



2010

POPULATION & HOUSING CENSUS

DISTRICT ANALYTICAL REPORT

TWIFO ATTI MORKWA DISTRICT



Canada

MINISTRY OF FOREIGN AFFAIRS OF DENMARK
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PREFACE AND ACKNOWLEDGEMENT

No meaningful developmental activity can be undertaken without taking into account the characteristics of the population for whom the activity is targeted. The size of the population and its spatial distribution, growth and change over time, in addition to its socio-economic characteristics are all important in development planning.

A population census is the most important source of data on the size, composition, growth and distribution of a country's population at the national and sub-national levels. Data from the 2010 Population and Housing Census (PHC) will serve as reference for equitable distribution of national resources and government services, including the allocation of government funds among various regions, districts and other sub-national populations to education, health and other social services.

The Ghana Statistical Service (GSS) is delighted to provide data users, especially the Metropolitan, Municipal and District Assemblies, with district-level analytical reports based on the 2010 PHC data to facilitate their planning and decision-making.

The District Analytical Report for the Twifo Atti-Morkwa District is one of the 216 district census reports aimed at making data available to planners and decision makers at the district level. In addition to presenting the district profile, the report discusses the social and economic dimensions of demographic variables and their implications for policy formulation, planning and interventions. The conclusions and recommendations drawn from the district report are expected to serve as a basis for improving the quality of life of Ghanaians through evidence-based decision-making, monitoring and evaluation of developmental goals and intervention programmes.

For ease of accessibility to the census data, the district report and other census reports produced by the GSS will be disseminated widely in both print and electronic formats. The report will also be posted on the GSS website: www.statsghana.gov.gh.

The GSS wishes to express its profound gratitude to the Government of Ghana for providing the required resources for the conduct of the 2010 PHC. While appreciating the contribution of our Development Partners (DPs) towards the successful implementation of the Census, we wish to specifically acknowledge the Department for Foreign Affairs, Trade and Development (DFATD) formerly the Canadian International Development Agency (CIDA) and the Danish International Development Agency (DANIDA) for providing resources for the preparation of all the 216 district reports. Our gratitude also goes to the Metropolitan, Municipal and District Assemblies, the Ministry of Local Government, Consultant Guides, Consultant Editors, Project Steering Committee members and their respective institutions for their invaluable support during the report writing exercise. Finally, we wish to thank all the report writers, including the GSS staff who contributed to the preparation of the reports, for their dedication and diligence in ensuring the timely and successful completion of the district census reports.



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ACRONYMS AND ABBREVIATIONS

2010 PHC	2010 Population and Housing Census
AIDS:	Acquired Immune Deficiency Syndrome
ASDR:	Age Specific death rate
CBR:	Crude birth rate
CDR:	Crude death rate
CEB:	Children Ever Born
CERSGIS:	Centre for Remote Sensing and Geographic Information Survey
CHIPS:	Community Health Planning Services
CIDA:	Canadian International Development Agency
CS:	Children Surviving
DANIDA:	Danish International Development Agency
DFID:	Department for International Development
EA:	Enumeration Area
ECOWAS:	Economic Community of West African States
EU:	European Union
fCUBE:	Free Compulsory Universal Basic Education
GDHS:	Ghana Demography Health Survey
GDP:	Gross Domestic product
GES:	Ghana Education Service
GETfund:	Ghana Education Trust Fund
GFR:	General fertility rate
GPRTU:	Ghana Private Road Transport Union
GPS:	Global Positioning System
GREDA:	Ghana Real Estate Developers Association
GSDP:	Ghana Statistics Development Plan
GSS:	Ghana Statistical Service
HIV:	Human Immune Virus
ICT:	Information Communication Technology
ICT4AD:	National ICT for Accelerated Development Policy
ISSER:	Institute of Statistical Social and Economic Research
JHS:	Junior High School
JSS:	Junior Secondary School

LEAP:	Livelihood Empowerment against Poverty Programme
LESDEP:	Local Enterprise and Skills Development
MDGs:	Millennium Development Goals
MMDAs:	Metropolitan, Municipal and District Assemblies
MOE:	Ministry of Education
MOFA:	Ministry of Food and Agriculture
MOTI:	Ministry of Trade and Industry
NCA:	National Communication Authority
NCPEC:	National Census Publicity and Evaluation Committee
NCTAC:	National Census Technical Advisory Committee
NDPC:	National Development Planning Commission
NGOs:	Non-governmental Organisations
NHIS:	National Health Insurance Scheme
NIPORT:	National Institute of Population Research and Training
PAS:	Population Analysis Spreadsheet
PHC:	Population and Housing Census
PNDC:	Provisional National Defence Council
PPP:	Public-Private Partnerships
PWDs:	Persons with disabilities
SAP:	Structural Adjustment Programme
SHS:	Senior High School
SMAM:	Singulate Mean Age at Marriage
SSS:	Senior Secondary School
TAMD:	Twifo Atti-Morkwa District
TAMDA:	Twifo Atti-Morkwa District Assembly
UN:	United Nations
UNDP:	United Nations Development Programme
UNFPA:	United Nations Population Fund
UNICEF:	United Nations International Children's Education Fund
WC:	Water Closet
WHO:	World Health Organization

EXECUTIVE SUMMARY

Introduction

The district census report is the first of its kind since the first post-independence census was conducted in 1960. The report provides basic information about the district. It gives a brief background of the district, describing its physical features, political and administrative structure, socio-cultural structure and economy. Using data from the 2010 Population and Housing Census (2010 PHC), the report discusses the population characteristics of the district, fertility, mortality, migration, marital status, literacy and education, economic activity status, occupation, employment; Information Communication Technology (ICT), disability, agricultural activities and housing conditions of the district. The key findings of the analysis are as follows (references are to the relevant sections of the report):

Population size, structure and composition

The population of Twifo Atti-Morkwa District, according to the 2010 Population and Housing Census, is 61,743, representing 2.9 percent of the population of Central Region with females constituting 51.0 percent while males formed 49.0. The District has a sex ratio of 96 which is higher than that of the region (91). It also has a youthful population (children under 15 years) (76.6%) depicting a broad base population pyramid with a small number of elderly persons (60+ years) constituting 6.8 percent

Fertility, mortality and migration

Twifo Atti-Morkwa District has a Total Fertility Rate of 4.1 which is high than that of the region (3.6). The CBR (29.5) and GFR (119.2) are higher than that of the region (CBR=26.5 and GFR=105.3). The crude death rate for the district is 5.5 per 1000 which is lower than the region (7.6 %). The District has a total of 23,648 migrants representing about 38.3 percent. It was observed that about 53.0 percent (12,461) were born elsewhere in the region, 47.3 percent were migrants born in other regions of Ghana while 1.9 percent were born outside Ghana.

Household size, composition and structure

The District has a household population of 59,284 with a total number of 12,959 households. The average household size in the district is 4.8 persons per household. Children constitute the largest proportion of the household composition 46.3 percent while grandchildren consist of 7.7 percent of household population. Spouses form about 11.3 percent. Nuclear households (head, spouse(s) and children) constitute 33.9 percent of the total number of households in the district.

Marital status

About four in ten (46.1%) of the population aged 12 years and older are married, 39.1 percent have never married, 4.7 percent are in consensual unions, 4.1 percent are widowed, 4.4 percent are divorced and 1.7 percent are separated. Among the married, 30.4 percent have no education while 6.4 percent of the never married have never been to school. More than half of the married population (86.1%) are employed, 1.8 percent are unemployed and 12.0 percent are economically not active. A greater proportion of those who have never married (58.1%) are economically not active with 2.5 percent unemployed.

Nationality

The proportion of Ghanaians by birth in the District is 95 percent. Those who have naturalised constitute 0.4 percent and the non-Ghanaian population is 1.7 percent.

Literacy and education

Of the population 11 years and above, 77.7 percent are literate and 22.3 percent are non-literate. The the number of non-literate females (6,371) was two times that of males (3,024). On the other hand, female literate population (15,296) in the District was slightly less than their male counterparts (17,396).Six out of ten people (64.7%) indicated they could speak and write both English and Ghanaian languages. Out of the 24,488 persons enumerated as currently in school, 47.5 percent were at the primary level, 18.2 percent were at the JSS/JHS level while 6.0 percent were at the Senior High School level. Those who attended school in past constitute about 20,747 made up of females 9,721 and males 11,026. The distribution was as follows: Primary (17.8) Middle school (26.3%), JSS/JHS (38.3%), SSS/SHS (8.5%) and Tertiary (3.0%)

Economic activity status

About 74 percent of the population aged 15 years and older are economically active while 26.3 percent are economically not active. Of the economically active population, 96.7 percent are employed while 3.3 percent are unemployed. For those who are economically not active, a larger percentage of them are students (53.4%), 26.1 percent perform household duties and 6.3 percent are disabled or too sick to work. About five out of ten (59.4%) unemployed are seeking work for the first time.

Occupation

Of the employed population (25,636), 56.4 percent are engaged as skilled agricultural, forestry and fishery workers, 14.2 percent in service and sales, 11.8 percent in craft and related trade, and 6.6 percent are engaged as managers, professionals, and technicians.

Employment status and sector

The employed population 15 years and older has 62.6 percent as self-employed without employees, 17.5 percent are contributing family workers, 11.9 percent are employees, 2.7 percent are self- employed with employees and casual workers 2.6 percent. The private informal sector is the largest employer in the district, employing 87.7 percent of the population followed by the public sector with 8.0 percent.

Information Communication Technology

Of the population 12 years and above, 38.0 percent have mobile phones. Men who own mobile phones constitute 48.4 percent as compared to 51.6 percent of females. The population 12 years and older who use internet facilities in the district is 2.5 percent. Only 442 households representing 3.4 percent of the total households in the district have desktop/laptop computers.

Disability

About 2.6 percent of the District's total population have one form of disability or the other. The proportion of the male population with disability is slightly higher (52.6%) than females (47.4%). The types of disability in the district include sight, physical, hearing, speech, intellect, and emotion. Persons with sight disability accounted for 40.0 percent of all cases of which 48.5 percent were females while 51.5 percent were males. Also 60.6 percent of the total population of disabled persons in the district were employed, 2.1 percent were unemployed while 37.3 percent were economically not active.

Agriculture

It is observed that about 72 percent of households are engaged in agriculture. Nearly nine out of every ten households (85.7) in the rural areas as compared with about 14.3 percent of households in the urban areas are engaged in agriculture. Majority of these farmers (86.6) are involved in crop farming.

Housing

The housing stock of the district is 8,664. The total number of households in these houses was 12,959 with population per house estimated to be (7.1) and an average household size of 4.8

Type, tenancy arrangement and ownership of dwelling units

About 5 in 10 (49.0%) of all dwelling units in the district are compound houses; 32.3 percent are separate houses and 11.8 percent are semi-detached houses. About (63%) of the dwelling units are owned by members of the household; 20.4 percent are owned by private individuals; 12.1percent are owned by a relative who is not a member of the household and 2.2 percent are owned by public or government. Less than one percent (0.6%) of the dwelling units is owned through mortgage schemes.

Material for construction of outer wall, floor and roof

The main construction material for outer walls of dwelling units in the district is Mud brick/earth (55%) cement block and concrete accounting for 41.2 percent. Cement (81.2%) and earth/mud (16.6%) are the two main materials used in the construction of floors of dwelling units. Metal sheets (84.3%) and thatch/palm leaf or raffia (8.4%) are the two major roofing materials for dwelling units.

Room occupancy

One room constitutes the highest percentage (57.2%) of sleeping rooms occupied by households in dwelling units in the district. About 13.4 percent of households with 10 or more members occupy single rooms.

Utilities and household facilities

The three main sources of lighting in dwelling units in the district are electricity (59.4%) flashlight/torch (21.7%) and kerosene lamp (17.5%). The main sources of fuel for cooking by most households are wood (58.6%) followed by charcoal (25.3%). The four main sources of drinking water are bore-hole/pump/tube well (45.5%), public tap (14.2%), pipe-borne outside dwelling (11.0%) pipe-borne inside dwelling (2.2%).

A higher percentage of households (43percent) used public toilet, about 38 percent used Pit latrines, while 8.4 percent used KVIP. Nearly 8 percent of households in the district had no toilet facility and therefore used the bush or beach as places of convenience. Every 2 out of 10 households (28.6%) share separate bathrooms in the same house with 26.4 percent having their own bathroom for their exclusive use.

Waste disposal

The most commonly used methods of solid waste disposal in the district is public dump (open space) (63.7%) and dump indiscriminately accounting for 13 percent. Liquid waste are mostly thrown onto compound (58.2 %) and thrown onto street/outside (26.9%) and Thrown into gutter (7.6%).

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Twifo Atti-Morkwa District is one of the twenty administrative districts in the central region of Ghana. It was formerly known as the Twifo-Hemang Lower Denkyira District with its capital at Twifo Praso. It was carved from Denkyira District Council in 1988 by LI 1377 with the name Twifo Hemang Lower Denkyira District. Again, in 2012, government split the Twifo Hemang Lower Denkyira District into two districts namely; Twifo Atti Morkwa District and Hemang lower Denkyira District under the Local Government Act 462 of 1992 by LI 2023. The district is bounded on the north by the Upper Denkyira East Municipal at the South by the Hemang Lower Denkyira District, at the West by the MpohorWassa East District and at the East by the Assin North Municipal (Figure 1.1).

1.2 Physical Features

1.2.1 Geology and soil

The land is underlined by Birimian and Tarkwaian rocks which are very rich in mineral deposits. Diamond deposits can be found at Afiafiso and Manganese at Asamang and Twifo Mampong. Within the Pra River can be found Birimian and Tarkwaian rocks. These rocks hold the potential for the exploitation of gold, and manganese. The bed of the River Pra has alluvial gold deposits which are currently being mined illegally by local galamsey operators to the detriment of rural communities who drink from the river.

The District has five main soil types namely; the Nsaba-Swedru Compound, the Nta-Offin Associates, the Asuanzi-Kumasi Associates, the Bekwai-Nzema-Oda compound and the Juaso-Manso-Kyegyewere-Kakum Compound. The Nsaba-Swedru Compound: These are soils developed over granite that are well drained and respond well to phosphorus fertilizer application. They can be found in the northern part of the district around Mampoma, Morkwa, Agona and Nkwankyemaso. They are excellent for the cultivation of tree crops such as cocoa, oil palm, citrus, and coffee, and food crops such as plantain, cocoyam, banana, and cassava.

Nta-Offin Associates: These soils are developed over rocks which are poorly drained. They are found around Brofoyedur and Bukruso. They are generally suitable for the cultivation of tree crops such as citrus, cola and oil palm. In addition to the tree crops, these soils tend to support semi-perennial food crops, dry season vegetables, sugar cane, and rice.

Asuanzi-Kumasi Associates: These are soils developed over Tarkwaian rocks, which are moderately drained and are good for the cultivation of tree crops such as cocoa and forestry products. These soils are found in the southern section of the District around Jukwa, Mampong, Ntafrewaso, Watreso and Krobo. They also support food crops such as plantain, cocoyam, maize, cassava and banana. They have low soil nutrients and require nitrogen and phosphorus fertilizer usage. Leaching needs to be avoided.

Bekwai-Nzema-Oda compound: They are found around Bepobeng, Moseaso, Nyinase and Tweapease. These soils are suitable for the cultivation of perennial tree crops such as cocoa, oil palm, coconut, coffee and food crops such as maize, cassava, and cocoyam.

Juaso-Manso-Kyekyewere-Kakum Compound: They can be found around Mafi, Bonsaho, Ashire, Mbraem Afiaso Mampoma and Wawase areas. These soils support perennial tree crops such as cocoa, oil palm, coconut, coffee and food crops including maize, cassava, and plantain.

1.2.2 Relief and drainage

The District has a generally undulating landscape with a general altitude between 60-200 meters above sea level. The Pra River and its tributaries serve as the major drainage system in the area.

1.2.3 Climate

The District falls within the semi equatorial climatic zone marked by double maximal rainfall with a total annual mean rainfall between 1,200mm and 2,000mm. The first rainy season spans from May to June with the heaviest in June while the second rainy season is from September to October (Dickson and Benneh, 2001). The main dry season is from November to February. It has fairly high uniform temperatures ranging between 26°C (in August) and 30°C (in March).

1.2.4 Vegetation and mineral deposit

Its vegetation consists basically of secondary forest that has been largely disturbed by the activities of man through logging, crop/livestock farming and mining among others. There are, however, large areas of forest reserves like, Bimpong Forest Reserve, Pra Suhyen Forest Reserve, Minta Forest Reserve and Bonsaben Forest Reserve with the bed of River Pra containing alluvial gold deposits, usually mined by galamsey operators.

1.3 Political Administration and Structures

The District is headed by the District Chief Executive who exercises the Executive powers on behalf of the President. There is also an administrative wing of the District, headed by the heads of all Decentralized Department. Twifo Atti-Morkwa District Assembly is made up of 38 members, comprising 28 elected members and 10 members appointed by the President. The District has five Area Councils. These are Twifo Praso Area Council, Mampong Area Council, Agona Area Council, Nyinase Area Council and Wamaso Area Council.

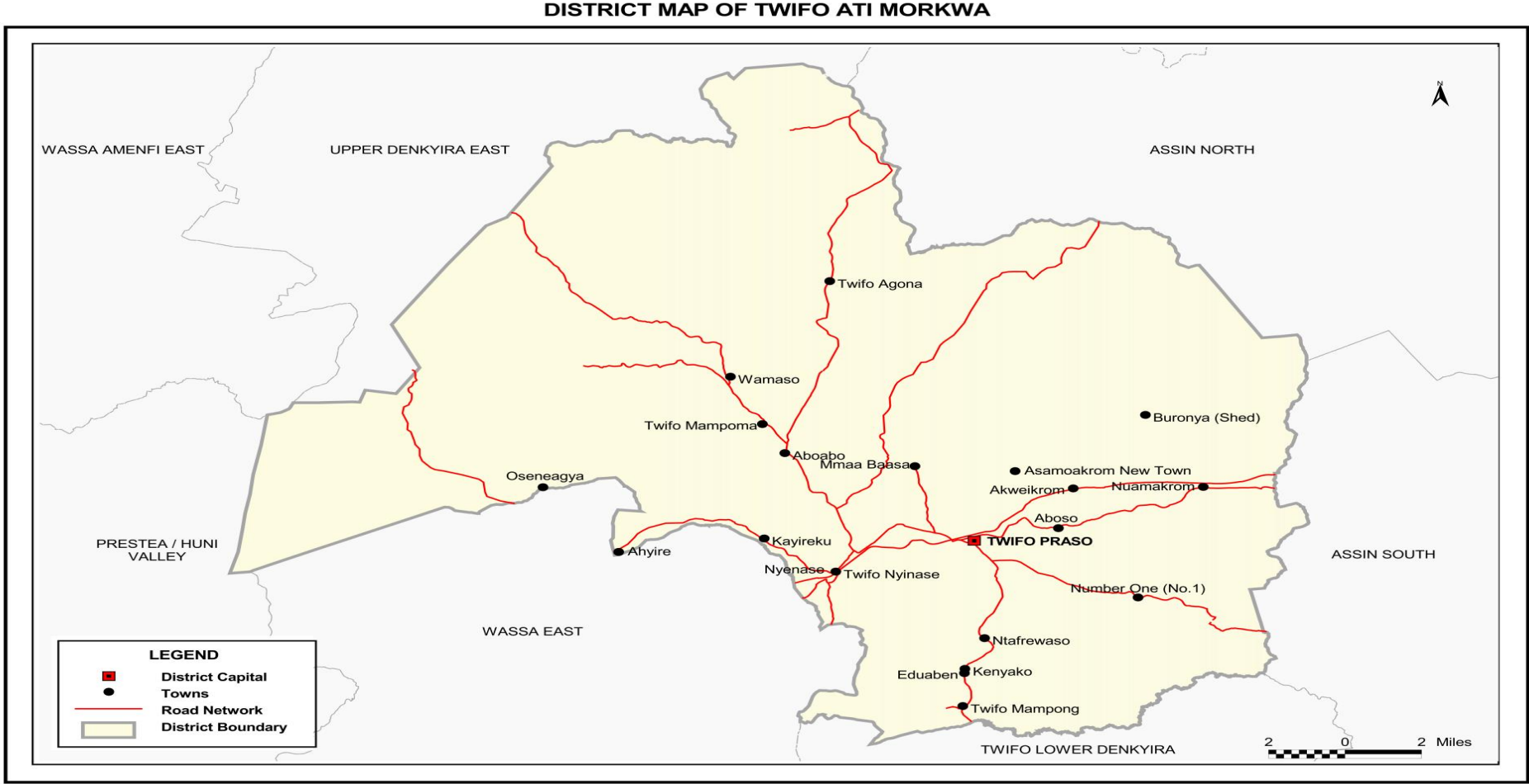
1.4 Social Composition and Cultural Structure

1.4.1 Ethnic composition

Akans form the majority amongst the ethnic groups in the district. The others include the Twifos, Gomoas, and the Assin extracts. Migration has also brought ethnic groups such as Ewes, Krobos Ga-Dangmes, Northerners and others into the district. Some of the languages spoken in the District are Twi, Fante, Ewe and Akuapim.

The Twifo Atti-Morkwa district is predominantly matrilineal, where succession line is taken from the maternal lineage. The original settlers of the district are the Twifo and the Atti-Morkwa people who belong to the Akan group, the largest ethnic group in the district.

Figure 1.1: Map of Twifo Atti-Morkwa



Source: Ghana Statistical Service, GIS

However, there are other ethnic groups who practice patrilineal system. Majority of these ethnic groups are migrants who live in the district, in some cases for over 20 years. They include the Ewes, Ga-Dangmes and Krobos.

1.4.2 Transport and communication

Twifo Atti Morkwa district has total trunk roads of 145km, out of which 65km are tarred roads while 80 km are untarred. The District has a total length of 425.60km of feeder roads, 295.10km of these feeder roads are properly engineered while 59.50km are partially engineered. A total of 24.4km of the feeder roads are tarred even though 354.60 of the untarred feeder roads are motorable.

The District has good access to all the Telecommunication networks including Scancom Ghana Limited operators of MTN, Vodafone Ghana Limited operators of Vodafone. The rest are Minicom Ghana Limited which operates Tigo, Expresso Telecom Limited operators of Expresso and Airtel Ghana. In addition to the telecommunication companies in the District, the District has one radio station which facilitates access and dissemination of information in the District.

1.5 Economy

Twifo Atti-Morkwa district is predominantly an agrarian economy. Some of the agricultural activities undertaken include crop farming, livestock rearing and tree growing. The district is noted for its dominance in the cultivation of oil palm. There is a Local Palm Oil production company known as Twifo Oil Palm Plantation (TOPP) which is a major supplier of local palm oil to major companies like Nestle Ghana limited.

The District has a big Market located at Twifo Praso, the district capital. It attracts people from neighbouring towns and villages on Tuesdays and Fridays which are the markets days.

1.6 Census Methodology, Concepts and Definitions

1.6.1 Introduction

Ghana Statistical Service (GSS) was guided by the principle of international comparability and the need to obtain accurate information in the 2010 Population and Housing Census (2010 PHC). The Census was, therefore, conducted using all the essential features of a modern census as contained in the United Nations Principles and Recommendations for countries taking part in the 2010 Round of Population and Housing Censuses.

Experience from previous post independence censuses of Ghana (1960, 1970, 1984 and 2000) was taken into consideration in developing the methodologies for conducting the 2010 PHC. The primary objective of the 2010 PHC was to provide information on the number, distribution and social, economic and demographic characteristics of the population of Ghana necessary to facilitate the socio-economic development of the country.

1.6.2 Pre-enumeration activities

Development of census project document and work plans

A large scale statistical operation, such as the 2010 Population and Housing Census required meticulous planning for its successful implementation. A working group of the Ghana Statistical Service prepared the census project document with the assistance of two consultants. The document contains the rationale and objectives of the census, census

organization, a work plan as well as a budget. The project document was launched in November 2008 as part of the Ghana Statistics Development Plan (GSDP) and reviewed in November 2009.

Census secretariat and committees

A well-structured management and supervisory framework that outlines the responsibilities of the various stakeholders is essential for the effective implementation of a population and housing census. To implement the 2010 PHC, a National Census Secretariat was set up in January 2008 and comprised professional and technical staff of GSS as well as staff of other Ministries, Departments and Agencies (MDAs) seconded to GSS. The Census Secretariat was primarily responsible for the day-to-day planning and implementation of the census activities. The Secretariat had seven units, namely; census administration, cartography, recruitment and training, publicity and education, field operations and logistics management, data processing, and data analysis and dissemination.

