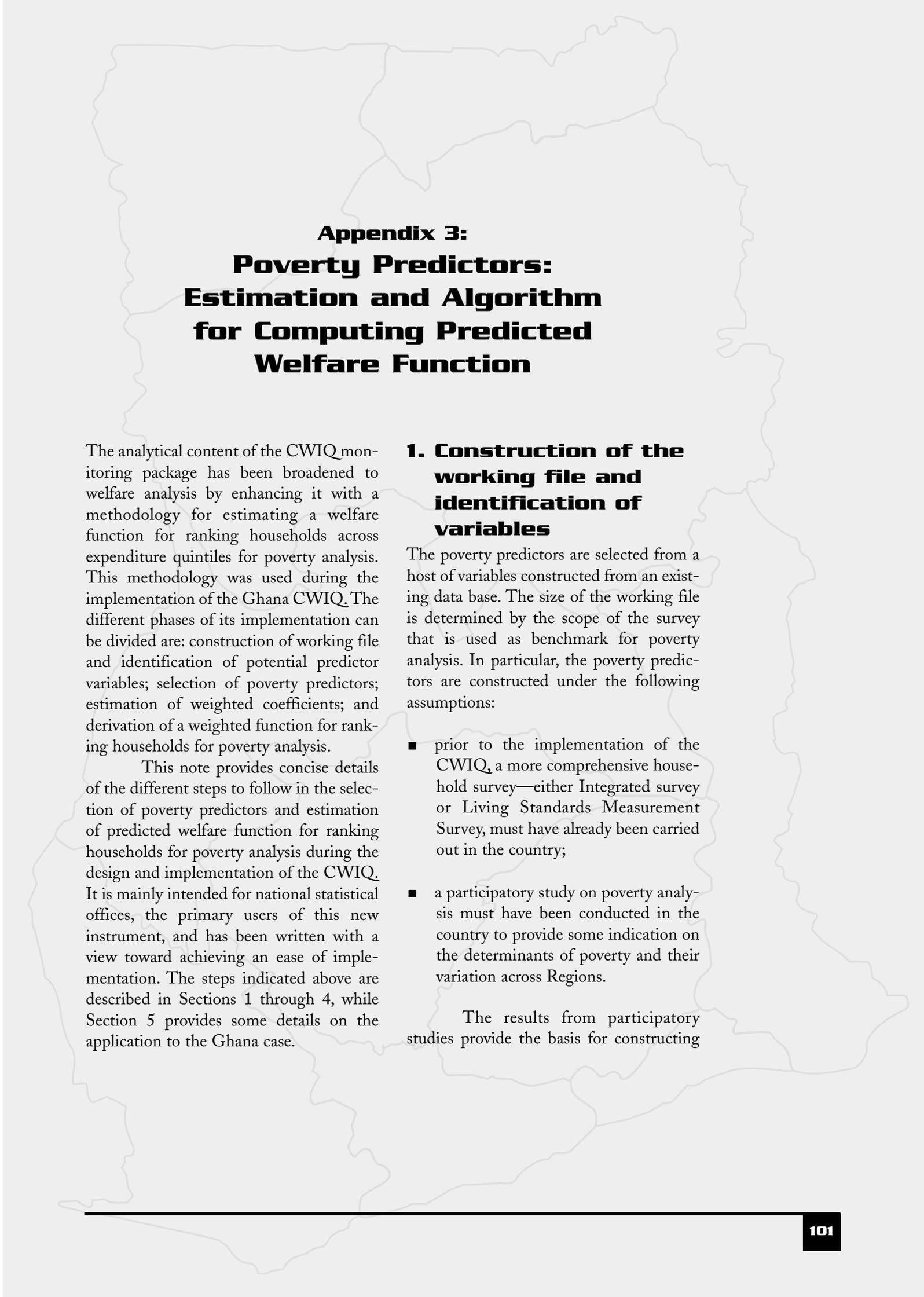
# Appendix 3:
# Poverty Predictors: Estimation and Algorithm for Computing Predicted Welfare Function

The analytical content of the CWIQ monitoring package has been broadened to welfare analysis by enhancing it with a methodology for estimating a welfare function for ranking households across expenditure quintiles for poverty analysis. This methodology was used during the implementation of the Ghana CWIQ. The different phases of its implementation can be divided are: construction of working file and identification of potential predictor variables; selection of poverty predictors; estimation of weighted coefficients; and derivation of a weighted function for ranking households for poverty analysis.

