

**THE EFFECTS OF FORMAL EDUCATION ON POVERTY REDUCTION IN
GHANA: THE CASE OF JIRAPA DISTRICT**

BY

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DECLARATION

I hereby declare that this submission is my own work towards the PhD. in Geography and Rural Development and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any degree of the University, except where due acknowledgment has been made in the text.

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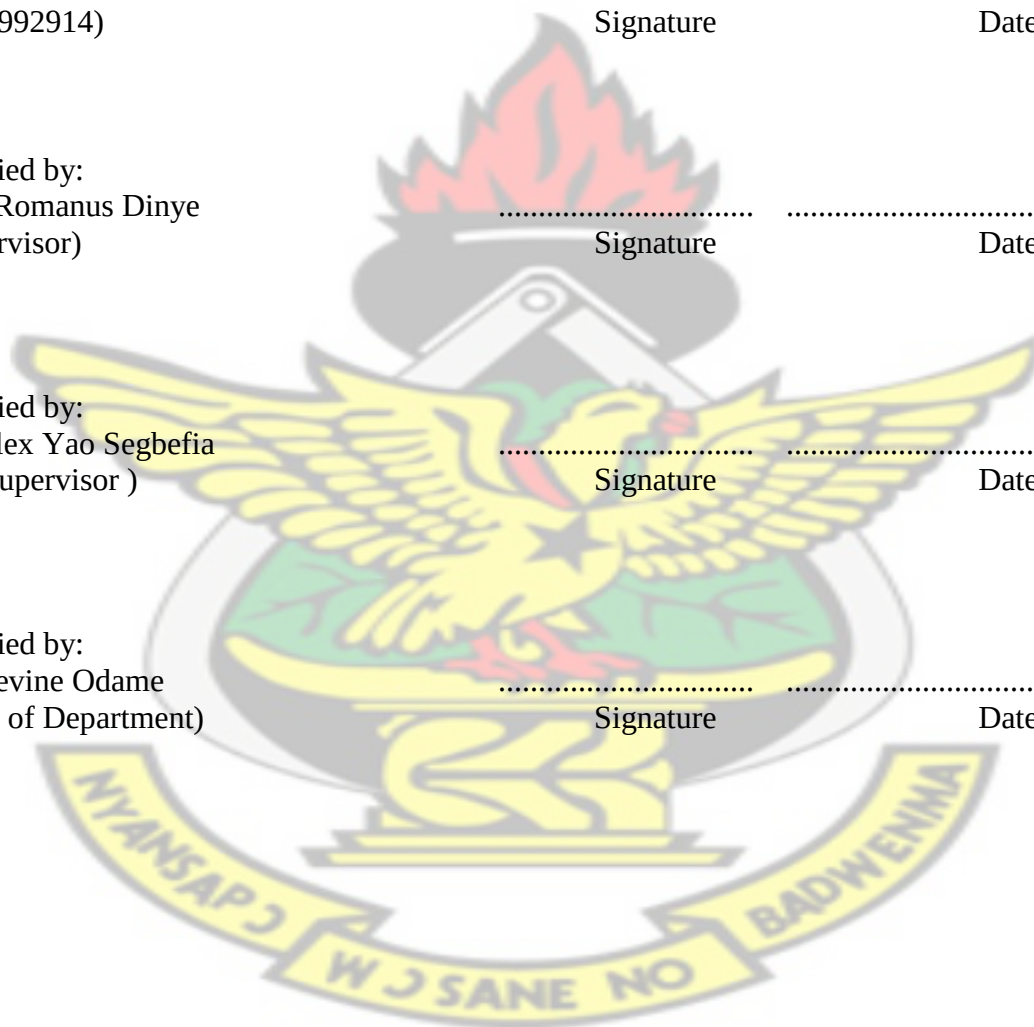
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ABSTRACT

There was a paucity of empirical evidence on the effects of formal education on poverty reduction in Ghana, particularly in the Jirapa District of the Upper West Region. This study used the case study design to investigate the extent to which formal education had an effect on poverty reduction among rural households in the Jirapa District. A multi-stage sampling methods were used to select a sample of 701 heads of households who provided data for the study. Data were collected using semi-structured interviews, questionnaires, focus group discussions and non-participant observation. The data were analyzed using percentages and frequency charts, chi-square tests and multivariate binary logistic regression and cross-tabulations to explore relationships between poverty and relevant variables in the context of social Darwinism and structural theories using SPSS version 22 software. The results reveal that the causes of poverty in the study area include geographically difficult environment, lack of formal education and governmental policies. The findings of the study raises provocative, startling and challenging conclusions that, the causes of poverty in the study area is endemic in that the people are trapped in a geographically difficult environment which affects their income negatively and creates a vicious cycle of poverty. The findings of the study further show that formal education reduces levels of poverty through educational empowerment that results in human capital formation, skills training and employment generation. The study established a statistically significant relationship between formal education and income, dwelling unit and nutrition. The theories have also been found to hold based on the revealed results. The study shows that the formally educated have greater chances of being part of the social fabric as well as being active participants in the governance of their locality, the district and country. Thus, formal education consolidates the individual's position as being a non-poor entity. On the bases of these findings, it is recommended that education at secondary level should be freely accessible to all in the country.

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Finally, I am solely responsible for any remaining errors in this thesis.

DEDICATION

This thesis is dedicated to my late parents Raphael and Angelina Beni

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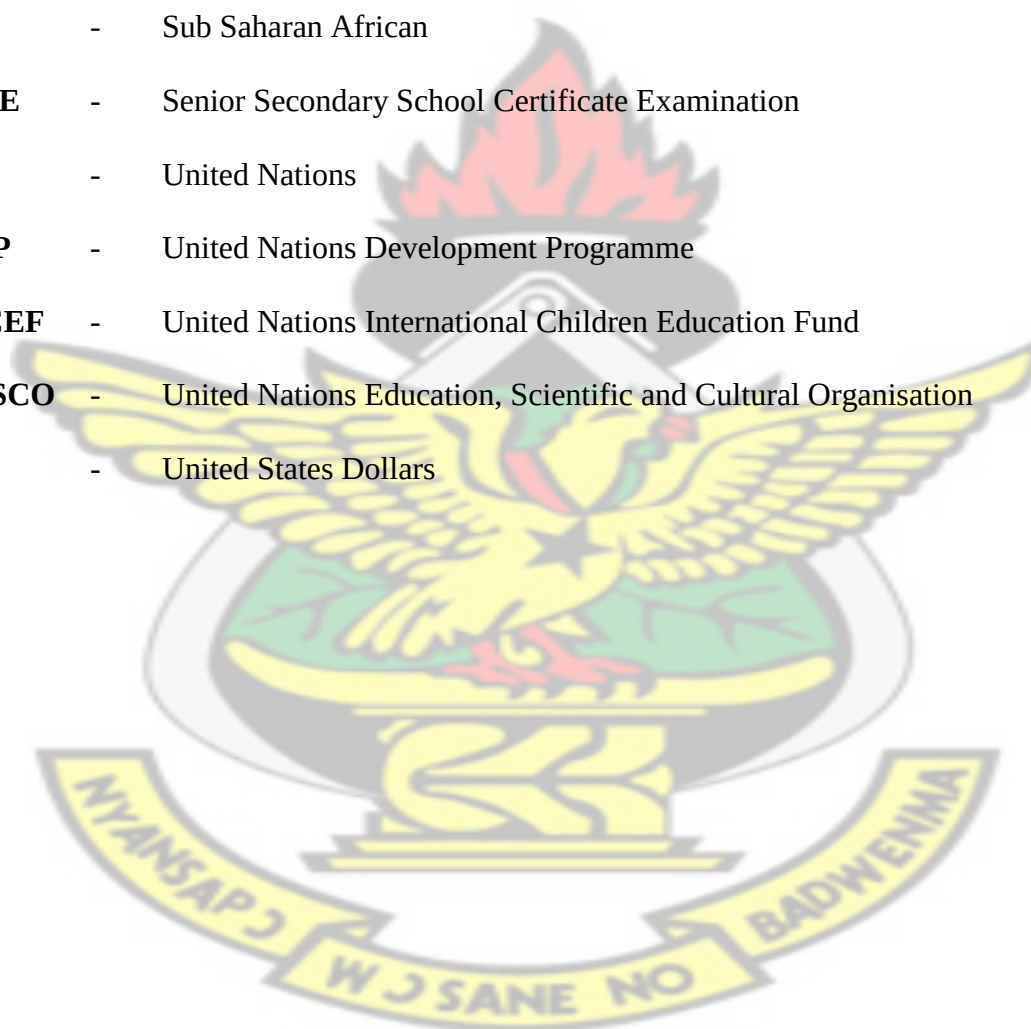
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LIST OF ACRONYMS

AIDS	-	Acquired Immune Deficiency Syndrome
ANT	-	Actor Network Theory
BECE	-	Basic Education Certificate of Education
CPRC	-	Chronic Poverty Research Centre
EFA	-	Education for All
ETC	-	Etcetera
FCUBE	-	Free Compulsory and Universal Basic Education
GAMA	-	Greater Accra Metropolitan Assembly
GAR	-	Gross Attendance Rate
GDP	-	Gross Domestic Product
GER	-	Gross Enrolment Rate
GIS	-	Geographic Information System
GPRS 1	-	Ghana Poverty Reduction Strategy 1
GPRS 11	-	Growth and Poverty Reduction Strategy 11
GSS	-	Ghana Statistical Service
GST	-	General System Theory
HIV	-	Human Immunodeficiency Virus
JHS	-	Junior High School
LICs	-	Low Income Countries
MDG	-	Millennium Development Goal
MDGs	-	Millennium Development Goals
MOEYS	-	Ministry Of Education Youth and Sports
NAR	-	Non Attendance Rate
NGOs	-	Non-Governmental Organisations

OECD	-	Organisation for Economic Co-operation and Development
PROAP	-	Principal Regional Office for Asia and the Pacific
PRSP	-	Poverty Reduction Strategy Papers
SDG	-	Sustainable Development Goals
SDGs	-	Sustainable Development Goals
SHS	-	Senior High School
SPSS	-	Statistical Package for Social Sciences
SSA	-	Sub Saharan African
SSSCE	-	Senior Secondary School Certificate Examination
UN	-	United Nations
UNDP	-	United Nations Development Programme
UNICEF	-	United Nations International Children Education Fund
UNESCO	-	United Nations Education, Scientific and Cultural Organisation
USD	-	United States Dollars



CHAPTER ONE

GENERAL INTRODUCTION

1.1 Background of the Study

The global poor are predominantly rural, young, poorly educated, are mostly employed in the agricultural sector, and live in larger households with more children (World Bank, 2016). The characteristics of poverty as tabulated by the World Bank can be visibly observed in the Northern part of Ghana and most especially in the Jirapa District of the Upper West Region. The various dimensions can be seen in a complex system that seems to demand an intentionally systematic approach to address. The driver to the solution of this complex system of poverty among other things is formal education.

Poverty is not only about income; neither is it static, as stated by the Organisation for Economic Co-operation and Development (OECD, 2015). The 2013 Global Forum on Development and the OECD Development Co-operation Report (2015) reaffirmed the importance of focusing on both income and non-income dimensions of poverty, as well as on a broader range of people than just those falling below a defined income threshold (OECD, 2015). There are different dimensions of poverty that are visibly seen in Ghana, including income based poverty. The different dimensions are linked together in what could be referred to as a complex system that involves multiple actors. It is only the poor that can best tell their story from their lived experiences. It cannot be doubted that formal education is one of the top priority factors necessary to counteract deprivations because education deals with acquisition of knowledge, skills development and human capital formation which are prerequisites for employment and reduction of poverty in all its different dimensions.

The causes of poverty is considered, among other things, to be both structural and Darwinist in nature in the Jirapa District of the Upper West Region of Ghana. It is structural because, social circumstances and social forces are seen to be determining the life-courses and life chances of people. Economic growth, labour market opportunities, educational provision and many other structural features of society provide a powerful contextual framework in which the living standards and social relations are created and recreated. And, as many social policy commentators have argued, in order to change these circumstances and relations these structural frameworks must themselves be changed, by policy action (Alcock, 2006). The Darwinist stresses the role of individuals, families and communities in creating and recreating poverty.

Despite progress in other parts of the world, extreme poverty remains unacceptably high, especially in Sub-Saharan Africa (OECD, 2015) and particularly in the Jirapa District of the Upper West Region of Ghana (GSS, 2014). Sub-Saharan Africa now has the largest number of extreme poor in the world, 389 million, which accounts for half of the total number of extreme poor in the world, and more than all the other regions combined (World Bank, 2015). The Upper West Region has the largest number of extreme poor in Ghana (GSS, 2014). The decline in extreme poverty in some part of the world was largely fuelled by the rapid advances in two regions – East Asia and the Pacific and South Asia –specifically in China, Indonesia, and India.

In the global perspective of the **definition of poverty**, it can be understood in pure economic terms that, **income poverty** is when a family's income fails to meet a nationally established threshold that differs across countries. Typically, it is measured with respect to families and not the individual, and is adjusted for the number of persons in a family. Economists often

seek to identify the families whose economic position (defined as command over resources) falls below some minimal acceptable level. Similarly, the international standard of extreme poverty is set to the possession of less than US\$ 1.90 a day (World Bank, 2015). Smelser and Baltes (2001) say that, frequently, poverty is defined in either relative or absolute terms. Absolute poverty measures poverty in relation to the amount of money necessary to meet basic needs such as food, clothing, and shelter while Relative poverty defines poverty in relation to the economic status of other members of the society: people are poor if they fall below prevailing standards of living in a given societal context. An important criticism of both concepts is that they are largely concerned with income and consumption.

Formal education, also known as formal training, is the process of integral education that is correlated stretching from primary to secondary and higher education, and that entails a systematic and deliberate intention that concretizes itself in an official curriculum, applied with defined calendar and timetable. It is, therefore, a type of education regulated by different internal regulations within the educational project of each School, College, Institution or University), intentional (because they have the primary intention to educate and give knowledge to students), and planned (because before each course, the college regulates and plans all the educational action which will be transmitted. As basic features it could be pointed out that this type of education (usually) occurs in concrete space and full-time (<https://edukalife.blogspot.com/2013/01/definition-of-formal-education.html>.) Education is a way, planned or unplanned, which elevates man towards its fullness, physical, intellectual, and especially ethics. Man is body, mind and soul, which can be deployed in a natural way, and/or suffer social influence. It is the latter case refers to education, and the natural and social aspects always go together, since social education may not refrain from considering the natural maturity of the person.

The concern of the international community on poverty has been rising over the past decade alongside the increased attention given to the realization of human rights. The support by the international community in reducing the proportion of people in developing countries who live below the international poverty line of \$1.90 per day is enormous (OECD, 2015). Raising the world's poor out of poverty to give them a dignified life, however, will require the translation of good intentions and promises into concrete action. This action must do more than merely boost incomes (OECD, 2015). As a precondition for reducing poverty, every person must receive some form of formal education, which is a fundamental human right.

The development priorities of sub-Saharan Africa countries speak volumes on the effects of education on poverty reduction. A survey conducted by MY World, a global UN Survey, which aimed to understand the development priorities of people from across the world in order to inform and influence the Sustainable Development Goal (SDGs), asked respondents one simple question: which six (out of 16) development priorities were most important to them and their families? To date, over 9.7 million people have responded to the survey. In the MY World Survey African priorities seem to reflect much of what is important to people globally. Both globally and in sub-Saharan Africa people have ranked a good education, better healthcare and job opportunities highest, with more than half of respondents selecting these three among their six top priorities (Nicolai et al., 2016). Growth was not sufficient or inclusive enough to sustain job creation and poverty reduction. For instance, the average employment-to-population ratio declined from 58% in 2005 to 44% in 2012 (UNECA, 2015 in Nicolai et al. 2016).

The role played by formal education in poverty reduction, in association with other social sector interventions, is critically essential. There is no country around the world that has developed if it has not educated its people. Education is not only essential in poverty reduction; it is also a key to wealth creation. Within this context, one of the pledges of the Dakar Framework for Action - Education for All (EFA): Meeting our Collective Commitments - was "to promote EFA policies within a sustainable and well-integrated sector framework strictly linked to poverty reduction and strategies for development" (UNICEF, 2000).

Education in this sense is focused particularly on achieving universal primary education. The report made by the Secretary-General of the United Nations within the context of the Decade for the Reduction of Poverty confirms that universal primary education is central to the fight against poverty. Understandably so, because this is the level of education through which most poor children pass and within which their achievements should assist them to break the vicious cycle of poverty. In fact, education is the social institution that reaches the largest segment of the population with the goal of guiding it through a systematic learning process (UNICEF, 2000). Ghana implemented free compulsory and universal basic education (FCUBE) in the 1990s to comply with internationally accepted strategy of poverty reduction and national development. Likewise in Kenya, The Free Primary Education policy announcement of 2003 led to 1.1 million extra school-age children attending the first school-day, from a total of 7.7 million primary-age children. The Free Day Secondary Education reform of 2008 led to the disbursement of capitation grants worth 10,265 Kenyan Shillings per student (equivalent to US\$115) directly to public secondary schools (Nicolai et al., 2016). Kenyan government spending on education is much higher than the 4.3% average for sub-Saharan Africa (World Bank, 2016a). Donor resources have played a minor role: aid per

capita to Kenya's education sector was estimated at US\$4, the lowest among Lower Income Countries (LICs) (UNESCO, 2012 in Nicholai et al. 2016).