An acting Census Coordinator engaged by the United Nations Population Fund (UNFPA) in 2008 to support GSS in the planning of the Census initially headed the Census Secretariat. In 2009, the Census Secretariat was re-organised with the Government Statistician as the National Chief Census Officer and overall Coordinator, assisted by a Census Management Team and a Census Coordinating Team. The Census Management Team had oversight responsibility for the implementation of the Census. It also had the responsibility of taking critical decisions on the census in consultation with other national committees. The Census Coordinating Team, on the other hand, was responsible for the day-to-day implementation of the Census programme.

A number of census committees are also set up at both national and sub-national levels to provide guidance and assistance with respect to resource mobilization and technical advice. At the national level, the committees are the National Census Steering Committee (NCSC), the National Census Technical Advisory Committee (NCTAC) and the National Census Publicity and Education Committee (NCPEC). At the regional and district levels, the committees are the Regional Census Implementation Committee and the District Census Implementation Committee, respectively.

The Regional and District Census Implementation Committees are inter-sectoral in their composition. Members of the Committees are mainly from decentralized departments with the Regional and District Coordinating Directors chairing the Regional Census Implementation Committee and District Census Implementation Committee, respectively. The Committees contributed to the planning of district, community and locality level activities in areas of publicity and field operations. They supported the Regional and District Census Officers in the recruitment and training of field personnel (enumerators and supervisors), as well as mobilizing logistical support for the census.

Selection of Census topics

The topics selected for the 2010 Population and Housing Census are based on recommendations contained in the UN Principles and Recommendations for 2010 Round of Population and Housing Censuses and the African Addendum to that document as well as the needs of data users. All the core topics recommended at the global level, i.e., geographical and internal migration characteristics, international migration, household characteristics, demographic and social characteristics such as age, date of birth, sex, and marital status, fertility and mortality, educational and economic characteristics, issues relating to disability and housing conditions and amenities are included in the census.

Some topics that are not considered core by the UN recommendations but which are found to be of great interest and importance to Ghana and are, therefore, included in the 2010 PHC are religion, ethnicity, employment sector and place of work, agricultural activity, as well as housing topics, such as, type of dwelling, materials for outer wall, floor and roof, tenure/holding arrangement, number of sleeping rooms, cooking fuel, cooking space and Information Communication Technology (ICT).

Census mapping

A timely and well-implemented census mapping is pivotal to the success of any population and housing census. Mapping delineates the country into enumeration areas to facilitate smooth enumeration of the population. The updating of the 2000 Census Enumeration Area (EA) maps started in the last quarter of 2007 with the acquisition of topographic sheets of all indices from the Survey and Mapping Division of the Lands Commission. In addition, digital sheets are also procured for the Geographical Information System Unit.

The Cartography Unit of the Census Secretariat collaborated with the Survey and Mapping Division of the Lands Commission and the Centre for Remote Sensing and Geographic Information Services (CERSGIS) of the Department of Geography and Resource Development, University of Ghana, to determine the viability of migrating from analog to digital mapping for the 2010 PHC, as recommended in the 2000 PHC Administrative Report. Field cartographic work started in March 2008 and was completed in February 2010.

Development of questionnaire and manuals

For effective data collection, there is the need to design appropriate documents to solicit the required information from respondents. GSS consulted widely with main data users in the process of the questionnaire development. Data users including MDAs, research institutions, civil society organizations and development partners are given the opportunity to indicate the type of questions they wanted to be included in the census questionnaire.

Documents developed for the census included the questionnaire and manuals, and field operation documents. The field operation documents included Enumerator's Visitation Record Book, Supervisor's Record Book, and other operational control forms. These record books served as operational and quality control tools to assist enumerators and supervisors to control and monitor their field duties respectively.

Pre-tests and trial census

The census questionnaire was pre-tested twice in the course of its development. The first pre-test was carried out in March 2009 to find out the suitability of the questions and the instructions provided. It also tested the adequacy and completeness of the responses and how respondents understood the questions. It is internationally recognized that an essential element in census planning is the pre-testing of the questionnaire and related instructions. The objective of the pre-test is to test the questionnaire, the definition of its concepts and the instructions for filling out the questionnaire.

The second pre-test was done in 10 selected enumeration areas in August, 2009. The objective of the second pre-test was to examine the sequence of the questions, test the new questions, such as, date of birth and migration, and assess how the introduction of 'date of birth' could help to reduce 'age heaping'. With regard to questions on fertility, the pre-tests sought to find out the difference, if any, between proxy responses and responses by the

respondents themselves. Both pre-tests are carried in the Greater Accra Region. Experience from the pre-tests was used to improve the final census questionnaire.

A trial census which is a dress rehearsal of all the activities and procedures that are planned for the main census was carried out in October/November 2009. These included recruitment and training, distribution of census materials, administration of the questionnaire and other census forms, enumeration of the various categories of the population (household, institutional and floating population), and data processing. The trial census was held in six selected districts across the country namely; Saboba (Northern Region), Chereponi (Northern Region), Sene (Brong Ahafo Region), Bia (Western Region), Awutu Senya (Central Region), and Osu Klottey Sub-Metro (Greater Accra Region). A number of factors are considered in selecting the trial census districts. These included: administrative boundary issues, ecological zone, and accessibility, enumeration of floating population/outdoor-sleepers, fast growing areas, institutional population, and enumeration areas with scattered settlements.

The trial census provided GSS with an opportunity to assess its plans and procedures as well as the state of preparedness for the conduct of the 2010 PHC. The common errors found during editing of the completed questionnaires resulted in modifications to the census questionnaire, enumerator manuals and other documents. The results of the trial census assisted GSS to arrive at technically sound decisions on the ideal number of persons per questionnaire, number of persons in the household roster, migration questions, placement of the mortality question, serial numbering of houses/housing structures and method of collection of information on community facilities. Lessons learnt from the trial census also guided the planning of the recruitment process, the procedures for training of census field staff and the publicity and education interventions.

1.6.3 Census Enumeration

Method of enumeration and fieldwork

All post- independence censuses (1960, 1970, 1984, and 2000) conducted in Ghana used the de facto method of enumeration where people are enumerated at where they are on census night and not where they usually reside. The same method was adopted for the 2010 PHC. The de facto count is preferred because it provides a simple and straight forward way of counting the population since it is based on a physical fact of presence and can hardly be misinterpreted. It is thought that the method also minimizes the risks of under-enumeration and over enumeration. The canvasser method, which involves trained field personnel visiting houses and households identified in their respective enumeration areas, was adopted for the 2010 PHC.

The main census enumeration involved the canvassing of all categories of the population by trained enumerators, using questionnaires prepared and tested during the pre-enumeration phase. Specific arrangements are made for the coverage of special population groups, such as the homeless and the floating population. The fieldwork began on 21st September 2010 with the identification of EA boundaries, listing of structures, enumeration of institutional population and floating population.

The week preceding the Census Night was used by field personnel to list houses and other structures in their enumeration areas. Enumerators are also mobilized to enumerate residents/inmates of institutions, such as, schools and prisons. They returned to the institutions during the enumeration period to reconcile the information they obtained from

individuals and also to cross out names of those who are absent from the institutions on Census Night. Out-door sleepers (floating population) are also enumerated on the Census Night.

Enumeration of the household population started on Monday, 27th September, 2010. Enumerators visited houses, compounds and structures in their enumeration areas and started enumerating all households including visitors who spent the Census Night in the households. Enumeration was carried out in the order in which houses/structures are listed and where the members of the household are absent, the enumerator left a call-back-card indicating when he/she would come back to enumerate the household. The enumeration process took off smoothly with enumerators poised on completing their assignments on schedule since many of them are teachers and had to return to school. However, many enumerators ran short of questionnaires after a few days' work.

Enumeration resumed in all districts when the questionnaire shortage was resolved and by 17th October, 2010, enumeration was completed in most districts. Enumerators who had finished their work are mobilized to assist in the enumeration of localities that are yet to be enumerated in some regional capitals and other fast growing areas. Flooded areas and other inaccessible localities are also enumerated after the end of the official enumeration period. Because some enumeration areas in fast growing cities and towns, such as, Accra Metropolitan Area, Kumasi, Kasoia and Techiman are not properly demarcated and some are characterized by large EAs, some enumerators are unable to complete their assigned tasks within the stipulated time.

1.6.4 Post Enumeration Survey

In line with United Nations recommendations, GSS conducted a Post Enumeration Survey (PES) in April, 2011 to check content and coverage error. The PES was also to serve as an important tool in providing feedback regarding operational matters such as concepts and procedures in order to help improve future census operations. The PES field work was carried out for 21 days in April 2011 and was closely monitored and supervised to ensure quality output. The main findings of the PES are that:

- 97.0 percent of all household residents who are in the country on Census Night (26th September, 2010) are enumerated.
- 1.3 percent of the population was erroneously included in the census.
- Regional differentials are observed. Upper East region recorded the highest coverage rate of 98.2 percent while the Volta region had the lowest coverage rate of 95.7 percent.
- Males (3.3%) are more likely than females (2.8%) to be omitted in the census. The coverage rate for males was 96.7 percent and the coverage rate for females was 97.2 percent. Also, the coverage rates (94.1%) for those within the 20-29 and 30-39 age groups are relatively lower compared to the coverage rates of the other age groups.
- There was a high rate of agreement between the 2010 PHC data and the PES data for sex (98.8%), marital status (94.6%), relationship to head of household (90.5%) and age (83.0%).

1.6.5 Release and dissemination of results

The provisional results of the census are released in February 2011 and the final results in May 2012. A National Analytical report, six thematic reports, a Census Atlas, 10 Regional Reports and a report on Demographic, Social, Economic and Housing are prepared and disseminated in 2013.

1.6.6 Concepts and Definitions

Introduction

The 2010 Population and Housing Census of Ghana followed the essential concepts and definitions of a modern Population and Housing Census as recommended by the United Nations (UN). It is important that the concepts, definitions and recommendations are adhered to since they form the basis upon which Ghana could compare her data with that of other countries.

The concepts and definitions in this report cover all sections of the 2010 Population and Housing Census questionnaires (PHC1A and PHC1B). The sections are: geographical location of the population, Household and Non-household population, Literacy and Education, Emigration, Demographic and Economic Characteristics, Disability, Information and Communication Technology (ICT), Fertility, Mortality, Agricultural Activity and Housing Conditions.

The concepts and definitions are provided to facilitate understanding and use of the data presented in this report. Users are therefore advised to use the results of the census within the context of these concepts and definitions.

Region

There are ten (10) administrative regions in Ghana during the 2010 Population and Housing Census as they are in 1984 and 2000.

District

In 1988, Ghana changed from the local authority system of administration to the District assembly system. In that year, the then existing 140 local authorities are demarcated into 110 districts. In 2004, 28 new districts are created; this increased the number of districts in the country to 138. In 2008, 32 additional districts are created bringing the total number of districts to 170. The 2010 Population and Housing Census was conducted in these 170 administrative districts (these are made-up of 164 districts/municipals and 6 metropolitan areas). In 2012, 46 new districts are created to bring the total number of districts to 216. There was urgent need for data for the 46 newly created districts for planning and decision-making. To meet this demand, the 2010 Census data was re-programmed into 216 districts after carrying out additional fieldwork and consultations with stakeholders in the Districts affected by the creation of the new districts.

Locality

A locality was defined as a distinct population cluster (also designated as inhabited place, populated centre, settlement) which has a NAME or LOCALLY RECOGNISED STATUS. It included fishing hamlets, mining camps, ranches, farms, market towns, villages, towns, cities and many other types of population clusters, which meet the above criteria. There are two

main types of localities, rural and urban. As in previous censuses, the classification of localities into 'urban' and 'rural' was based on population size. Localities with 5,000 or more persons are classified as urban while localities with less than 5,000 persons are classified as rural.

Population

The 2010 Census was a "de facto" count and each person present in Ghana, irrespective of nationality, was enumerated at the place where he/she spent the midnight of 26th September 2010.

Household

A household was defined as a person or a group of persons, who lived together in the same house or compound and shared the same house-keeping arrangements. In general, a household consisted of a man, his wife, children and some other relatives or a house help who may be living with them. However, it is important to remember that members of a household are not necessarily related (by blood or marriage) because non-relatives (e.g. house helps) may form part of a household.

Head of Household

The household head was defined as a male or female member of the household recognised as such by the other household members. The head of household is generally the person who has economic and social responsibility for the household. All relationships are defined with reference to the head.

Household and Non-household population

Household population comprised of all persons who spent the census night in a household setting. All persons who did not spend the census night in a household setting (except otherwise stated) are classified as non-household population. Persons who spent census night in any of the under listed institutions and locations are classified as non-household population:

- (a) Educational Institutions
- (b) Children's and Old People's Homes
- (c) Hospitals and Healing Centres
- (d) Hotels
- (e) Prisons
- (f) Service Barracks
- (g) Soldiers on field exercise
- (h) Floating Population: The following are examples of persons in this category:
 - i. All persons who slept in lorry parks, markets, in front of stores and offices, public bathrooms, petrol filling stations, railway stations, verandas, pavements, and all such places which are not houses or compounds.

ii.Hunting and fishing camps.

iii.Beggars and vagrants (mentally sick or otherwise).

Age

The age of every person was recorded in completed years disregarding fractions of days and months. For those persons who did not know their birthdays, the enumerator estimated their ages using a list of district, regional and national historical events.

Nationality

Nationality is defined as the country to which a person belongs. A distinction is made between Ghanaians and other nationals. Ghanaian nationals are grouped into Ghanaian by birth, Ghanaian with dual nationality and Ghanaian by naturalization. Other nationals are grouped into ECOWAS nationals, Africans other than ECOWAS nationals, and non-Africans.

Ethnicity

Ethnicity refers to the ethnic group that a person belonged to. This information is collected only from Ghanaians by birth and Ghanaians with dual nationality. The classification of ethnic groups in Ghana is that officially provided by the Bureau of Ghana Languages and which has been in use since the 1960 census.

Birthplace

The birthplace of a person refers to the locality of usual residence of the mother at the time of birth. If after delivery a mother stayed outside her locality of usual residence for six months or more or had the intention of staying in the new place for six or more months, then the actual town/village of physical birth becomes the birthplace of the child.

Duration of Residence

Duration of residence refers to the number of years a person has lived in a particular place. This question is only asked of persons not born in the place where enumeration took place. Breaks in duration of residence lasting less than 12 months are disregarded. The duration of residence of persons who made multiple movements of one (1) year or more is assumed to be the number of years lived in the locality (town or village) since the last movement.

Religion

Religion refers to the individual's religious affiliation as reported by the respondent, irrespective of the religion of the household head or the head's spouse or the name of the person. No attempt was made to find out if respondents actually practiced the faith they professed.

Marital Status

Marital status refers to the respondent's marital status as at Census Night. The question on marital status was asked only of persons 12 years and older. The selection of the age limit of 12 years was based on the average age at menarche and also on the practice in some parts of the country where girls as young as 12 years old could be given in marriage.

Literacy

The question on literacy referred to the respondent's ability to read and write in any language. A person was considered literate if he/she could read and write a simple statement with understanding. The question on literacy was asked only of persons 11 years and older.

Education

School Attendance

Data was collected on school attendance for all persons three (3) years and older. School attendance refers to whether a person has ever attended, was currently attending or has never attended school. In the census, school meant an educational institution where a person received at least four hours of formal education.

Although the lower age limit of formal education is six years for primary one, eligibility for the school attendance question was lowered to three years because pre-school education has become an important phenomenon in the country.

Level of Education

Level of education refers to the highest level of formal school that a person ever attended or was attending. This information was obtained for persons 3 years and older.

Activity Status

Activity status refers to economic or non-economic activity of respondents during the 7 days preceding census night. Information on type of activity was collected on persons 5 years and older. A person was regarded as economically active if he/she:

- a. Worked for pay or profit or family gain for at least 1 hour within the 7 days preceding Census Night. This included persons who are in paid employment or self-employment or contributing family workers.
- b. Did not work, but had jobs to return to.
- c. Are unemployed.

The economically not active are persons who did not work and are not seeking for work. They are classified by reasons for not being economically active. Economically not active persons included homemakers, students, retired persons, the disabled and persons who are unable to work due to their age or ill-health.

Occupation

This referred to the type of work the person was engaged in at the establishment where he/she worked. This was asked only of persons 5 years and older who worked 7 days before the census night, and those who did not work but had a job to return to as well as those unemployed who had worked before. All persons who worked during the 7 days before the census night are classified by the kind of work they are engaged in. The emphasis was on the work the person did during the reference period and not what he/she was trained to do. For those who did not work but had a job to return to, their occupation was the job they would go back to after the period of absence. Also, for persons who had worked before and are seeking for work and available for work, their occupation was on the last work they did before

becoming unemployed. If a person was engaged in more than one occupation, only the main one was considered.

Industry

Industry referred to the type of product produced or service rendered at the respondent's work place. Information was collected only on the main product produced or service rendered in the establishment during the reference period.

Employment Status

Employment status refers to the status of a person in the establishment where he/she currently works or previously worked. Eight employment status categories are provided: employee, self-employed without employees, self-employed with employees, casual worker, contributing family worker, apprentice, domestic employee (house help). Persons who could not be classified under any of the above categories are classified as "other".

Employment Sector

This refers to the sector in which a person worked. The employment sectors covered in the census are public, private formal, private informal, semi-public/parastatal, NGOs and international organizations.

Disability

Persons with disability are defined as those who are unable to or are restricted in the performance of specific tasks/activities due to loss of function of some part of the body as a result of impairment or malformation. Information was collected on persons with visual/sight impairment, hearing impairment, mental retardation, emotional or behavioural disorders and other physical challenges.

Information Communication Technology (ICT)

ICT questions are asked for both individuals and households. Persons having mobile phones refer to respondents 12 years and older who owned mobile phones (irrespective of the number of mobile phones owned by each person). Persons using internet facility refers to those who had access to internet facility at home, internet cafe, on mobile phone or other mobile device. Internet access is assumed to be not only via computer, but also by mobile phones, PDA, game machine and digital television.

Households having Personal Computers/Laptops refer to households who own desktops/laptop computers. The fixed telephone line refers to a telephone line connecting a customer's terminal equipment (e.g. telephone set, facsimile machine) to the public switch telephone network.

Fertility

Two types of fertility data are collected: lifetime fertility and current fertility. Lifetime fertility refers to the total number of live births that females 12 years and older had ever had during their life time. Current fertility refers to the number of live births that females 12-54 years old had in the 12 months preceding the Census Night.

Mortality

Mortality refers to all deaths that occurred in the household during the 12 months preceding the Census Night. The report presents information on deaths due to accidents, violence,

homicide and suicide. In addition, data are collected on pregnancy-related deaths of females 12-54 years.

Agriculture

The census sought information on household members who are engaged in agricultural activities, including the cultivation of crops or tree planting, rearing of livestock or breeding of fish for sale or family consumption. Information was also collected on their farms, types of crops and number and type of livestock.

Housing Conditions and Facilities

The UN recommended definition of a house as “a structurally separate and independent place of abode such that a person or group of persons can isolate themselves from the hazards of climate such as storms and the sun” was adopted. The definition, therefore, covered any type of shelter used as living quarters, such as separate houses, semi-detached houses, flats/apartments, compound houses, huts, tents, kiosks and containers.

Living quarters or dwelling units refer to a specific area or space occupied by a particular household and therefore need not necessarily be the same as the house of which the dwelling unit may be a part.

Information collected on housing conditions included the type of dwelling unit, main construction materials for walls, floor and roof, holding/tenure arrangement, ownership type, type of lighting, source of water supply and toilet facilities. Data was also collected on method of disposal of solid and liquid waste.

1.7 Organization of Reports

The report consists of nine chapters. Chapter one provides basic information about the district. It gives a brief background of the district, describing its physical features, political and administrative structure, social and cultural structure, economy and the methodology and concepts used in the report. Chapter two discusses the population size, composition and age structure. It further discusses the migratory pattern in the district as well as fertility and mortality. In chapter three, the focus is on household size, composition and headship as well as the marital characteristics and nationality of the inhabitants of the district. The chapter also discusses the religious affiliations and the educational statuses of the members of the district. Chapter four focuses on economic characteristics such as economic activity status, occupation, industries and the employment status and sectors that the people are employed.

Information Communication Technology (ICT) is discussed in chapter five. It analyses mobile phone ownership, internet use and ownership of desktop/laptop computers while chapter six is devoted to Persons living with disabilities (PWDs) and their socio-demographic characteristics. Chapter seven concentrates on the agricultural activities of the households, describing the types of farming activities, livestock rearing and numbers of livestock reared.

In chapter eight, housing conditions such as housing stock, type of dwelling and construction materials, room occupancy, holding and tenancy, lighting and cooking facilities, bathing and toilet facilities, waste disposal and source of water for drinking or for other domestic use in the district are discussed and analysed in detail. The final chapter, Chapter nine presents the summary of findings and conclusions. It also discusses the policy implications of the findings for the district.

CHAPTER TWO

DEMOGRAPHIC CHARACTERISTICS

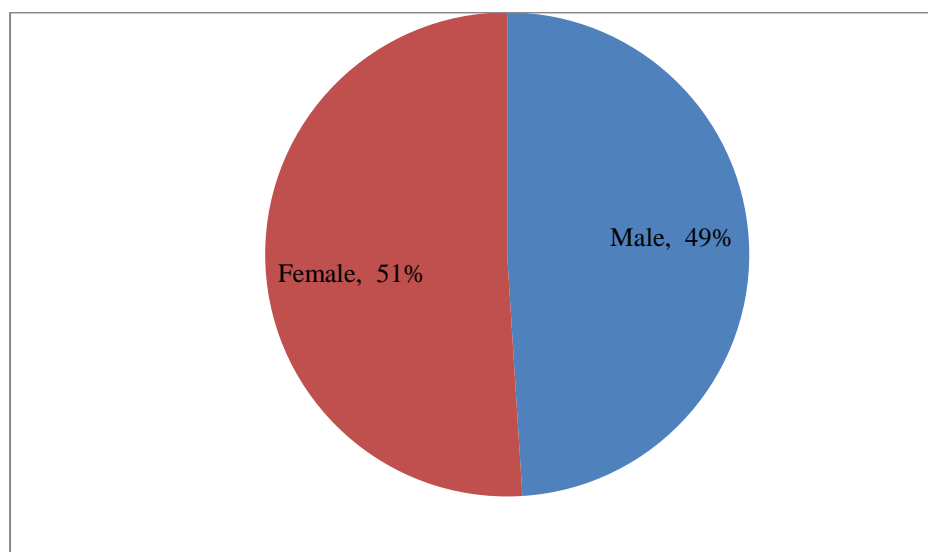
2.1 Introduction

It is important that the size, composition and distribution of any population be analyzed to facilitate development planning, programme development and policy implementation. The current decentralized governance system and administration in Ghana require that statistics be provided on the size, composition and distribution of the population at the local level. This chapter presents results on population size, composition, age-sex structure, nationality, birth place, fertility, mortality and migration on the Twifo Atti-Morkwa district.

2.2 Population Size and Distribution

This section provides information on sex composition, sex ratio and type of locality. From the 2010 Population and Housing Census (2010 PHC) the district has a total population of 61,743, representing 2.9 percent of the population of the Central Region. Figure 2.1 shows that females (51.0%) outnumber males (49.0%) in the district. This is consistent with the regional and national levels which also have more females than males (GSS, 2010).

Figure 2.1: Sex composition of population



Source: Ghana Statistical Service, 2010 Population and Housing Census

Table 2.1 shows the population of the Twifo Atti-Morkwa district by age, sex and sex ratio. The age distribution of the population shows that the age group 0-4 years exhibits the highest proportion of 15.1 percent and the age group 95-99 years constituting the lowest proportion of 0.1 percent. With regards to sex ratio, usually expressed as the number of males for every 100 females, the sex ratio of the district is 96.1 which imply that there are 96.1 males to every 100 females in the district. The sex ratio of the district is higher than the regional ratio of 91.2. The sex ratio of the district indicates that females are more than males which could be attributed to male out-migration from the district. This is evident by the fact that the highest sex ratio of 113.3 falls within the age group of 55-59 years which forms part of the active population or working population.