This note provides concise details of the different steps to follow in the selection of poverty predictors and estimation of predicted welfare function for ranking households for poverty analysis during the design and implementation of the CWIQ. It is mainly intended for national statistical offices, the primary users of this new instrument, and has been written with a view toward achieving an ease of implementation. The steps indicated above are described in Sections 1 through 4, while Section 5 provides some details on the application to the Ghana case.

## 1. Construction of the working file and identification of variables

The poverty predictors are selected from a host of variables constructed from an existing data base. The size of the working file is determined by the scope of the survey that is used as benchmark for poverty analysis. In particular, the poverty predictors are constructed under the following assumptions:

■ prior to the implementation of the CWIQ, a more comprehensive household survey—either Integrated survey or Living Standards Measurement Survey, must have already been carried out in the country;

■ a participatory study on poverty analysis must have been conducted in the country to provide some indication on the determinants of poverty and their variation across Regions.

The results from participatory studies provide the basis for constructing

the working files from more integrated surveys. A combination of information from these two different sources—qualitative studies and more comprehensive integrated household surveys, is used to identify the set of explanatory variables that are likely to be used to predict household aggregated total expenditure in the model. Hence the construction of these variables is done on the basis of qualitative studies and the variables constructed reflect the determinants of poverty suggested by the participatory poverty assessment carried out in the country.[1] A maximum number of potential explanatory variables $x_1$, $x_2$, $x_3 \ldots$, $x_n$, with ($n < \infty$), and the predicted variable of interest, aggregated household total expenditure $Y$ is constructed at this stage of the process.[2]

This initial set of regressors essentially includes household level variables and individual characteristics such as literacy and enrollment are aggregated at the household level for consistency in the estimation.[3] Other regressors are derived from this initial list of variables. These include squares, cubes variables, as well as interaction terms formed as product of variables. The inclusion of these variables in the model improves the precision of the predicted welfare: squares and cubes variables allow curvature in the relationship and thus better model non-linear pattern in the data; interaction variables capture non-additive effects of regressors and allow the gradient of the regression of the response on one particular independent variable to change with the value of another variable. To the extent that increased accuracy in prediction of welfare is achieved without any additional cost of data collection—interaction, squares and cubes variables are formed from already existing ones, attempt should be made to include these later variables in the estimation process.[4]

One variable which happens to be highly correlated with aggregated household total expenditure with strong predictive capability is "asset score".[5] This variable is constructed by assigning equal weight to each of the ten assets variables listed in the questionnaire and suggested by qualitative studies as strong determinant of poverty. A constant 1 is assigned to each of the assets detained by the household, and the assets score is obtained by summing up across all assets at the household level.

The maximum asset score is 10 and the minimum is 0 for poorer households which possess none of the assets listed.[6] Of course uniform allocation of score irrespective of the asset characteristics tends to smooth out the distribution of assets across households. To the extent that these assets have different values and all exhibit different rate of depreciation, uniform allocation might even increase the distortion in the distribution of household assets. But, what actually matters in this construction is the ownership of assets by a household and not so much the values of the asset which cannot however be accurately estimated from light monitoring sur-

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[1] *In countries where participatory studies have not been carried out, guidance from national statistical offices at the central and Regional levels on the population perception of poverty can be crucial and should be sought by the analyst.*

[2] *The comprehensiveness of the expenditure section of the survey that is used for poverty analysis is critical because the accuracy of the poverty map is determined by the distribution of total expenditure across Regions and households and light monitoring surveys tend to underestimate total consumption with large bias against poor and rural Regions, for more details see Fofack (1999).*