Masood, et al. (2011), state that Education and poverty are inversely related. The higher the level of education of the population, the lesser will be the number of poor persons because education imparts knowledge and skills which is supportive in higher wages. The direct effect of education on poverty reduction is through increasing income or wages. The indirect effect of education on poverty is important with respect to 'human poverty' because as education improves income, the fulfilment of basic necessities becomes easier and raises the living standard which surely means a fall in human poverty.

Women and the girl-child are estimated to constitute the largest among the extremely poor in Ghana and most especially in the Jirapa District of the Upper West Region (GSS 2016). This is understandably so because they are accounted as the largest of the uneducated in the District. This has resulted in the gender debate of the education of the girl-child. Education indirectly helps in the achievement of basic essential needs such as shelter, water, health facilities, and sanitation. It also helps change women's behaviour in fertility decisions and family planning (Jeffery & Basu, 1996). It is understood that meeting such basic needs increases the productivity and wages, consequently putting people above the poverty line. The linkages between education and poverty broadly can be seen in two ways: In the first instance, investment in education increases the skills and productivity of poor households and, therefore, increases the income level as well as the overall standard of living, that is, human development. Secondly, poverty is also a serious hindrance to educational achievement.

Poverty has a negative influence on the educational attainment in three ways. The first comes from lack of resources, that is, financial resources. The second comes from the creation of social pressures which destroys the mindset of a poor student. The third is that, when poverty affects any institution it decreases the standard of teaching and learning (Branley & Karley, 2005). At the international level, it can generally be identified that countries that are considered poor have low levels of education and at the national level children who do not attend schools, come from poor families. In Pakistan for example, it is estimated that 80% of the 6.5 million children who are not in school have never even enrolled in any school at all (UNESCO, 2007). The main reasons why children are not in schools are both economic and non-economic challenges. For example, male children are considered as a source of income in the form of child labour, that is, they are used either in the farm or trading in the market for their parents; girls are considered very helpful to their mothers in household work and in taking care of their younger siblings.

In addition to that, there are some social norms and religious doctrines which hinder the education of the girl child. Consequently, lack of education becomes the cause of low earning potential of any person and family and poverty persists even to later generations of that household. Pakistan is considered to be among the second of the world countries with the highest number of children who are out of school, and it is because of extreme poverty affecting more than 60 percent of the population that lives on \$2 a day. It can be understood that 'education poverty' and 'income poverty' have a mutually reinforcing relationship with each other both at the macro and micro levels. Lack of education is a key factor of income poverty and absence of sufficient income cannot overcome the education poverty either (Tilak, 2005).

As indicated earlier on, education plays an important role in the fulfilment of basic needs, through poverty reduction. These basic needs include the availability of education itself. In other words provision of education and fulfilment of basic needs both reinforce each other (UNESCO – PROAP, 1998). Also, as stated earlier on, the inverse relationship between education and poverty has been well noticed but there is a debate relating to the educational levels; whether primary education is enough for the ultimate outcomes or all educational levels (Primary, Junior High, Senior High and Tertiary education) have to be focused on simultaneously. The main focus of the Sustainable Development Goals (SDGs) of the United Nations on education and the Poverty Reduction Strategy Papers approved by the World Bank put more emphasis on primary education and girls' education (Nicolai et al, 2016).

It has been observed around the world that the probability of finding employment rises with higher levels of education, and that earnings are higher for people with higher levels of education (UNESCO, 1997). A better educated household is less likely to be poor. In Chile, for instance, between one quarter and one third of household income differences can be explained by the level of education of household heads (Ferreira & Litchfield, 1998). Absolutely poor people in developing countries usually have low education levels (UNESCO, 1997). Some may still not even have access to primary education or may not complete their primary education. Universal primary education is, therefore, crucially important to reduce poverty. Education accelerates economic growth and the development of poor countries, communities and households.

Poor people live a life of deprivation involving any or all of the following:

- material deprivation – lack of income, resources and assets.
- physical weakness – malnutrition, sickness, disability, lack of strength.

- isolation – illiteracy, lack of access to education and resources, peripheral location, marginalization and discrimination.
- vulnerability – to contingencies which increase poverty (e.g. war, climatic changes, seasonal fluctuations, disability).
- powerlessness – the inability to avoid poverty or change the situation.

Arising from the above issues, the present study is motivated by the effect of formal education as a tool to reducing poverty through empowerment, income/earnings, health care, social amenities, changes in the mindset of the people and its attendance effects on the vulnerability of the people in the Jirapa District of the Upper West Region of Ghana.

This study is based on theoretical as well as empirical observations and is distinctive because it investigates education as an additional determinant of poverty in contrast to conventional income-based determinants. Absolute poverty is a fundamental barrier to development, particularly for developing countries, which spend large amounts of funds in collaboration with international organizations with the aim of reducing poverty. A cheaper and more effective policy for poverty reduction is crucial as public resources are not unlimited. Ascertaining the strength of different determinants of poverty can help establish appropriate policy recommendations. Obviously, a world with a large number of poor people is neither socially nor economically acceptable. The central motivation to work on this issue was the yet unresolved poverty problem of the Jirapa District. A prominent view in the literature on economic development is that the poor have certain common characteristics that force them to stay poor: this is usually known as the “poverty trap.” Therefore, useful results can be produced by analyzing the collective datasets of the District to ascertain the causality of poverty. For the Jirapa District, the results of this study could provide a better path to move on.

1.2 Problem Statement

The Northern regions continue to present Ghana with the most formidable developmental challenge. Of the five regions (Northern, Upper East, Upper West, Central and Eastern Regions) in Ghana with the highest levels of poverty in 1992, three were in northern Ghana. While other regions have seen poverty levels decline dramatically over the past one and half decades, northern Ghana has fallen further behind. There has been an erratic trend in poverty levels in northern Ghana compared with the rest of Ghana. In this respect, northern Ghana stands in sharp contrast with the rest of the country, and especially the Central and Eastern Region, where poverty is being reduced consistently across these two regions and over time. In Ghana, poverty is disproportionately concentrated in the North. The northern part of Ghana has benefited very little from poverty reduction which took place at the national level (GSS, 2000). Evidence from the poverty reduction literature in support of the above has indicated that Northern Ghana which is so far the poorest of the ecological zones has been left far behind in terms of poverty reduction. Research shows that, while the rural savannah areas in 2005/2006 accounted for only one fourth of the population, they accounted for half of the poor in Ghana (GSS, 2006, cited in Coulombe & Wodon, 2007).

There are clear differences in the incidence of poverty in the various demographic groupings. In 2012/13, the population of rural Ghana was made up of 50 percent of the total population of the country. Yet, it accounted for 78 percent of the people in poverty. This supports the previous reports of the poverty profile in the country (GSS 1998/99 and 2005/06) where above 80 percent of the total population who lived below the poverty line in Ghana were living in the rural areas (GSS, 2014).

In communities where poverty is more pronounced, the poverty incidence is much higher among those living in rural savannah. In the 12-month period between 2012/13, the contribution to poverty incidence in rural savannah was found to be higher than in rural coastal and forest zones combined. It is well noted that rural savannah has more than 40 percent of the total poverty in Ghana. This situation is in line with previous poverty reports which indicate that the poverty reduction in Ghana (from 1998/99 to 2005/06) has not been evenly distributed geographically (GSS, 2014).

The clear geographic differences that characterize absolute poverty are found to be more pronounced with extreme poverty, the incidence of which is highest in rural Savannah. Extreme poverty is also a rural phenomenon, with as many as over 1.8 million persons living in extreme poverty in rural areas. Extreme poverty is particularly high in rural Savannah at 27.3 percent and this locality accounts for nearly three-fifths of those living in abject poverty in Ghana. The incidence of extreme poverty is virtually not noticeable in urban localities, with Accra contributing only 0.9 percent to the incidence of extreme poverty. Urban localities contribute 11.2 percent to the national incidence of extreme poverty (GSS, 2014).

Amongst the ten regions of Ghana, the incidence of poverty and poverty gap are not evenly distributed. Greater Accra has a very low level (5.6%) of poverty incidence, which is 18.6 percentage points lower than the national average rate of poverty. The same cannot be said of the three northern regions, which comprise mainly savannah areas. More than four in every ten persons are poor in Upper East (44.4%), increasing to one in every two in the Northern Region (50.4%) and seven out of every ten in Upper West (70.7%). The puzzle here is that, even among the three northern regions of Ghana, there are very wide differences between their rates of poverty incidence, in spite of the closeness of the regions and the fact that the regions concerned share boundaries (GSS, 2014). In terms of extreme poverty incidence, apart from the three

northern regions, whose rates are higher than the national rate of extreme poverty, all the other regions in the coastal and forest areas have rates lower than the national average. Upper West Region has the highest extreme poverty incidence of 45.1 percent, followed by Northern 22.8% and Upper East 21.3% (GSS, 2014).

Despite the fact that there have been several governmental and non-governmental donor support schemes in aid of poverty reduction in Ghana, poverty is still acute in the three northern regions. There have been persistent regional inequalities. A greater number of households in the three northern regions appear to be in a situation of chronic and persistent poverty mainly due to lack of formal education and isolation from markets. There are significant disparities in household access to education and health care. Households in these regions have remained disconnected from economic growth taking place in the rest of the country, with limited opportunities to escape from poverty because of their limited access to education, health care, market and other public services (World Bank, 2004).

The distribution of poverty incidence and poverty gap vary by the level of education of the household head. The level of education of households was one of the major causes of poverty and a tool for poverty reduction as well. While low level of education can increase the vulnerability of people and cause them to be poor, high level of education on the other hand was a major tool for reducing the level of vulnerability and poverty among households. For instance, according to the GSS (2014) poverty was higher among households whose heads were uneducated than among those with some education. The trend suggests that the level of poverty reduces as the educational level of the household head increases. The 2014 GSS report shows that more than a third of household heads with no education are poor compared with 15.7 percent of those with a BECE and 8 percent of those with a secondary education.

Only three percent of heads with a tertiary education are poor. The contribution to national poverty incidence by households headed by an uneducated person is 72.4 percent, whilst the highly educated accounts for less than one percent. The results suggest that a strong negative relationship exists between poverty and educational level, such that the more educated the household head is the less likely they are to be poor.

The problem of poverty gives rise to two fundamental questions. First, why are people poor? Second, how can the poor escape poverty? Finding an appropriate solution to poverty requires determining its causes. Does the growth rate of per capita income influence poverty? Does a low income level lead to poverty? Does the income gap between rich and poor create poverty? Does the difference in earning ability between low and high-income groups cause poverty? Here, an empirical investigation of plausible poverty determinants becomes indispensable. Many research analyses highlight the significance of income and income inequality as determinants of poverty (Janjua & Kamal, 2011). A significant amount of work on poverty has been done using income-based determinants (Jordan, 2004; Ted, 2006; Anderson and Bird, 2006; and Okojie and Shimeles, 2006) among others, but poverty is not confined to income or income differentials. Different studies have discussed income variables, income growth, and income inequality as the only possible determinants of poverty, and have provided mixed evidence (Janjua & Kamal, 2011). The present study assumes, on the basis of these previous findings, that income variables do not adequately explain poverty reduction. Therefore, the present study was designed to explore other possible determinants of poverty, such as lack of formal education.

1.3 Objectives of the Study

The main objective of this study was to assess the effect of formal education on poverty reduction in Ghana.

Specifically, the study sought to:

1. examine the causes of poverty in the study area in the context of the social Darwinism and structural theories.
2. investigate the effect of variations in levels of formal education of heads of households on their dwelling units.
3. assess the effects of formal education on vulnerability and isolation of household heads
4. evaluate the differential effects of gender and formal education on household poverty.
5. analyse the relationship between formal education and social and political participation within the local context.

1.4 Research Questions

The following research questions guided the study:

1. What evidence is there that the social Darwinism and structural theories have a considerable effect on the magnitude of poverty in the study area?
2. In what ways do variation in levels of formal education of household heads affect type of dwelling units?
3. How much of the study participants' vulnerability and isolation is explained by lack of formal education?
4. What are the differential effects of gender and formal education on household poverty?

5. In what ways do formal education influence participation of household heads in social and political life in the local community?

1.5 Research Hypothesis

The study tested the following hypotheses:

1. H_0 : there is no statistically significant relationship between formal education and income.

H_1 : there is a statistically significant relationship between formal education and income.

2. H_0 : there is no statistically significant relationship between formal education and type of dwelling unit.

H_1 : there is a statistically significant relationship between formal education and type of dwelling unit.

1.6 Scope of the Study

The study was designed to investigate the effect of formal education on poverty reduction in the Jirapa District of the Upper West Region of Ghana. Upper West Region was chosen because it was considered by the Ghana Statistical Service as the poorest region in Ghana and the Jirapa District was the fourth largest in area and second in terms of population size. The respondents of the study were: heads of households, women, District educational officers, Chiefs, Opinion leaders, and heads of educational institutions.

The study focused mainly on the following key issues: the efficiency and effectiveness of formal education as a tool for poverty reduction as well as how formal education fits into national poverty reduction policies/programmes. It also focused on the contribution of formal

education to poverty reduction in Jirapa District. The study also explored some of the core challenges encountered by formal education in its efforts at contributing to the poverty reduction efforts in the study area; and finally the research tried to make key policy recommendations to enhance and improve the efforts of formal education in reducing poverty. Among the various dimensions of poverty in literature, the study focused on the non-income dimension of poverty, such as lack of formal education.

1.7 Justification

The justification of this study stems from the role of poverty reduction efforts in enhancing improved access to basic necessities of life (including food, health care, water, and shelter), as well as halting the further deterioration in the living standards experienced by vulnerable and disadvantaged population groups and strengthening their prospects for a decent life. This has been a challenge for most developing economies including Ghana.

The methods of the research are expected to be useful to future researchers who wish to vary their research methodology to improve future problem investigations. Also, it is hoped that the study will help future prospective researchers evaluate the theoretical underpinnings of various research investigations with the aim of adopting and improving such theories. In the academic area, the various findings will serve as evidence and a reference document for any future study and may be used to formulate guidelines for planning and implementing poverty reduction programmes. Additionally, the findings of the study provide a basis for the community to assess their operational strategies and policies, failures, successes, in poverty reduction through formal education and determine the way forward. Moreover, the findings may also help such communities renew their stand in accepting or rejecting formal education

as a poverty reduction strategy when they are aware of how education has affected the lives of people who have had it.

1.8 Geographical Significance of the Study

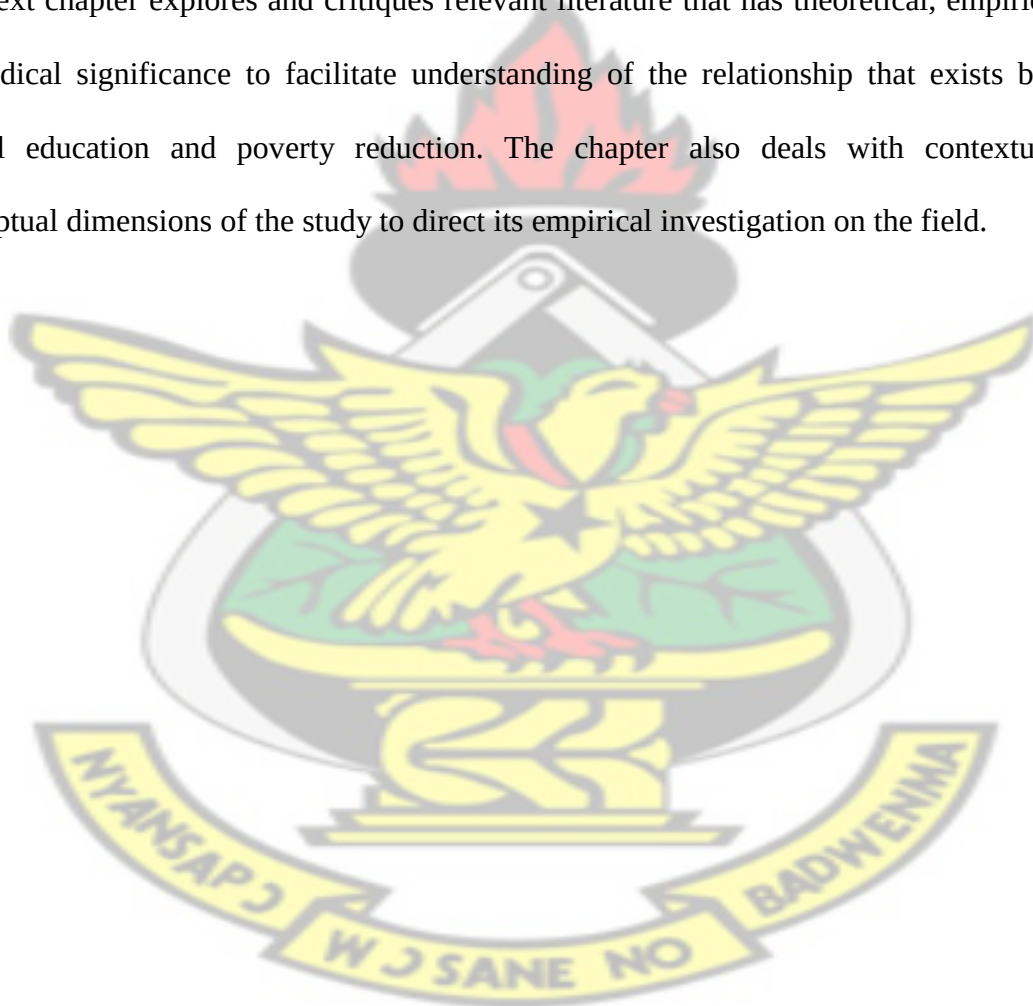
Geographically, the study community is densely populated. The 2010 National Population Census put the population of Jirapa District at 88,402. In relation to the other districts in the region, the Jirapa District is the fourth largest in area and second in terms of population size. With a population size of 88,402 and a total area of 1,667.6 square kilometers, the District has a population density of 58.1 persons per square kilometer. This figure is almost double the regional density of 31.2. Therefore, it means that there is emerging pressure on land, water, agricultural facilities, educational facilities, health facilities, and other resources. About five percent of the people live in major towns of the District while 95 percent live in rural settlements. The District is therefore considered as a rural district. (GSS, 2014) indicated that, the Jirapa District was one of the poorest in the country. In the light of this geographical significance, the study area was selected to investigate the effect of formal education on poverty reduction in a geographically challenging environment.