Table 2.1: Population by age, sex and type of locality

Age group	Both Sexes		Male		Female		Sex ratio
	Number	Percent	Number	Percent	Number	Percent	
All Ages	61,743	100.0	30,254	49.0	31,489	51.0	96.1
0 - 4	9,327	15.1	4,657	50.0	4,670	50.0	99.7
5 - 9	8,343	13.5	4,156	50.0	4,187	50.0	99.3
10 - 14	8,116	13.1	4,156	51.0	3,960	49.0	104.9
15 - 19	6,623	10.7	3,383	51.0	3,240	49.0	104.4
20 - 24	5,265	8.5	2,381	45.0	2,884	55.0	82.6
25 - 29	4,851	7.9	2,141	44.0	2,710	56.0	79.0
30 - 34	3,768	6.1	1,814	48.0	1,954	52.0	92.8
35 - 39	3,445	5.6	1,613	47.0	1,832	53.0	88.0
40 - 44	2,882	4.7	1,433	50.0	1,449	50.0	98.9
45 - 49	2,446	4.0	1,232	50.0	1,214	50.0	101.5
50 - 54	2,068	3.3	1,041	50.0	1,027	50.0	101.4
55 - 59	1,248	2.0	663	53.0	585	47.0	113.3
60 - 64	1,075	1.7	537	50.0	538	50.0	99.8
65 - 69	668	1.1	337	50.0	331	50.0	101.8
70 - 74	697	1.1	314	45.0	383	55.0	82.0
75 - 79	334	0.5	146	44.0	188	56.0	77.7
80 - 84	302	0.5	121	40.0	181	60.0	66.9
85 - 89	154	0.2	66	43.0	88	57.0	75.0
90 - 94	95	0.2	41	43.0	54	57.0	75.9
95 - 99	36	0.1	22	61.0	14	39.0	157.1

Source: Ghana Statistical Service, 2010 Population and Housing Census

2.3 Age Dependency Ratio

Table 2.2 shows the dependent populations, that is, age group 0-14 (Children) and 65 and above (Elderly) and the working population (15-64) and also the total dependency ratio (ratio of persons in the dependent ages to those in the economically productive ages in a population) by locality. The results indicate that Twifo Atti-Morkwa has a total age dependency ratio of 83.4 as compared with the regional average of 81.4. The total dependency ratio for the urban areas is lower (71.8 %) than that of the rural areas (87.3 %). Both child and old age dependency ratios are higher in the rural areas (Child dependency ratio: 79.4 and old age dependency ratio: 7.9) than urban areas (Child dependency ratio: 68.1 and Old age dependency ratio: 3.6

Table 2.2: Age dependency ratio by locality

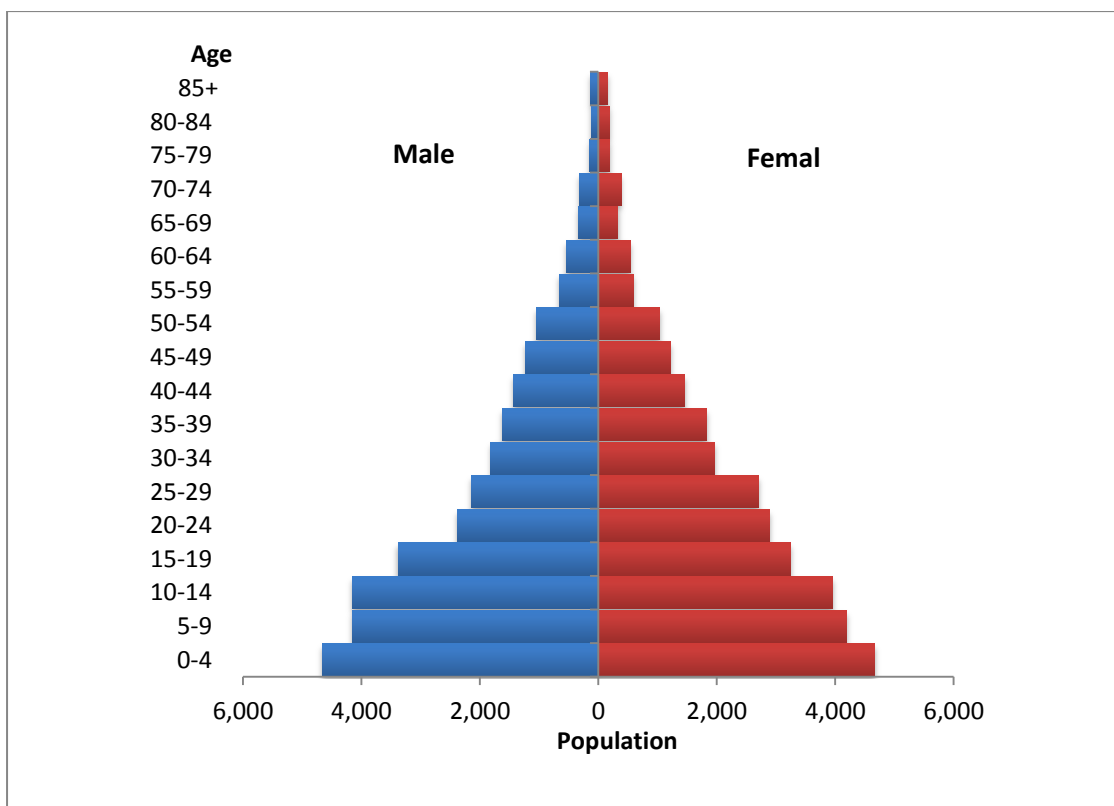
Age group	Both sexes	Type of locality	
		Urban	Rural
All Ages	61,743	14,651	47,092
0-14	25,786	5,816	19,970
15-64	33,671	8,530	25,141
65+	2,286	305	1,981
Age-dependency ratio	83.4	71.8	87.3
Child dependency ratio	76.6	68.1	79.4
Old age dependency ratio	6.8	3.6	7.9

Source: Ghana Statistical Service, 2010 Population and Housing Census

2.4 Age Sex Structure

A population pyramid illustrates the age - sex structure of a country's population and may provide insights about the nature of dependency ratio as well as the social and economic structure of a country's future population. The pyramid (Figure 2.2) shows the age-sex structure of the population of Twifo Atti-Morkwa district. The age structure shows a youthful population which is characteristic of most developing countries. The shape of the pyramid is generally of a bell-shape with a broad base, which tapers off with increasing age. It is characterized by a large proportion of children aged less than 15 years (41.7%) and a small proportion of elderly (65 years and older) (3.7%). Females constitute the majority in most of the age groups, especially between ages 70 and 94 years. This could be due to the fact that they constitute the majority in the district, regional and national total populations (GSS, 2012).

Figure 2.2: Population pyramid



Source: Ghana Statistical Service, 2010 Population and Housing Census

2.5 Fertility, Mortality and Migration

The 2010 census collected data on fertility, mortality and migration which are the three components of population change. Data collected on fertility are total fertility, general fertility, crude birth rate, children ever-born, children surviving and sex of child. Mortality data collected are deaths in households and crude death rate while migration data cover place of birth, duration of stay in residence, emigration and nationality. The levels and changes in the three components of population are important indicators for the interplay of demographic, economic, socio-cultural, environmental and political factors. It is also important for socioeconomic planning and policy making in the decentralized system of governance in

Ghana. This section describes results on data collected on fertility, mortality and migration in the Twifo Atti-Morkwa district.

2.4.1 Fertility

Information on fertility is key in analyzing the growth of a country's population. . Lifetime fertility is defined as the total number of live births that females aged 12 years and older have ever had during their life time while current fertility refers to the number of live births that females aged 12-54 years and older have had in the 12 months preceding the Census Night.

Fertility Rate (TFR) is defined as the total number of births a woman would have by the end of her childbearing period if she were to pass through those years bearing children at the currently observed age-specific fertility rates. General Fertility Rate (GFR) is defined as the number of live births occurring during a specified period per 1,000 women aged 15-49, while Crude Birth Rate (CBR) is defined as the number of births per 1,000 populations during a specified period. Women were asked some questions to determine the total number of live births they have in their lifetime, children surviving and births in the past 12 months. Data collected include that of females aged 12-14 years, which is below the recommended age-specific fertility range of 15-19 years usually used in computing adolescent fertility.

Table 2.3 reveals that Twifo Atti-Morkwa has a TFR of 4.1 which is higher than that of the Central Region (3.6). Also, both the CBR (29.5) and GFR (119.2) are higher than that of the region (CBR=26.5 and GFR=105.3). The high levels of TFR, GFR and CBR in the district can partly be attributed to low contraceptives use among females.

Table 2.3: Reported total fertility rate, general fertility rate and crude birth rate by district

District	Population	Number of women 15-49 years	Number of births in last 12 months	Total Fertility Rate	General Fertility Rate	Crude Birth Rate
All Districts	2,201,863	553,384	58,292	3.6	105.3	26.5
Komenda-Edina-Egyafo-Abirem Municipal	144,705	33,902	3,561	3.6	105.0	24.6
Cape Coast Metropolis	169,894	51,308	3,009	2.2	58.6	17.7
Abura-Asebu-Kwamankese	117,185	27,603	3,308	4.1	119.8	28.2
Mfantseman	144,332	39,462	3,537	3.4	89.6	24.5
Ajumako-Enyan-Essiam	138,046	31,419	3,600	4.0	114.6	26.1
Gomoa West	135,189	32,740	3,657	3.8	111.7	27.1
Effutu Municipal	68,597	19,261	1,629	2.9	84.6	23.7
Gomoa East	207,071	54,787	6,159	3.7	112.4	29.7
Ewutu Senya	86,884	21,749	2,496	3.9	114.8	28.7
Agona East	85,920	20,368	2,408	4.0	118.2	28.0
Agona West Municipal	115,358	29,580	2,679	3.1	90.6	23.2
Asikuma-Odoben Brakwa	112,706	25,731	3,470	4.7	134.9	30.8
Assin South	104,244	23,709	2,986	4.3	125.9	28.6
Assin North Municipal	161,341	38,331	4,687	4.1	122.3	29.1
Twifo Atti Morkwa	61,743	15,283	1,822	4.1	119.2	29.5
Upper Denkyira East Municipal	72,810	18,690	1,972	3.5	105.5	27.1
Upper Denkyira West	60,054	13,789	1,862	4.5	135.0	31.0
Twifo Hemang Lower Denkyira	55,131	13,308	1,411	3.6	106.0	25.6
Ekumfi	52,231	11,594	1,290	4.0	111.3	24.7
Awutu Senya East Municipal	108,422	30,770	2,749	3.0	89.3	25.4

Source: Ghana Statistical Service, 2010 Population and Housing Census

2.4.2 Children ever born and children Surviving by female 12 years and older

Children ever born and children surviving are presented in Table 2.3. In Twifo Atti-Morkwa district, 56,969 children were born to 21,009 female population aged 12 years and older. In general, the number of children surviving is less than children ever born. There is an increasing pattern of the number of children ever born and children surviving from age group 12-14 to 40-44.

The female population aged 60 years and older has more children ever born and surviving than all other females in the district. However, females between 12-14 age group gave birth to 13 children out of which 12 are surviving (Table 2.4).

Table 2.4: Female population 12 years and older by age, children ever born, children surviving and sex of child

Age	Number of Females	Children Ever Born			Children Surviving		
		Both sexes	Male	Female	Both sexes	Male	Female
All ages	21,009	56,969	28,424	28,545	49,288	24,316	24,972
12 – 14	2,337	13	2	11	12	2	10
15 – 19	3,240	456	217	239	404	187	217
20 – 24	2,884	2,532	1,228	1,304	2,339	1,104	1,235
25 – 29	2,710	5,292	2,657	2,635	4,958	2,471	2,487
30 – 34	1,954	6,244	3,094	3,150	5,772	2,829	2,943
35 – 39	1,832	7,866	3,926	3,940	7,210	3,601	3,609
40 – 44	1,449	7,258	3,648	3,610	6,463	3,195	3,268
45 – 49	1,214	6,537	3,280	3,257	5,701	2,860	2,841
50 – 54	1,027	6,331	3,171	3,160	5,310	2,643	2,667
55 – 59	585	3,453	1,707	1,746	2,852	1,405	1,447
60 +	1,777	10,987	5,494	5,493	8,267	4,019	4,248

Source: Ghana Statistical Service, 2010 Population and Housing Census

2.4.4 Mortality

Information on Mortality plays an important role in determining the growth of a population. The level and pattern of Mortality is a reflection of the health status of a population. Mortality data could among others be used for the analyses of potential growth of population and constructing population projections as well as formulating policies for the development of all sectors of the economy.

Mortality is measured by crude death rate which is affected by many population characteristics, particularly age structure. It is defined as the number of deaths per 1000 persons in a given year and it measures the mortality experience in an entire population.

In a total of 16,694 deaths recorded in households in the region, Twifo Atti-Morkwa district recorded the second least number of deaths in the households (399 deaths) in the region in the last 12 months preceding the 2010 PHC (Table 2.4).

The crude death rates by districts and the region are presented in table 2.4. The crude death rate of Twifo Atti-Morkwa district is 5.5 per 1000 population, which is lower than most districts in the region as well as the regional crude death rate of 7.6 percent

Table 2.5: Total population, deaths in households and crude death rate by district

District	Total Population	Deaths in households	Crude death rate
All Districts	2,201,863	16,694	7.6
Komenda-Edina-Egyafo-Abirem Municipal	144,705	1,321	9.1
Cape Coast Metropolis	169,894	881	5.2
Abura-Asebu-Kwamankese	117,185	974	8.3
Mfantsiman	144,332	994	6.9
Ajumako-Enyan-Essiam	138,046	1,828	13.2
Gomoa West	135,189	1,341	9.9
Effutu Municipal	68,597	502	7.3
Gomoa East	207,071	1,121	5.4
Ewutu Senya	86,884	653	7.5
Agona East	85,920	668	7.8
Agona West Municipal	115,358	889	7.7
Asikuma-Odoben Brakwa	112,706	1,114	9.9
Assin South	104,244	753	7.2
Assin North Municipal	161,341	1,080	6.7
Twifo Atti Morkwa	61,743	339	5.5
Upper Denkyira East Municipal	72,810	542	7.4
Upper Denkyira West	60,054	414	6.9
Twifo Hemang Lower Denkyira	55,131	455	8.3
Ekumfi	52,231	559	10.7
Awutu Senya East Municipal	108,422	266	2.5

Source: Ghana Statistical Service, 2010 Population and Housing Census

2.4.5 Birthplace and migration pattern

In the 2010 PHC, migrants refer to persons who are residents in the district during the period of enumeration but were not originally born in the district. In this section, migration is measured with respect to birthplace and duration of residence as shown in Table 2.6.

Table 2.6 indicates that, out of the total population of 61,743 of the Twifo Atti-Morkwa district, 38.3 percent (23, 648) are migrants. About 53.0 percent (12,461) were born elsewhere in the region, 47.3 percent were migrants born in other regions of Ghana while 1.9 percent were born outside Ghana.

Among the migrants from other parts of Ghana (Inter-regional migrants), the higher proportion (28.4%) are those who migrated from the Eastern Region to the district while the least (1.0%) are those who came from the Upper West Region. Migrants from the Eastern region constitute the largest proportion (35.6%) among migrants who have lived in the district for more than twenty years. Also, the results indicate that 23.6 percent of migrants born elsewhere in the region have lived in the district for more than twenty years.

For migrants who have lived in the district for less than one year, the greater proportion (21.4%) were migrants from the Upper West Region while the least (9.1%) are those from the Northern Region. The highest percentage of migrants (42.4%) who have lived in the district between 1-4 years are migrants from the Volta Region. About 29.0 percent of those born outside Ghana have stayed in the district for 1-4 years, which is the highest proportion among all migrants who have stayed in the district for that period.

Table 2.6: Birthplace by duration of residence of migrants

Birthplace	Number	Duration of residence (%)				
		Less than 1 year	1-4 years	5-9 years	10-19 years	20+ years
Total	23,648	12.9	29.1	17.3	18.3	22.3
Born elsewhere in the region	12,461	11.7	26.6	17.5	20.6	23.6
Born elsewhere in another region:						
Western	1,928	12.4	33.9	20.0	18.6	15.0
Central	0	0.0	0.0	0.0	0.0	0.0
Greater Accra	978	14.7	37.5	17.1	12.4	18.3
Volta	2,537	18.5	42.4	13.8	11.9	13.4
Eastern	3,174	10.3	21.0	16.3	16.9	35.6
Ashanti	1,192	15.4	31.5	18.9	18.7	15.6
Brong Ahafo	451	19.7	31.3	24.4	11.8	12.9
Northern	287	9.1	35.9	17.4	21.3	16.4
Upper East	143	15.4	36.4	14.7	11.9	21.7
Upper west	117	21.4	26.5	15.4	17.1	19.7
Outside Ghana	380	18.9	28.7	18.4	19.7	14.2

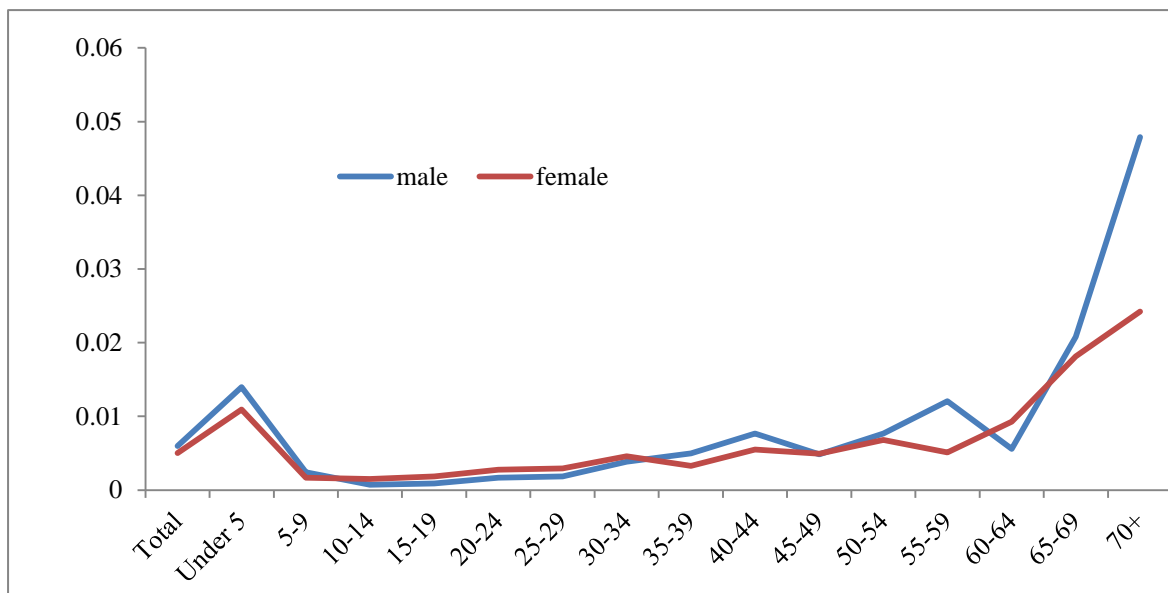
Source: Ghana Statistical Service, 2010 Population and Housing Census

2.4.6 Age specific death rates (ASDRs) by Sex

Death rates are calculated for specific age groups in order to compare mortality at different ages or at the same age over time. The age specific death rates (ASDRs) are computed as a ratio of deaths of people in a specified age group, for example deaths among 20-24 year-age group to the population in that age group (20-24 years) multiplied by 1,000. Figure 2.3 provide information on age specific death rates in the Twifo Atti-Morkwa district.

The data show that death rates for males and females are higher in ages under five years but drop steadily to their the lowest point in the age group 10-14 years where they start to rise steadily until they reach the age group 30-34 years and then that of the males rises while that the females declines This may be attributed to maternal mortality. Its follows a gradual rise and fall pattern until ages 45-49 where its rises sharply to 70 years and older. The ASDRs for males is higher at ages 50-69 years than females and this is an indication of a lower life expectancy for the males as compared with that of the females. Furthermore, at ages 50 years and older, differences between male and female are greater as compared with that within the lower age groups.

Figure 2.3: Reported age specific death rates by sex



Source: Ghana Statistical Service, 2010 Population and Housing Census

CHAPTER THREE

SOCIAL CHARACTERISTICS

3.1 Introduction

Government has provided various social intervention programmes such as Livelihood Empowerment against Poverty (LEAP), District Disability Fund and Ghana Youth in Entrepreneurship and Employment Development Agency (GYEEDA) in the Metropolitan, Municipal and District Assemblies (MMDA) aimed at improving upon the well-being of all Ghanaians, particularly the most vulnerable. For these programmes to be effective and achieve the desired goal there is the need for information on household composition and characteristics. A household in this context is a person or group of persons who live together in the same house or compound and share the same house-keeping arrangement and recognize one person as the head. The size of the population is largely an aggregation of individual household members and non-household population (i.e. individuals who at the time of the census in one way or the other were not enumerated as members of their households but enumerated as part of the institutional population). This chapter describes household composition and headship, marital status, nationality, religious affiliation, literacy and educational status of the population of Twifo Atti-Morkwa District.

3.2 Household Composition and Structure

Closely linked to the family is the formation of households in which members are not necessarily connected by blood but have decided to live together and belong to the same housing unit. In Ghana, households constitutes important source of information for planning especially in many social interventions rolled out by Government.

3.3.1 Household composition

Data on household composition by sex are presented in Table 3.1. The district has a total household membership of 59,284 out of which the males constitute 49.1 percent and the females 50.9 percent. Male headship is common (30.9%) as compared with female headship (13.1%) in the district (Table 3.1). This is expected because within the Ghanaian cultural settings, males are generally the heads of households not females. A female becomes a head of household under the following circumstances: when she is single or not married or when she is widowed, divorced or separated or when her husband has migrated (Tanle, 2010).

Majority of household members are children (46.3%), followed by heads (21.9%) and spouse (11.3%). This may be due to the dwindling influence of the extended family system practiced in the country where the nuclear family system is getting more knitted than the extended family system. Among the children, the proportion of the sons (48.0%) is higher than that of the daughters (44.8%). Grand child is the next dominant member of households (7.7%) in the District. Adopted or foster children constitute the least proportion (0.3%) of household members in the Municipality.

Table 3.1: Household population by composition and sex

Household composition	Total		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Total	59,284	100.0	29,111	100.0	30,173	100.0
Head	12,959	21.9	8,992	30.9	3,967	13.1
Spouse (wife/husband)	6,679	11.3	254	0.9	6,425	21.3
Child (son/daughter)	27,468	46.3	13,965	48.0	13,503	44.8
Parent/parent in-law	349	0.6	51	0.2	298	1.0
Son/paughter in-law	285	0.5	90	0.3	195	0.6
Grandchild	4,544	7.7	2,276	7.8	2,268	7.5
Brother/pister	1,740	2.9	963	3.3	777	2.6
Step child	430	0.7	206	0.7	224	0.7
Adopted/poster child	166	0.3	70	0.2	96	0.3
Other relative	3,840	6.5	1,775	6.1	2,065	6.8
Non-relative	824	1.4	469	1.6	355	1.2

Source: Ghana Statistical Service, 2010 Population and Housing Census

3.3.2 Household structure

Household structure presented in this section refers to the type of relationship (whether related or unrelated) among household members who were present on census night. Classification of households depend on whether it is a single person household, household that consists of head and spouse only, nuclear household (head, spouse(s) and their children) or nuclear extended among other combinations.

Table 3.2 shows that the extended family is the dominant (50.4%) household structure in the district followed by the nuclear family (49.6%). However, the general preference for the nuclear family in recent times means that the nuclear family is more likely to be prevalent in the future. Within the nuclear family structure, nuclear households (Head, spouse(s) and children) are predominant (33.9%) while 23.6 percent are nuclear extended households (Head, spouse(s), children and Head's relatives). The proportion of the males (50.7%) is higher than that of the females (49.3%) in the nuclear family structure. Males are predominant in the nuclear family households while their female counterparts are dominant in the extended nuclear family households. Table 3.2 also shows that females are dominant in the single parent's household for both extended and nuclear families. In the head only category, the males recorded higher proportion of 4.2 percent as compared with that of the females who recorded 2.1 percent.