[3] *This aggregation of individual characteristics at the household level produces variables such as proportion of children enrolled in each household, proportion of household members literate, literacy of household head, household dependency ratio, to name just few.*

[4] *These variables are constructed from a much broader set which include: household assets, education and literacy, employment, household amenities, household structure and demographic characteristics, geographical location.*

[5] *Indeed, this poverty predictor has the highest standardized weights in the Ghana case.*

[6] *The components of assets score variable in the case of Ghana include: sewing machine, sofa, bicycle, radio, refrigerator, gas or electric stove, television, stereo, fan and car. However, different items may be chosen in other countries.*

veys carried out on a single visit to the household, especially because valuation of household assets is rather difficult, even with more integrated household surveys and measurement errors are likely to increase with light monitoring instruments.

## 2. Selection of poverty Predictors

The set of explanatory variables selected from the working file to predict aggregate total consumption estimate at the household level for ranking household for poverty analysis are variables which are highly correlated with the predicted variables of interest . This is the dependent variable in the model which has been transformed in the log-scale to smooth out the variance and improve accuracy of prediction.

In the first step, a multiple correlation analysis assessing the magnitude of correlation between the potential regressors $x_1$, $x_2$, $x_3$..., $x_n$, and the response variable $Y$ is used to discriminate among these variables.[7] The initial set of potential predictor variables $x_1$, $x_2$, $x_3$..., $x_k$, with $(k < n)$ include all variables that are highly correlated with the response variable. The multiple correlation analysis test rejects the null hypothesis of absence of correlation between the response $Y$, and any given poverty correlates $x_j$ if the estimated $p - value$ is less than the specified level of significance. This test is the first step in the variables selection process, and only the poverty predictors with smaller than the specified values are retained for inclusion in the model for further testing. On the basis of this test, a set of poverty predictors variables significant at 5 percent are selected.

The multiple correlation analysis identifies a host of variables which are highly correlated with the response. However, all these variables cannot be used as regressors. Not only because the cost and logistics required for data collection on these variables might be prohibitive for light monitoring surveys, but also because the chance of multicollinearity among these regressors is likely to increase with the number of independent variables fed in the model, to the extent that these regressors include a sizable number of dichotomized and ordinal level variables.[8]

*Further reduction of the dimensionality of the model is attempted using stepwise procedure in the regression analysis setting. This procedure allows one to calibrate the models by gradually dropping explanatory variables with less predictive power. A given independent variable is removed from the model only when marginal increase of the percentage variance of the response explained by the model as a result of its inclusion is the smallest, that is,*

$$\Delta\left( R^2(y|\sum_{j=1}^{k}\lambda_j x_j) - R^2(y|\sum_{j=1}^{k-1}\lambda_j x_j) \right) < \varepsilon.$$

## 3. Estimation of weighted coefficients

This iterative process of gradual elimination allows one to reduce the number of predictors to a core set of variables which can be collected easily with less measurement errors during the implementation of light monitoring surveys and yet capture large proportional variance of household aggregate total expenditure. Up to $p$ poverty predictors $x_1$, $x_2$, $x_3$..., $x_p$ could be used. Presumably, the core set of poverty predictors could well be limited to 10 variables as well, $(x_1, x_2, x_3..., x_{10})$, depending on the proportional response variance that one is

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7   *Since regressors include ordinal level variables, the Spearman correlation coefficient, which is distribution-free is used at this stage to classify the potential regressors variables according to the strength of the correlation with the aggregated total expenditure.*

8   *In this note, CWIQ and light monitoring surveys are used interchangeably because the latter refers to surveys with short questionnaires carried out on a single visit to households.*

willing to capture by the model. The regression model for computing the predicted welfare could be symbolized by the following equation:

$$Y_j = \lambda_0 x_0 + \lambda_1 x_1 + \lambda_2 x_2 + ... + \lambda_p x_p$$

where $x_0$ is a vector of constant, $Y_j$ is the natural logarithm of aggregate total expenditure of household $j$ for , $(j = 1,2,...N)$, $N$ is the total number of households sampled, and $(\lambda_0, \lambda_1, \lambda_3 ..., \lambda_p)$ are the regression coefficients.[9] The predicted estimated weighted function is continuous and allows the construction of household expenditure quintiles which are used as basis for poverty analysis in the CWIQ.