1.9 Organization of the Thesis

The thesis emanating from the study is presented in six chapters, starting from Chapter One which presents the general introduction of the study. It covers the background information of the study, the research problem, research questions, research objectives and the scope of the study, justification of the study, geographical significance of the study, followed by the hypothetical underpinnings of the study. The chapter ends with the organization of the thesis. Chapter Two reviews pertinent literature on the effect of formal education on poverty reduction: it discusses contextual, conceptual, theoretical and empirical issues on the subject which is important in understanding the various aspects of the issues on the subject of

poverty reduction through formal education. Chapter Three presents the profile of the study area and discusses the research methodology. Chapter Four presents and discusses Poverty and formal education nexus. Chapter Five capture the data presentations and analyses of formal education and socio-economic vulnerability nexus. The sixth and final chapter provides a summary, draws conclusions and makes policy recommendations based on the findings and conclusions of the study.

The next chapter explores and critiques relevant literature that has theoretical, empirical and methodical significance to facilitate understanding of the relationship that exists between formal education and poverty reduction. The chapter also deals with contextual and conceptual dimensions of the study to direct its empirical investigation on the field.



CHAPTER TWO

REVIEW OF PERTINENT LITERATURE AND CONCEPTUAL ISSUES

2.1 Introduction

The objectives of the review of relevant literature is to place the study in a scholarly context by looking at the main contributions made by researchers on the concept of poverty and education and the main linkages between the two. It highlights some of the views of the international community on the concept of poverty and the ideas expressed on the issue of poverty by some researchers through poverty surveys in the country. This aims to put the problem in its right perspective. The literature reviewed in the present work has benefited from the strengths and the weaknesses of previous poverty surveys. In addition, the review has enabled identification of research gaps that have facilitated elaboration of the research problem.

The literature is reviewed under five main sections. The first major section considers issues on the definitions and measurements of poverty and where necessary identified the problems associated with the approaches. It further reviews the poverty trends in Ghana before and after independence. The second section focuses on the theories of poverty, its relevance and its effects on the empirical evidence from the study. The section also examines the conceptual framework of the study. The third section discusses formal education and its effect on poverty reduction. The section also examines accessibility and affordability of educational facilities. The section also deals with the role of female education in poverty reduction. The fourth section discusses geography and poverty traps. Finally, the fifth section focuses on the linkages that exist between education and poverty.

2.2. Definitions and Measurement of Poverty

Smelser and Baltes (2001) have noted that reducing **poverty** has become an international concern, yet there is no international consensus on guidelines for measuring poverty. In pure economic terms, **income poverty** is when a family's income fails to meet a nationally established threshold that differs across countries. Typically, it is measured with respect to families and not the individual, and is adjusted for the number of persons in a family. Economists often seek to identify the families whose economic position (defined as **command over resources**) falls below some minimal acceptable level. Similarly, the international standard of **extreme poverty** is defined as the possession of less than US\$ 1.90 a day (World Bank, 2015). Smelser and Baltes (2001) say that, frequently, poverty is defined in either relative or absolute terms. **Absolute poverty** measures poverty in relation to the amount of money necessary to meet basic needs such as food, clothing, and shelter. The concept of absolute poverty is not concerned with broader **quality of life** issues or with the overall level of inequality in society. The concept therefore fails to recognise that individuals have important social and cultural needs. This, and similar criticisms, led to the development of the concept of **relative poverty**. Relative poverty defines poverty in relation to the economic status of other members of the society: people are poor if their level of being falls below prevailing standards of living in a given societal context. An important criticism of both concepts is that they are largely concerned with income and consumption (Beni, et al., 2016, p. 40)

The concept of social exclusion emerged largely in reaction to this type of narrow definition of poverty. It has contributed significantly towards including multi-faceted indicators of ill-being into the conceptual understanding of poverty. To further develop the definition of the concept of relative poverty or relative deprivation, three perspectives are relevant; the **income**

perspective indicates that a person is poor only if his or her income is below the country's poverty line (defined in terms of having income sufficient for a specified amount of food); the **basic needs perspective** goes beyond the income perspective to include the need for the provision by a community of the basic social services necessary to prevent individuals from falling into poverty; and finally, the **capability (or empowerment)** perspective suggests that poverty signify a lack of some basic capability to function (Smelser and Baltes, 2001; Beni, et al., 2016).

On the other hand, the understanding of poverty by social scientists is essential of the economic idea of free choice models where individuals control their own destiny and are, thus, the cause of their own poverty. Rather than being interested in its measurement, sociologists generally study the reasons for poverty, such as the roles of culture, power, social structure and other factors largely out of the control of the individual. According to Smelser and Baltes (2001), the multidimensional nature of poverty, in particular social aspects such as housing poor, health poor or time poor, needs to be understood in order to create more effective programmes for poverty reduction. Hypotheses that typically play a role in sociological theories of poverty are based on the idea that individuals are influenced by the physical and cultural context in which they live, and it gives importance to gender and household structure.

It has been held widely across the world that one cannot consider only the economic part of poverty. For example, Pierre Sanè (2001) explains that poverty has cultural, social and political, connotation. Sanè states that, poverty undermines human rights – economic rights (the right to work and have an adequate income), cultural rights (the right to maintain one's cultural identity and be involved in a community's cultural life), social rights (access to health

care and education) and political (freedom of thought, expression and association). The Millennium Development Goals - global targets that the world's leaders set at the UN Millennium Summit in September 2000 - are an agenda for reducing poverty, its causes and manifestations. As part of the goal to eradicate extreme poverty and hunger, United Nations Development Programme (UNDP) sought to halve, between 1990 and 2015, the proportion of people whose income is less than 1 \$US a day (UNDP, 2000; Beni, et al., 2016).

2.3 Choice of Poverty Definition

In the global perspective, many important organizations and institutions including the World Bank itself would see the **World Bank** as the closest thing to a reference authority on poverty. They are the expert body that the UN typically refers to regarding such matters. Theirs, after all, is the **default definition** of poverty, based on the single indicator of standardized income that gives us the idea of the 'poverty line' and the associated definitions of 'the poor' and those in 'extreme poverty'. However, not all people agree to this. One may say that, knowledge for development and the reduction of global poverty is primarily in the hands of a transnational expert institution, the World Bank. Under pressure from critics on all sides, the Bank has responded by emphasizing its role as producer of policy-oriented knowledge for development (UNDP, 2000). Yet, views and prospects announced by the Bank are increasingly contested by critics from both left and right, from the local to the global arena. Critics tend to dismiss this institution's knowledge, arguing it is politicized and simply a tool for the spread of neoliberal economic globalization, benefiting global elites.

The World Bank's official position might be to say that '**income poverty**' is defined by the \$2 and \$1.90 a day figures, used to delimit the poverty line and extreme poverty line – notionally separating those falling either side of them. However, on their own website, they recognise

that poverty is a ***multi-dimensional phenomenon*** and that income is only a **single variable** by which to measure it. One might make the analogy of trying to measure how ‘smart’ someone is by their IQ. The World Bank currently states: While much progress has been made in measuring and analyzing income poverty, efforts are needed to measure and study the many other dimensions of poverty (World Bank, 2014). This is where the views of the poor themselves come in handy.

In the literature, education and poverty exist in both directions, with low education being both a cause and an effect of poverty. Estimating causality is always important because if we know the robustness of cause toward effect, then we can address the problem effectively. Poverty is strongly correlated with a range of family background variables, including parental education, which also influences children’s educational outcomes (Berg, 2008) and at the same time, poverty is just one of many family background factors that limit learning. The Chronic Poverty Research Centre (2005) refers to evidence showing that formal education is strongly associated with the decreased possibility of chronic poverty. It also indicates that the level of schooling at which this might happen can vary between countries. The Chronic Poverty Research Centre (2008), shows that low education is a key factor in keeping people poor over decades and lifecycles. The concern here is absolute poverty so there will not be discussion of the literature on chronic poverty as it requires addressing the vast area of non quantitative aspects of poverty and other social variables.

The absolute poor in developing countries usually have low or even no education. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO) (2007), the children most likely to be out of school or to drop out live in rural areas and come from the poorest households. The underlying aim of the Early Childhood Care and Education

programme was to provide a strong foundation in early childhood to escape from poverty in the future. Geda, Jong, Kimenyi, and Mwabu (2005) explore the determinants of poverty in Kenya by using household data. They reveal that, among all the variables “in all models, the most important determinant of poverty status is the level of education. Lack of education is a factor that accounts for a higher probability of being poor.” Londoño (1996) suggests that inadequate education is the most important factor holding back Latin American economic growth and thus sustaining high levels of inequality and poverty. He concludes that improved education can bring about a large and relatively quick reduction in poverty due to its effect on individuals’ earnings and growth.

Harper, Marcus, and Moore (2003) provide a comprehensive review of the literature on poverty reduction. Their discussion covers a number of key social processes that affect poverty. They also highlight the significance of education as a means of poverty reduction, and argue that a good-quality formal education widens horizons and increases future employment opportunities. They conclude that education can facilitate upward economic and social mobility, a better-paying and safer job, and general wellbeing. This conclusion confirms the importance of education in breaking different aspects of the poverty cycle, ranging from individual earning to parental and family effects.

Berg (2008) says that, throughout the world it has been found that the probability of finding employment rises with higher levels of education, and that earnings are higher for people with higher levels of education. According to the study, this connection between education and poverty works through three mechanisms. Firstly, more educated people earn more. Secondly, more (and especially better quality) education improves economic growth and thereby economic opportunities and incomes. Thirdly, education brings wider social benefits

that improve economic development and especially the situation of the poor, such as lower fertility, improved health care of children and greater participation of women in the labour force. These findings support the view that the benefits (direct and indirect) of education result in changes in people's behaviour and this behavioral change inevitably has an impact on poverty alleviation.

2.4 Theories of Poverty in Contemporary Literature

Current literature on poverty uniformly acknowledges different theories of poverty, but the literature has classified these theories in multiple ways. The sections that follow discuss some of these theories that are considered useful to the present study.

2.4.1. Individual Deficiencies Theory of Poverty.

The Individual Deficiencies Theory of Poverty is a large and multifaceted set of explanations that focus on the individual as responsible for their poverty situation. Typically, politically conservative theoreticians blame individuals in poverty for creating their own problems, and argue that with harder work and better choices the poor could have avoided (or can now remedy) their problems (Ted, 2006; Beni, et al., 2016, p. 41). Other variations of the individual theory of poverty ascribe poverty to lack of genetic qualities such as intelligence that are not so easily reversed.

The belief that poverty stems from individual deficiencies is an old one. Religious doctrine that equated wealth with the favour of God was central to the Protestant reformation (Weber, 2001). The blind, crippled, or deformed people were believed to have been punished by God for either their sins or those of their parents. With the emergence of the concept of inherited intelligence in the 19th century, the eugenics movement went so far as to rationalize poverty

and even sterilization for those who appeared to have limited abilities. Books like Hurnstein and Murray's *The Bell Curve* (1994) are modern uses of this explanation. Rainwater, (1970) critically discusses individualistic theories of poverty as a moralizing perspective and notes that the poor are afflicted with the mark of Cain. They are meant to suffer, indeed must suffer, because of their moral failings. They live in a deserved hell on earth. Rainwater goes on to say that it is difficult to overestimate the extent to which this perspective (incorrectly) under-girds our visions of poverty, including the perspective of the disinherited themselves (Beni, et al., 2016, p. 41).

Ted (2006) states that, the individualistic sources of poverty perspective is reinforced by neo-classical economics. The core premise of this dominant paradigm for the study of the conditions leading to poverty is that individuals seek to maximize their own well being by making choices and investments, and that (assuming that they have perfect information) they seek to maximize their well-being. When some people choose short term and low-payoff returns, economic theory holds the individual largely responsible for their individual choices- for example to forego college or university education or other training that will lead to better paying jobs in the future (Beni, et al., 2016, p. 41).

The economic theory that the poor lack incentives for improving their own conditions is a recurrent theme in articles that blame the welfare system's generosity on the perpetuation of poverty. In a *Cato Journal* article, economists Gwartney and McCaleb argue that the years of the war on poverty actually increased poverty (adjusted for noncash transfers) among working age adults in spite of unprecedented increases in welfare expenditures. They conclude that, the application of simple economic theory, suggests that the problem lies in the war on poverty programmes: The welfare programmes have introduced a perverse incentive

structure, one that penalizes self-improvement and protects individuals against the consequences of their own bad choices (Gwartney & McCaleb, 1985). This and similar arguments that cast the poor as a “moral hazard” also hold that, the problem of poverty continues to fester not because we are failing to do enough, but because we are doing too much that is counterproductive (Gwartney & McCaleb, 1985; Beni, et al., 2016, p. 41). The economic model would solve poverty by assuring that the penalty of poverty was great enough that none would choose it (and welfare would be restricted to the truly disabled or otherwise unable to work).

A second, albeit less widely critiqued, version of the individualistic theory of poverty comes from American values of individualism—the Horatio Alger myth that any individual can succeed by skills and hard work, and that motivation and persistence are all that are required to achieve success (Asen, 2002; Beni, et al., 2016). Self-help literature reinforces the belief that individuals fail because they do not try hard enough. Frank Bettger (1977), in the Dale Carnegie tradition, tells how he got a list of self-improvement goals on which to focus and became one of the most successful and highly paid salesmen in America. He goes on to say that anyone can succeed by an easy formula--focused goals and hard work. This is the message of hundreds of self-help books, articles, and sermons. By extension, this literature implies that those who do not succeed must face the fact that they themselves are responsible for their failure (Beni, et al., 2016).

Scientifically, it is routine to dismiss the individual deficiency theory as an apologetic related to concepts of family, cash income, treatment of taxes, special work related expenses, or regional differences in the cost of living. However, Blank (1997) and Quigley (2003) opine that regardless of how we look at the “science” of poverty, or what O’Connor calls the

“knowledge of poverty,” it is essential to retain focus on the fact that the definition of poverty and the policies addressing it are all shaped by political biases and values. This disparity of status and interest makes poverty research an inescapably political act. It gives power to educated elite to categorize, stigmatize, but above all to neutralize the poor and disadvantaged through analysis that obscures the political nature of social and economic inequality (O’Connor, 2001; Beni, et al., 2016, p. 42).

Beni et al. (2016) stated that, political agendas are the overriding factors in poverty that not only influence the choice of theory of poverty but the very definition of poverty to be explained by each theory. The most common “objective” definition of poverty is the statistical measure established by governments as the annual income needed for a family to survive. The “poverty line” was initially created in 1963 by Mollie Orshansky at the U.S. Department of Agriculture based on three times her estimate of what a family would have to spend for an adequate but far from lavish diet. According to Michael Darby (1997), the very definition of poverty was political, aimed to benchmark the progress of poverty programmes for the war on poverty. Adjusted for inflation, the poverty line for a family of four was \$17,050 income in 2000 according to the US Census. It was noteworthy that most poverty scholars have many problems with this definition, for example, Morrill and Whohlenberg (1971) and Blank (2002).

2.4.2 Sub-Cultures Theory of Poverty

The second theory of poverty roots its cause in the “Culture of Poverty”. This theory is sometimes linked with the individual theory of poverty or other theories to be introduced below, but it recently has become so widely discussed that its special features should not be minimized. This theory suggests that poverty is created by the transmission over generations

of a set of beliefs, values, and skills that are socially generated but individually held. Individuals are not necessarily to blame because they are victims of their dysfunctional subculture or culture (Ted, 2006; Beni, et al., 2016).