Table 3.2: Household population by structure and sex

Household structure	Total		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Total	59,284	100.0	29,111	100.0	30,173	100.0
Nuclear family	29,404	49.6	14,910	50.7	14,494	49.3
Head only	1,869	3.2	1,235	4.2	634	2.1
Head and a spouse only	890	1.5	453	1.6	437	1.4
Single parent Nuclear	6,544	11.0	2,874	9.9	3,670	12.2
Nuclear (Head spouse(s) children)	20,101	33.9	10,348	35.5	9,753	32.3
Extended family	29,880	50.4	14,201	47.5	15,679	52.5
Extended (Head spouse(s) children Head's relatives)	14,002	23.6	6,919	23.8	7,083	23.5
Extended + non relatives	931	1.6	463	1.6	468	1.6
Head spouse(s) and other composition	2,065	3.5	1,032	3.5	1,033	3.4
Single parent Extended	8,386	14.1	3,458	11.9	4,928	16.3
Single parent Extended + non relative	617	1.0	249	0.9	368	1.2
Head and other composition but no spouse	3,879	6.5	2,080	7.1	1,799	6.0

Source: Ghana Statistical Service, 2010 Population and Housing Census

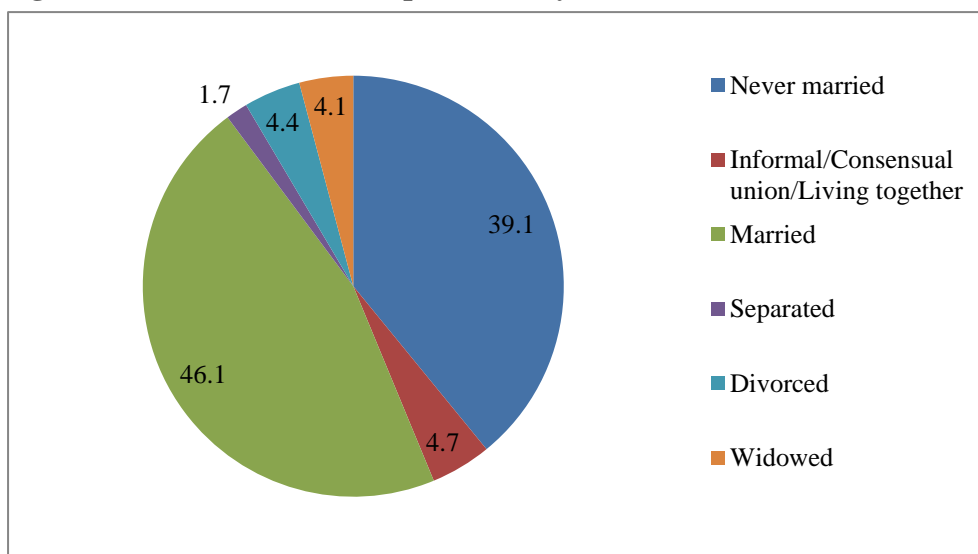
3.3 Marital Status

Marriage may be defined as a social institution which establishes the legitimacy of children (GSS, 2012). It serves as a means for procreation, mutual support and companionship. Marriage in Ghana is based on legal contractual relations between a man and a woman. The three forms of marriages in Ghana are the customary, ordinance and Islamic marriages. There are also informal co-habiting unions with no legal obligations.

An analysis of marital characteristics has demographic, economic and socio-cultural and health implications. While it is recognized that there is a legal minimum age prescribed for marriage, females below the prescribed age have been given into marriage in traditional settings, as a cultural practice. To capture such child spouses in the 2010 PHC, the eligible age for marriage is reduced from 15(as used in the 2000 census) years to 12 years and older.

Figure 3.1 shows the population aged 12 years and older by marital status. From the results, persons aged 12 years and older who have never married constitute 39.1 percent while 46.1 percent are married. . The results further show that 4.7 percent are in informal or consensual union, 4.4 percent are divorced while 1.7 percent is separated.

Figure 3.1: Marital status of persons 12 years and older



Source: Ghana Statistical Service, 2010 Population and Housing Census

3.3.1 Marital Status and Age

Table 3.3 indicates marital status of the population aged 12 years and older by age and sex in the Twifo Atti-Morkwa District. From the Table, 40, 705 of the population are aged 12 years and older, constituting 51.6 percent (21,009) females and 48.3 percent (19,696) males.

Forty-six percent are married (customary, church or ordinance), 39.1 percent have never married while 4.7 percent are in informal/consensual union/living together. The pattern of never married population declines steadily as age increases from age groups 12-14 years to 50-54 years while, married population increases with age from 12-14 years until age group 40-44 years where it turns to decrease probably due to deaths, divorce or separation. Among the never married, higher proportion (45.1%) are males while 33.5 percent are females. The highest proportion of the divorced (12.3%) occurs in the age group 55-59 years while the population aged 65 years and over recorded the highest spousal death (33.6%). This is expected because the aged are more prone to death than the young people. A higher proportion of those aged 25-29 years (11.0%) are in informal/consensual union/living together. This is expected because they are still young and might want to study each other before formalizing their marriages.

The proportion of never married is the highest in the age groups 12-14 years (97.4 %) and 15-19 years (90.2 %). This may be due to the fact that they are in full time education since they are within the school going ages.

Table 3.3: Persons 12 years and older by sex, age-group and marital status

Sex/Age-group	Number	Total	Never married	Informal/consensual union/living together	Married	Separated	Divorced	Widowed
Both Sexes								
Total	40,705	100.0	39.1	4.7	46.1	1.7	4.4	4.1
10-14	4,748	100.0	94.7	0.4	4.9	0.0	0.0	0.0
15 - 19	6,623	100.0	90.2	2.3	6.8	0.5	0.2	0.0
20 - 24	5,265	100.0	60.0	9.6	27.5	1.2	1.4	0.3
25 - 29	4,851	100.0	28.2	11.0	55.0	2.3	3.0	0.4
30 - 34	3,768	100.0	10.9	7.1	73.3	2.3	5.0	1.3
35 - 39	3,445	100.0	5.8	4.4	78.4	3.0	6.2	2.1
40 - 44	2,882	100.0	3.7	3.6	80.4	2.2	6.5	3.6
45 - 49	2,446	100.0	2.0	2.6	79.7	2.1	8.7	4.9
50 - 54	2,068	100.0	1.2	1.7	75.0	2.7	11.0	8.4
55 - 59	1,248	100.0	1.5	1.1	69.7	2.4	12.3	13.0
60 - 64	1,075	100.0	2.5	1.5	64.6	2.3	10.8	18.3
65+	2,286	100.0	3.5	1.3	48.3	2.7	10.6	33.6
Male								
Total	19,696	100.0	45.1	4.0	45.9	1.1	2.7	1.3
10-14	2,411	100.0	94.4	0.4	5.2	0.0	0.0	0.0
15 - 19	3,383	100.0	95.2	0.6	4.1	0.1	0.0	0.0
20 - 24	2,381	100.0	78.7	5.8	14.8	0.2	0.4	0.0
25 - 29	2,141	100.0	41.6	10.8	44.7	1.4	1.3	0.2
30 - 34	1,814	100.0	15.9	7.8	70.9	1.8	2.9	0.7
35 - 39	1,613	100.0	8.8	5.2	78.9	2.4	4.1	0.6
40 - 44	1,433	100.0	4.7	3.8	82.7	1.8	5.0	1.9
45 - 49	1,232	100.0	3.1	3.0	85.1	1.9	5.6	1.3
50 - 54	1,041	100.0	1.3	2.0	88.1	1.1	5.6	1.9
55 - 59	663	100.0	1.7	1.5	84.8	2.4	6.3	3.3
60 - 64	537	100.0	3.0	1.5	82.1	2.6	6.1	4.7
65+	1,047	100.0	4.0	2.0	71.5	2.3	9.2	11.0
Female								
Total	21,009	100.0	33.5	5.3	46.2	2.2	6.0	6.8
10-14	2,337	100.0	95.0	0.4	4.6	0.0	0.0	0.0
15 - 19	3,240	100.0	85.0	4.0	9.6	0.9	0.4	0.1
20 - 24	2,884	100.0	44.6	12.7	37.9	2.0	2.3	0.5
25 - 29	2,710	100.0	17.6	11.1	63.2	3.0	4.4	0.6
30 - 34	1,954	100.0	6.2	6.6	75.6	2.8	7.0	1.9
35 - 39	1,832	100.0	3.2	3.8	77.9	3.7	8.0	3.4
40 - 44	1,449	100.0	2.6	3.5	78.1	2.6	8.0	5.2
45 - 49	1,214	100.0	0.9	2.2	74.1	2.3	11.9	8.5
50 - 54	1,027	100.0	1.1	1.5	61.8	4.3	16.5	14.9
55 - 59	585	100.0	1.4	0.7	52.6	2.4	19.0	23.9
60 - 64	538	100.0	2.0	1.5	47.0	2.0	15.4	32.0
65+	1,239	100.0	3.1	0.7	28.6	3.1	11.8	52.8

Source: Ghana Statistical Service, 2010 Population and Housing Census

3.3.2 Marital status and education

The level of education one attains before marriage is key to the socio-economic status of the family. It is assumed that when couples are educated they turn to have a well-planned family and leave together happily in the community. Table 3.4 shows that in a total married

population of 18,748, 30.8 percent have no formal education, 57.2 percent have basic education while 1.0 percent have obtained tertiary education. On the basis of sex, higher proportion of the females (39.2%) who are married as compared with that of their male counterparts (21.8%) have no formal education.

The results also show that 75.0 percent of persons aged 12 years and older who have never married have attained Basic School (Primary, Middle and JSS/JHS), 6.4 percent have no formal education while 0.4 percent have attained tertiary education.

Again, it can be observed that 49.0 percent of divorced women have no formal education as compared to 34.0 percent of their male counterparts. Table 3.4 also reveals that among the males who are married, 1.8 percent have attained tertiary education as compared with 0.3 percent of their female counterparts. In general, more females than males have no formal education or have low level of formal education in the Twifo Atti-Morkwa District. This has implications for the socio-economic status of the family. The low educational attainment of the females in the district is a reflection of the high level of illiteracy among the females in the country (GSS, 2010).

Table 3.4: Persons 12 years and older by sex, marital status and level of education

Sex/Marital status	Number	All levels	No Education	Basic ¹	Secondary ²	Voc./ Tech./ Comm	Post middle/ secondary certificate/ diploma	Tertiary
Both Sexes								
Total	40,705	100.0	23.0	62.8	8.9	1.2	3.4	0.7
Never married	15,912	100.0	6.4	75.0	14.0	0.5	3.6	0.4
Informal/Consensual union/Living together	1,897	100.0	19.6	62.3	9.9	1.4	6.3	0.5
Married	18,748	100.0	30.8	57.2	6.0	1.7	3.4	1.0
Separated	686	100.0	37.9	51.3	5.7	2.3	2.3	0.4
Divorced	1,779	100.0	44.6	49.9	2.3	1.5	1.6	0.2
Widowed	1,683	100.0	67.8	28.8	1.3	0.8	1.2	0.2
Male								
Total	19,696	100.0	15.2	67.1	10.8	1.4	4.2	1.2
Never married	8,877	100.0	6.5	74.4	14.8	0.6	3.2	0.6
Informal/Consensual union/Living together	779	100.0	13.6	66.0	12.3	1.9	5.1	1.0
Married	9,038	100.0	21.8	61.4	7.6	2.1	5.3	1.8
Separated	223	100.0	26.9	57.8	6.3	3.6	4.5	0.9
Divorced	527	100.0	34.0	58.4	3.6	1.7	1.9	0.4
Widowed	252	100.0	45.2	45.2	2.4	2.4	4.0	0.8
Female								
Total	21,009	100.0	30.2	58.8	7.1	1.0	2.6	0.2
Never married	7,035	100.0	6.3	75.8	13.1	0.5	4.1	0.2
Informal/Consensual union/Living together	1,118	100.0	23.7	59.7	8.2	1.0	7.2	0.2
Married	9,710	100.0	39.2	53.2	4.4	1.3	1.6	0.3
Separated	463	100.0	43.2	48.2	5.4	1.7	1.3	0.2
Divorced	1,252	100.0	49.0	46.3	1.8	1.4	1.4	0.1
Widowed	1,431	100.0	71.8	25.9	1.1	0.5	0.7	0.1

Source: Ghana Statistical Service, 2010 Population and Housing Census

3.3.3 Marital status by sex and economic activity status

In the 2010 PHC, questions on economic activity were restricted to persons aged 12 years and older who during the reference week performed work, even for just one hour per week, for pay, profit or family gain or were not at work but had a job or business from which they were temporarily absent. Table 3.5 presents marital status of persons aged 12 years and older by economic activity status of Twifo Atti-Morkwa District.

Economically active population comprises of employed and unemployed population of the district. Among the married population in the district, 86.1 percent (16,149) are employed, 1.8 percent are unemployed while 12.0 percent are economically not active.

Higher proportion of the married males (90.8%) than females (81.8%) are employed. Unemployment is higher among the married females (2.5%) than their male counterparts (1.2%). A higher proportion of the widowed males (77.0%) than their female counterparts (70.2%) are employed.

Table 3.5: Persons 12 years and older by sex, marital status and economic activity status

Sex/Marital Status	All status		Employed		Unemployed		Economically not active	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Both Sexes								
Total	40,705	100.0	26,443	65.0	878	2.2	13,384	32.9
Never married	15,912	100.0	5,562	35.0	384	2.4	9,966	62.6
Informal/Consensual union/Living together	1,897	100.0	1,479	78.0	84	4.4	334	17.6
Married	18,748	100.0	16,149	86.1	346	1.8	2,253	12.0
Separated	686	100.0	570	83.1	15	2.2	101	14.7
Divorced	1,779	100.0	1,484	83.4	35	2.0	260	14.6
Widowed	1,683	100.0	1,199	71.2	14	0.8	470	27.9
Male								
Total	19,696	100.0	13,249	67.3	353	1.8	6,094	30.9
Never married	8,877	100.0	3,500	39.4	220	2.5	5,157	58.1
Informal/Consensual union/Living together	779	100.0	696	89.3	18	2.3	65	8.3
Married	9,038	100.0	8,211	90.8	105	1.2	722	8.0
Separated	223	100.0	193	86.5	5	2.2	25	11.2
Divorced	527	100.0	455	86.3	3	0.6	69	13.1
Widowed	252	100.0	194	77.0	2	0.8	56	22.2
Female								
Total	21,009	100.0	13,194	62.8	525	2.5	7,290	34.7
Never married	7,035	100.0	2,062	29.3	164	2.3	4,809	68.4
Informal/Consensual union/Living together	1,118	100.0	783	70.0	66	5.9	269	24.1
Married	9,710	100.0	7,938	81.8	241	2.5	1,531	15.8
Separated	463	100.0	377	81.4	10	2.2	76	16.4
Divorced	1,252	100.0	1,029	82.2	32	2.6	191	15.3
Widowed	1,431	100.0	1,005	70.2	12	0.8	414	28.9

Source: Ghana Statistical Service, 2010 Population and Housing Census

3.4 Nationality

Nationality is defined as the country to which a person belongs. Ghanaian nationals are classified as Ghanaian by birth, Ghanaian by dual nationality and Ghanaian by naturalization. Table 3.6 shows that about 95 percent of the total population (61, 743) of the district are Ghanaians by birth, 1.3 percent have dual nationality while 0.3 percent of the population are made up of foreigners. A higher percentage of the foreigners comprise ECOWAS nationals (1.7 %). The proportion of the male ECOWAS nationals (0.9%) is higher than that of the females (0.6%) but the proportion of both males and females African other than ECOWAS nationals in the District is the same (0.3 % each).

Table 3.6: Population by nationality and sex

Nationality	Both sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Total	61,743	100.0	30,254	100.0	31,489	100.0
Ghanaian by birth	59,845	96.9	29,292	96.8	30,553	97.0
Dual nationality (Ghanaian & Other)	818	1.3	395	1.3	423	1.3
Ghanaian by naturalization	256	0.4	129	0.4	127	0.4
ECOWAS	454	0.7	261	0.9	193	0.6
African other than ECOWAS	202	0.3	103	0.3	99	0.3
Other	168	0.3	74	0.2	94	0.3

Source: Ghana Statistical Service, 2010 Population and Housing Census

3.5 Religious Affiliation

Table 3.7 presents population by religious affiliation and sex in the Twifo Atti-Morkwa district. The Christian population (Catholic, Protestant, Pentecostal/Charismatic and other Christians) was the dominant religion (85.2%) in the district followed by Islam (7.9%) while the least (0.3%) was Traditionalist. The Pentecostal/Charismatic religious group in the district is the largest (36.0%), higher than that of the region as a whole (29.8%). The Table also indicates that there are more female Christians than their male counterparts but the opposite is the case with Islam (Males: 8.4% and females: 7.5 %) in the district.

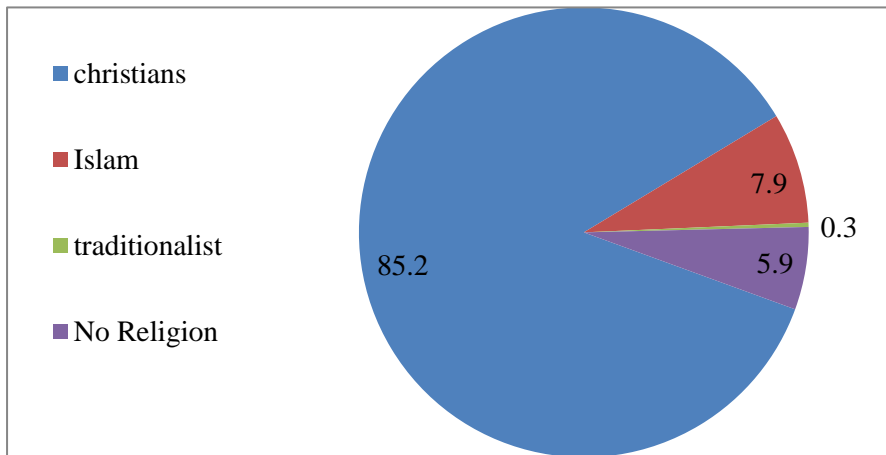
Table 3.7: Population by religion and sex

Religion	Both sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Total	61,743	100.0	30,254	100.0	31,489	100.0
No religion	3,630	5.9	2,385	7.9	1,245	4.0
Catholic	6,742	10.9	3,177	10.5	3,565	11.3
Protestants (Anglican Lutheran etc.)	11,269	18.3	5,443	18.0	5,826	18.5
Pentecostal/Charismatic	22,252	36.0	10,500	34.7	11,752	37.3
Other Christian	12,323	20.0	5,902	19.5	6,421	20.4
Islam	4,905	7.9	2,548	8.4	2,357	7.5
Traditionalist	166	0.3	102	0.3	64	0.2
Other	456	0.7	197	0.7	259	0.8

Source: Ghana Statistical Service, 2010 Population and Housing Census

Figure 3.2 shows a pie chart of the district population by religious affiliation. Twifo Atti-Morkwa district could be described as Christian dominated district. From the results, 85.2 percent of the populations are Christians; Moslems constitute the second highest (7.9%) while 0.3 percent are traditionalists.

Figure: 3.2: Population by religion



Source: Ghana Statistical Service, 2010 Population and Housing Census

3.6 Literacy and Education

In the 2010 PHC, literacy is defined as the ability to read and write simple statement with understanding. If a person can only read but cannot write or can write but cannot read, he or she is not literate. Similarly, if a person was literate some time ago but cannot read and write with understanding at present then he/she is not literate. Information collected on literacy included None, English only, Ghanaian Language only, English and Ghanaian Language, English and French, English, French and Ghanaian Language, and Other. Education may be defined as the process of acquiring knowledge, skills, values and attitudes to fully develop individual capabilities for the well-being of society.

3.6.1 Literacy

Table 3.8 shows population of persons 11 years and older by sex, age and literacy status in the Twifo Atti-Morkwa district. In the district, 0.8 percent of persons in the age group 11-14 years can speak English, French and Ghanaian Language. The results further show that 64.7 percent of persons aged 11 years and older can speak both English and Ghanaian Language. The highest percentage (16.2%) of persons who are literates in Ghanaian language only are those aged 65 years and above, and among them a higher proportion of the females (19.4%) than that of the males (14.7%) are literates in Ghanaian language only. In spite of attempts being made by government and the French Embassy to promote literacy in French, only 0.1 percent of the district's populations is literate in English and French. The highest proportion of those who can speak English only (35.1%) are those aged 11-14 years followed by those aged 15-19 years (25.5%). This might be due to the fact that they are in full time education since they are within the school going age.

Table 3.8: Population 11 years and older by sex, age and literacy status

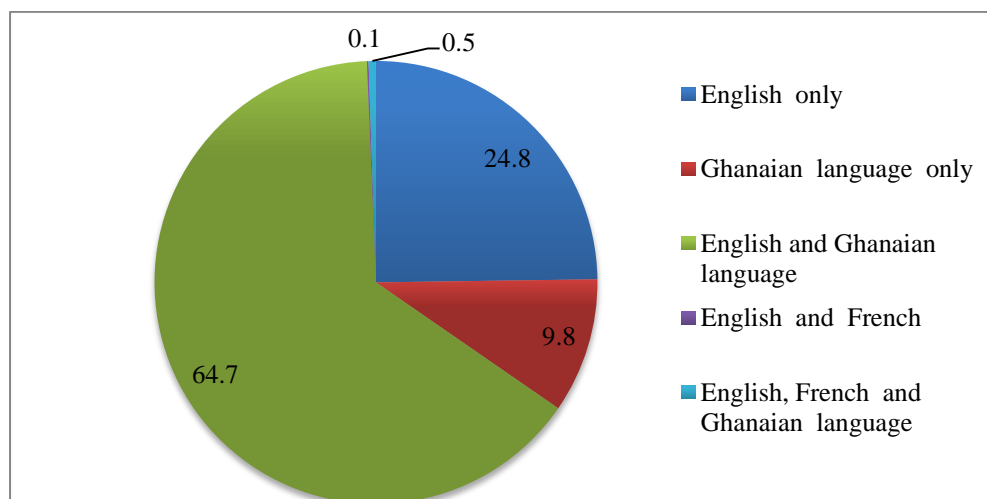
Age group	None (not literate)	Literate	Total	English only	Ghanaian language only	English and Ghanaian language	English and French	English, French and Ghanaian language
Both sexes								
Total	9,395	32,692	100.0	24.8	9.8	64.7	0.1	0.5
10-14	158	5,972	100.0	35.1	7.7	56.3	0.1	0.8
15-19	369	6,254	100.0	25.5	5.1	68.6	0.1	0.7
20-24	696	4,569	100.0	22.1	6.9	70.3	0.2	0.5
25-29	927	3,924	100.0	23.5	11.0	64.8	0.4	0.3
30-34	930	2,838	100.0	24.2	12.8	62.7	0.1	0.2
35-39	1,075	2,370	100.0	23.0	14.2	62.4	0.1	0.4
40-44	955	1,927	100.0	20.8	15.7	62.9	0.0	0.6
45-49	881	1,565	100.0	19.2	15.0	65.0	0.1	0.6
50-54	860	1,208	100.0	18.4	12.6	68.4	0.1	0.6
55-59	484	764	100.0	15.8	13.5	70.3	0.1	0.3
60-64	547	528	100.0	15.0	14.4	70.6	0.0	0.0
65+	1,513	773	100.0	15.0	16.2	68.6	0.0	0.3
Male								
Total	3,024	17,396	100.0	22.9	8.5	67.8	0.1	0.6
10-14	75	3,060	100.0	35.3	7.8	56.1	0.0	0.8
15-19	144	3,239	100.0	24.6	4.7	69.7	0.1	0.9
20-24	223	2,158	100.0	18.6	5.6	75.1	0.2	0.5
25-29	280	1,861	100.0	21.7	9.5	67.9	0.4	0.4
30-34	299	1,515	100.0	20.8	11.4	67.5	0.1	0.3
35-39	311	1,302	100.0	20.4	10.9	67.9	0.2	0.6
40-44	290	1,143	100.0	20.1	11.7	67.3	0.0	0.9
45-49	279	953	100.0	17.6	10.8	70.3	0.2	1.0
50-54	268	773	100.0	18.1	8.9	71.9	0.1	0.9
55-59	166	497	100.0	15.3	9.1	75.1	0.2	0.4
60-64	173	364	100.0	12.6	13.5	73.9	0.0	0.0
65+	516	531	100.0	11.3	14.7	73.8	0.0	0.2
Female								
Total	6,371	15,296	100.0	26.9	11.4	61.2	0.1	0.4
10-14	83	2,912	100.0	35.0	7.6	56.5	0.2	0.8
15-19	225	3,015	100.0	26.5	5.4	67.4	0.0	0.6
20-24	473	2,411	100.0	25.2	8.1	65.9	0.2	0.5
25-29	647	2,063	100.0	25.2	12.4	61.9	0.3	0.2
30-34	631	1,323	100.0	28.2	14.4	57.3	0.0	0.1
35-39	764	1,068	100.0	26.1	18.2	55.6	0.0	0.1
40-44	665	784	100.0	21.7	21.6	56.5	0.0	0.3
45-49	602	612	100.0	21.6	21.6	56.9	0.0	0.0
50-54	592	435	100.0	18.9	19.1	62.1	0.0	0.0
55-59	318	267	100.0	16.9	21.7	61.4	0.0	0.0
60-64	374	164	100.0	20.1	16.5	63.4	0.0	0.0
65+	997	242	100.0	23.1	19.4	57.0	0.0	0.4

Source: Ghana Statistical Service, 2010 Population and Housing Census

The percentages of the literate population aged 11 years and older and their languages of literacy is shown in Figure 3.2. About two-thirds of the populations aged 11 years and older are literate in English and Ghanaian language (64.7%). The second highest number of

persons literate in one language is in English language only (24.8%). The proportion aged 11 years and older who are literate in English, French and Ghanaian Language is 0.5 percent.