Care should be made to avoid a regression through the origin since the minimum household total expenditure estimate is uniformly greater than unity on the log scale, and regressing through the origin will impose a curve that is not consistent with the empirical distribution of expenditure—creating a large discrepancy between the observed and predicted values. The constant in the regression estimate is very important and omitting it might cause a large discrepancy that is likely to lead to important misclassification of households across expenditure quintiles in poverty analysis.

Carrying out the estimation with $Y_j$ in the log-scale improves the accuracy of the prediction because it stabilizes the error variance and reduces asymmetry in the distribution of error terms. Moreover, this transformation is rank-invariant—for all $Y_a$, $Y_b$ with $(Y_a > 0)$ and $(Y_b > 0)$, $(Y_a < Y_b) \Rightarrow \log(Y_a) < \log(Y_b)$ —and will not affect the ranking of households across expenditure quintiles for poverty analysis as a result of any form of bias in the overall estimate of total expenditure aggregate.

# 4. Algorithm for computing the predicted welfare function

The steps and algorithm to follow in computing the welfare function for ranking households are summarized below.

- The questions on the core $p$ poverty predictors $x_1$, $x_2$, $x_3...$, $x_p$ are included in the CWIQ questionnaire and information and data is collected on these variables during the implementation of the survey

- The weights estimated from the more comprehensive integrated surveys $(\lambda_0, \lambda_1, \lambda_3 ..., \lambda_p)$ are combined with the identified poverty predictors to derive the predicted response for ranking households for poverty analysis, under the assumption that the derived weights are stable over time[10]

- The predicted response or household total aggregate expenditure $Y$ is estimated by

$$\hat{Y} = \exp\left(\sum_{j=0}^{p} \lambda_j x_j\right)$$

- For ranking household for poverty analysis, the predicted total household expenditure is adjusted for household size and its resulting value is provided by:

$$\hat{Y}_{pce} = \left[\exp\left(\sum_{j=0}^{p} \lambda_j x_j\right)/hhsize\right]$$

which can be rewritten as follow

$$\hat{Y}_{pce} = \left[\exp\left(\lambda_0 + \lambda_1 x_1 + \lambda_2 x_2 + + \lambda_p x_p\right)/hhsize\right]$$

---

[9]  *These regressions coefficients are very efficient because they have been estimated using maximum likelihood methods.*

[10] *For more details on the stability of these weights, see Fofack (1997).*

The predicted per capita total household expenditure is continuous and will minimize the clustering of households at the quintiles cut-off points. These expenditure quintiles are constructed from the predicted household total per capita expenditure using the formula mentioned above.

## 5. Application to the Ghana CWIQ

This methodology was used during the implementation of the Ghana CWIQ. The core poverty predictors were constructed from GLSS III and the regression coefficients estimated from the same survey. The number of core poverty predictors was limited to 10, including: asset score, number of spouses, use of toothpaste, proportion of school age kids, ownership of poultry, number of member per room, source of lighting, ownership of land, and literacy of household head. Two squares terms which happen to be significant and highly correlated with the response were also included in the model. These were constructed from the variables, member per room and number of spouses. The regression model based on these variables explained over 40 percent of proportional variance observed in the response.