American Sociology has long been fascinated by subcultures of immigrants and ghetto residents as well as the wealthy and powerful. Culture is socially generated and perpetuated, reflecting the interaction between the individual and the community. This makes the “culture of poverty” theory different from the “individual” theories that link poverty explicitly to individual abilities and motivation. Technically, the culture of poverty is a subculture of poor people in ghettos, poor regions, or social contexts where they develop a shared set of beliefs, values and norms for behaviour that are separate from but embedded in the culture of the main society (Ted, 2006).

Oscar Lewis was one of the main writers to define the culture of poverty as a set of beliefs and values passed from generation to generation. He opines that,

once the culture of poverty has come into existence it tends to perpetuate itself. By the time slum children are six or seven they have usually absorbed the basic attitudes and values of their subculture. Thereafter they are psychologically unready to take full advantage of changing conditions or improving opportunities that may develop in their lifetime, (quoted in Ryan, 1976, p.120; Beni, et al., 2016, p. 42).

Cultures are socialized and learned, and one of the tenants of learning theory is that rewards follow to those who learn what is intended. The culture of poverty theory explains how government antipoverty programmes reward people who manipulate the policy and stay on welfare. The underlying argument of conservatives such as Charles Murray (1984) is that government welfare perpetuated poverty by permitting a cycle of “welfare dependency” where poor families develop and pass on to others the skills needed to work the system rather

than to gain paying employment. The net result of this theory of poverty is summed up by Asen's (2002) perceptive phrase, "From the war on poverty to the war on welfare" (p. 48).

This theory of poverty based on perpetuation of cultural values has been fraught with controversy. No one disputes that poor people have subcultures or that the subcultures of the poor are distinctive and perhaps detrimental. The concern is over what causes and constitutes the subculture of poverty. Daniel Patrick Moynihan (1965) found the concept particularly applicable to his study of Black poverty in the early 1960s and linked Black poverty to the largely "dysfunctional" Black family found in central cities. Valentine (1968) criticizes E. Franklin Frazier, who with Daniel Patrick Moynihan (1965), portrayed the culture of the negro poor as an "immoral chaos brought about by the disintegration of the black folk culture under the impact of urbanization" (p. 20).

In other sub-cultural situations the cultural portrayal of the poor is more sympathetic. For example, many liberal scholars understand the cultural problems that Native Americans face trying to assimilate middle class value systems. Ironically, after a number of generations we recall the "heroic" efforts of Irish or Italian immigrant groups and their willingness to accept hard work and to suffer for long term socio-economic gains; we forget the cultural discrimination they faced for not fitting in during the first generations after they arrived (Ted, 2006; Beni, et al., 2016).

2.4.3 Economic, Political, and Social Distortions or Discrimination Theory of Poverty

Whereas the first "individualistic" theory of poverty is advocated by conservative thinkers and the second is a culturally liberal approach, the third to which we now turn is a progressive social theory. Theorists in this tradition look not to the individual as a source of

poverty, but to the economic, political, and social system which causes people to have limited opportunities and resources with which to achieve income and well being. For instance, lack of or inadequate educational infrastructure and materials in the rural areas could limit the educational opportunities of a person thereby making him or her poor due to the political, social and economic system of the state. Research and theories in this tradition attempt to redress the problem noted by Rank, et al (2003): “Poverty researchers have in effect focused on who loses out at the economic game, rather than addressing the fact that the game produces losers in the first place”.

Ted (2006) indicated that, the 19th century social intellectuals developed a full attack on the individual theory of poverty by exploring how social and economic systems overrode and created individual poverty situations. For example, Marx showed how the economic system of capitalism created the “reserve army of the unemployed” as a conscientious strategy to keep wages low. Later Durkheim showed that even the most personal of actions (suicide) was in fact mediated by social systems. Discrimination was separated from skill in one after another area, defining opportunity as socially mediated. Taken to an extreme, radical thinkers argued that the system was flawed and should be radically transformed (Beni, et al., 2016, p. 43).

Much of the literature on poverty now suggests that the economic system is structured in such a way that poor people fall behind regardless of how competent they may be. Partly the problem is the fact that minimum wages do not allow single mothers or their families to be economically self-sufficient (Jencks, 1996). The problem of the working poor is increasingly seen as a wage problem linked to structural barriers preventing poor families from getting better jobs, complicated by limited numbers of jobs near workers and lack of growth in

sectors supporting lower skilled jobs (Tobin, 1994; Beni, et al., 2016). Interestingly research is showing that the availability of jobs to low income people is about the same as it has been, but wages workers can expect from these jobs have fallen. Fringe benefits including health care and promotions have also become scarce for low skilled workers. These and related economic changes documented by Blank (1997) and Quigley (2003) show the way the system has created increasingly difficult problems for those who want to work.

Elimination of structural barriers to better jobs through education and training have been the focus of extensive manpower training and other programmes, generating substantial numbers of successes but also perceived failures. However, in spite of perceived importance of education, funding per student in less advantaged areas lags that which is spent on richer students, teachers are less adequately trained, books are often out of date or in limited supply, amenities are few, and the culture of learning is under siege. This systemic failure of the schools is thus thought to be the reason poor people have low achievement, poor rates of graduation, and few pursue higher education (Chubb & Moe, 1996; Beni, et al., 2016, p. 43).

A parallel barrier exists with the political system in which the interests and participation of the poor is either impossible or is deceptive. Research has confirmed the linkage between wealth and power, and has shown how poor people are less involved in political discussions, their interests are more vulnerable in the political process, and they are excluded in decision making and at many levels in the political process. Coupled with racial discrimination, poor people lack influence in the political system that they might use to mobilize economic benefits, formal education, social amenities and justice (Ted, 2006).

A final broad category of system flaws associated with poverty relate to groups of people being given a social stigma because of race, gender disability, religion, or other groupings, leading them to have limited opportunities regardless of personal capabilities. No treatment of poverty can be complete without acknowledging that groups against which discrimination is practiced have limited opportunities regardless of legal protections (Ted, 2006; Beni, et al., 2016). The process of gaining stronger rights for minorities in poverty is an ongoing one, for which legal initiatives and public policy reform must work with efforts to change public attitudes.

2.4.4 Structural Theory of Poverty

Supporters of the "structural" school of thought argue that most poverty can be traced back to structural factors inherent to either the economy and/or to several interrelated institutional environments that serve to favour certain groups over others, generally based on gender, class, or race (Jordan, 2004). Of the various institutional environments that tend to sustain a multitude of economic barriers to different groups, it is discrimination based on race and gender that create the most insidious obstructions. The disproportionately high rate of poverty among women may be viewed as the consequence of a patriarchal society that continues to resist their inclusion in a part of society that has been historically dominated by men, and as a consequence, welfare programmes have been designed in ways that stigmatize public support for women as opposed to marital support; both arrangements tend to reinforce patriarchy (Abramovitz, 1996). In this regard, the rise in poverty among women is an important structural level variable.

The structural approach emphasizes the importance of social circumstances and social forces in determining the life-courses and life chances of people through social inclusion and

exclusion. Economic growth, labour market opportunities, educational provision, social security systems and many other structural features of society provide a powerful contextual framework in which our living standards and social relations are created and recreated. And, as many social policy commentators have argued, in order to change these circumstances and relations these structural frameworks must themselves be changed, by policy action (Alcock, 2006).

2.4.5 Theory of Social Darwinism

Social Darwinism is a term coined in the late 19th century to describe the idea that humans, like animals and plants, compete in a struggle for existence in which natural selection results in "survival of the fittest." Social Darwinists base their beliefs on theories of evolution developed by British naturalist Charles Darwin. Some social Darwinists argue that governments should not interfere with human competition by attempting to regulate the economy or cure social ills such as poverty. Instead, they advocate a laissez-faire political and economic system that favours competition and self-interest in social and business affairs. Social Darwinists typically deny that they advocate a "law of the jungle." But most propose arguments that justify imbalances of power between individuals, races, and nations because they consider some people more fit to survive than others (<http://www.britannica.com/topic/social-Darwinism>, 2016). The Englishman most associated with early social Darwinism, however, was sociologist Herbert Spencer. Spencer coined the phrase "survival of the fittest" to describe the outcome of competition between social groups. In *Social Statics* (1850) and other works, Spencer argued that through competition social evolution would automatically produce prosperity and personal liberty unparalleled in human history.

2.4.6 Social Inequality, Exclusion and Inclusion

Inequality, exclusion and adverse incorporation are key drivers and maintainers of poverty. Inequality, which is generally defined as the proportion of, and gaps between, the rich and the poor, can exist and contribute to poverty in a range of dimensions. Inequalities in income and other economic indicators, such as asset ownership, are often persistent, deeply rooted and typically a result of political forces that enable powerful groups to protect their wealth, and of market imperfections that make it difficult for those who have low incomes and low savings to accumulate capital. Importantly, then, in any society there is a generally positive relationship between high levels of income inequality and low school enrolment, low life expectancy, high fertility, corruption, insecure property rights and macroeconomic instability, which demonstrates the multidimensional impact of income inequality (Inter-Regional Inequality Facility, 2006).

In terms of income inequality, SSA is one of the most unequal regions in the world. The average Gini coefficient is 47.4 and the poorest 20% of the population earn only 5.3% of total income. Drawing on evidence from Kenya – where the country's top 10% of households receive 42% of total income while the bottom 10% receives less than 1%, and real GDP has declined between 1980 and 2003 at a rate of 0.2% per year, Anderson and Bird (2006) conclude that levels of income inequality could be partially responsible for poor economic growth. In other words, low incomes reduce access to services and goods that can be used to increase earning power and generate national wealth. Inequalities in non income dimensions (such as assets, education, health and access to public services and the labour market) are also high across SSA, particularly between regions and with stark differences between men and women (Okojie and Shimeles, 2006).

Exclusion from political, social and economic institutions is part of a vicious cycle that leads to low capability levels, which in turn reduces the ability of the people to escape poverty and 'horizontal inequalities' (inequalities between groups defined according to ethnicity, gender, region, religion, and so on) make up a significant proportion of overall inequality (Stewart, 2004 and World Bank, 2005:40-43 in Inter-Regional Inequality Facility, 2006). Commonly, exclusion results from various forms of active discrimination, directed against certain people (e.g. who share ethnicity, religion, or culture). It may be reinforced by discrimination on the basis of personal characteristics, such as gender, age or impairment (CPRC, 2004; 37). This can lead to favouritism (e.g., the Chewa under Dr Banda in Malawi), to inequities such as the San face in Botswana, or in the extreme cases, to violent conflict as in Rwanda in 1994.

Inclusion can also be problematic at times, for it sometimes drives and maintains poverty. For example, many of the poorest people are included in economic activity, but on unfavourable terms (CPRC, 2004:37). This 'adverse incorporation' reinforces inequalities by, for example, forcing people to take low wage work, in bad conditions and on uncertain terms (CPRC, 2004: 38; see also Hickey & du Toit, 2007). This is seen on tobacco and other estates where people (even children) have little choice but to work for extremely low rates of pay and live in intolerable situations.

Inequality, exclusion and adverse incorporation play out in a number of sub-Saharan African countries. Because ethnicity is a key defining characteristic in Africa, it drives discrimination, conflict, state formation, political alliances, economic choices, etc. (Mamdani, 1996 in Hickey & Du Toit, 2007). Ethno-territoriality (where ethnicity overlaps with territorial claims) plays a central role in determining wealth and poverty as well as access to resources and political power. In places, state formation along ethno-territorial lines has created poverty

traps for entire peoples and regions (Hickey & Du Toit, 2007: 9-10). Inequality, exclusion and adverse incorporation also play out in relation to gender in SSA. Certainly African women have far fewer political positions and senior business posts, a direct result of gender discrimination. Not only do aspiring women not reach their full potential, but gender discrimination ensures that women – particularly elderly women and female-household heads – bear the brunt of the shocks and costs that flow from the HIV/AIDS crisis (du Toit & Neves, cited in Hickey & du Toit, 2007).

2.4.7 Geographical Disparities Theory of Poverty

Rural poverty, ghetto poverty, urban disinvestment, Southern poverty, third-world poverty, and other framings of the problem represent a spatial characterization of poverty that exists separately from other theories. While these geographically based theories of poverty build on the other theories, this theory calls attention to the fact that people, institutions, and cultures in certain areas lack the objective resources needed to generate well being and income, and that they lack the power to claim redistribution. As Shaw (1996) points out, “Space is not a backdrop for capitalism, but rather is restructured by it and contributes to the system’s survival. The geography of poverty is a spatial expression of the capitalist system” (p. 29).

That poverty is most intense in certain areas is an old observation, and explanations abound in the development literature about why regions lack the economic base to compete. Recent explanations include disinvestment, proximity to natural resources, density, diffusion of innovation, among other factors (Morrill & Wohlenberg, 1971). In a thorough review of the literature on rural poverty, Weber and Jensen (2004) note that most literature finds a “rural differential” in poverty, but that the spatial effect is not as clearly isolated from individual effects as needed for confidence. Goldsmith and Blakely (1992) offer a comprehensive

perspective on the link between development and poverty in urban contexts. In their book, *Separate Societies*, they argue that the joint processes of movement of households and jobs away from poor areas in central cities and rural regions create a “separation of work, residence, and economic, social and political life” (Goldsmith & Blakely, 1992: 125). These processes which we already discussed are multiplied by racism, tribalism and political indifference of the localities in which they flourish.

One theoretical perspective on spatial concentrations of poverty comes from economic agglomeration theory, usually used to explain the emergence of strong industrial clusters, Bradshaw et al (1998). Agglomeration shows how propinquity of similar firms attracts supportive services and markets, which further attracts more firms. In reverse, the propinquity of poverty and the conditions leading to poverty or the consequences of poverty (crime and inadequate social services) generate more poverty, while competitive areas attract business clusters, drawing away from impoverished communities. Low housing prices in such locations may attract more poor persons, for example, leading to housing disinvestment by building owners. In a world in which the criteria for investment is “location, location, location,” it is not unreasonable to track investment going to neighborhoods, communities and regions in which there is already substantial investment, while leaving less attractive areas (Ted, 2006).

A second theoretical insight is from central place theory and related “human ecology” examinations of urban growth that trace the flows of knowledge and capital (Rural Sociological Society, 1990). As Niles Hansen (1970) points out, rural areas are often the last stop of technologies, and low wages and competitive pricing dominate production. The lack of infrastructure that allows development of human resources limits economic activity that

might use these resources. Places left behind (Lyson & Falk, 1992) experience the largest competition in restructuring of the economy because the jobs in these categories are most likely to move to less developed countries. An increasing body of literature holds that advantaged areas stand to grow more than disadvantaged areas even in periods of general economic growth and that there will be some “trickle-down” effects but not an equalizing effect as classical economists would have us believe (Rural Sociological Society, 1990).

A third perspective involves selective out-migration. Wilson (1987) holds that the people from ghetto areas with the highest levels of education, the greatest skills, widest world view, and most extensive opportunities were the ones who migrated out of central city locations to other places. In addition, he argued, these departing people also were the community’s best role models and were often civic leaders. Rural poverty is similarly attributable to selective out migration.

2.4.8 Poverty Caused by Cumulative and Cyclical Interdependencies

The previous four theories have demonstrated the complexity of the sources of poverty and the variety of strategies to address it. The final theory of poverty to be discussed is by far the most complex and to some degree builds on components of each of the other theories in that it looks at the individual and their community as caught in a spiral of opportunity and problems, and that once problems dominate they close other opportunities and create a cumulative set of problems that make any effective response nearly impossible, Bradshaw (2000). The cyclical explanation explicitly looks at individual situations and community resources as mutually dependent, with a faltering economy, for example, creating individuals who lack resources to participate in the economy, which makes economic survival even harder for the community since people pay fewer taxes.

This theory has its origins in economics in the work of Myrdal (1957) who developed a theory of “interlocking, circular, interdependence within a process of cumulative causation” that helps explain economic underdevelopment and development. Myrdal notes that personal and community well being are closely linked in a cascade of negative consequences, and that closure of a factory or other crisis can lead to a cascade of personal and community problems including migration of people from a community. Thus the interdependence of factors creating poverty actually accelerates once a cycle of decline has started.

One place where the cycle of poverty is clearly defined is in a book on rural education by Jonathan Sher (1977) in which the focus is on the cycle by which education and employment at the community and individual levels interact to create a spiral of disinvestment and decline, while in advancing communities the same factors contribute to growth and wellbeing. For example, at the community level, a lack of employment opportunities leads to outmigration, closing retail stores, and declining local tax revenues, which leads to deterioration of the schools, which leads to poorly trained workers, leading firms not to be able to utilize cutting edge technology and to the inability to recruit new firms to the area, which leads back to a greater lack of employment.

This cycle also repeats itself at the individual level. The lack of employment leads to lack of consumption and spending due to inadequate incomes, and to inadequate savings, which means that individuals can not invest in training, and individuals also lack the ability to invest in businesses or to start their own businesses, which leads to lack of expansion, erosion of markets, and disinvestment, all of which contribute back to more inadequate community opportunities. Health problems and the inability to afford preventive medicine, a good diet, and a healthy living environments become reasons the poor fall further behind. The cycle of

poverty also means that people who lack ample income fail to invest in their children's education, the children do not learn as well in poor quality schools and they fall further behind when they go to get jobs. They also are vulnerable to illness and poor medical care (Ted, 2006).