Figure 3.3: Literacy status of person 11 years and older



Source: Ghana Statistical Service, 2010 Population and Housing Census

3.6.2 Education

Table 3.9 provides information on population aged 3 years and older by level of education, school attendance and sex. Out of the 24, 488 persons enumerated as currently in school, 47.5 percent are in the primary, 18.2 percent are in the JSS/JHS while 6.0 percent are at the Senior High School level. The results further show that among persons currently attending school, the proportions of males and females in the primary school is the same (47.5% each), the proportions of males in JHS/JSS (19.0%), SSS/SHS (6.6%) and Tertiary (1.3%) were higher than females in JHS/JSS (17.4%), SSS/SHS (5.3%) and Tertiary (0.6%).

With regards to those who attended school in the past (20, 747), the distribution were as follows: Middle school (26.3%), Primary (17.8%), JSS/JHS (38.3%), SSS/SHS (8.5%) and Tertiary (3.0%). Also, the results show that a higher proportion of the females (42.8%) than that of the males (34.3%) ended their education at the JHS/JSS levels while higher proportion of the males (4.5%) than the females (1.4%) have completed Tertiary education (Table 3.9).

Table 3.9: Population 3 years and older by level of education, school attendance and sex

Level of education	Currently attending						Attended in the past					
	Both sexes		Male		Female		Both sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	24,488	100.0	12,580	100.0	11,908	100.0	20,747	100.0	11,026	100.0	9,721	100.0
Nursery	1,597	6.5	777	6.2	820	6.9	0	0.0	0	0.0	0	0.0
Kindergarten	4,653	19.0	2,281	18.1	2,372	19.9	0	0.0	0	0.0	0	0.0
Primary	11,631	47.5	5,979	47.5	5,652	47.5	3,691	17.8	1,495	13.6	2,196	22.6
JSS/JHS	4,466	18.2	2,393	19.0	2,073	17.4	7,945	38.3	3,787	34.3	4,158	42.8
Middle	0	0.0	0	0.0	0	0.0	5,465	26.3	3,417	31.0	2,048	21.1
SSS/SHS	1,466	6.0	831	6.6	635	5.3	1,767	8.5	1,008	9.1	759	7.8
Secondary	0	0.0	0	0.0	0	0.0	406	2.0	298	2.7	108	1.1
Voc./Tech/Comm.	44	0.2	28	0.2	16	0.1	435	2.1	249	2.3	186	1.9
Post middle/secondary certificate	376	1.5	111	0.9	265	2.2	365	1.8	236	2.1	129	1.3
Tertiary	255	1.0	180	1.3	75	0.6	673	3.0	536	4.5	137	1.4

Source: Ghana Statistical Service, 2010 Population and Housing Census

CHAPTER FOUR

ECONOMIC CHARACTERISTICS

4.1 Introduction

The production of goods and services are meant for human consumption but human capital forms part of the factors of production. Information on the characteristics of the population as well as the proportion of economically active and economically not active persons in the total population can inform policies and programmes on economic activities, occupation, industry and employment. This chapter presents information on economic activity status, size and structure of the labour force, and its distribution by occupation, industry, employment sector and employment status.

4.1 Economic Activity Status

Economically active are all persons (i) who worked for pay or profit or family gain during the seven days preceding the census or (ii) who did not work but had jobs to return to, such as those on leave with or without pay, temporarily ill persons, temporarily laid off persons or (iii) who did not work during the reference period, but were actively looking for work (i.e. the unemployed). On the other hand, economically not active are homemakers (persons who engaged in household duties without pay), students, the aged, pensioners and persons with disability (GSS, 2012).

This section presents results concerning persons aged 15 years and older who are engaged in any activity for pay (cash or kind) or profit or family gain during the seven days preceding census night in the Twifo Atti-Morkwa District. Table 4.1 shows that out of the population aged 15 years and older in the Municipality, 73.7 percent are economically active while 26.3 percent are economically not active. It also shows that 96.7 percent of the economically active populations are employed while 3.3 percent are unemployed.

The Table further shows that higher proportion of males (76.0%) than females (71.6%) are economically active while the opposite is the case for economically not active between the two sexes. Table 4.1 also reveals that majority of the economically not active population are engaged in full time education (53.4 %) with the males constituting 65.0 percent and the females (44.3%). However, females outnumber their male counterpart in the number of persons engaged in household chores. This is expected because females are naturally endowed with the skills needed in household chores.

Table 4.1: Population 15 years and older by activity status and sex

Activity status	Total		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Total	35,957	100.0	17,285	100.0	18,672	100.0
Economically active	26,511	73.7	13,145	76.0	13,366	71.6
<i>Employed</i>	<i>25,636</i>	<i>96.7</i>	<i>12,793</i>	<i>97.3</i>	<i>12,843</i>	<i>96.1</i>
<i>Worked</i>	<i>24,854</i>	<i>96.9</i>	<i>12,496</i>	<i>97.7</i>	<i>12,358</i>	<i>96.2</i>
<i>Did not work but had job to go back to</i>	<i>745</i>	<i>2.9</i>	<i>283</i>	<i>2.2</i>	<i>462</i>	<i>3.6</i>
<i>Did voluntary work without pay</i>	<i>37</i>	<i>0.1</i>	<i>14</i>	<i>0.1</i>	<i>23</i>	<i>0.2</i>
<i>Unemployed</i>	<i>875</i>	<i>3.3</i>	<i>352</i>	<i>2.7</i>	<i>523</i>	<i>3.9</i>
<i>Worked before, seeking work and available</i>	<i>355</i>	<i>40.6</i>	<i>113</i>	<i>32.1</i>	<i>242</i>	<i>46.3</i>
<i>Seeking work for the first time and available</i>	<i>520</i>	<i>59.4</i>	<i>239</i>	<i>67.9</i>	<i>281</i>	<i>53.7</i>
Economically not active	9,446	26.3	4,140	24.0	5,306	28.4
Did home duties (household chore)	2,462	26.1	691	16.7	1,771	33.4
Full time education	5,040	53.4	2,689	65.0	2,351	44.3
Pensioner/Retired	156	1.7	113	2.7	43	0.8
Disabled/Sick	592	6.3	237	5.7	355	6.7
Too old/young	725	7.7	214	5.2	511	9.6
Other	471	5.0	196	4.7	275	5.2

Source: Ghana Statistical Service, 2010 Population and Housing Census

Information about the population of aged 15 years and older by sex, age and economic activity status is presented in Table 4.2. It indicates that the peak of employment status is between ages 40-44 years for both sexes, the highest percentage of unemployment in both cases is 5.1 percent while about 70.0 percent aged between 15-19 years were economically not active. This may be due to the fact that persons aged between 15-19 years are within the school going age and are likely to be in full time education.

Higher proportions of both sexes aged between 20 and 29 years dominate the various employment status. However, there is a higher proportion of the males aged between 15 and 19 years (41.7%) than that of their female counterparts (32.8%) who are economically not active. This might be due to the fact that more males than females aged 15-19 years are in full time education.

However, the age groups with the highest proportions of employed males and females are aged 35-39 years and 50-54 years respectively. The proportion of the unemployed females (2.8%) is higher than that of the males (2.0 %) in the Twifo Atti-Morkwa District.

Table 4.2: Economic activity status of population 15 years and older by sex, age

Age group	All Status		Employed		Unemployed		Economically not active	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Both Sexes								
Total	35957	100.0	25636	71.3	875	2.4	9446	26.3
15-19	6623	100.0	1851	27.9	151	2.3	4621	69.8
20-24	5265	100.0	3121	59.3	269	5.1	1875	35.6
25-29	4851	100.0	3879	80.0	207	4.3	765	15.8
30-34	3768	100.0	3322	88.2	90	2.4	356	9.4
35-39	3445	100.0	3150	91.4	32	0.9	263	7.6
40-44	2882	100.0	2668	92.6	21	0.7	193	6.7
45-49	2446	100.0	2261	92.4	24	1.0	161	6.6
50-54	2068	100.0	1932	93.4	9	0.4	127	6.1
55-59	1248	100.0	1139	91.3	8	0.6	101	8.1
60-64	1075	100.0	869	80.8	52	4.8	154	14.3
65+	2286	100.0	1444	63.2	12	0.5	830	36.3
Male								
Total	17285	100.0	12793	74.0	352	2.0	4140	24.0
15-19	3383	100.0	967	28.6	58	1.7	2358	69.7
20-24	2381	100.0	1429	60.0	120	5.0	832	34.9
25-29	2141	100.0	1808	84.4	83	3.9	250	11.7
30-34	1814	100.0	1678	92.5	30	1.7	106	5.8
35-39	1613	100.0	1554	96.3	11	0.7	48	3.0
40-44	1433	100.0	1370	95.6	6	0.4	57	4.0
45-49	1232	100.0	1174	95.3	6	0.5	52	4.2
50-54	1041	100.0	1000	96.1	4	0.4	37	3.6
55-59	663	100.0	615	92.8	5	0.8	43	6.5
60-64	537	100.0	445	82.9	23	4.3	69	12.8
65+	1047	100.0	753	71.9	6	0.6	288	27.5
Female								
Total	18672	100.0	12843	68.8	523	2.8	5306	28.4
15-19	3240	100.0	884	27.3	93	2.9	2263	69.8
20-24	2884	100.0	1692	58.7	149	5.2	1043	36.2
25-29	2710	100.0	2071	76.4	124	4.6	515	19.0
30-34	1954	100.0	1644	84.1	60	3.1	250	12.8
35-39	1832	100.0	1596	87.1	21	1.1	215	11.7
40-44	1449	100.0	1298	89.6	15	1.0	136	9.4
45-49	1214	100.0	1087	89.5	18	1.5	109	9.0
50-54	1027	100.0	932	90.7	5	0.5	90	8.8
55-59	585	100.0	524	89.6	3	0.5	58	9.9
60-64	538	100.0	424	78.8	29	5.4	85	15.8
65+	1239	100.0	691	55.8	6	0.5	542	43.7

Source: Ghana Statistical Service, 2010 Population and Housing Census

4.3 Occupation

Occupation refers to the type of work a person is engaged in or a person's principal or usual work or business especially as a means of earning a living. In the 2010 PHC, occupation was asked only of persons who worked for at least one hour during the seven days before the census night, and those who did not work but had a job to return to, as well as those who were unemployed but had worked before. All persons who worked during the seven days before the census night were classified by the kind of work they were engaged in. The emphasis was on the work the person did during the reference period.

Table 4.3 shows the employed population aged 15 years and older by occupation in the Twifo Atti-Morkwa district. The highest percentages (56.4%) of the population aged 15 years and older are engaged in skilled agricultural forestry and fishery work. Males constitute a higher percentage (59.1%) as compared with that of the females (53.8%), implying that males were predominant in skilled agricultural forestry and fishery work in the district.

The results further indicate that 14.2 percent of the populations of both sexes were engaged in service and sales work. However, females constituted the highest proportion (22.9%) of the population engaged in service and sales. This is expected because traditionally such occupations are associated with females.

Table 4.3: Employed population 15 years and older by occupation and sex

Occupation	Both sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Total	25,636	100.0	12,793	100.0	12,843	100.0
Managers	332	1.3	144	1.1	188	1.5
Professionals	1,082	4.2	682	5.3	400	3.1
Technicians and associate professionals	283	1.1	215	1.7	68	0.5
Clerical support workers	153	0.6	97	0.8	56	0.4
Service and sales workers	3,653	14.2	712	5.6	2,941	22.9
Skilled agricultural forestry and fishery workers	14,469	56.4	7,558	59.1	6,911	53.8
Craft and related trades workers	3,019	11.8	1,453	11.4	1,566	12.2
Plant and machine operators and assemblers	1,544	6.0	1,503	11.7	41	0.3
Elementary occupations	1,100	4.3	428	3.3	672	5.2
Other occupations	1	0.0	1	0.0	0	0.0

Source: Ghana Statistical Service, 2010 Population and Housing Census

4.4 Industry

In the 2010 PHC, information on industry was collected on the main products or services produce during the seven days before the census night. Table 4.4 shows that 57.4 percent of the employed population 15 years and older were engaged in agricultural forestry and fishing industry followed by wholesale and retail, repair of motor vehicles and motorcycles representing 12.0 percent.

Table 4.4 also shows that females dominate (71.4%) the wholesale and retail, repair of motor vehicles and motorcycles business. This is expected because the wholesale and retail activities in particular are traditionally undertaken by females.

Table 4.4 further shows that males, on the other hand, dominate more than half of the industries in the district which include construction (97.5%), transportation and storage (97.0%), information and communication (85.7%) and administrative, support services activities (91.9 %). This indicates that industries in the district are gender stereotyped.

Table 4.4: Employed population 15 years and older by industry and sex

Industry	Both sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Total	25636	100.0	12,793	49.9	12843	50.1
Agriculture forestry and fishing	14726	100.0	7822	53.1	6904	46.9
Mining and quarrying	739	100.0	710	96.1	29	3.9
Manufacturing	2492	100.0	966	38.8	1526	61.2
Electricity gas steam and air conditioning supply	23	100.0	18	78.3	5	21.7
Water supply; sewerage waste management and remediation activities	40	100.0	18	45.0	22	55.0
Construction	446	100.0	435	97.5	11	2.5
Wholesale and retail; repair of motor vehicles and motorcycles	3065	100.0	878	28.6	2187	71.4
Transportation and storage	659	100.0	639	97.0	20	3.0
Accommodation and food service activities	1135	100.0	90	7.9	1045	92.1
Information and communication	28	100.0	24	85.7	4	14.3
Financial and insurance activities	75	100.0	52	69.3	23	30.7
Real estate activities	0	0.0	0	0.0	0	0.0
Professional scientific and technical activities	57	100.0	40	70.2	17	29.8
Administrative and support service activities	74	100.0	68	91.9	6	8.1
Public administration and defence; compulsory social security	167	100.0	129	77.2	38	22.8
Education	890	100.0	566	63.6	324	36.4
Human health and social work activities	170	100.0	63	37.1	107	62.9
Arts entertainment and recreation	48	100.0	42	87.5	6	12.5
Other service activities	729	100.0	209	28.7	520	71.3
Activities of households as employers; undifferentiated goods - and services - producing activities of households for own use	73	100.0	24	32.9	49	67.1
Activities of extraterritorial organizations and bodies	0	0.0	0	0.0	0	0.0

Source: Ghana Statistical Service, 2010 Population and Housing Census

4.5 Employment Status

Employment status refers to the position of a person in the establishment where he/she currently works or previously worked. In the 2010 PHC, eight employment status categories were provided: employee, self-employed without employees, self-employed with employees, casual worker, contributing family worker, apprentice and domestic employee (house-help).

From Table 4.5, self-employed without employees constitute the highest percentages in both sexes (62.6 %). This is consistent with the fact that in the district majority of the people are engaged in petty trading activities, especially females who recorded the highest percentage of employed without employees (64.3%). In the sex distribution of employees, the proportion of the male employees (17.9%) is higher than that of the females (6.0%). Domestic employees however recorded the least (0.6%) in both sexes (Table 4.5).

Females were twice (23.1%) the number of males (11.9%) who were engaged in contributing to family work. This is expected because females are mostly associated with family or domestic work (Tanle and Awusabo-Asare, 2007).

Table 4.5: Employed population 15 years and older by employment status and sex

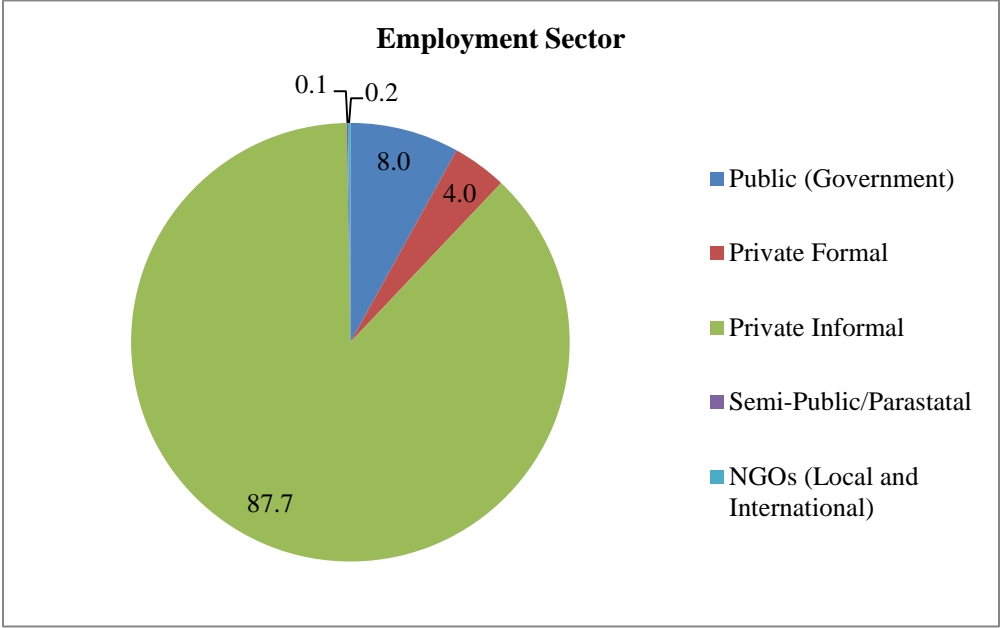
Employment sector	Both sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Total	25,636	100.0	12,793	100.0	12,843	100.0
Employee	3,059	11.9	2,284	17.9	775	6.0
Self-employed without employee(s)	16,058	62.6	7,800	61.0	8,258	64.3
Self-employed with employee(s)	692	2.7	426	3.3	266	2.1
Casual worker	662	2.6	510	4.0	152	1.2
Contributing family worker	4,499	17.5	1,527	11.9	2,972	23.1
Apprentice	492	1.9	171	1.3	321	2.5
Domestic employee (House help)	141	0.6	58	0.5	83	0.6
Other	33	0.1	17	0.1	16	0.1

Source: Ghana Statistical Service, 2010 Population and Housing Census

4.6 Employment Sector

Employment sector refers to the sector in which a person works. The sectors covered in the census are e Public, Private formal, Private informal, Semi-public/parastatals, NGOs and International organizations. Figure 4.3 shows that private informal sector (87.7%) is the major employment sector followed by public or government (8.0%). The least sector representing 0.1% is NGO'S (local and international).

Figure 4.1: Employment sector of population 15 years and older



Source: Ghana Statistical Service, 2010 Population and Housing Census

CHAPTER FIVE

INFORMATION COMMUNICATION TECHNOLOGY

5.1 Introduction

Information and Communications Technology (ICT) is an important tool for sustainable development in every country. Information and Communication Technologies (ICT) have become important source of information in today's knowledge-based society and economy. This role of ICT in an emerging economy such as Ghana's, has been widely recognized at various levels. The recognition is reflected in actions such as the deployment of a national ICT infrastructure, institutional and regulatory framework for managing the sector, promoting the use of ICT in all sectors of the economy, implementing e-governance in all government institutions and the construction of a National Data Centre as well as Regional Innovation Centres.

To understand some of these developments, a module was included in the 2010 PHC for the first time on ownership and use of ICT facilities from persons aged 12 years and older. This chapter describes access to ICT facilities and availability of ICT facilities in households in the Twifo Anti-Morkwa District.

5.2 Ownership of Mobile Phones

In 2003, cellular phones became the most widely-used telecommunication tool in the world and have been spreading around faster than any telecommunication technology (Castells *et al.* 2004). Research shows that the increasing global diffusion of mobile telecommunication has contributed to narrowing the gap in telephone usage between developed and less developed countries (Geser, 2004). Ghana has benefited from this global diffusion of mobile telecommunication, when in 2003; mobile telephones became the primary mode of communication for social and business activities for the majority of Ghanaians (Ayensu, 2003).

Table 5.1 shows that about 38.0 percent out of the population of the district (40, 705) own mobile phones, which is lower than the regional average (73.5%). The proportions of persons who own mobile phones are 57.3 percent of the males and 42.7 percent of the females respectively.

Table 5.1: Population 12 years and older by mobile phone ownership, internet facility usage and sex

Sex	Population 12 years and older		Population having mobile phone		Population using internet facility	
	Number	Percent	Number	Percent	Number	Percent
Total	40,705	100.0	15,433	100.0	1005	100.0
Male	19,696	100.0	8,849	57.3	654	65.1
Female	21,009	100.0	6,584	42.7	351	34.9

Source: Ghana Statistical Service, 2010 Population and Housing Census

5.3 Uses of Internet

Persons using internet facility refers to those who have access to internet facility at home, internet café, and mobile phone or by other mobile devices. Internet access is assumed not to be only via computer but also by mobile phone, game machine and digital televisions. Table 5.1 reveals that 2.5 percent of the populations have access to internet facility of which 65.1 percent are males while 34.9 percent are females. This might be attributed to the fact that females are often involved in domestic chores and therefore they have limited free time to use the internet.

5.4 Household Ownership of Desktop/Laptop Computers

The distribution of households with desktop/laptop computers by sex of household heads is shown in Table 5.2. On ownership of desktop/laptop computers, 3.4 percent of the total households have desktop/laptop computers, which is lower than the regional average of 5.2 percent. A higher proportion of the male-headed households (78.7%) than that of their female counterparts (21.3%) have desktop/laptop computers.

Table 5.2: Households having desktop/laptop computers by sex of household head

Sex	Households		Households having desktop/laptop computers	
	Number	Percent	Number	Percent
Total	12,959	100.0	442	100.0
Male	8,992	100.0	348	78.7
Female	6,102	100.0	94	21.3

Source: Ghana Statistical Service, 2010 Population and Housing Census

CHAPTER SIX

DISABILITY

6.1 Introduction

Persons with disabilities (PWD) have been defined as those who are unable to or are restricted in the performance of specific tasks/activities due to loss of function of some part of the body as a result of impairment or malformation (Ghana Statistical Service, 2012). As a result, PWDs face a wide range of life challenges because disability, in whatever form or type, can reduce an individual's ability to function to his/her full potential. Disability can limit an individual's full participation in a number of activities in life. The World Health Organization (WHO) estimates show that there are more than 600 million PWDs in the world, of which approximately 80 percent live in low-income countries (Ayiku, 2012).

In Ghana, PWDs in general are marginalized and suffer from discrimination on account of their disability status (GSS 2012). They are mostly regarded as less productive and not capable of contributing to development compared to their non-disabled counterparts. Accordingly, they are often seen as a burden on society and their unfortunate circumstances are viewed sometimes as a curse or punishment. Furthermore, they have poorer health status, lower educational achievements, less economic participation and higher levels of poverty than people without disabilities (World Health Organisation, 2011).

The inclusion of questions on disability in the 2010 PHC is therefore paramount. The areas discussed in this chapter are population with disability, types of disability, disability type, disability and economic activity and disability, education and literacy.

6.2 Population with Disability

Population by type of locality, disability type and sex is shown in Table 6.1. In the Twifo-Atti Morkwa district, 2.6 percent (1, 590) of the total population of 61,743 have different forms of disability, which is lower than the regional average of 3.4 percent. The main types of disability in order of proportions are sight (40.0%), physical disability (28.2%), emotional (18.3%), hearing (16.9%) and speech (15.0%). Speech recorded a higher proportion among the males (58.2%) than that of the females (41.8%). In the district, the males stand out in all forms of disabilities (52.6%). The proportion of the females with all forms of disabilities (50.2%) in the urban areas is slightly higher than that of the males (49.8%). On the other hand, the proportion of the males (53.3%) is higher than that of the females (46.7%) with all forms of disabilities in the rural areas. The main type of disability in the urban areas is physical (58.7%) while speech (60.8%) is the main type of disability in the rural areas.