The regression coefficients were estimated from GLSS III survey and their values are provided in table 1, along with the corresponding poverty predictors updated from the CWIQ survey. These regression weights and updated values of poverty predictors were used to compute the predicted household total expenditure for poverty analysis. This predicted welfare function is expressed as weighted sum of poverty predictors. Table 2 compares household ranking using the predicted function with the ranking based on the observed aggregated expenses. The comparison is made along expenditure quintiles. The results show successful rates of classification, above 85 percent in the intermediate quintiles, and much higher in the extreme quintiles—above 95 percent in the poorest quintile and slightly greater than 91 percent in the wealthiest quintile.[11]

### Table 1: Poverty predictors and estimated coefficients

| Listing of $x_j$ for ($j$ = 0,1, …,11) | Poverty predictors label | Regression estimates $\lambda_j$ |
|---|---|---|
| 0 | Intercept | 12.472013 |
| 1 | Asset score | .126667 |
| 3 | Number of spouses | .104452 |
| 4 | Use of toothpaste | .268916 |
| 5 | Proportion of school age kids | .4122 |
| 6 | Ownership of poultry | .129944 |
| 7 | Number of members per room | .067203 |
| 8 | Source of lighting | .113282 |
| 9 | Ownership of land | .108962 |
| 10 | Literacy of household head | −.032945 |
| 11 | Member per room squared | −.003600 |
| 12 | Number of spouse squared | .054996 |

[11] *It is important to point out that misclassified households fall in neighboring expenditure quintiles, minimizing the scope of leakage in targeting for poverty alleviation.*

**Table 2: Household ranking across expenditure quintiles: comparison between observed and predicted aggregated per capita household expenditure**