A third level of the cycle of poverty is the perspective that an individual's lack of jobs and income leads to deteriorating self-confidence, weak motivation, and depression. The psychological problems of individuals are reinforced by association with other individuals, leading to a culture of despair, perhaps a culture of poverty under some circumstances. In rural communities this culture of despair affects leaders as well, generating a sense of hopelessness and fatalism among community leaders.

This brief description of the cycle of poverty incorporates many of the previous theories. It shows how people become disadvantaged in their social context which then affects psychological abilities at the individual level. The various structural and political factors in the cyclical theory reinforce each other, with economic factors linked to community and to political and social variables. Perhaps its greatest value is that it more explicitly links economic factors at the individual level with structural factors that operate at a geographical level. As a theory of poverty, the cyclical theory shows how multiple problems cumulate, and it allows speculation that if one of the linkages in the spiral was broken, the cycle would not continue (Ted, 2006). Hence, the lack of opportunities to the households due to the structures of the economy and the inadequacies of educational materials and infrastructure as espoused in the structural theory and the economic, political and social discrimination theory have the potential to affect the educational levels of households and deepen their poverty levels.

2.5 Conceptual framework of the systems theory

The present study adapts the system theory for its conceptual framework. The system theory offers a generally appropriate instrument for describing the structures and processes that make up reality. The modern technical scientific view of controlling all manner of processes, systems and organizations receives ample treatment. A game metaphor is used to explain the highly complex system that the world is. Special attention is devoted to the concept of objectives, using which the essence of the behaviour of complex systems can be succinctly described and the gap between the exact sciences and the social sciences bridged. The problem of objectives, values and giving meaning to life is undoubtedly a central issue in the construction of world views. We establish a link between the objectives of survival and humanization and the growing complexity of the world. The problem of objectives is also at the heart of the crisis that faces Western society, lacking as it does a meaningful perspective. In an attempt to break the deadlock and tackle the pressing problems, one would like to argue in favour of integrating objectives, seeking balanced solutions, joining forces and restoring unity. Finally, there is the option to strive for a decent world that cares about life and heeds a transcendental existence.

2.5.1 Systems Theory

Systems theory is an interdisciplinary field which studies a set of interdependent elements coming together as a whole to exhibit a particular behaviour. Systems theory focuses on complexity and interdependence and normally represents systems thinking as a specialization or approach. Bertalanffy (1974) in his early works of the General Systems Theory (GST) refers to a system composing of regularly interacting or interdependent groups of activities/parts that form a whole. At a point in time, it became evident that contemporary issues could not be handled by holistic system approaches where natural science was

involved. This gave rise to the use of systems concepts to distinguish between ‘hard’ and ‘soft’ systems to solve ‘unstructured’ problems related to social activity systems, Checkland (1981).

Checkland and Scholes (1990) further mentioned that selection of relevant systems depends on primary-task or issue-based systems. Primary-task systems deal with institutionalized arrangements whilst issue-based systems deal with informal arrangements. Senge (1990) also provided this succinct description of systems thought: systems thinking is a discipline for seeing wholes. It is a framework for seeing relationships rather than things, for seeing patterns of change rather than static “snapshots”.

Similarly, Macy (1991) indicates a system consisting of a dynamic flow of interactions, integrated at a new level of organization permitted by the interdependence of its parts.

Today, systems thinking is needed more than ever because we are becoming overwhelmed by complexity. Simply put a system is an organized collection of parts (or subsystems) that are highly integrated and has various inputs, which go through certain processes to produce certain outputs, which together, accomplish an overall desired goal. So a system is usually made up of many smaller systems or subsystems. Curtis (1992) used a systems model to illustrate the systems theory by introducing inputs accepted into the system and outputs produced by processes within the system, with intermediate storage and control over the functioning of the system as shown in Figure 2.1.

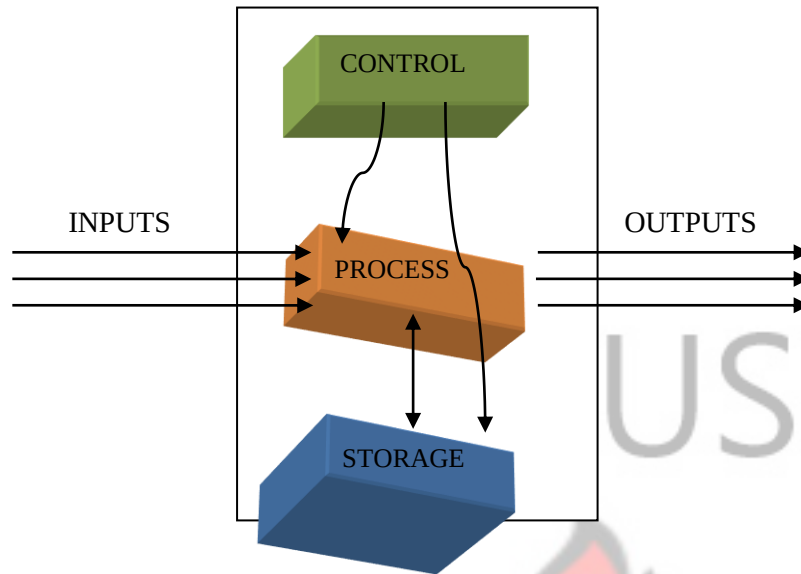


Figure 2.1: A General System Model

Source: Curtis (1992)

Littlejohn (2001) indicates that a system can be said to consist of four things. The first is objects – the parts, elements, or variables within the system. These may be physical or abstract or both, depending on the nature of the system. Second, a system consists of attributes – the qualities or properties of the system and its objects. Third, a system has internal relationships among its objects. Fourth, systems exist in an environment. The environment of a system is what lies outside the boundaries of the system. This environment is usually defined as involving factors that are important in terms of their influence on the system to be considered, but are beyond its control (Arbnor & Bjerke, 1997).

A system is a set of things that affect one another within an environment and form a larger pattern that is different from any of the parts. Figure 2.2 shows a simple systems model. The underlying assumption of a system approach is that the reality is arranged in such a way that the whole differs from the sum of its parts. This implies that not only must the different parts of a system be studied but also their relationships (Arbnor & Bjerke, 1997).

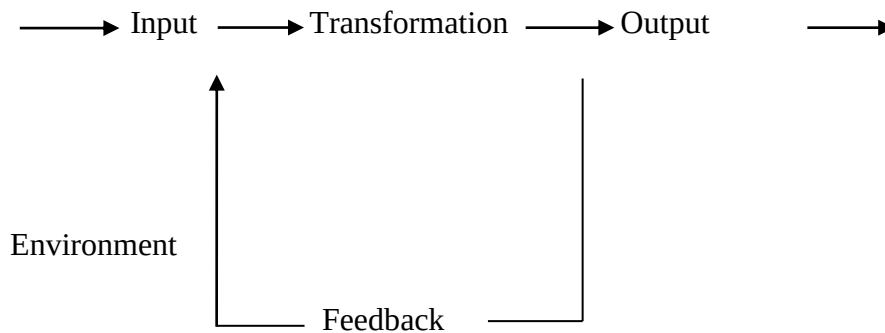


Figure 2.2: Simple Systems Model

Source: Littlejohn (2001)

Littlejohn (2001) further indicates that the fundamental systems-interactive paradigm of organizational analysis features the continual stages of input, throughout (processing), and output, which demonstrate the concept of openness/closeness. Another very important aspect of a high-functioning system is that it continually exchanges feedback among its various parts to ensure that they remain closely aligned and focused on achieving the goal of the system. If any of the parts or activities in the system seems weakened or misaligned, the system makes necessary adjustments to more effectively achieve its goals. This directly represents the situation in formal education that contributes to poverty reduction whereby all stakeholders need to balance their interest such that all educational principles are applied to obtain the expected result (economic growth and poverty reduction).

Systems theory has a large scope of application in today's life, mainly because real world systems are all complex. It provides a new paradigm to think about systems whether simple or complex. A complex system is composed of many parts that interconnect in intricate ways than when it is composed of a group of related units for which the degree and nature of the relationships is imperfectly known. Also, a complex system is a set of elements connected in order to perform a unique function that cannot be achieved by any of the parts alone (Sussman, 2000). Sussman (2000) and (Ferreira 2001) further noted that the analysis of a

complex system aims at understanding the structure and behaviour of inter-related parts. Poverty reduction is an example of a complex system.

Systems Thinking has been defined as an approach to problem solving, by viewing “problems” as parts of an overall system, rather than reacting to specific part, outcomes or events and potentially contributing to further development of unintended consequences (Checkland, 1981). System thinking is process of understanding how things influence one another within a whole and distinguishes itself from the more traditional analytic approach by emphasizing the interactions and connectedness of its different components. Systems thinking is a discipline for seeing the “structures” that underlie complex situations (Aplet et al., 1993). There is the need to balance our propensity to focus on increasing smaller scales of activity with a systems view that includes natural poverty reduction through education.

Further works by Infante (1997) elaborate system perspective model to several system characteristics such as: wholeness and interdependence (the whole is more than the sum of all parts), correlations, perceiving causes, chain of influence, hierarchy, subsystems, self-regulation and control, goal-oriented, interchange with the environment, inputs/outputs, the need for balance, change and adaptability. The above characteristics help to understand a wide variety of physical, social, political, cultural, geographical and behavioural processes, including communication which has become a very important tool in achieving growth and poverty reduction through education and human capital formation.

Aronson (1998) indicated that the approach of systems thinking is fundamentally different from that of traditional forms of analysis which focuses on separating the individual pieces of what is being studied. Rather, system thinking focuses on how the thing being studied

interacts with the other constituents of the system. This means that instead of isolating smaller and smaller parts of the systems being studied, it works by expanding its view to take into account larger and larger numbers of interactions as an issue is being studied. This results in strikingly different conclusions than those generated by traditional forms of analysis, especially when what is being studied is dynamically complex or has a great deal of feedback from other sources, internal or external.

The character of systems thinking makes it extremely effective on the most difficult types of problems to solve: those involving complex issues, those that depend a great deal dependence on the past or on the actions of others, those stemming from ineffective coordination among those involved. Examples of areas in which systems thinking has proven its value include:

1. Complex problems that involve helping many actors see the big picture” and not just their part of it.
2. Recurring problems or those that have been made worse by past attempts to fix them.
3. Issues where an action affects the environment surrounding the issue as in poverty reduction.
4. Problems whose solutions are not obvious.

2.5.2 Open Systems

Social systems such as a school are generally regarded as open systems. Katz and Kahn (1966) have described the features of an open system as comprising the following:

- Energy is transformed, and something new is produced.
- A product is exported into the environment.

- The pattern of energy exchange is cyclical; the product that is exported into the environment is the source of energy for repetition of the cycle of activities.
- The system aims to “maximize its ratio of imported to expended energy.”
- The system exhibits differentiation, a tendency toward increased complexity through specialization.

SYSTEMS

In addition to the degree of openness, systems are also characterized by three important concepts: hierarchy, homeostasis, and purposiveness.

Hierarchy. A system's hierarchy refers to the number of levels within the system. Each successively higher level of the hierarchy encompasses all of the processes at each lower level and is increasingly complex as the number of elements and the relationship among elements increases. As the number of elements, or subsystems, increases linearly, the number of relationships increases exponentially. What is of particular significance from the systems perspective is that the energy required to maintain the relationships increases at an even faster rate (Kenneth Boulding, 1956).

Hierarchies may be natural, for example, birth order in a family, or arbitrary, as is the case in a designed system, such as a school or business. Arbitrary hierarchies require more energy to maintain than do natural hierarchies, and they frequently divert energy from goal attainment. For example, maintaining the age-grade hierarchy in schools can be shown to be counter-productive in many cases.

Furthermore, Kenneth Boulding (1956) has suggested a useful rule of thumb related to hierarchies. For example, if a teacher is having problems in classroom management

(classroom level), we tend to discuss the difficulties in terms of the teacher's behaviours (individual level), but the solution may be more readily found at the school level in the nature of the supportive structures, unrealistic expectations of teachers, or even the notion of a classroom itself. Russell Ackoff (1986) suggests the most elegant way to handle a problem is to dissolve it. The only way an individual teacher can have problems of classroom management is if instruction has been arbitrarily organized into teacher-managed self-contained classrooms.

Homeostasis. A second important characteristic is homeostasis, which refers to self-regulation through feedback mechanisms. Machines are relatively simple systems with few variables, which operate in a stable relationship. Mechanical systems require little feedback from the environment to function. At the other extreme, organic systems are very complex with many variables, which require a great deal of feedback. The larger and more complex the system, the more energy, in the form of feedback, is required to maintain a dynamic balance among elements, Betts (1992).

Purposiveness. A final characteristic of a system is its purposiveness. Some systems have a single, clear goal, which Banathy (1991) classifies as a “unitary” system. Other systems have many, sometimes even conflicting, goals; these are “pluralistic” systems. The study has attempted to treat education as a unitary system, but in reality it is highly pluralistic with many conflicting goals. The compromise that has been reached is by applying old paradigms in a new context are proving to be unsatisfactory, but paradigm paralysis prevents one from seeing what is really needed. By placing systems along a descriptive continuum for each characteristic, one can better differentiate between system types.

Nearly a century of change has left schools playing catch-up, and it will take a whole-system approach to meet society's evolving needs (Batts, 1992). As a system, a school is moderately open. The primary types of energy are financial and intellectual. The school is not a natural system; it operates under a series of sometimes conflicting legal mandates rather than a social mandate that represents a consensus of the participants. Consequently, substantial amounts of systems energy are consumed in maintaining relationships rather than achieving goals.

The inevitable conclusion from the evidence at hand is that the old system is no longer adequate to the task. If we accept this assertion, we must also conclude that no amount of fine-tuning of the old system will produce significant improvement. What kind of a system is needed to produce the breakthrough achievement we are looking for? An analysis of the literature and practice in both educational and management suggests we are moving from deterministic systems toward purpose-seeking systems. In social terms, we are moving from “dictatorial” to “participative” organizational styles (Betts, 1992).

In order to make this kind of transition, it is necessary only to shift perspective from a *one-to-many* toward a *many-to-one* orientation. For example, in education this means a shift from viewing education as a system in which one teacher provides information to many students toward a system in which there are many information resources accessible by one student, of which only one is the teacher. This shift can accurately be characterized as moving from an emphasis on instruction to an emphasis on learning (Betts, 1992).

2.5.3 Conceptual Framework

The critical analysis of the various schools of thought in line with systems and the actor-network theories, drawing from the concepts and various governance models and frameworks have provoked the development of a conceptual framework of poverty reduction through education as presented in Figure 3.4. This framework was adapted from Latour Bruno (2005). This conceptual framework has in common the representation of linkages between states and processes in a system and helps to understand how changes in one part of the system may have implications elsewhere, and to see the resulting outcomes may vary.

Most challenges that confront us today are complex, involve multiple actors, and are partly the result of past actions. Application of systems theory supported by actor-network theory can adequately address the complex problems by applying knowledge which becomes the responsibility of the researcher to reflect on the choices available in the right context.