Table 6.1: Population by type of locality, disability type and sex

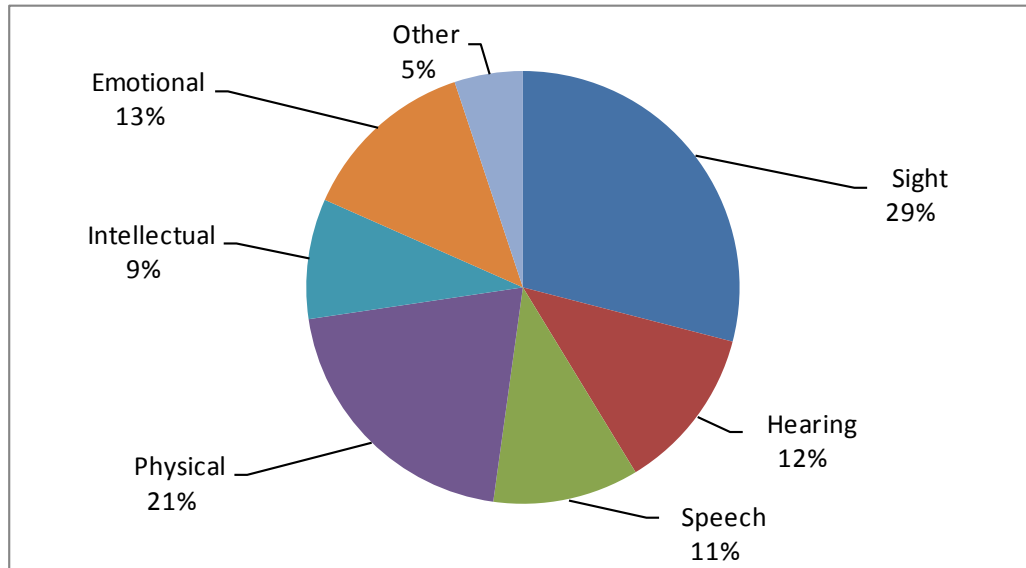
Disability type	Both sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
<i>All localities</i>						
Total	61,743	100.0	30,254	49.0	31,489	51.0
No disability	60,153	100.0	29,417	48.9	30,736	51.1
With a disability	1,590	100.0	837	52.6	753	47.4
Sight	637	100.0	328	51.5	309	48.5
Hearing	269	100.0	145	53.9	124	46.1
Speech	239	100.0	139	58.2	100	41.8
Physical	449	100.0	239	53.2	210	46.8
Intellectual	197	100.0	99	50.3	98	49.7
Emotional	291	100.0	149	51.2	142	48.8
Other	112	100.0	62	55.4	50	44.6
<i>Urban</i>						
Total	14,651	100.0	6,831	46.6	7,820	53.4
No disability	14,344	100.0	6,678	46.6	7,666	53.4
With a disability	307	100.0	153	49.8	154	50.2
Sight	174	100.0	86	49.4	88	50.6
Hearing	33	100.0	14	42.4	19	57.6
Speech	30	100.0	12	40.0	18	60.0
Physical	63	100.0	37	58.7	26	41.3
Intellectual	19	100.0	7	36.8	12	63.2
Emotional	34	100.0	17	50.0	17	50.0
Other	26	100.0	11	42.3	15	57.7
<i>Rural</i>						
Total	47,092	100.0	23,423	49.7	23,669	50.3
No disability	45,809	100.0	22,739	49.6	23,070	50.4
With a disability	1,283	100.0	684	53.3	599	46.7
Sight	463	100.0	242	52.3	221	47.7
Hearing	236	100.0	131	55.5	105	44.5
Speech	209	100.0	127	60.8	82	39.2
Physical	386	100.0	202	52.3	184	47.7
Intellectual	178	100.0	92	51.7	86	48.3
Emotional	257	100.0	132	51.4	125	48.6
Other	86	100.0	51	59.3	35	40.7

Source: Ghana Statistical Service, 2010 Population and Housing Census

6.3 Type of Disability

Figure 6.1 indicates PWDs by type of disability in the district. Persons with sight disability recorded the highest (29.0%) followed by physical disability (21.0%), emotional (13.0%), hearing (12.0%), Speech (11.0%), intellectual (9.0%) and others (5%).

Figure 6.1: Population by type of disability



Source: Ghana Statistical Service, 2010 Population and Housing Census

6.5 Disability and Activity Status

Activity status refers to the economic and non-economic activity of persons during the reference period of seven days preceding the census night. Persons who worked for pay, profit or family gain, those who did not work but had jobs to return to and those unemployed, are referred to as the economically active. The economically not active are persons who did not work and were not seeking for work. These includes homemakers, students, retired persons, disabled and unable to work and those with ill-health or too old and too young to work.

Table 6.2 shows economic activity status by sex for persons aged 15 years and older who are disabled. The results show that 3.6 percent (1300) of persons aged 15 years and older (35,957) in the Twifo Atti-Morkwa district are PWDs. About 60.6 percent of PWDs are employed, 2.1 percent are unemployed while 37.3 percent are economically not active. Table 6.2 also indicates that among the various types of disability, persons with emotional disability are the majority who are employed (67.8%), most of those unemployed are 'other' (4.7%) while the highest proportion of economically not active are those with intellectual disability (52.5%).

Table 6.2 further indicates that higher proportions of males with various types of disabilities are employed as compared with that of their female counterparts while the opposite is the case for those who are economically not active. This could be due to one or a combination of the following scenario: either females with various types of disabilities have not acquired knowledge or skills that could enable them obtain employment or they are discriminated against in the job market or they are in full time education.

Table 6.2: Economic activity of population 15 years and older with disability by sex older

Sex/ Disability type	All status		Employed		Unemployed		Economically not active	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Both Sexes								
Total	35,957	100.0	25,636	71.3	875	2.4	9,446	26.3
No disability	34,657	100.0	24,848	71.7	848	2.4	8,961	25.9
With a disability	1,300	100.0	788	60.6	27	2.1	485	37.3
Sight	568	100.0	324	57.0	9	1.6	235	41.4
Hearing	189	100.0	124	65.6	2	1.1	63	33.3
Speech	168	100.0	103	61.3	1	0.6	64	38.1
Physical	369	100.0	198	53.7	12	3.3	159	43.1
Intellectual	137	100.0	62	45.3	3	2.2	72	52.6
Emotional	211	100.0	143	67.8	4	1.9	64	30.3
Other	86	100.0	45	52.3	4	4.7	37	43.0
Male								
Total	17,285	100.0	12,793	74.0	352	2.0	4,140	24.0
No disability	16,611	100.0	12,351	74.4	339	2.0	3,921	23.6
With a disability	674	100.0	442	65.6	13	1.9	219	32.5
Sight	290	100.0	173	59.7	4	1.4	113	39.0
Hearing	102	100.0	74	72.5	1	1.0	27	26.5
Speech	97	100.0	66	68.0	1	1.0	30	30.9
Physical	194	100.0	120	61.9	9	4.6	65	33.5
Intellectual	67	100.0	38	56.7	1	1.5	28	41.8
Emotional	102	100.0	77	75.5	0	0.0	25	24.5
Other	44	100.0	25	56.8	1	2.3	18	40.9
Female								
Total	18,672	100.0	12,843	68.8	523	2.8	5,306	28.4
No disability	18,046	100.0	12,497	69.3	509	2.8	5,040	27.9
With a disability	626	100.0	346	55.3	14	2.2	266	42.5
Sight	278	100.0	151	54.3	5	1.8	122	43.9
Hearing	87	100.0	50	57.5	1	1.1	36	41.4
Speech	71	100.0	37	52.1	0	0.0	34	47.9
Physical	175	100.0	78	44.6	3	1.7	94	53.7
Intellectual	70	100.0	24	34.3	2	2.9	44	62.9
Emotional	109	100.0	66	60.6	4	3.7	39	35.8
Other	42	100.0	20	47.6	3	7.1	19	45.2

Source: Ghana Statistical Service, 2010 Population and Housing Census

6.6 Disability, Education and Literacy

Table 6.3 shows the population aged three years and older with disability disaggregated by level of education and disability type. The results show that 2.8 percent (1556) of the population aged three years and older (56,241) in the Twifo Atti-Morkwa district have various types of disabilities. Among these persons, 38.7 percent have never attended school, 19.7 percent have completed primary school, 30.0 percent have completed middle school/ JSS/JHS, 0.4 percent have degrees while 0.2 percent have post graduate certificates. The high proportion of disabled persons who had never attended school implies that the education of such persons is neglected in the district.

About half have had basic education (Primary, JSS, JHS and Middle school) while 4.2 percent (65) have had secondary or senior high school education. More than a third (37.5%) (290) of those with basic school education have visual impairment while the highest proportion of those with post-secondary certificate/diploma (1.2%) also have visual impairment. No persons with emotional disability have education up to the degree or postgraduate level in the Twifo-Atti Morkwa district.

More females (354) than males (248) with all forms of disabilities have never attended school. Visual impairment is more prevalent among the females (149) than the males (104) who have never attended school. In general, visual impairment is the main type of disability in the district, particularly among the females aged three years and older who have never attended school.

Table 6.3: Population 3 years and older by sex, disability type and level of education

Sex/disability type	Number					Percent				
	Total	Never	Pre-Prim	Basic	Sec/SHS and higher	Total	Never	Pre-Prim	Basic	Sec/SHS and higher
Total	56,241	11,006	6,250	33,198	5,787	100.0	19.6	11.1	59.0	10.3
No disability	54,685	10,404	6,183	32,424	5,674	100.0	19.0	11.3	59.3	10.4
With a disability	1,556	602	67	774	113	100.0	38.7	4.3	49.7	7.3
Sight	629	253	23	290	63	100.0	40.2	3.7	46.1	10.0
Hearing	259	108	16	121	14	100.0	41.7	6.2	46.7	5.4
Speech	235	96	11	111	17	100.0	40.9	4.7	47.2	7.2
Physical	442	178	18	223	23	100.0	40.3	4.1	50.5	5.2
Intellectual	191	85	13	88	5	100.0	44.5	6.8	46.1	2.6
Emotional	277	94	16	156	11	100.0	33.9	5.8	56.3	4.0
Other	109	36	3	58	12	100.0	33.0	2.8	53.2	11.0
Male										
Total	27,483	3,877	3,058	17,071	3,477	100.0	14.1	11.1	62.1	12.7
No disability	26,668	3,629	3,026	16,614	3,399	100.0	13.6	11.3	62.3	12.7
With a disability	815	248	32	457	78	100.0	30.4	3.9	56.1	9.6
Sight	323	104	12	167	40	100.0	32.2	3.7	51.7	12.4
Hearing	142	55	7	70	10	100.0	38.7	4.9	49.3	7.0
Speech	137	44	5	74	14	100.0	32.1	3.6	54.0	10.2
Physical	236	73	8	138	17	100.0	30.9	3.4	58.5	7.2
Intellectual	95	35	7	50	3	100.0	36.8	7.4	52.6	3.2
Emotional	138	31	8	91	8	100.0	22.5	5.8	65.9	5.8
Other	59	16	2	37	4	100.0	27.1	3.4	62.7	6.8
Female										
Total	28,758	7,129	3,192	16,127	2,310	100.0	24.8	11.1	56.1	8.0
No disability	28,017	6,775	3,157	15,810	2,275	100.0	24.2	11.3	56.4	8.1
With a disability	741	354	35	317	35	100.0	47.8	4.7	42.8	4.7
Sight	306	149	11	123	23	100.0	48.7	3.6	40.2	7.5
Hearing	117	53	9	51	4	100.0	45.3	7.7	43.6	3.4
Speech	98	52	6	37	3	100.0	53.1	6.1	37.8	3.1
Physical	206	105	10	85	6	100.0	51.0	4.9	41.3	2.9
Intellectual	96	50	6	38	2	100.0	52.1	6.3	39.6	2.1
Emotional	139	63	8	65	3	100.0	45.3	5.8	46.8	2.2
Other	50	20	1	21	8	100.0	40.0	2.0	42.0	16.0

Source: Ghana Statistical Service, 2010 Population and Housing Census

CHAPTER SEVEN

AGRICULTURAL ACTIVITIES

7.1 Introduction

Agriculture plays a vital role in the socio-economic development of the district and the region at large. The agricultural sector comprises crops, livestock, fisheries, agro-forestry and non-traditional commodities. Ghana's agricultural sector has and continues to be the largest sector of the Ghanaian economy since independence. In 2004, agriculture employed about 56 percent of the economically active population and contributed 40 percent of the Gross Domestic Product and 52.8 percent of export earnings. The sector also contributed 10 percent of government revenue, provided food, and raw materials to meet the growing demand of the economy. The contribution of agriculture to foreign exchange earnings averaged 45 percent in the 1990s but dropped to 40 percent in the 2000s (ISSER 2000, 2011). The sector's contribution to GDP also declined from over 40 percent in the 1990s to 30 percent in the 2000s (ISSER, 2000, 2011). This chapter describes the characteristics of the population of the Twifo Atti-Morkwa district who are engaged in agriculture.

7.2 Households in Agriculture and Locality

In the 2010 PHC, an agricultural household is defined as one that engages generally in agricultural activities or if at least one of its members engages in agricultural activities, even if not earning from it. Questions were asked on the following agricultural activities: crop farming, tree growing, livestock rearing and fish farming engaged in by any member of the household.

Table 7.1 shows that 71.8 percent (9, 309) out of the total households of 12, 959 in the district were engaged in agriculture compared with 51. 4 percent of households engaged in agriculture at the regional level. Of this number, 97.3 percent were engaged in crop farming, 0.4 percent in tree planting, 38.8 percent in livestock rearing and 0.2 percent in fish farming. The table further shows that 14.3 percent of households in urban areas compared with 85.7 percent in rural areas were engaged in agriculture. This clearly shows that agriculture is predominantly a rural enterprise in the district.

Out of the agricultural households in the rural areas, 98.3 percent were into crop farming, 0.4 percent was engaged in tree planting, and 40.9 percent were involved in livestock rearing while 0.2 percent engaged in fish farming. For the urban areas, 91.2 percent were into crop farming, 0.6 percent was involved in tree planting, and 26.3 percent were engaged in livestock rearing while no household was engaged in fish farming. Agriculture, particularly crop farming is the main livelihood activity of the people in the district.

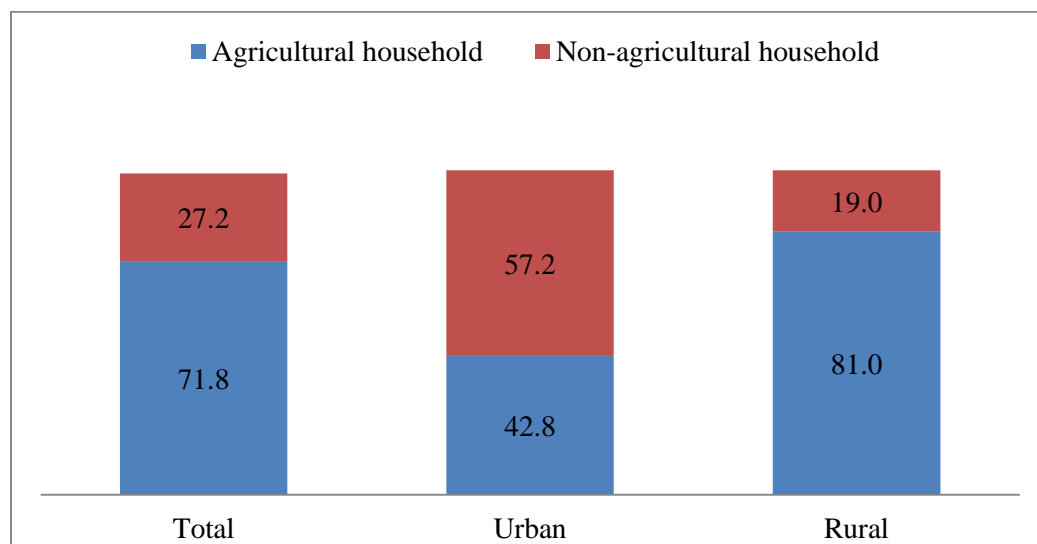
Table 7.1: Households by agricultural activities and locality

Categories	Total		Urban		Rural	
	Number	Percent	Number	Percent	Number	Percent
Total Households	12,959	100.0	3,110	24.0	9,849	76.0
Households engaged in agriculture	9,309	100.0	1,330	14.3	7,979	85.7
Crop farming	9,060	100.0	1,213	13.4	7,847	86.6
Tree planting	36	100.0	8	22.2	28	77.8
Livestock rearing	3,615	100.0	350	9.7	3,265	90.3
Fish farming	15	100.0	0	0.0	15	100.0

Source: Ghana Statistical Service, 2010 Population and Housing Census

7.2.1 Household in agriculture and non-agriculture

Figure 7.1 shows the percentage of households engaged in agriculture and non-agriculture in the Twifo-Atti Morkwa district. It is observed that about 72 percent are engaged in agriculture while about 27.2 percent are engaged in non-agricultural activities. Eight out of every ten households in the rural areas as compared with about 43.0 percent of households in the urban areas are engaged in agriculture. On the other hand, 57.2 percent of households in the urban areas are non-agriculture households as compared with 19.0 percent in the rural areas. As expected, other economic activities than agriculture are the main livelihood activities in the urban areas, which is characteristic of urban areas.

Figure 7.1: Household in agriculture and non-agriculture

Source: Ghana Statistical Service, 2010 Population and Housing Census

7.3 Types of Farming Activities

Table 7.2 shows the distribution of livestock, birds, fishes and others, number of keepers and average per keeper in the Twifo Atti-Morkwa district. The four most dominant livestock reared are chicken (66, 007), goat (11, 746), sheep (4,549) and fish farming (2, 615). The number of keepers vary according to the size of the livestock with the highest number being goat keepers (3, 045) and the least being fish farmers (16). However, average per keeper is highest (163) among fish farmers and least (9) among sheep rearers.

Table 7.2: Distribution of livestock, other animals and keepers

Type of livestock	Number of livestock, birds, fishes and others	Number of keepers	Average per Keeper
All livestock	90,562	5,086	18
Chicken	66,007	3,045	22
Goat	11,746	1,060	11
Sheep	4,549	513	9
Fish farming	2,615	16	163
Other	2,473	198	12
Duck	834	64	13
Pig	733	84	9
Guinea fowl	432	23	19
Cattle	268	19	14
Rabbit	185	15	12
Silk worm	159	4	40
Turkey	156	8	20
Ostrich	146	11	13
Dove	110	9	12
Grass-cutter	84	10	8
Snail	53	4	13
Beehives	12	3	4
Inland fishing	0	0	0
Marine fishing	0	0	0

Source: Ghana Statistical Service, 2010 Population and Housing Census

CHAPTER EIGHT

HOUSING CONDITIONS

8.1 Introduction

In 2010, the policy framework of the Government of Ghana, the Ghana Shared Growth and Development Agenda, emphasized the need for increased access of the population to safe, adequate and affordable housing and shelter (National Development Planning Commission, 2010). Earlier frameworks also underscored the important role of housing in social development. For example, in the Ghana Poverty Reduction Strategy (2003 – 2005) policy framework interventions were prescribed implicitly within the context of social development objectives (National Development Planning Commission, 2002). The United Nations (UN) defines a house as “structurally separate and independent place of abode such that a person or a group of persons can isolate themselves from the hazards of climate such as storm and the sun” (UN, 2008). This definition was adopted in the 2010 PHC. The definition thus covered any type of shelter used as living quarters, such as separate houses, semi-detached houses, flat/apartment, compound houses, huts, tents, kiosks and containers. It is envisaged that the housing data from the 2010 PHC will enable planners and policy makers formulate realistic and relevant housing policies and design appropriate programs to meet Ghana’s housing needs. For instance, information obtained from the census on housing quality indicates by the materials used for constructing various housing units, and the availability of facilities such as water and sanitation, will serve as important indicators of the occupants’ quality of life.

8.2 Housing Stock

The Twifo Atti-Morkwa District has a total population of 61,743 of which a higher proportion of 76.3 percent reside in the rural areas while 23.7 percent live in the urban areas. Table 8.1 shows that the total number of houses in the district is 8,664 of which 81.5 percent are located in the rural areas while 18.5 percent are in the urban areas. The average household size of the district is 4.8. The average household size of the rural areas (4.8) is slightly higher than that of the urban areas (4.7).

Table 8.1: Stock of houses and households by type of locality

Household	Total				
	Country	Region	District	Urban	Rural
Total population	24,658,823	2,201,863	61,743	14,651	47,092
Total household population	24,076,327	2,113,766	59,284	13,295	45,989
Number of houses	3,392,745	346,699	8,664	1,603	7,061
Number of households	5,467,054	526,763	12,959	3,110	9,849
Average households per house	1.6	1.5	1.5	1.9	1.4
Population per house*	7.3	6.4	7.1	9.1	6.7
Average household size	4.5	4.2	4.8	4.7	4.8

Source: Ghana Statistical Service, 2010 Population and Housing Census

*This excludes homeless and institutional population.

8.3 Type of Dwelling, Holding and Tenancy Arrangement

Table 8.2 shows percentages of type of dwelling units by sex of household heads and the type of locality in the district. The results show that there are 12,959 heads of households in the district of which 49.0 percent dwell in compound houses while 32.3 percent live in separate houses. Flats and Huts which represents (2.8%) and (2.3%) respectively are not common in the district.

A higher proportion of the female headed households (54.4%) than the male headed households (46.7%) live in compound houses. For household heads living in separate houses, male headed households were more than (33.7 %) their female counterparts (29.0 %). A higher percentage of household heads in the urban areas (68.1%) live in compound houses as compared with 43.0 percent in the rural areas. On the other hand, a higher proportion of household heads in the rural areas live in separate houses (36.9%) than that of their counterparts in the urban areas (17.7%). This is probably due to the fact that there are cheap building materials in the rural areas that can be used to build low cost houses.

Table 8.2: Type of occupied dwelling unit by sex of household head and type of locality

Type of dwelling	Total		District					
	Country	Region	Total		Male headed	Female headed	Urban	Rural
			Number	Percent				
Total	5,467,054	526,763	12,959	100.0	100.0	100.0	100.0	100.0
Separate house	1,471,391	158,608	4,182	32.3	33.7	29.0	17.7	36.9
Semi-detached house	391,548	36,734	1,523	11.8	12.1	10.9	5.7	13.7
Flat/Apartment	256,355	22,889	367	2.8	3.1	2.2	5.7	1.9
Compound house (rooms)	2,942,147	286,740	6,356	49.0	46.7	54.4	68.1	43.0
Huts/Buildings (same compound)	170,957	8,432	297	2.3	2.6	1.6	0.6	2.8
Huts/Buildings (different compound)	36,410	1,817	42	0.3	0.3	0.4	0.0	0.4
Tent	10,343	937	34	0.3	0.3	0.3	0.4	0.2
Improvised home (kiosk/container etc)	90,934	3,674	71	0.5	0.5	0.7	1.5	0.2
Living quarters attached to office/shop	20,499	1,559	40	0.3	0.3	0.2	0.3	0.3
Uncompleted building	66,624	4,370	44	0.3	0.3	0.4	0.1	0.4
Other	9,846	1,003	3	0.0	0.0	0.0	0.0	0.0

Source: Ghana Statistical Service, 2010 Population and Housing Census

8.3.1 Type of dwelling by sex and type of locality

Table 8.3 shows the ownership status of dwelling units by sex of household head and type of locality. From the results, out of the total number of 12,959 households in the district, 8,130 are owned by a household member, 2,654 belong to other private individual while 1,574 belonged to relative not a household member.

Male headed households own 69.4 percent of the dwelling units while female headed households own 30.6 percent. About 83.3 percent of dwelling units in the rural areas are owned by household member as compared with 16.7 percent in the urban areas. This might be due to the low cost of building materials in the rural than in the urban areas. Eighty-three (83) of the households have their dwelling units being purchased (e.g. mortgage) of which 65 are male headed households while 18 are female headed households.