*Observed per capita expenditure*

| Frequency \|<br>Percent \|<br>Row Pct \|<br>Col Pct | | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|---|
| | 1 | 868 | 30 | 0 | 0 | 0 | 898 |
| | | 19.36 | 0.67 | 0 | 0 | 0 | 20.03 |
| | | 96.66 | 3.34 | 0 | 0 | 0 | |
| | | 96.77 | 3.34 | 0 | 0 | 0 | |
| | 2 | 29 | 768 | 100 | 0 | 0 | 897 |
| | | 0.65 | 17.13 | 2.23 | 0 | 0 | 20.01 |
| | | 3.23 | 85.62 | 11.15 | 0 | 0 | |
| | | 3.23 | 85.62 | 11.14 | 0 | 0 | |
| Predicted per capita expenditure | 3 | 0 | 99 | 765 | 33 | 0 | 897 |
| | | 0 | 2.21 | 17.06 | 0.74 | 0 | 20.01 |
| | | 0 | 11.04 | 85.28 | 3.68 | 0 | |
| | | 0 | 11.04 | 85.19 | 3.70 | 0 | |
| | 4 | 0 | 0 | 33 | 780 | 82 | 895 |
| | | 0 | 0 | 0.74 | 17.40 | 1.83 | 19.96 |
| | | 0 | 0 | 3.69 | 87.15 | 9.16 | |
| | | 0 | 0 | 3.67 | 87.44 | 9.12 | |
| | 5 | 0 | 0 | 0 | 79 | 817 | 896 |
| | | 0 | 0 | 0 | 1.76 | 18.22 | 19.99 |
| | | 0 | 0 | 0 | 8.82 | 91.18 | |
| | | 0 | 0 | 0 | 8.86 | 90.88 | |
| Total | | 897 | 897 | 898 | 892 | 899 | 4483 |
| | | 20.01 | 20.01 | 20.03 | 19.90 | 20.05 | 100.00 |
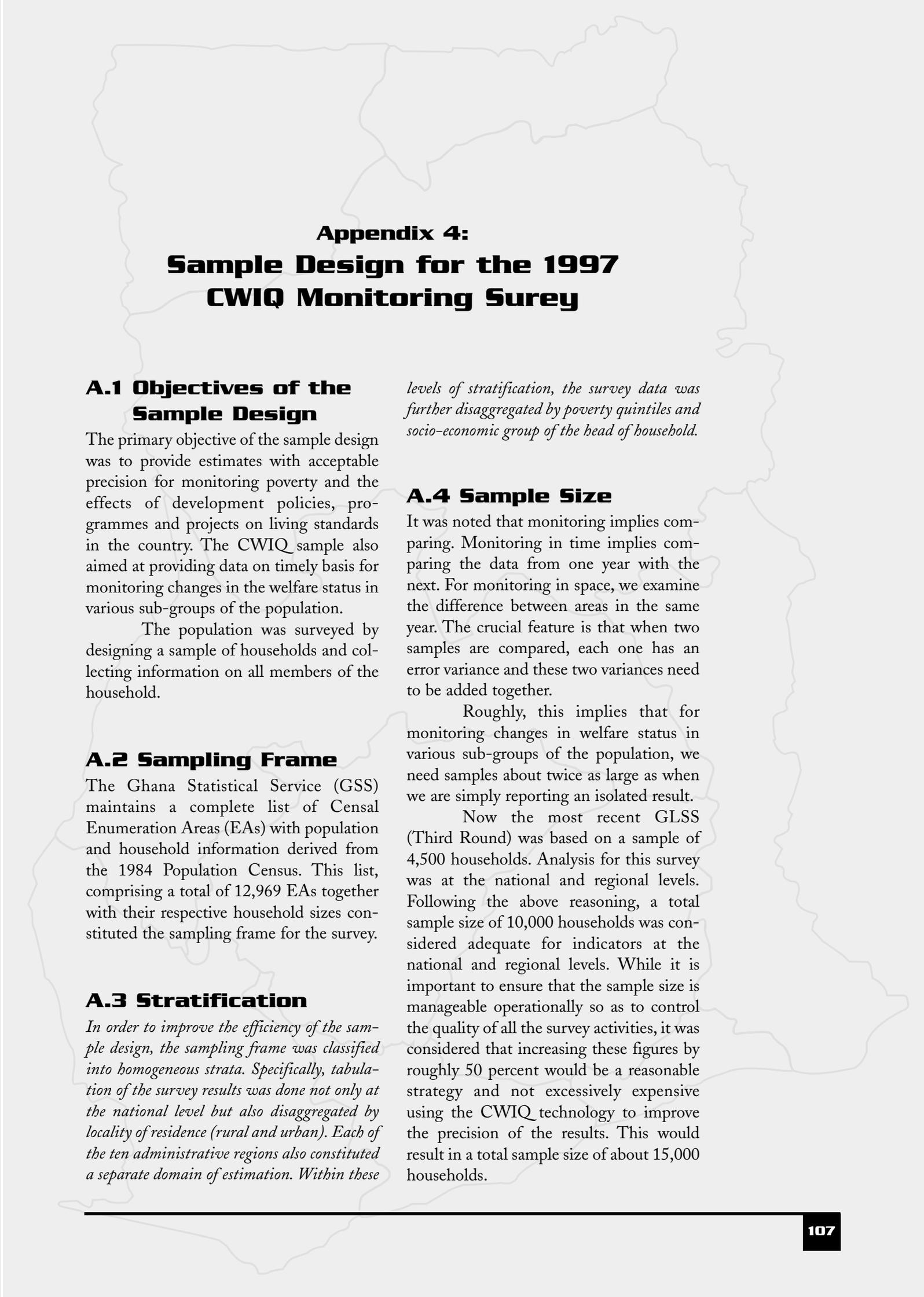
# Appendix 4:
# Sample Design for the 1997 CWIQ Monitoring Surey

## A.1 Objectives of the Sample Design

The primary objective of the sample design was to provide estimates with acceptable precision for monitoring poverty and the effects of development policies, programmes and projects on living standards in the country. The CWIQ sample also aimed at providing data on timely basis for monitoring changes in the welfare status in various sub-groups of the population.

The population was surveyed by designing a sample of households and collecting information on all members of the household.

## A.2 Sampling Frame

The Ghana Statistical Service (GSS) maintains a complete list of Censal Enumeration Areas (EAs) with population and household information derived from the 1984 Population Census. This list, comprising a total of 12,969 EAs together with their respective household sizes constituted the sampling frame for the survey.