This conceptual framework is underpinned by six building blocks based on the systems theory which covers all dimensions of poverty reduction namely:

1. Input (Formal Education, Material and Non-Material Resources)
2. Transformation (Training, Human Capital Formation)
3. Output (Employment, Increase earnings,)
4. Expected Outcome (Food, water, shelter, justice, gender, empowerment etc.)
5. Control and Feedback Mechanism (Government Policies, Laws, Public Interest Satisfaction)
6. Structural Theory

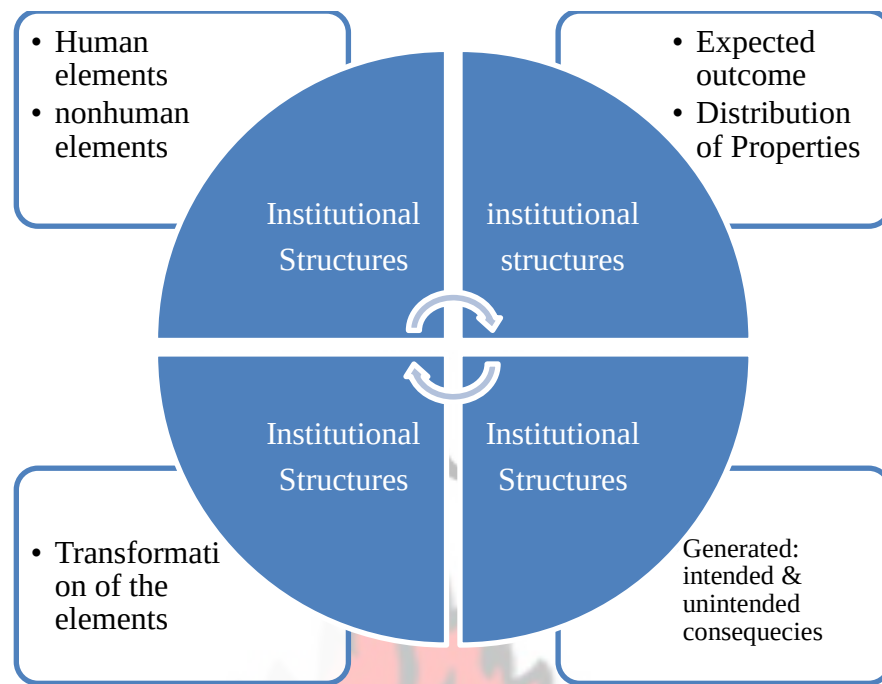


Figure 2.3: Conceptual Framework

Source: Latour Bruno 2005

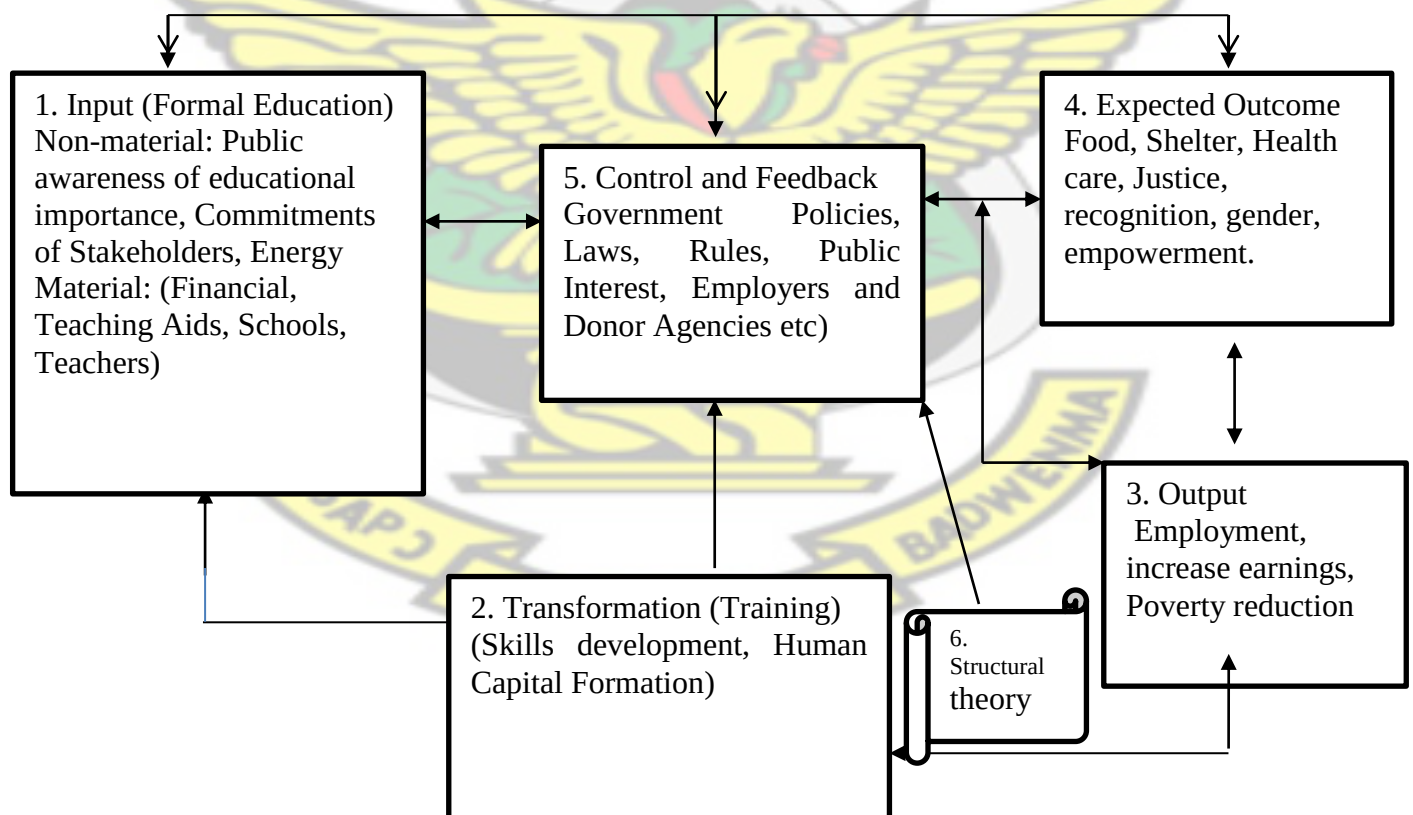


Figure 2.4: A Conceptual Framework of Poverty Reduction through Formal Education

Source: Adapted from Latour Bruno (2005) ANT concept explanation.

The Actor–Network Theory (ANT) is a constructivist approach in that it avoids essentialist explanations of events or innovations (i. e. ANT explains a successful theory by understanding the combinations and interactions of elements that make it successful, rather than saying it is “true” and the others are “false”). On the other hand, it is distinguished from other sociological network theories for its distinct material-semiotic approach.

The first block, input determines the educational resources (material and non-material). All governance principles in education are applied by the material and non-material components of the resources in the input block. This means that transparency, participation, responsiveness, equitability and inclusiveness, rule of law, consensus building, accountability, well-informed and direction will form the basis that will ensure that discrimination, political bias, neglect of the poor and corruption is minimized; the views of minorities are taken into consideration in decision making regarding the educational resources.

The second block, transformation (training processes) handles all the interactions, skills development, human capital formation, carrier development through teaching and learning. The interest and connectedness of stakeholders in the educational process in addition to negotiations, decision-making and actions form the basis of the actor-network theory. During the transformation stage, various interests are protected, some leading to conflicts, unclear instructions, legitimate rights of some stakeholders are abused, promoting resource illegalities and disaffections.

The interactions amongst stakeholders are a very important feature of the concept and hence this block has been emphasized. This reminds stakeholders of their roles and responsibilities,

and reinforces educational principles like inclusiveness and consensus building in general and share information on other global issues bothering on educational resources availability and affordability (e.g. school buildings, teachers, teaching materials, etc.).

This transformation stage deals with protecting the interests of others; those who shout loudest are heard. Others may be silent and take the law into their own hands by conducting illegal activities. The transformation brings about the complexity in educational resource allocation in most countries due to the multi-actors coming into play. A lot of networking amongst stakeholders takes place here, for example, the expectations of stakeholders in education towards training institutions to produce employable workforce for the nation. Stakeholder connectedness at this stage is key and builds positive and negative relationships.

This third block, output, considers the effects after the inputs undergo transformation. The output deals with employment opportunities, increase earnings/income after school and also increased productivity, revenue generation, increased quality and quantity of human resource and the result is poverty reduction.

The fourth block, expected outcome, 'outcome for the poor'. This block in effect deals with the expectations from the stakeholders with respect to whether the whole system objectives has been achieved by the various blocks working together as a whole, and also whether education is effective in reducing poverty. It takes into account stakeholder's satisfaction, equitable distribution of benefits like social services to disadvantage communities, gender empowerment, the poor, revenue generation to the state and sustained supply of human capital for sustainable development and growth of the economy.

The fifth block, control and feedback mechanism as against 'mechanism of access' in Cleaver and Franks (2005), deals with the rules and regulation, laws, international conventions, millennium development goals now (sustainable development goals) and international agreements on the rights to education and the elimination of extreme poverty that help to govern the educational resource allocation. This calls for institutional arrangements and mandates to be reinforced to prevent abuse, ethnic and tribal discrimination and actions that affect human resource development and poverty reduction in disadvantage geographical location in Ghana.

The fifth block also handles a feedback mechanism which serves as a channel for challenges (e.g. public expectations of the output and outcome of formal education and its effect on society.) which are mainly areas which deal with Political, Economic, Social, Geographical and Technological issues encountered during the interactions, connectedness and application of human resource development practices as a result of the transformation process to the output stage back into the input block. This will then trigger the kind of decisions and degree of educational interventions necessary for the expected outcome.

The sixth block, deals with structural theory that controls social circumstances and social forces in determining the life-courses and life chances of people. In order to change these circumstances and relations these structural frameworks must themselves be changed, by policy action.

The last very important aspect of this framework is the actors and agents engaged in poverty reduction activities through education which also reflects the tenets of the actor-network theory. Actors govern the human and material resources and have a serious impact on the

controls and feedback mechanisms and continue to shape their own expected outcome on the resource. The difficulty in all this is that where there is lack of political will, the rule of law will not be applied to the letter and thus the voices of the minority are not heard; the focus and attention of the ruling government may change hence paying little attention to the sector in charge; governments may consider only immediate economic gains and neglect educational concerns of the poor, leading to their exploitation and neglect.

In conclusion, the conceptual framework depicts the assumption that strengthening the educational principles may effectively create a sustainable human resource development where all stakeholders will be satisfied and challenges of poverty could be managed effectively because jobs will be created and earnings/income of household would increase. This will pave the way for economic growth. This framework is applicable to all human resources development towards poverty reduction and thus will help generate valuable insights and contribute to improved policy formulation and strategies for all stakeholders. As part of this study, this proposed framework will be tested using variables on education and poverty to ascertain the significance and effectiveness of education for poverty reduction.

2.6 Education

Evidence of the value of supporting education to achieve development is convincing. A more equitable distribution of education correlates with reduced economic poverty and inequality and faster economic growth (Handley et al., 2009). Handley et al., citing Bruns, Mingat & Rakotomala (2003), noted that, education for girls has positive impacts on women's empowerment and lowers women's risk of being poor. It also generates indirect benefits in terms of the health of their infants and children, family nutrition, immunization rates and educational attainment for their children. Handley et al. also noted that in SSA education for

boys and girls may be the single most effective weapon against HIV/AIDS. Primary education also contributes to improved natural resource management. Education, especially at secondary and tertiary levels, is fundamental for the construction of democratic societies and globally competitive economies. In short, Handley et al., citing Bruns et al., assert that education is a powerful instrument for reducing inequality and poverty and for laying the foundations for sustained economic growth, effective institutions and sound governance.

Despite improvements in universal primary education enrolments, countries in SSA still face numerous education challenges. On average, less than 60% of SSA adults can read and write with understanding (UNESCO, 2005). There are a number of reasons why educational levels are low, for instance, Africa has many under-15s and governments are therefore faced with the challenge of educating increasing numbers of school-aged children within tightly constrained budgets. In poorer households, education is not a priority when simply surviving is a challenge, and children are kept out of school to work; in cases of extreme poverty, children may contribute up to 40% of family income (Handley et al. 2009). These and other constraints mean families cannot afford, or do not prioritise schooling.

2.7 Poverty and Educational level of Household Head

Ghana Statistical Service (GSS, 2014) data show that the distribution of poverty incidence and poverty gap vary by the level of education of the household head. Poverty is higher among households whose heads are uneducated than among those with some education. There has been a clear trend that suggests that the level of poverty reduces as the educational level of the household head increases. More than a third of household heads with no education are poor compared with 15.7 percent of those with a BECE and 8 percent of those with a secondary education. Only three percent of heads with a tertiary education are poor.

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

Household heads who are farmers are not just the poorest in Ghana, but they contribute the most to Ghana's poverty. Household heads engaged as private employees and self-employed in non-agricultural sectors are less likely to be poor than those engaged in the agricultural sector. Over the period, public sector earners have, as a result of the public sector wage rationalization policy (single spine pay structure) implemented in 2009, experienced a reduction in poverty. Generally, female-headed households appear to be better off than male-headed households in terms of poverty incidence. Lack of education is still a hindrance to poverty reduction. Households with uneducated household heads are the poorest in Ghana and contribute the most to Ghana's poverty incidence (GSS, 2014).

Welfare distribution is more disproportionate in Ghana now than in 2005/06; this means that there is increasing inequality as measured by the Gini coefficient. However, whilst some regions showed improvement in terms of the equality in the distribution of welfare, other regions such as Volta and Upper West experienced worsening welfare distribution between 2005/06 and 2012/13. Generally, those in the lower income brackets and the population above the 60th percentile benefited the most from the growth in consumption (GSS, 2014). The growth incidence curve shows a growing middle class in the Ghanaian population.

2.8 Evidence of Poverty Trends in Ghana

Nearly a quarter of Ghanaians are poor whilst under a tenth of the population is in extreme poverty. Ghana Statistical Service (2014) defines persons in extreme poverty as “those whose standard of living is insufficient to meet their basic nutritional requirements even if they devoted their entire consumption budget to food”. Given the extreme poverty line of GH¢792.05 per adult equivalent per year, an estimated 8.4 percent of Ghanaians are considered to be extremely poor. This rate indicates that fewer Ghanaians are extremely poor compared to 2005/06. Revising the extreme poverty line based on the current basket of food consumed by Ghanaians, the incidence of extreme poverty reduced by 8.1 percentage points from the 2005/06 revised extreme poverty incidence of 16.5 percent. More than 2.2 million Ghanaians (based on 2010 projections) cannot afford to feed themselves with 2,900 calories per adult equivalent of food per day, even if they were to spend all their expenditures on food. From the GSS (2014) data, although the absolute number living in extreme poverty has reduced over time, it is still quite high given the fact that Ghana is considered to be a lower middle income country.

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

localities contribute 11.2 percent to the national incidence of extreme poverty, (GSS, 2014). This situation has persisted over a decade.

According to Ghana Statistical Service (2014), Upper West Region has highest poverty rate amongst the ten regions, though the region contributes less than ten percent to the national poverty due to the fact that it is the smallest region in Ghana in terms of population. Indeed, of the 6.4 million persons who are deemed poor in Ghana, only half a million are from the Upper West region, whilst the Northern region with a poverty incidence of 50.4 percent accounts for one-fifth (20.8%) or 1.3 million of the poor in Ghana, making this region the highest single contributor to the level of poverty in Ghana. This pattern does not seem any different from 2005/06, since the Northern Region again was the highest contributor to national poverty (Table 2. 1).

In terms of extreme poverty incidence, apart from the three northern regions, whose rates are higher than the national rate of extreme poverty, all the other regions in the coastal and forest areas have rates lower than the national average. Upper West Region has the highest extreme poverty incidence of 45.1 percent, followed by Northern (22.8%) and Upper East (21.3%), according to GSS (2014). The GSS report cited shows that in terms of contribution to extreme poverty, the Northern Region accounts for slightly over a quarter of the extreme poor in Ghana, far more than any other region. The three northern regions combined account for more than half of those living in extreme poverty (52.7%). The pattern is very similar to the findings in 2005/06, although the three northern regions account for slightly less of the extreme poor in 2012/13 than in 2005/06.

Table 2. 1: Poverty incidence and poverty gap by region (%), 2005/06 – 2012/13

Poverty line = GH¢ 1.314) Region	Poverty incidence (P0)	Contribution to total poverty (C0)	Poverty gap (P1)	Contribution to total poverty gap (C1)	Poverty incidence (P0)	Contribution to total poverty (C0)	Poverty gap (P1)	Contribution to total poverty gap (C1)
Western	20.9	7.9	5.7	6.8	22.9	7.3	5.4	5.0
Central	18.8	6.9	5.6	6.4	23.4	6.4	5.6	4.4
Greater Accra	5.6	3.8	1.6	3.5	13.5	5.9	3.7	4.7
Volta	33.8	12.1	9.8	11.0	37.5	8.7	9.2	6.2
Eastern	21.7	9.3	5.8	7.8	17.8	7.5	4.2	5.2
Ashanti	14.8	12.0	3.5	9.0	24.0	12.6	6.4	9.8
Brong Ahafo	27.9	11.4	7.4	9.4	34.0	9.8	9.5	7.9
Northern	50.4	20.8	19.3	24.9	55.7	21.0	23.0	25.2
Upper East	44.4	7.4	17.2	9.0	72.9	10.9	35.3	15.3
Upper West	70.7	8.4	33.2	12.3	89.1	10.0	50.7	16.4
All Ghana	24.2	100.0	7.8	100.0	31.9	100.0	11.0	100.0

Source: Ghana Statistical Service (2014)

Overall, the dynamics of poverty in Ghana over the 7-year period indicate that poverty is still very much a rural phenomenon, thus reducing rural poverty is a panacea to Ghana's poverty, if poverty reduction is to achieve the desired levels for Ghana as a middle income country. There is a lot of variability in poverty incidence by region. Whilst half of the ten regions (Greater Accra, Western, Central, Eastern, and Ashanti) had their rates of poverty incidence lower than the national average of 24.2 percent, the remaining half had rates higher than the national average; Greater Accra is the least poor region and the Upper West the poorest overall. Though most regions show a reduction in poverty incidence since 2005/06, the pattern of poverty by region has not changed (GSS, 2014).

2.9 Geography and Poverty Traps

2.9.1 Defining Spatial Poverty Traps

Spatial poverty traps are where 'geographic capital' (the physical, natural, social, political and human capital of an area) is inadequate and poverty is high, partly as a result of geographic disadvantage. Spatial poverty traps may be geographically remote (areas that are

far from the centres of political and economic activity), ‘low potential’ or marginal (ecologically disadvantaged areas that have low agricultural or natural resources), ‘less favoured’ (politically disadvantaged areas) or ‘weakly integrated’ (areas that are poorly linked both physically and in terms of communication and markets), Chronic Poverty Research Centre (CPRC, 2004).