Table 8.3: Ownership status of dwelling by sex of household head and type of locality

Ownership status	Total			Male headed		Female headed		Urban		Rural	
	Country	Region	District	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	5,467,054	526,763	12,959	8,992	69.4	3,967	30.6	3,110	24.0	9,849	76.0
Owned by household member	2,883,236	272,070	8,130	5,770	71.0	2,360	29.0	1,354	16.7	6,776	83.3
Being purchased (e.g. mortgage)	45,630	3,896	83	65	78.3	18	21.7	10	12.0	73	88.0
Relative not a household member	851,630	115,683	1,573	948	60.3	625	39.7	349	22.2	1,224	77.8
Other private individual	1,439,021	118,549	2,654	1,816	68.4	838	31.6	1,305	49.2	1,349	50.8
Private employer	83,610	5,191	291	236	81.1	55	18.9	13	4.5	278	95.5
Other private agency	21,123	1,788	28	19	67.9	9	32.1	9	32.1	19	67.9
Public/Government ownership	118,804	7,496	131	83	63.4	48	36.6	65	49.6	66	50.4
Other	24,000	2,090	69	55	79.7	14	20.3	5	7.2	64	92.8

Source: Ghana Statistical Service, 2010 Population and Housing Census

8.4 Construction Materials

8.4.1 Material for outer wall

Table 8.4 indicates the main construction material for outer walls of dwelling unit by type of locality in the district. The data show that the main materials for outer walls in the district are mud brick/earth (55.0%) followed by cement blocks/concrete (41.2%). Cement blocks/concrete are the main materials for outer walls in the urban areas (67.1%) while mud brick/earth (63.3%) constitute the main material for outer walls in the rural areas. This is expected because in the rural areas mud bricks/earth are common and cheaper for the type of buildings put up in those areas.

Table 8.4: Main construction material for outer wall of dwelling unit by type of locality

Material for outer wall	District					
	Total Country	Region	Total		Urban	Rural
			Number	Percent		
Total	5,817,607	567,051	13,791	100.0	100.0	100.0
Mud brick/earth	1,991,540	206,207	7,584	55.0	28.3	63.3
Wood	200,594	10,461	169	1.2	2.1	1.0
Metal sheet/slate/asbestos	43,708	2,698	61	0.4	0.3	0.5
Stone	11,330	942	10	0.1	0.1	0.1
Burnt bricks	38,237	5,389	143	1.0	1.0	1.1
Cement blocks/concrete	3,342,462	325,673	5,676	41.2	67.1	33.1
Landcrete	104,270	10,996	78	0.6	0.7	0.5
Bamboo	8,206	766	15	0.1	0.1	0.1
Palm leaf/thatch (grass)/raffia	38,054	1,295	13	0.1	0.0	0.1
Other	39,206	2,624	42	0.3	0.4	0.3

Source: Ghana Statistical Service, 2010 Population and Housing Census

8.4.2 Floor material

Type of materials used for a floor of a house affects the appearance, quality and health status of the household. Some floors are easily contaminated and are difficult to clean or disinfect. Table 8.5, shows the main construction materials for floor of dwelling units by type of locality. Cement/concrete is mostly (81.2%) used as floor material in the district followed by mud brick/earth (16.6%). Again, cement/concrete is the main materials for floors (90.5%) in the urban areas as compared with 73.8 percent in the rural areas. Thus, cement/concrete continues to be the dominant material for floors in both rural and urban areas in the district. This might be due to its durability for the floor of a house compared to other materials.

Table 8.5: Main construction materials for the floor of dwelling unit by type of locality

Materials for the floor	Total		District			
	Country	Region	Total		Urban	Rural
			Number	Percent		
Total	5,467,054	526,763	12,959	100.0	100.0	100.0
Earth/mud	872,161	59,543	2,155	16.6	6.4	19.9
Cement/concrete	4,255,611	448,599	10,525	81.2	90.5	78.3
Stone	32,817	2,192	42	0.3	0.5	0.3
Burnt brick	6,537	718	9	0.1	0.0	0.1
Wood	52,856	1,924	29	0.2	0.2	0.2
Vinyl tiles	57,032	3,378	41	0.3	0.8	0.2
Ceramic/porcelain/granite/marble tiles	88,500	5,534	98	0.8	0.9	0.7
Terrazzo/terrazzo tiles	85,973	3,669	23	0.2	0.3	0.2
Other	15,567	1,206	37	0.3	0.4	0.3

Source: Ghana Statistical Service, 2010 Population and Housing Census

8.4.3 Main construction material for roofing

The type of roofing material used in construction is very important. Disasters such as strong winds, fire outbreaks and roof leakages can be reduced if proper roofing materials are used. Table 8.6 shows the main materials for roofing by dwelling units in Twifo-Atti Morkwa district. The main material used is metal sheet (84.3%) followed by thatch/palm leaf or raffia (8.4%). Although the use of metal sheets for roofing is generally high in both rural and urban areas, 94.5 percent of the urban dwelling units are roofed with metal sheets as compared with 81.1 percent in the rural areas.

Table 8.6: Main construction material for roofing of dwelling unit by type of locality

Main roofing material	Total		District			
	Country	Region	Total		Urban	Rural
			Number	Percent		
Total	5,817,607	567,051	13,791	100.0	100.0	100.0
Mud/mud bricks/earth	80,644	2,568	69	0.5	0.1	0.6
Wood	45,547	3,047	75	0.5	0.8	0.5
Metal sheet	4,152,259	369,829	11,623	84.3	94.5	81.1
Slate/asbestos	759,039	146,526	300	2.2	0.7	2.6
Cement/concrete	141,072	10,824	83	0.6	1.0	0.5
Roofing tile	31,456	1,892	58	0.4	0.0	0.6
Bamboo	71,049	9,912	359	2.6	0.8	3.2
Thatch/palm leaf or raffia	500,606	19,317	1,154	8.4	1.6	10.5
Other	35,935	3,136	70	0.5	0.6	0.5

Source: Ghana Statistical Service, 2010 Population and Housing Census

8.5 Room Occupancy

The relationship between the number of rooms and the number of persons determine the space available per person. According to K' Akumu (2007), the number of rooms can be analyzed against household size to give an indication of overcrowding, which then demonstrates the degree of housing inadequacy and overall socio-economic status or standard of living of the household.

Overcrowding increases the risk of the spread of infectious diseases, such as meningococcal disease, tuberculosis and respiratory infections. Considering the hot and humid conditions, overcrowding can lead to psychological distress; lack of tolerance, reduced levels of concentration and can affect mental health. (GSS, 2012).

Table 8.7 shows household size and number of sleeping rooms in their dwelling units. A total of 1,869 households have household size of one, and 90.7 percent live in one room. It appears that as household size increases the proportion of persons living in two and three rooms also increases up to household size seven for those sleeping in two rooms and nine for those sleeping in three rooms. However, this does not mean a proportion increase in the number of sleeping rooms. For household size of two, 76.7 percent have one sleeping room while 18.0 percent share two sleeping rooms. About 53.0 percent of household with five members live in one room which is evident that such households are overcrowded.

Table 8.7: Household size and number of sleeping rooms occupied in dwelling unit

Household size	Number of sleeping rooms										
	Total	Percent	One room	Two rooms	Three rooms	Four rooms	Five rooms	Six rooms	Seven rooms	Eight rooms	Nine rooms or more
Total	12,959	100.0	57.2	24.3	10.5	4.6	1.7	0.8	0.3	0.2	0.3
1	1,869	100.0	90.7	6.1	1.4	0.8	0.4	0.1	0.1	0.1	0.3
2	1,501	100.0	76.7	18.0	2.3	2.1	0.3	0.3	0.0	0.1	0.2
3	1,657	100.0	69.5	21.5	6.5	1.6	0.4	0.2	0.2	0.0	0.2
4	1,917	100.0	61.5	25.9	8.6	2.3	0.9	0.4	0.2	0.2	0.1
5	1,768	100.0	52.9	28.6	11.7	4.6	0.9	0.6	0.2	0.1	0.3
6	1,365	100.0	43.9	33.5	14.2	5.0	2.3	0.5	0.1	0.3	0.1
7	1,063	100.0	32.6	37.7	17.8	7.7	2.4	0.8	0.3	0.4	0.3
8	669	100.0	27.8	34.4	20.6	12.4	2.2	1.5	0.1	0.6	0.3
9	391	100.0	18.7	32.0	28.1	10.2	6.1	2.8	0.8	0.3	1.0
10+	759	100.0	13.4	25.0	25.6	16.7	10.0	4.9	1.7	0.8	1.8

Source: Ghana Statistical Service, 2010 Population and Housing Census

8.6 Access to Utilities and Household Facilities

8.6.1 Main source of lighting of dwelling unit

Access to basic utilities and household facilities are essential to the socio-economic wellbeing of households. This section analyses access to utilities and household facilities in the district. Table 8.8, shows that the main source of lighting in the district is electricity (mains) (59.4%), which is lower than the regional value of 66.1 percent. This is followed by the use of flash lights/touch

(21.7%) and kerosene lamp (17.5%). A higher proportion of the urban households (92.1%) use electricity (mains) than in the rural areas (49.0%) but the use of flash lights/touch (27.4%) and kerosene lamp (22.0%) is higher in the rural than in the urban areas. From Table 8.8, the three main sources of lighting in the district are electricity (main), flashlights/touch and kerosene lamp which is consistent with the regional level.

Table 8.8: Main source of lighting of dwelling unit by type of locality

Main source of light	Total		District			
	Country	Region	Total		Urban	Rural
			Number	Percent		
Total	5,467,054	526,763	12,959	100.0	100.0	100.0
Electricity (mains)	3,511,065	347,998	7,693	59.4	92.1	49.0
Electricity (private generator)	36,142	3,806	88	0.7	0.4	0.8
Kerosene lamp	971,807	109,111	2,268	17.5	3.4	22.0
Gas lamp	9,378	817	21	0.2	0.1	0.2
Solar energy	9,194	592	11	0.1	0.1	0.1
Candle	41,214	2,796	28	0.2	0.3	0.2
Flashlight/Torch	858,651	59,233	2,808	21.7	3.6	27.4
Firewood	13,241	822	15	0.1	0.0	0.1
Crop residue	4,623	357	3	0.0	0.0	0.0
Other	11,739	1,231	24	0.2	0.0	0.2

Source: Ghana Statistical Service, 2010 Population and Housing Census

8.6.2 Main source of cooking fuel, and cooking space used by households

The main source of cooking fuel and cooking space used by households by locality is presented in Table 8.9. The main source of fuel for cooking in the district is wood (58.6%) (7,599) followed by charcoal (25.3%) (3,274) and gas (11.1%) (1,442). Compared to the regional level, the proportion that use wood in the region is lower (44.2%), those who use charcoal is higher (36.9%) while those who use gas is slightly higher (12.5%). Wood is the main cooking fuel (93.4%) used in the rural areas while gas (60.0%) is the dominant cooking fuel used in the urban areas. There is a slight difference between the rural (51.7%) and the urban areas (48.0%) in the use of charcoal as cooking fuel. However, there are others who do not cook at all (26.0%). The use of wood and charcoal as the main cooking fuel in the rural areas has negative implications for the environment and the livelihood activities of future generation.

With regards to cooking space, 6,030 households cook in separate room exclusive for the household, 3,219 households cook on the verandah while 1,264 households cook in an open space in the compound. In the urban areas, the main cooking space is on the verandah (45.7%) while the in rural areas enclosure rooms without roof constitutes the common cooking space (93.2%).

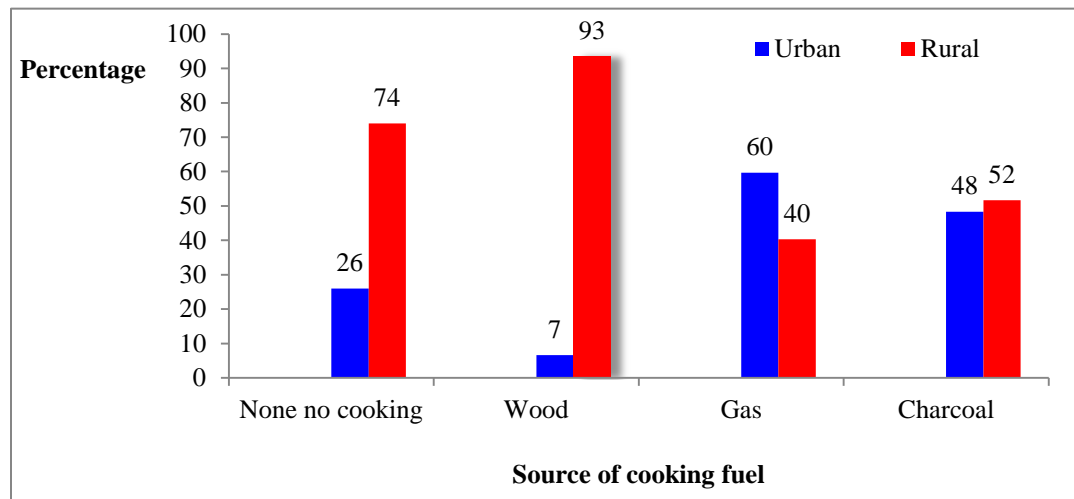
Table 8.9: Main source of cooking fuel, and cooking space used by households by type of locality

Source of cooking fuel/cooking space	Total		District					
	Country	Region	Total		Urban		Rural	
			Number	Percent	Number	Percent	Number	Percent
Main source of cooking fuel for household								
Total	5,467,054	526,763	12,959	100.0	3,110	24.0	9,849	76.0
None/ no cooking	306,118	26,767	519	100.0	135	26.0	384	74.0
Wood	2,197,083	232,964	7,599	100.0	503	6.6	7,096	93.4
Gas	996,518	65,955	1,442	100.0	861	59.7	581	40.3
Charcoal	1,844,290	194,256	3,274	100.0	1,582	48.3	1,692	51.7
Cooking space used by household								
Total	5,467,054	526,763	12,959	100.0	3,110	24.0	9,849	76.0
No cooking space	386,883	34,823	725	100.0	199	27.4	526	72.6
Separate room for exclusive use of household	1,817,018	176,215	6,030	100.0	953	15.8	5,077	84.2
Separate room shared with other household(s)	410,765	35,850	631	100.0	79	12.5	552	87.5
Enclosure without roof	117,614	8,635	117	100.0	8	6.8	109	93.2
Structure with roof but without walls	349,832	34,193	863	100.0	67	7.8	796	92.2
Bedroom/Hall/Living room)	74,525	8,387	84	100.0	25	29.8	59	70.2
Verandah	1,173,946	108,346	3,219	100.0	1,470	45.7	1,749	54.3
Open space in compound	1,115,464	117,661	1,264	100.0	304	24.1	960	75.9
Other	21,007	2,653	26	100.0	5	19.2	21	80.8

Source: Ghana Statistical Service, 2010 Population and Housing Census

Figure 8 shows the main source of cooking fuel by type of locality in the Twifo Atti-Morkwa district. Wood is the main cooking fuel (93.4%) used in the rural areas while gas (60.0%) is the dominant cooking fuel used in the urban areas. The difference between the rural (51.7%) and the urban areas (48.0%) in the use of charcoal as cooking fuel is not much.

Figure 8.1: Main source of cooking fuel by type of locality



Source: Ghana Statistical Service, 2010 Population and Housing Census

8.7 Main source of Water for Drinking and Other Domestic Uses

8.7.1 Main source of drinking water

Water is one of the basic necessities of life and access to clean drinking water is a measure of quality of life. Therefore, availability, accessibility, affordability and reliability of improved drinking water are important aspects of the health of household members in the district. The UN Millennium Development Goal 7 (MDG) aimed at reducing by half the proportion of people without sustainable access to safe drinking water by 2015 based on 1990 levels. The source of water supply particularly for drinking has some health implications. For instance, one of the main health benefits of clean drinking water supply is a reduction in diarrhoea cases, especially among children.

Water sources are often classified as improved or unimproved. Sources considered as improved are piped public water into homes, public standpipe, borehole, protected (lined) dug well, protected spring, and rainwater while unimproved are unprotected wells and springs, vendors, and tanker-trucks (WHO and UNICEF, 2000). The main sources of drinking water in Twifo-Atti Morkwa district are presented in Table 8.10. Household drinking water is obtained from seven main sources namely: bore-hole including pump or tube well (45.5%), public tap or standpipe (14.2%), river or stream (12.5%), pipe-borne water outside the dwelling unit (11.0%), protected well (7.2%), sachet water (4.6%) and pipe-borne water inside the dwelling unit (2.2%). The borehole is the most common source of drinking water in the district while public standpipe is the main source of drinking water in the region. The borehole/pump/Tube well is the main source of drinking water in the rural areas (51.2%) while pipe-borne water (inside dwelling unit and

outside dwelling unit) constitutes the main source of drinking water in the urban areas (30.1%). In general, 70.1 percent of the sources of drinking water in the district are from improved sources.

Quality water for domestic uses is essential for the health of members of households. Table 8.10 shows the sources of water for other domestic uses of households in the district. The five main source of water for other domestic uses are: borehole/pump/tube (46.2%), river/stream (13.9%), public stand pipe (13.5%), protected well (10.2%), pipe borne outside dwelling (10.0%). Thus, borehole/pump/tube water remains the most widely used water for both drinking and domestic purposes in the district. The use of borehole/pump/tube well is higher in the rural (50.4%) than in the urban areas (33.1%). The use of river/stream for other domestic activities is higher in the rural (17.6%) than in the urban areas (2.0%). The proportion of households using pipe-borne water for domestic uses (inside dwelling unit and outside dwelling unit) is higher in the urban (26.8%) than in the rural (7.7%) areas.

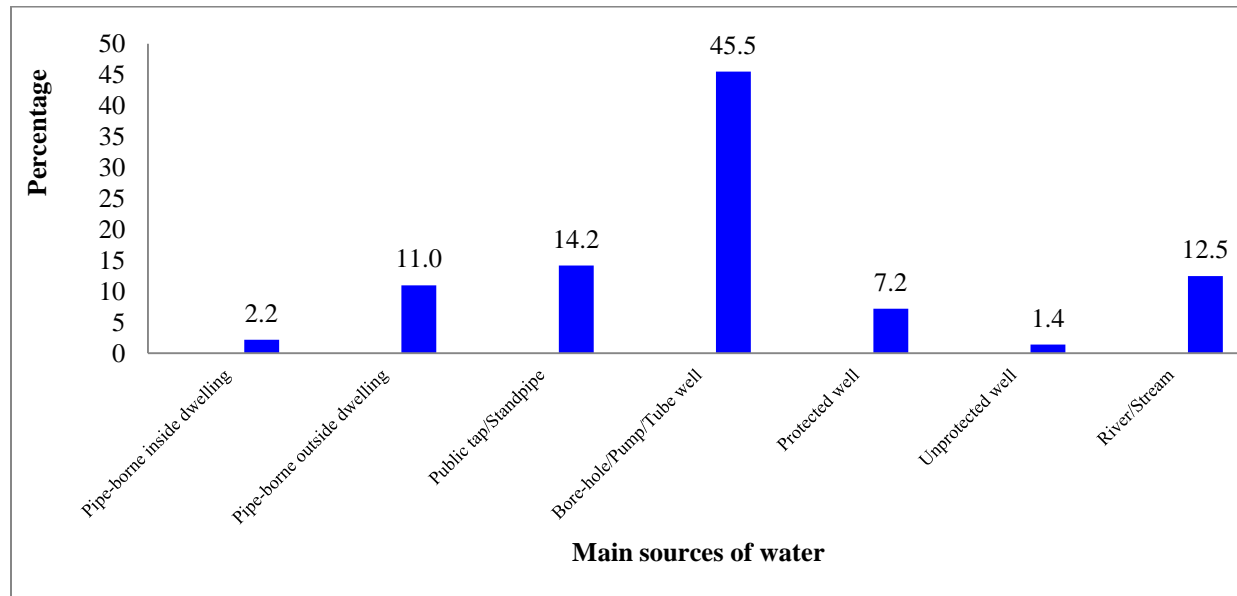
Table 8.10: Main source of water for drinking and other domestic purposes

Sources of water	Total		District			
	Country	Region	Number	Percent	Urban	Rural
Main source of drinking water for household						
Total	5,467,054	526,763	12,959	100.0	100.0	100.0
Pipe-borne inside dwelling	790,493	48,916	285	2.2	3.1	1.9
Pipe-borne outside dwelling	1,039,667	109,946	1,427	11.0	27.0	6.0
Public tap/standpipe	712,375	122,845	1,836	14.2	7.2	16.4
Bore-hole/pump/tube well	1,267,688	96,113	5,893	45.5	27.3	51.2
Tanker supply/vendor provided	58,400	15,072	0	0.0	0.0	0.0
Unprotected spring	12,222	1,041	5	0.0	0.1	0.0
Other	3,972	365	6	0.0	0.1	0.0
Main source of water for other domestic use of household						
Total	5,467,054	526,763	12,959	100.0	100.0	100.0
Pipe-borne inside dwelling	905,566	54,888	289	2.2	3.6	1.8
Pipe-borne outside dwelling	1,089,030	109,873	1,301	10.0	23.2	5.9
Public tap/standpipe	704,293	117,824	1,754	13.5	6.9	15.6
Bore-hole/pump/tube well	1,280,465	101,438	5,988	46.2	33.1	50.4
Protected well	465,775	37,995	1,319	10.2	28.5	4.4
Rain water	39,916	6,583	112	0.9	0.3	1.1
Protected spring	18,854	1,725	28	0.2	0.5	0.1
Tanker supply/vendor provided	100,048	20,059	4	0.0	0.0	0.0
Unprotected well	152,055	15,523	239	1.8	0.9	2.2
Unprotected spring	15,738	1,783	3	0.0	0.0	0.0
River/Stream	588,590	52,309	1,799	13.9	2.0	17.6
Dugout/pond/lake/dam/canal	96,422	5,823	102	0.8	0.9	0.8
Other	10,302	940	21	0.2	0.2	0.2

Source: Ghana Statistical Service, 2010 Population and Housing Census

Figure 8.2 shows the main sources of drinking water in the district. The main source of water for drinking is bore-hole/pump/tube (45.5%) followed by public tap/stand pipe (14.2%) and river/stream (12.5%).

Figure 8.2: Main sources of water for drinking



Source: Ghana Statistical Service, 2010 Population and Housing Census

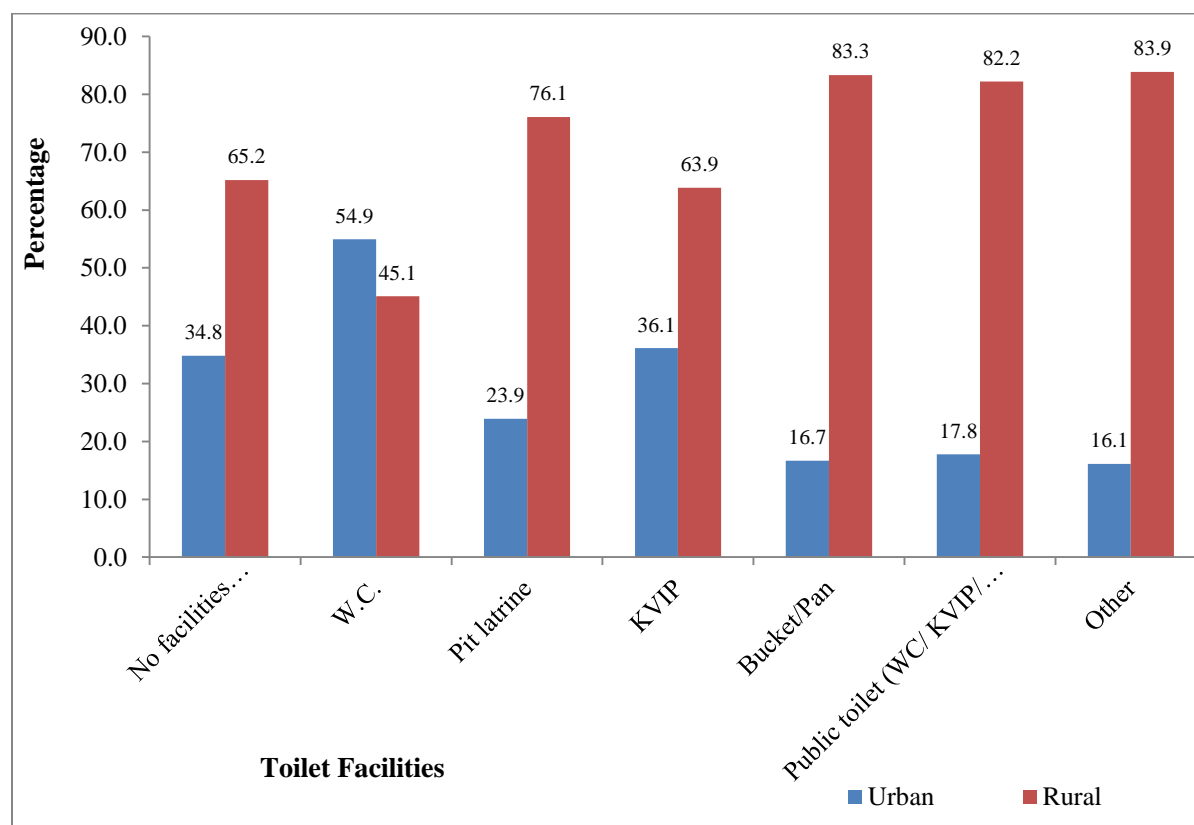
8.8 Bathing and Toilet Facilities

8.8.1 Toilet facilities by locality

An efficient and hygienic method of human waste disposal available in a dwelling unit is a critical indicator of the sanitary condition of the unit and is an indirect measure of the socio-economic status of every household in the district.