## A.3 Stratification

*In order to improve the efficiency of the sample design, the sampling frame was classified into homogeneous strata. Specifically, tabulation of the survey results was done not only at the national level but also disaggregated by locality of residence (rural and urban). Each of the ten administrative regions also constituted a separate domain of estimation. Within these levels of stratification, the survey data was further disaggregated by poverty quintiles and socio-economic group of the head of household.*

## A.4 Sample Size

It was noted that monitoring implies comparing. Monitoring in time implies comparing the data from one year with the next. For monitoring in space, we examine the difference between areas in the same year. The crucial feature is that when two samples are compared, each one has an error variance and these two variances need to be added together.

Roughly, this implies that for monitoring changes in welfare status in various sub-groups of the population, we need samples about twice as large as when we are simply reporting an isolated result.

Now the most recent GLSS (Third Round) was based on a sample of 4,500 households. Analysis for this survey was at the national and regional levels. Following the above reasoning, a total sample size of 10,000 households was considered adequate for indicators at the national and regional levels. While it is important to ensure that the sample size is manageable operationally so as to control the quality of all the survey activities, it was considered that increasing these figures by roughly 50 percent would be a reasonable strategy and not excessively expensive using the CWIQ technology to improve the precision of the results. This would result in a total sample size of about 15,000 households.

# Appendix 5:
# Sample Selection

*Using the above sampling frame, the number of households to be selected per EA was based on the following reasoning. The Third Round of the Ghana Living Standards Survey used 10 households per EA in the rural sector and 15 in the urban sector. During the CWIQ Pilot Survey, 30 households were arbitrarily selected per EA to test the survey instruments. The overriding factor in the CWIQ is cost-effectiveness and simplicity and this favours a large take. However, the selection of 30 households per EA was considered too high. A sample size of 25 households per EA appeared more likely to be optimal.*

Following the above parameters, the CWIQ survey was based on a two-stage, stratified, nationally representative cluster sample design.

Specifically, at the first stage, 588 Enumeration Areas (EAs) were selected using systematic sampling with probabilities proportional to size (PPS-method). The distribution of the selected EAs by region is a follows:

| REGION | NUMBER OF EAs |
|---|---|
| Western | 63 |
| Central | 64 |
| Greater Accra | 85 |
| Eastern | 61 |
| Volta | 83 |
| Ashanti | 105 |
| Brong Ahafo | 57 |
| Northern | 32 |
| Upper East | 12 |
| Upper West | 26 |
| **Total** | **588** |

A household listing exercise was carried out in the selected EAs. At the second stage, a systematic sample of 25 households per EA was selected. This sample design yielded a total sample of 14,700 households nationwide.

Mathematically, the selection procedure may be summarized as follows:

- At the first stage, we select 588 EAs with probability proportional to size (PPS), where the measure of size is the number of households in the 1984 census, i.e.:

$$P_{1i} = (a * Mi) \Big/ \sum Mi$$

Where ($a$) is the total number of EAs selected i.e. ($a$) = 588

$Mi$ is the number of census households in the $i^{th}$ EA.

$\sum Mi$ is the total number of households in the country (from 1984 Census data).

$P_{1i}$ is the first stage sampling probability for the $i^{th}$ EA.

- At the second stage, we select 25 households by systematic sampling.

i.e. $$P_{2i} = b \Big/ Mi$$

Where $Mi$ is the total number of households in the $i^{th}$ EA (from Listing).

$P_{2i}$ is the sampling probability for households and

$b$ is the number of households selected per EA i.e. $b = 25$

- The final overall household probability of selection is given by the product of the first and second stage probabilities expressed as:

$$\int i = P_{1i} * P_{2i} = \frac{ab}{\Sigma Mi} x \frac{Mi}{Mi}$$

The weighting factor for the $i^{th}$ EA. Wi is the reciprocal of the overall probability of selection.

Hence, $Wi = \dfrac{\sum Mi}{ab} x \dfrac{Mi}{Mi}$

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