The endowments of the area explain a substantial proportion of the poverty of people living in it, controlling for individual and household characteristics, such as age, household composition or ethno-linguistic group (Jalan & Ravallion, 1997; Ravallion & Wodon, 1997). Essentially, location goes a long way to explaining why the people that live there are poor. ‘First nature’ geographic characteristics, such as topography or proximity to the coast, play an important role in the existence of spatial poverty. But, as Kanbur and Venables (2005) highlight, in their book ‘Second Nature Geography’, the geographical distribution of infrastructure and public services – is also critical in explaining spatial disparities. Bird et al. (2010), in their contribution, survey the literature to propose that the following factors contribute to the emergence of spatial poverty traps:

Agro-ecology: An area’s agro-ecological characteristics can influence the ability of residents to meet their basic needs.

- Institutional, political and governance failures: Institutional, political and governance failures, at both national and sub-national levels, can contribute to the emergence of spatial poverty traps. The ‘contract’ between central government and citizens in remote, marginal and less favoured areas might be weak and, even when political will exists, the additional costs and constraints in working in a particular area may compromise the quality of service delivery (Farrington and Gerard, 2002, in Bird et al., 2010).

- **Stigma and exclusion:** Stereotypes based on ethnicity, race, language, religion or culture can lead to the social exclusion of and discrimination against people living in certain geographic locations. This can lead to political instability and insecurity and increasing economic and social inequality. Socially excluded groups may suffer from discrimination in labour, credit and housing, and also in other markets if they attempt to migrate to less disadvantaged areas. They may also be blamed for political unrest and crime, and they tend to be poorly connected to political elites and thus weakly protected.
- **Physical isolation and inadequate infrastructure:** In less favoured rural areas, low population densities can drive up costs of providing basic services and extending physical infrastructure in comparison with more densely populated urban areas, where a more effective political lobby for infrastructure investment may also exist. In addition to these factors, we suggest that crime and violent conflict can also lead to the emergence of spatial poverty traps.

It is estimated that, billions of people around the world live in spatial poverty traps—suffering geographic pockets of poverty, disadvantage and marginalisation. Spatial poverty traps are found in detached, remote rural areas and also in the burgeoning slums of cities. They are home to large numbers of people: around 1.8 billion people live in ‘less favoured,’ ‘low potential’ areas, and around 1 billion people live in slums in the developing world (Pender and Hazell, 2000); World Bank, 2008). The geographic variation in poverty, and in development outcomes more broadly, has sparked significant interest over the past decade. Paul Krugman’s Nobel Prize winning work explores the spatial dimensions of economic activity (Fujita et al., 1999; Krugman, 1991). Jyotsna Jalan and Martin Ravallion analysed the relationship between neighbourhood endowments and household productivity (Jalan &

Ravallion, 1997; 2002). The Chronic Poverty Research Centre (CPRC) examines the relationship between remoteness and long-duration or chronic poverty (CPRC, 2004). Ravi Kanbur and Tony Venables (2005) led a comprehensive research project investigating spatial disparities and development policy. And the 2009 World Development Report titled *Reshaping Economic Geography* is a policy-focused investigation of economic geography and development policy did a similar investigation. All of these works have confirmed that ‘place’ and ‘space’ are significant determinants in development, and worthy of policy attention.

2.9.2 Evidence of Spatial Poverty Traps

Theoretical and conceptual literature establishing spatial disparities has been accompanied by numerous empirical studies that demonstrate the existence of spatial poverty traps. Following Jalan and Ravallion’s original work in China, several studies demonstrate empirically the existence, and drivers, of spatial poverty traps. Bird and Shepherd (2003), in their empirical study of semi-arid zones in Zimbabwe, identified a clear link between high levels of remoteness, low levels of public and private investment and high incidence of chronic poverty. Escobal and Torero (2005) found similar results in Peru: they identify a strong association between spatial inequality and variation in private and public assets. Minot et al. (2003) argue explicitly for the presence of spatial poverty traps, given that interventions have been unable to address the small number of agro-climatic and market access variables that explain roughly three-quarters of poverty in rural Vietnam. In his work on Indonesia, Daimon (2001) described the presence of a spatial poverty trap in which spatial factors, including quality of public goods in a district of residence, remoteness and rural residence, are statistically significant in determining levels of per capita expenditure and poverty rates.

Christiaensen et al. (2005), in their cross-Africa study, found that the impact of economic growth on poverty reduction depends on how remote households are from economic centres and how well they are served by public infrastructure. Drawing on research from Madagascar, Fafchamps and Moser (2004) argue that, in the developing world, isolated regions tend to have more banditry and are more likely to harbour armed terrorist or insurgent groups than better connected areas, and that this can lead to the deepening of spatial poverty traps.

Spatial poverty traps present many challenges to development policy. One such challenge is that they may in fact be the result of development policies or interventions, as Fu (2004) finds in China, where regional disparities are related intimately to the structure of exports and foreign direct investment. The emphasis on a pattern of economic growth associated with foreign direct investment, labour-intensive production and processing-related exports in the coastal regions has attracted relatively mobile and efficient resources from the inland regions, but has offered only limited growth to the sending regions, exacerbating regional disparities. Another challenge spatial poverty traps present is their heterogeneity, which means that varied policy responses are required. For example, Okwi et al. (2006) found that a range of spatial factors explain the differentiation in welfare levels across provinces in Kenya, which therefore require variable policy responses.

2.9.3 Relevance of Spatial Poverty Traps

Why do spatial poverty traps deserve policy attention? First, the scale of the problem is significant. There is a clear and compelling body of evidence demonstrating that spatially determined factors can partially explain the poverty experienced by a large number of people

in the world. The factors may be more responsive to policy interventions than household- and intra-household-level drivers of poverty.

Second, the poverty that people in spatial poverty traps experience is likely to be characterised by compound disadvantage: low returns on all forms of investment, partial integration into fragmented markets, social and political exclusion and inadequate access to public services. They are more likely to be not only income poor (poverty headcount) but also severely and chronically poor (poverty gap and poverty duration) as in Northern Ghana.

Third, the ‘bad neighbourhood effect’ constrains the opportunities of people living in spatial poverty traps and limits poverty exit. This means that, even if an individual in a spatial poverty trap has the entrepreneurial skills, the investment capital and the will to invest in a business, the returns on their investment will be lower than in a better connected area with higher geographic capital and a ‘good neighbourhood effect.’ Such areas are blighted, and enterprise success is harder to achieve. The bad neighbourhood effect extends its blighting effect to investments in human capital too. Parents investing in their children’s education in a spatial poverty trap are likely to receive a poorer return on their investment. Even if their children attend a good school and receive a technically good education, the absence of local and accessible successful role models and good entry-level employment opportunities will make success harder to come by.

Fourth, most national household survey data show a significant regional dimension to the incidence of poverty (Bird et al., 2010), and spatial poverty traps can be found even when a country has experienced economic growth and aggregate reductions in the poverty headcount (CPRC, 2004). So, if reducing poverty, addressing chronic poverty and facilitating more

equitable growth is a desired outcome, understanding and addressing this geographic dimension of poverty is crucial.

Finally, despite an acknowledgement that poverty is higher in certain regions and areas within regions, and the prominence of location in explanations of poverty, this fact has generally received low levels of attention in development policies and debates. Institutions play an important role in explaining poverty. Empirical evidence indicates a relationship between poverty and institutional quality (Chong and Calderon 2000). Quality of institutions which ultimately lead to good or bad governance is the key to poverty alleviation, Grindle (2004). Poor institutions might cause poverty traps (Tebaldi & Mohan, 2010). In an economy, good governance leading to a non-discriminatory judiciary system, control of corruption, system to exercise democratic rights and market-friendly policies facilitates economic development and poverty reduction.

Historically-determined factors along with institutions, fundamental forces like geography and climate influence poverty too (Sachs 2003). Analysis shows that probability of being poor is high for countries at the equator and declines with latitude. The above probability declines to one-fourth at nearly sixty degrees' latitude. This region corresponds to Northern Europe. Thus it was inferred that cool coastal countries with evenly spread rainfall are likely to be more affluent (Bloom et al., 2003). There have been attempts to explain this observational fact. It has been said that geography-related variables (like climate and incidence of infectious diseases) along with historically determined factors (like colonial status and origin of legal system) might have influenced quality of institutions (Tebaldi & Mohan, 2008). Some authors even claim that historically determined factors were influenced by geography. It has been opined that colonization process endogenously acted in response to

certain environmental surroundings (Acemoglu et al., 2001). That process in turn created early institutions accustomed to the colony's geography.

2.10 The Politics and Economics of Colonial Education in Northern Ghana

Crowther et al (1996), define education as a process of training and instruction, especially of children and young people in schools, colleges, universities, etc which is designed to give knowledge and skills. This opportunity of acquiring knowledge and skills through formal education was lacking among the three northern regions of Ghana formerly called the Northern Territories. The contrasting policies of educational development pursued in the Gold Coast may be more meaningfully explained in terms of the political, military and economic superstructure of the colonial administration (Bening, 1990).

In 1898, the Northern Territories were constituted into a subordinate government distinct from the Gold Coast Colony and Ashanti in appreciation of the dynamic and able manner in which Lt. Col H. P. Northcott, the first Commissioner and Commandant, had administered the territory. The scheme of a separate administration directly under the Colonial Office was, however, reluctantly abandoned when Northcott was killed in South Africa in 1899. As the task of governing the Northern Territories could not be entrusted to any other person at the time, the area was made a division of the Gold Coast to be administered by a Commissioner responsible in all matters to the Governor. Lord Selborne, who was not particularly happy about the new scheme, remarked that "if the Northern Territories are simply tacked on to the Gold Coast, good bye to all chances of development. No Governor will ever go near them (and) not a sixpence will be devoted to their development except by the direct orders of the Secretary of State," (Bening, 1990, p. 177)

After this minute was written, immediately, the Colonial Office received a dispatch from the Governor, Sir F.M. Hodgson, which indicated that the territory has no natural resources worth developing:

The Territories as far as is known is destitute of mineral wealth, it is destitute of valuable timbers, and does not produce either rubber or kola nuts or indeed any product of trade value. . . For the present I therefore cannot too strongly urge the employment of all the available resources of the Government upon the development of the country to the south of Kintampo leaving the Northern Territories to be dealt with in future years . . . I would not at present spend upon the Northern Territories a single penny more than is absolutely necessary for their suitable administration and the encouragement of the transit trade (Bening, 1990, p. 178).

As a result this statement by Hodgson succeeding governors before Guggisberg re-echoed similar, and the Colonial Administration failed to initiate any scheme of development in the area.

Bening (1990) states that in a survey of the military potential of the Gold Coast in 1924, it was declared that the inhabitants of Ashanti and the Gold Coast Colony “have no aptitude, or inclination for soldiering.”(p. 178). Major D.S. Merchant, Inspector of Local Forces, also indicated in 1935 that literates from southern Ghana were useful only as bandsmen and signalers; nor, was it in the interest of the military authorities that the rank and file of the army should be literate, armed and enlightened. He insisted that “it should be the first consideration of officers responsible for the enlistment of recruits to keep the percentage of Northern Territories men as high as possible.”(p. 178). Bening explains that limiting the expansion of education in the Protectorate, the Administration ensured that they could always rely on illiterate and young uninformed men for the police and army from the Northern Territories.

Accelerating economic growth and poverty reduction depends ultimately on people; the abundance of natural resources and capital investment alone may not necessarily generate economic growth. The improvement of the level and quality of the human resources is all important and the absence of a system of education capable of producing the men with the right skills and attitudes as a result of the proscription of secondary and technical education impeded progress and frustrated the results expected from investment. Bening (1990) supported this view with an example from 1940, where the officer in charge of the Water Supplies Division of the Geological Department of the Gold Coast responsible for sinking wells in the Northern Territories complained of slow progress owing to shortage of European staff. To speed up the work he had to recruit indigenous staff as foremen but this was not possible because their standard of education was too low, yet people from Ashanti and the Colony did not get on well with those of the Protectorate.

Bening (1990) stated that, Mr. J.A. Braimah attributed all the grievances of the people of the North to the inadequate facilities for primary schools, the lack of opportunities for higher education and the absence of northerners in the political service and the senior grades of other departments. He observed that knowledge is power and unless action was taken, political domination from the South would be accentuated. Mr. S.D. Dombo, Duori Naa, observed that “With only 1% of our people educated, our education was the lowest in the whole of the Gold Coast. He felt there was the need to find means of asking the Government to look into the question of education as well as general development of the Protectorate. Our boys he said should be offered scholarships to the Southern Colleges and abroad in great numbers to learn more and more to provide us with efficient administration in this Region” (Bening, 1990, p. 179).

A Standing Committee formed by the Northern Territorial Council noted that: “Not possessing cocoa or timber nor as far as is known at present, a variety of minerals, the Northern Territories show little signs of the vigorous economic activity characteristic of the more fortunate southern regions. Materially the people are poorer than those of the rest of the country and the general standard of education is lower than in the south. Yet, they are industrious and of great potential ability, and within the limits of their poor resources have shown a remarkable sense of civic responsibility unsurpassed anywhere in the country” (Bening, 1990, p.179).

By 1954, one could count only five primary schools and one mission secondary school in the North which received no government grant-in-aid. In 1955, however, Government agreed to assist the Catholic Mission which was making a valuable contribution towards rapid educational advancement with building materials and equipment (Bening, 1990).

The Standing Committee noted that: “the Northern Territories constant clamour for rapid development of its physical resources and social services is as of right, in view of the fact that the Northern Territories plays, and is going to play, an important part in the Political, Social and economic life of the Gold Coast. And that unless the Government takes heed to this clamour for speedy development in the Northern Territories it will endanger the political and economic relations of the Northern Territories with the rest of the Gold Coast” (Bening, 1990, p.179). The Standing Committee subsequently reviewed the priorities for specific projects of development and reiterated the view that education was the first priority in the development needs of the Protectorate and demanded that the Accelerated Development Plan for Education Should be expedited and expanded.

The Nkrumah administration inherited a lopsided educational system in quality and quantity. Educational facilities were limited and inequitably distributed between the three territorial divisions of the country and the disparity between educational advancement in the North and the South affected the political stability of the Gold Coast and tended to retard the march towards independence. The narrow but practical scheme formulated for the Protectorate by Guggisberg in 1925 and as subsequently modified to suit the economic, political and administrative system of the colonial regime seriously threatened the economic growth and national unity of the emerging independent State of Ghana. The Northern Territories citizens insisted that the one reason for their backwardness was the lack of education and continuously pressed for more facilities in this field. The Prime Minister assured the region of its fair share of development and a mass literacy campaign was initiated in the Protectorate (Bening, 1990).

Despite the inequity in the provision of educational facilities since the colonial era, much has been achieved in the field of education in Northern Ghana since 1951 but a lot still remains to be done and a more radical approach is necessary if a more balanced pattern of growth is to evolve. For, although the literacy rates have increased considerably and the growth of the school-going population has been tremendous, the Northern, Upper East and Upper West Regions still lag far behind the other regions of the country. Government efforts to reduce regional imbalances must be supplemented by local action (Bening, 1990). The chronic and persistent poverty in the Northern Regions of Ghana is attributable to the geography and poverty traps as a result of low school enrollment and other variables in development. GSS (2014) data reveal that, the key area that continues to worsen and is a clear source of concern is that of equity. Ghana's inequality measure, the Gini Coefficient, has risen from 41.9 in 2005/06 to 42.3 in 2012/13, an indication that increasingly, income is shared inequitably

across the population. This is particularly so in the three Northern Regions of Ghana. This level of inequality has adverse implications for Government's efforts at reducing poverty in the country.

2.11 Development, Poverty and Inequality in Ghana

Ghana has made substantial development progress in recent years and has long been thought of as a star performer in sub-Saharan Africa (Coulombe & Wodon, 2007). Through the Economic Recovery Program, launched in the early 1980s, Ghana has made significant progress in renewing economic growth, with growth averaging 4.5% from 1983 through to 2000 and accelerating to 5.6% in 2004 and 6.2% in 2006 (World Bank, 2007). Poverty has fallen, with consumption poverty dropping substantially, from 51.7% (1991/92) to 39.5% (1998/99) and then 28.5% (2005/06) (Coulombe & Wodon, 2007). Asset poverty also decreased, from 45.7% (1997) to 38.9% (2003) (Coulombe & Wodon, 2007). This has resulted in Ghana being on track to reduce poverty by half of the 1990 level, well before the target date of 2015 for the Millennium Development Goals (Higgins, 2009). Ghana also has reasonable expectations of achieving middle-income status by 2015 (World Bank, 2007). Political liberalisation, initiated in the 1990s, has continued, delivering enhanced political rights and civil liberties.

While the economy is growing and poverty levels are declining, Ghana still faces many development challenges. For example, weaknesses in social and human development are reflected in its poor performance as measured by the Human Development Index (138 out of 177 countries, in 2003) compared to its rather better, and improving GDP per capita levels (ranked of 123, also in 2003) (World Bank, 2007).