Figure 8.3 shows toilet facilities by localities of households in the district. In the rural areas, Bucket/Pan is the main toilet facility (83.3%) followed by public toilet (WC/KVIP/Pit/pan) (82.2%), pit latrine (76.1%) and no facilities (bush/beach/field) (65.2%). Water closet (WC) is the main toilet facility in the urban areas (54.9%) followed by the Kumasi Ventilated Improved Pit Latrine KVIP (36.1%). Unlike the district where bucket/pan is the main toilet facility, public toilet (39.5%) is the main toilet facility in the region but the proportion as compared with that of the district is lower. The proportion with no toilet facility is higher in the district (65.2%) than the region (15.4%). This is a reflection of the situation of most districts along the coast in the central region where people use the beaches as places for defecation (GSS, 2012). The use of unhygienic toilet facilities such as KVIP, public toilets and the bush or beaches coupled with poor hygiene practices could lead to the contamination of water and food with human excreta (Tanle and Kendie, 2013).

Figure 8.3: Toilet facilities by locality



Source: Ghana Statistical Service, 2010 Population and Housing Census

8.8.2 Bathing and toilet facilities by locality

Table 8.11 shows the type of bathing and toilet facilities used by household by type of locality. It shows that 28.6 percent (3710) used shared separate bathrooms in the same households, 26.4 percent (3427) use own bathrooms for exclusive use while 22.8 percent (2949) use share open cubicle. Rural households have higher proportions of all the bathing facility types than the urban households. On toilet facilities, the most common facility is public toilet (43.0%) followed by pit latrine (38.0%). Public toilet (46.5%) is the main toilet facility in the rural areas while pit latrine (37.87%) is the most widespread toilet facility in the urban areas.

Table 8.11: Type of toilet facility and bathing facility used by household by type of locality

Type	Total		Localities		
	Country	Region	Total	Urban	Rural
Toilet facility used by household					
Total	5467054	12959	12,959	3,110	9,849
No facilities (bush/beach/field)	1056382	882	882	307	575
W.C.	839611	417	417	229	188
Pit latrine	1040883	4919	4,919	1,176	3,743
KVIP	572824	1093	1,093	395	698
Bucket/Pan	40678	48	48	8	40
Public toilet (WC/ KVIP/ Pit/Pan etc)	1893291	5569	5,569	990	4,579
Other	23385	31	31	5	26
Bathing facility used by household					
Total	5467054	12959	12,959	3,110	9,849
Own bathroom for exclusive use	1535392	3427	3,427	534	2,893
Shared separate bathroom in the same house	1818522	3710	3,710	1,164	2,546
Private open cubicle	381979	926	926	128	798
Shared open cubicle	1000257	2949	2,949	1,044	1,905
Public bath house	140501	180	180	19	161
Bathroom in another house	187337	1036	1,036	122	914
Open space around house	372556	668	668	93	575
River/Pond/Lake/Dam	14234	40	40	6	34
Other	16276	23	23	0	23

Source: Ghana Statistical Service, 2010 Population and Housing Census

8.9 Methods of Waste Disposal

Waste disposal continues to be a major problem for some Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana as population increases. Table 8.12 shows the methods of households' solid and liquid waste disposal by locality in the district. The most widely used method of solid waste disposal in the district is public dump (open space) (63.7%) (8,261) followed by dumping indiscriminately (12.5%) (1,618) and public dump (container) (10.7%) (1,383). Also, for the region as a whole, public dump (open space) (53.4%) is the main method of solid waste disposal but the proportion as compared with that of the district is lower.

In terms of locality, the main method of solid waste disposal in the urban households is through the public dump (container) (88.4%) followed by buried method (42.0%) and burned method (39.3%). Other (places not specified) is the most common place of solid waste disposal in the rural areas (98.1%) followed by dumping indiscriminately (91.1%). There is the need to identify how solid waste is disposed in the rural areas in the district so that appropriate mechanisms could be put in place when necessary.

Table 8.12 further shows how households in the district dispose liquid waste by locality. From the table, 58.2 percent (7,541) of households throw their liquid waste onto compounds, 26.9 percent (3,487) of households throw their liquid waste onto the street/outside while 1.4 percent (176) throw their liquid waste through the sewerage system. Like the region, compound and streets/outside (85.1%) constitute the main places for liquid waste disposal in the Twifo Atti-Morkwa district but the proportion is lower in the region (72.1%). In the urban areas, households mostly throw liquid waste into the gutters (50.1%) while other (places not specified) (92.7%) is where the rural areas throw their liquid waste into.

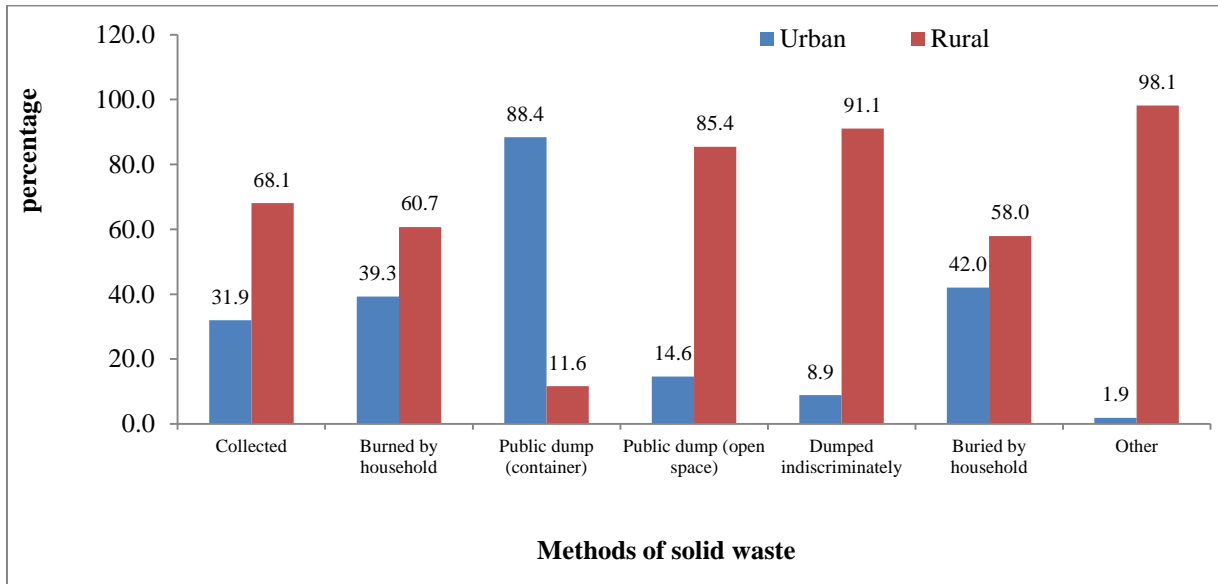
Table 8.12: Methods of solid and liquid waste disposal by type of locality

Waste Disposal	Total country	District					
				Urban		Rural	
		Number	Percent	Number	Percent	Number	Percent
Solid waste							
Total	5,467,054	12,959	100.0	3,110	24.0	9,849	76.0
Collected	785,889	529	100.0	169	31.9	360	68.1
Burned by household	584,820	499	100.0	196	39.3	303	60.7
Public dump (container)	1,299,654	1,383	100.0	1,222	88.4	161	11.6
Public dump (open space)	2,061,403	8,261	100.0	1,205	14.6	7,056	85.4
Dumped indiscriminately	498,868	1,618	100.0	144	8.9	1,474	91.1
Buried by household	182,615	402	100.0	169	42.0	233	58.0
Other	53,805	267	100.0	5	1.9	262	98.1
Liquid waste							
Total	5,467,054	12,959	100.0	3,110	24.0	9,849	76.0
Through the sewerage system	183,169	176	100.0	58	33.0	118	67.0
Through drainage system into a gutter	594,404	452	100.0	149	33.0	303	67.0
Through drainage into a pit (soak away)	167,555	232	100.0	36	15.5	196	84.5
Thrown onto the street/outside	1,538,550	3,487	100.0	1,014	29.1	2,473	70.9
Thrown into gutter	1,020,096	989	100.0	495	50.1	494	49.9
Thrown onto compound	1,924,986	7,541	100.0	1,352	17.9	6,189	82.1
Other	38,294	82	100.0	6	7.3	76	92.7

Source: Ghana Statistical Service, 2010 Population and Housing Census

Figure 8.4 shows the different methods of solid waste disposal by localities in the district. The main method of solid waste disposal in the urban areas is through the public dump (container) (88.4%) while other (places not specified) is the most common place of solid waste disposal in the rural areas (98.1%). The second most common methods of waste disposal in urban and rural areas are buried by household (42.0%) and dumped indiscriminately (91.1%) respectively.

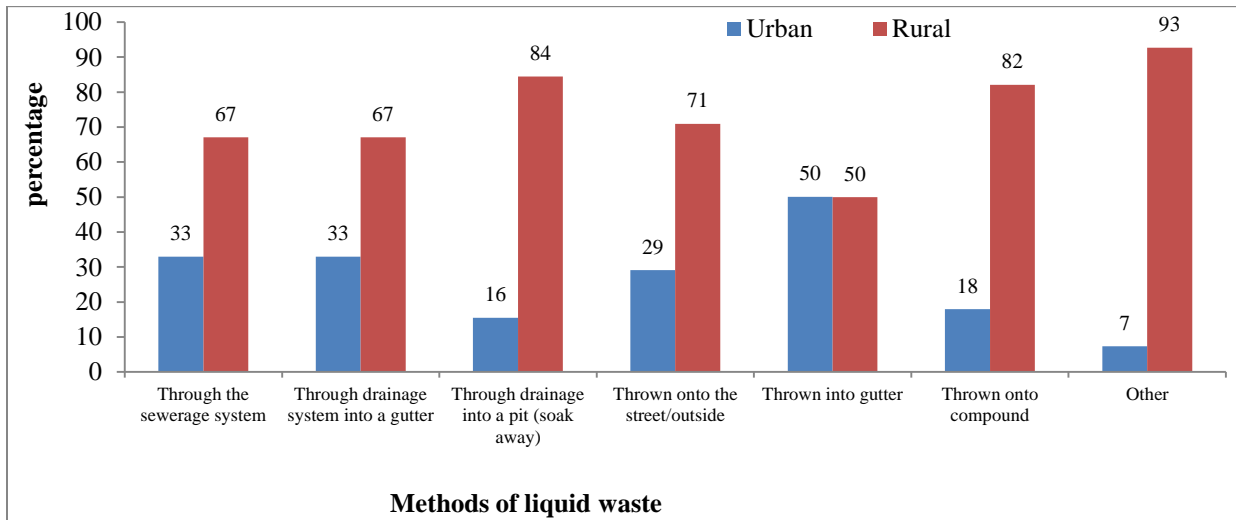
Figure 8.4: Methods of solid waste disposal by localities



Source: Ghana Statistical Service, 2010 Population and Housing Census

Figure 8.5 shows liquid waste disposal by locality in the Twifo-Atti-Morkwa district. The same proportion of urban and rural households throw liquid waste into the gutters (50.0%) while rural households mostly (93.0%) throw their liquid waste into other (i.e. unspecified places).

Figure 8.5: Methods of liquid waste disposal by localities



Source: Ghana Statistical Service, 2010 Population and Housing Census

CHAPTER NINE

SUMMARY, CONCLUSIONS AND POLICY IMPLICATIONS

9.1 Introduction

This chapter presents a summary of the main findings, conclusions and policy implications of data collected on selected topics on the population of the Twifo Atti-Morkwa district in the 2010 Population and Housing Census (PHC). The 2010 Population and Housing Census (PHC), the fifth in the history of modern census-taking in the country, derived its basic features from the United Nations Principles and Recommendations (2010) for countries taking part in the 2010 round of population and housing census and experiences from previous censuses.

This report is the first attempt by the Ghana Statistical Service in collaboration with the Ministry of Local Government to produce a District Census Analytical report with the aim of providing useful materials for planners, academics and policy makers as well as the general reading public on some of the results from the 2010 PHC at the Metropolitan, Municipal and District levels.

As with previous censuses, the 2010 PHC collected data on basic demographic and socio-economic characteristics such as age, sex, and relationship to head of household, marital statuses, ethnicity, religion, literacy, education, economic characteristics and housing. Also, unlike previous censuses, the 2010 PHC, for the first time, collected data on Information and Communications Technology (ICT), disability, emigration, mortality and agriculture.

9.2 Summary of Main Findings

9.2.1 Demographic characteristics

The total population of the Twifo Atti-Morkwa district is 61,743, comprising 51.0 percent males and 49.0 percent females. The population shows a youthful age structure, with a total dependency ratio of 83.4 percent. The sex ratio of 96 indicates that females are more than males which could be attributed to male out-migration from the district. TFR, GFR and CBR are generally high in the district and this can partly be attributed to low contraceptives use among females. About 40 percent of the population are migrants, mostly from the Eastern region.

9.2.2 Social characteristics

Heads of households are mostly males. The extended family constitutes 50.4 percent of the total households. On marital status, 46.1 percent are married while 39.1 percent have never married. The percentage of the never married males is higher (45.1%) than that of the females (33.5%).

Majority of persons in the district have attended JSS/JHS school (38.3%) in the past but currently the largest portions of the population of school going age are in primary school (47.5%). In general, more females than males have no formal education or have low level of formal education. About 95 percent of the total population of the district are Ghanaians by birth, 1.3 percent have dual nationality while 0.3 percent of the population are made up of foreigners.

9.2.3 Economics characteristics

Seventy-four percent of the populations aged 15 years and older in the district are economically active while 26.3 percent are economically not active. A higher proportion of the males (76.0%) than the females (71.6%) are economically active. More than half (56.4%) of the population aged 15 years and older are engaged in skilled agricultural forestry and fishery work with males being in the majority (59.1%). Self-employed without employees (62.6%) constitute the highest percentages for both sexes. Females are dominant (71.4%) in wholesale and retail, repair of motor vehicles and motorcycles business but there are higher proportions of males in more than half of the industries in the district.

9.2.4 Information communication technology

About 38.0 percent of persons aged 12 years and older own mobile phones in the district with males constituting the majority (57.3%). A small proportion of the populations under consideration (2.5%) have access to internet facility of which most of them are males (65.1%).

Fixed telephone lines owners are quite few (0.2 %) with 95.9 percent of male headed households owning the majority. Only 3.4 percent of households own desktop/laptop computers with the males being in the majority (78.7%).

9.2.5 Disability

The populations with all forms of disabilities in the Twifo-Atti Morkwa district constitute 2.6 percent. Sight and physical are the main types of disabilities in the district. Speech is the highest (58.2%) form of disability among males whilst sight is the main form of disability among females (48.5%).

Males dominated in all forms of disabilities (52.6%) in the district. Sight is the main form of disability in both the rural and urban areas. About 60.6 percent of employable PWDs are employed, 2.1 percent are unemployed while 37.3 percent are economically not active.

About 39.0 percent of PWDs have never attended school, 30.0% have middle school/ JSS/JHS education while 0.4 percent have degrees.

9.2.6 Agricultural activity

The 2010 Population and Housing Census indicates that a high proportion (71.8%) of households in the district are engaged in agriculture of which most (81.0%) are rural households. The main activity is crop farming (97.3%). The most dominant livestock reared in the district is chicken. The high proportion of agriculture households in the rural areas is due to the fact that agriculture is the main economic activity in rural areas.

9.2.7 Housing conditions

The distribution of housing stock indicates a total of 8,664 houses of which most (81.5%) of them are located in the rural areas. The household size is 4.8, and the most common dwelling unit in the district is a compound house (49.0%). A higher proportion of the female headed households (54.4%) live in compound houses. Similarly, larger percentages of households (68.1%) live in compound houses. About 83.3 percent of dwelling units in the rural areas is owned by household member.

The main construction material for outer walls and floor in the district is cement while metal sheets constitute the main roofing material. The main source of lighting for dwelling units in the district is electricity (mains) (59.4%). Gas is the main cooking fuel in the urban areas (59.7%) while wood (93.4%) is the most common cooking fuel in the rural areas.

The main source of drinking water in the Twifo-Atti Morkwa district is bore-hole including pump or tube well (45.5%) and also bore hole (46.7%) is the main source of water for other domestic uses. Public toilet is the most widespread toilet facility in the district but WC is the main toilet facility in the urban areas (54.9%).

Shared separate bathrooms in the same household are the main type in the district. Solid waste is generally disposed into public dump (open space) while liquid waste is mostly disposed onto compounds.

9.3 Conclusions

The Twifo-Atti Morkwa district has a youthful population with high total dependency ratio, high fertility and mortality levels. A significant proportion of the population are internal migrants, mostly from the eastern region. Most houses in the district are owned by household members. There is some evident of overcrowding in sleeping rooms as most people have only one sleeping room. Agriculture, especially food crop farming is the main occupation of the people. The private sector is the main employer in the district with females being the majority in the private informal sector

Unhygienic toilet facilities such as public toilets and open defecation exist in the district and their health implications are quite obvious. Solid and liquid wastes are disposed into public dump (open space) and onto the compound respectively, which have some health implications. In general, more females than males have no formal education or have low level of formal education. A small proportion of the populations (2.6%) have some forms of disabilities, especially sight and physical. The use of ICT in the district is generally low compared to the region as a whole.

9.4 Policy Implications

The district has a youthful population and also attracts a significant proportion of migrants. The District Assembly needs to provide some basic socio-economic infrastructure such as schools, healthcare centres, water and sanitation facilities and recreational grounds for the growing population. There is the need for government to intensify the decentralization process in the country to ensure that the provision of requisite infrastructure and development projects are evenly distributed across the country. This could reduce inter-regional migration into the district.

The high fertility rates (TFR, GFR and CBR) in the district calls for the need to intensify family planning programmes to reduce fertility. The District Assembly in collaboration with other stakeholders should identify the causes of the high mortality in the district and implement policies and programmes to reduce mortality

Data on education in the district shows a decreasing trend of females currently in school. This means that more females drop out of school than their male counterparts. Stakeholders must therefore identify ways to encourage girl child education in the district.

The causes of the sight and physical disabilities in the district may be due to poor environmental conditions and lack of immunization of children during the relevant ages. The district assembly should intensify immunization and sanitation campaigns to reach all persons in the desired ages. The inclusion of disability in the 2010 PHC has provided insight into the demographic and economic characteristics of PWDs. The result of the analyses should prompt the development of policies and programmes to address their needs in the area of skills development and employment. Furthermore, physical facilities at schools and the school curriculum should be designed to suit PWDs.

Given the low level of ICT in the district, there is the need for Private-Public Partnerships (PPP) and other interventions to expand computer ownership and the use of internet in the district. It is recommended that the Assembly should increase investment in ICT infrastructure and services in schools and selected public places. The government policy of distributing free computers to school children should be extended to all schools in the district to encourage the use of ICT among the students.

Since agriculture is one of the main livelihood activities of the people, all efforts should be made to modernize it and make it more attractive to the youth. In addition, opportunities for skills training and/or practical apprenticeship programmes should be developed by the District Assembly to provide job opportunities for the youth.

The inadequate housing situation could be improved by increasing the housing stock to eliminate over-crowding. The District Assembly should lobby for the affordable housing scheme project that is being carried out at the national level. The provision of portable water to all communities (rural and urban) and proper and safe disposal of liquid and solid waste can help eliminate water-borne and sanitation-related diseases in the district. The district must come out with by-laws that ensure that landlords/landladies with no toilet facilities in their homes provide such facilities within a stipulated time frame. Furthermore, the district and regional lands departments should strictly ensure that toilet facilities are included in building plans before permits are issued, and also monitor the construction of these facilities. The use of wood and charcoal as the main source of fuel could lead to deforestation in the district. The high cost of gas should be addressed to encourage more households to shift to the use of gas to help save the environment.

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APPENDICES

Table A1: Population by sex, number of houses and households in the 20 largest communities

S/No	Community Name	Total	Male	Female	House holds	Houses
1	Twifo Praso	14,651	6,831	7,820	3,110	1,603
2	Twifo Mampong	3,844	1,799	2,045	878	515
3	Ntafrewaso	2,375	1,212	1,163	556	277
4	Twifo Nyinase	2,153	1,080	1,073	475	286
5	Wamaso	1,491	709	782	325	253
6	Twifo Agona	1,476	657	819	391	107
7	Twifo Mampoma	1,453	677	776	341	243
8	Nuamakrom	1,449	716	733	296	223
9	Kayireku	1,282	640	642	275	179
10	Aboabo	1,178	585	593	214	182
11	Eduaben	1,007	524	483	259	167
12	Ahyire	929	491	438	202	174
13	Oseneagya	881	398	483	234	71
14	Number One (No.1)	878	453	425	175	160
15	Asamoakrom New Town	851	435	416	134	125
16	Akweikrom	847	414	433	141	119
17	Buronya (Shed)	817	421	396	118	137
18	Aboso	807	404	403	151	110
19	Mmaa Baasa	794	392	402	163	174
20	Kenyako	774	365	409	200	149

Source: Ghana Statistical Service, 2010 Population and Housing Census

Table A2: Population by age group in the 20 largest communities

S/No.	Community Name	All ages	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+
1	Twifo Praso	14,651	2,097	1,753	1,966	1,653	1,700	1,441	1,094	833	626	473	335	211	164	105	99	101
2	Twifo Mampong	3,844	475	523	549	466	321	280	201	239	197	173	131	80	72	42	42	53
3	Ntafrewaso	2,375	340	322	277	236	229	229	169	133	124	92	83	33	17	15	17	59
4	Twifo Nyinase	2,153	331	315	287	229	152	123	124	132	104	68	76	63	43	29	34	43
5	Wamaso	1,491	231	204	240	140	89	81	80	76	57	55	61	57	38	22	32	28
6	Twifo Agona	1,476	219	184	175	150	151	129	110	98	67	45	48	26	16	19	11	28
7	Twifo Mampoma	1,453	235	207	198	138	92	89	58	95	57	55	55	45	32	27	23	47
8	Nuamakrom	1,449	228	200	187	160	95	91	86	89	88	64	37	37	24	19	18	26
9	Kayireku	1,282	198	190	173	137	72	91	69	72	62	46	40	28	46	17	28	13
10	Aboabo	1,178	169	191	174	140	77	71	64	59	61	50	34	23	18	11	13	23
11	Eduaben	1,007	144	115	131	115	107	84	67	43	54	46	38	25	11	7	8	12
12	Ahyire	929	160	137	120	101	48	68	51	58	43	33	35	19	18	12	12	14
13	Oseneagya	881	145	128	80	73	86	62	45	28	42	50	32	19	23	18	15	35
14	Number One (No.1) Asamoakrom	878	156	125	116	83	70	60	49	34	42	36	41	20	14	9	12	11
15	New Town	851	111	126	128	110	66	55	48	36	39	35	32	16	18	3	9	19
16	Akweikrom	847	149	125	114	72	66	50	55	47	43	27	38	13	14	6	12	16
17	Buronya (Shed)	817	126	124	116	94	57	58	42	45	33	26	32	20	15	15	9	5
18	Aboso	807	135	113	92	80	57	60	48	37	41	26	25	19	23	11	18	22
19	Mmaa Baasa	794	138	122	89	73	57	67	62	43	28	27	27	15	12	7	15	12
20	Kenyako	774	115	94	112	62	60	72	50	46	28	41	28	18	13	17	5	13

Source: Ghana Statistical Service, 2010 Population and Housing Census

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