Inequality poses a significant development challenge for Ghana, and has increased in the last 15 years. This is illustrated by the differences in consumption between the rich and poor. The consumption per equivalent adult at the 90th percentile of the population was in 1991/92 5.2 times higher than at the tenth percentile (Coulombe & Wodon, 2007). Again, Coulombe and Wodon noted that by 2005/06, this ratio had increased to 6.4. They further show that the adjusted Gini index for consumption per equivalent adult also increased substantially, from 0.353, in 1991/92, to 0.394 in 2005/06. They point out that there are multiple drivers of poverty and inequality, and that the probability of being poor is associated with the following characteristics: living in the northern regions (versus other regions); rurality (versus urbanity); being in a household with an older household head (poverty tendency increases with household head age); larger households (versus smaller households); marriage (versus being single, separated or divorced); having low levels of education (the probability of being poor decreases as education of the household head increases); being reliant on agriculture for your livelihood (followed by manufacturing and construction); being self employed in agriculture (followed by wage earners in the private informal sector) and not owning any land (versus land ownership).

2.12 Regional Inequality and Secondary Education

The regional dimension of inequality is significant in Ghana. Poverty is much reduced in Accra and around the Rural Forest area but is still very widespread in the three northern regions (Higgins, 2007).

The developmental North-South divide found in Ghana arises from a combination of circumstances and policies, including the geographical concentration of agricultural resources and activities (such as cocoa, minerals and forest resources) in the Southern regions; the

British colonial legacy of investing more heavily in regions where exploitable resources, such as diamonds, gold, timber and cocoa, were available and cheap to produce and export; the transfer of labour and lack of educational investment from the northern region where labour was sourced and post-colonial investment patterns and development strategies (Langer et al., 2007). As Jebuni, McKay and Shepherd (2007) argue, northern Ghana has essentially ‘lagged’ behind the rest of the country and as a result Ghana has missed significant opportunities to increase the country’s average income and foreign exchange earnings, and also further bed-down national stability. The degree to which regional disparities impact on development outcomes is reflected in the International Development Association, International Monetary Fund and World Bank’s identification of targeting poverty disparities and addressing inequality within and between regions as central to improving Ghana’s economic performance and human development indicators (International Development Association and International Monetary Fund (Higgins, 2009).

Vigorous human resource development is one of three strategic priorities of Ghana’s Growth and Poverty Reduction Strategy II (GPRS II) (National Planning Commission, 2005). The main goal of the human resource development priority is ‘to ensure the development of a knowledgeable, well-trained and disciplined labour force with the capacity to drive and sustain private sector led growth’ (National Planning Commission, 2005). Education is central to the GPRSII, comprising a major sub-sector of the human resource development pillar (National Planning Commission, 2005).

Ghana’s commitment to education is reflected in Ghana’s Free Universal Basic Education policy, which aims to provide two years of kindergarten, six years of primary school and three years of junior high school free to all children in Ghana (Government of Ghana, 2007).

Significant improvements in education access indicators reflect this commitment. Both primary and secondary school enrolment has increased (World Bank, 2007). Nevertheless Ghana's gross and net enrolment figures are still below the sub-Saharan Africa average at the primary level, although they are above average at the secondary level (World Bank, 2006). There is a strong correlation between poverty and low primary and secondary net and gross enrolment rates (Higgins, 2009), and despite free basic education, poorer people are still less able to educate their children.

Education access (measured in terms of gross enrolment rate and net enrolment rate) and education performance (measured in terms of Senior Secondary School Certificate Examination (SSSCE) pass rates) have a regional dimension in Ghana, as Table 1 on p. 67 demonstrates. Table 1 also shows the link between poverty and poor education access and performance indicators.

2.13 Mission Statement and Goals for the Education Sector in Ghana after

Independence

The mission of the Ministry of Education is to provide relevant education to all Ghanaians at all levels to enable them to acquire skills that will assist them to develop their potentials to be productive so as to facilitate poverty reduction and promote socio-economic growth and national development. In fulfilment of this mission, the Ministry of Education Youth and Sports (MOEYS) provides the following:

- a. Facilities to ensure that all citizens, irrespective of age, gender, ethnic, religion and political affiliation are functionally literate and self-reliant.
- b. Basic education for all.
- c. Opportunities for open education for all.

- d. Education and training for skills development with emphasis on Science, Technology and Creativity.
- e. Higher education for the development of middle and top-level manpower requirements.

In providing these Services the ministry is guided by the following principles: Quality Education, Efficient Management of Resources, Accountability and Transparency and Equity (GES, 2004).

2.14 Legal Framework of Education in Ghana

The development of education in Ghana since independence has been and continues to be guided by various education acts and programmes, the most fundamental being the Education Act of 1961. The Education Act of 1961 is the principal legislation on the right to education and its states in section 2(1):

Every child who has attained the School age as determined by the Minister shall attend a course of instruction as laid down by the Minister in a school recognized for the purpose by the Minister.

The 1992 Constitution gives further impetus to the provision of education as a basic right for all Ghanaians. Article 38 sub-section 2 states:

The Government shall within two years after parliament first meets after coming into force of this constitution draws up a programme for the implementation within the following ten years for the provision of a free, compulsory universal basic education.

In 1996 the Free Compulsory Universal Basic Education Programme was launched. This is a 10-year programme (1996-2005) designed to established the policy framework, strategies and activities to achieve free and compulsory basic education for all children of school going age,

GES (2004). At the dawn of the 21st Century, the sector had made a lot of progress in the area of Access, Equity and Content of education in Ghana but a lot still needs to be done, as the statistics shows, there is still a lot of disparity in Access and Equity.

2.15 The Gender Debate on Education and Poverty

Concept of Education

Education is the process of providing information to an inexperienced person to help him/her develop physically, mentally, socially, emotionally, spiritually, politically and economically. That is why at graduation ceremonies one hears the Vice-Chancellors pronounce these words while awarding degrees to their institutions' graduates, "you have been found worthy in character and learning..." In education parlance, it means that the individual has acquired adequate and appropriate knowledge, skills and attitudes and values, known as cognitive, psychomotor and affective behaviours to be able to function optimally as a citizen. These behaviours are the focus of training individuals in institutions of learning.

The planned and systematic training given in an institution of learning is formal education. The programme is organized, planned and systematically implemented. In an informal education, there is no plan and the training is haphazard and incidental (Ocho, 2005). It is a process through which the young acquires knowledge and realizes her potentialities and uses them for self-actualization, to be useful to herself and others. It is a means of preserving, transmitting and improving the culture of the society. In every society education connotes acquisition of something good, something worthwhile.

Education is one of the fundamental rights of individuals. Article 26 of the Universal Declaration of Human Rights, which was adopted by the United Nations General Assembly in December, 1949 stipulated that:

- ❖ Everyone has the right to education. This shall be free at least in the elementary and primary stages.
- ❖ Elementary education shall be compulsory while technical and professional education shall be made generally available.
- ❖ Higher education shall be equally accessible to all on the basis of merit.
- ❖ Parents have a prior right to choose the kind of education that shall be given to their children (Nwangwu, 1976).

Why should everyone have the right to education? The answers to this question are given thus:

1. The child is born helpless and has to rely entirely on parents and other older members of the society to survive and satisfy his growth needs in all their ramifications.
2. The degree and quality of participation in the life of the society depends to a large extent on the degree and quality of her education. This will enable her perform her political and other citizenship duties and exercise the rights pertaining thereto effectively.
3. Since every citizen benefits from the result of the education of her fellow citizen and since every generation receives its education from an older generation, every generation has a duty to reciprocate by educating the generation that comes after it (Ocho, 2005).

There is an adage that says “educate a man, you educate an individual, but educate a woman, you educate a nation” The above summarizes the essence of education to the girl-child and indeed, to every educable human being, and so calls for special attention to be focused on education of the girl-child. No nation can afford to toy with the education of her citizens, especially, the child, who will be the father or mother of tomorrow because education is the

bedrock of all facets of development. Children are future leaders and mothers are guardians of the future, and the first aim of every family and society should be to raise healthy and productive individuals who are physically, psychologically, socially, and mentally well developed. These can be achieved through the education of the girl-child who is the mother of tomorrow (Offorma, 2009).

The child's right to education is a requirement for human dignity. It is unacceptable that in this world of ours, possessing a store of scientific and technical knowledge unprecedented in history there should be, side by side with privileged people commanding access to the resource of knowledge while hundreds of millions, not only of boys and girls, but also men and women, who are denied the possibility of simply learning to read and to write (M'Bow, 1979).

This 'requirement' for human dignity has gained increasing international and domestic recognition over the past three decades. Such recognition led rather belatedly to, inter alia, resolution 1998/33 of the Commission on Human Rights. Education must first and foremost be viewed as a human right and applicable to all ages. Education should not be viewed as a public service. Further, as a human right it is subject to violation. As no right can exist without remedies, those subject to its violation must have corresponding standing to claim those rights and demand remedies (M'Bow, 1979). While states have repeatedly affirmed the indivisibility of all human rights, economic, social and cultural rights have consistently enjoyed a lower level of legal protection than civil and political rights. Protection afforded to education is clearly implicated by this lesser protection.

At least 55 million girls do not attend school. At least twenty-three states risked failing to achieve universal primary education by 2015, as proposed in the Millennium Development

Goals (UNESCO 2006). Despite substantial progress in sub-Saharan Africa and Southern and Western Asia, those states are found in precisely the regions where girls most lack educational opportunities: in Southern Asia 23.5 million girls do not attend school, and in Central and West Africa virtually half of all girls are excluded. To this depressing prospect must be added the 25 per cent of illiterate adults over fifteen years old in Central America, for the most part indigenous girls and women living in rural areas (UNDP, 2003, p. 31).

Whilst these figures reflect the general exclusion from education, exclusion is the experience of a disproportionate number of girls and women. Parity in education, therefore, remains elusive. Eighty-six states are unlikely to achieve parity by 2015, and seventy-six have failed to achieve parity even in primary education (UNESCO 2006). In percentage terms this translates into 56 per cent of the world school-age population living in states that have failed to achieve gender parity in primary education; in the case of secondary education the figure rises to 87 percent, UIS (2005).

It is deeply disturbing that no state has succeeded in eliminating the gender gap in all aspects of social life. Although this is not the place to launch into a discussion as to the various causes, its context is nonetheless briefly considered below. Three points are worth noting. The first is that although gender inequality in education is subject to specific local and regional features, some characteristics are common to many states. Poverty is one such characteristic. Second, ample documentation of gender inequality in education in North America and Europe suggests that poverty is not, however, its single and automatic cause. Finally, parity implies the quantification of registration for school. It does not reflect the concept of 'gender equality' as contemplated in the 1995 Beijing Declaration and Platform of

Action. If the aim of ‘parity’ is to influence policy and legislation, so therefore must there be a broader view of gender equality (UNESCO, 2010).

UNESCO (2010) indicates that, the causes of this inequality are various and partially reflect the long running debate as to the appropriate aims of education, to which passing comment has been made above. The earliest aims of education systems were to ensure the availability of trained industrial commercial labour. Education was consequently viewed as an instrument subordinate to the market and answering the interests of the economy before those of individuals. It was provided as a service rather than as a right and despite the rise and fall of varying educational trends, their legacy, which reflected and validated stereotypes, prejudices and gender inequalities of the time, remains (UN Millennium Project, 2005).

These stereotypes, prejudices and gender inequalities are grounded in what is been referred to elsewhere as patriarchy – a social framework of asymmetries and disparities. One basis for this asymmetry is the imposition of supremacy of men over women, which, in addition to entrenching gender inequality, impedes social mobility, remaining an obstacle to egalitarian relations between men and women (UNESCO, 2010).

2.16 Crucial Issues in Girl-Child Education

This section discusses major and crucial issues in girl-child education. The issues to be discussed include: Access to education, Retention and Dropout, Equity, Enrollment Quality, and Achievement in school subjects.

a. Access to Education

Access simply means the right to education. It is also the opportunity provided for the girl-child to be educated. Access deals with the availability, convenience and ability to be educated. It is true that many governments make provision for the education of their citizens, but the provisions most of the time do not take cognizance of the peculiarities of the girl-child. In that case the girl-child may not have access to education, which is a fundamental human right (Offorma, 2009).

Research has shown that millions of girls do not have access to school despite the concerted efforts to push the cause forward. Okeke, Nzewi and Njoku (2008) identified child labour, poverty and lack of sponsorship, quest for wealth, bereavement, truancy, broken home, engagement of children as house helps, as factors or the clog in the wheel of children's access to education. According to the World Bank (2003), more than 350 million people, over half Africa's population, live below the poverty line of one dollar a day. This implies that poverty, too, excludes children, including the girl-child, from school.

In Ethiopia, girls are sometimes abducted for marriage when they are no more than eight years. In West Africa, they are generally recruited from poor rural families to work as domestic servants in coastal cities or even neighbouring countries. In Afghanistan, they have simply been barred from school under the Taleban regime. According to Guttman (a UNESCO courier journalist), customs, poverty, fear and violence are the reasons why girls still account for 60% of the estimated 113 million out-of-school children, and majority live in sub-saharan Africa and South Asia (Offorma, 2009).

Most of the factors that militate against the girl-child's access to education are sociocultural. Many countries on the African continent rank among the poorest in the world. The on-going HIV/AIDS epidemics, over-crowding in cities, tribal warfare and despotic governments have contributed to the degeneration of the beautiful African land into a human rights catastrophe. At the centre of the devastating situation is the girl-child. Girl-children appear to be the most vulnerable and most undervalued members of the world society. In a region where many are struggling to get enough food and to stay alive, remain out of reach of the various violent rebel armies, and to care for those stricken with various diseases, a basic education, especially for girl children, is low on the list of priorities (Offorma, 2009).

The right to education, which is a fundamental human right, is frequently denied girls in some African countries. A former United Nations Secretary General, Kofi Annan, stated that in Africa, when families have to make a choice, due to limited resources, of educating either a girl or a boy child, it is always the boy that is chosen to attend school. In Africa, many girls are prevented from getting the education entitled to them because families often send their daughters out to work at a young age, so that they can get the additional income they may need to exist beyond subsistence level, and finance the education of sons (Offorma, 2009).

It was reported in BBC News (2006), that African patriarchal societal viewpoint favours boys over girls because boys maintain the family lineage. Additional reasons why girls do not have adequate access to education in Africa include the fact that many have to stay home to nurse relatives with HIV/AIDS. That their mothers were not educated is another reason that makes them feel that their daughters do not need education. Furthermore, some families do not believe in education of girls.

In Ethiopia child brides face early pregnancy, responsibilities to their children and in-laws, and reticence of their husbands, who are usually much older, to let them out of the house. In Uganda, Birungi (2008) cites the rampant fire in schools as examples of the gaps in implementation of the girl-child education. She noted that the previous year's floods in eastern Uganda left many schools in disrepair and these were seen as forms of exclusion. Children in Bundibugyo district cannot access schools during the raining season and 'Government has done nothing to alleviate the problem' (p. 5).

In Kenya, girl-child education is elusive. Mwangi (2004) wrote that a combination of poverty, disease and backward cultural practices continued to deny the girl-child her right to education. Even with the introduction of free primary education, access to education is still remaining a wide dream to many Kenyan children. Despite the introduction of free primary education in the country which accounted for an increase in enrolment, a sizeable number of children, especially girls, still find themselves out of school owing to a number of reasons. The reasons for this are: demands for their labour in the homes such as assisting in looking after their young siblings; child marriage, doing house chores, death of mother, and looking after the sick members of the family.

Offorma (2009) states that, some of the girls are given in marriage against their wish and when they refuse, they are threatened with death. The children are given in marriage at a tender age in quest of dowry from the husbands. But how much is the amount and for how long does it last? The girls lament that because of the setbacks they still did not escape from poverty and their parents had nothing to show for the dowry received.

Some parents justify the denial of girls of their right to education to prevent them from bringing shame to the family through early pregnancy. Yet others believe that women who are at the same level of education as the men are a disgrace to the community because more often than not, they will not get married and if they do, it will be to a foreigner. For such parents, early marriage is the best way to prevent this and at the same time preserve traditions (Offorma, 2009).

b. Retention and Dropout

UNICEF (2003) reported that in Sub-Saharan Africa, the number of girls out of school each year has risen from 20 million in 1990 to 24 million in 2002. Of the 25 selected countries studied, 15 were in sub-Saharan Africa. The criteria studied were: low enrolment rates for girls; gender gaps of more than 10 percent in primary education; countries with more than one million girls out of school; countries included on the World Bank's Education For All Fast Track Initiative and countries hard hit by a range of crises that affect school opportunities for girls, such as HIV/AIDS and conflict. The fifteen countries included Chad, Nigeria, Sudan, Tanzania, Eritrea, Ethiopia and the Democratic Republic of Congo.

The worst hit is Southern Sudan, which has been seriously affected by civil war for decades. UNICEF said to wait for an end to the conflict would be to dismiss the rights of generations of children. UNICEF noted that in the area, as few as 15 percent of primary school-aged children were in school and girls represented only one quarter of the number. By the time the upper primary level was reached, there were hardly any girls left in school and at the territory's foremost secondary school, Rumbek, there was a solitary girl. Only 560 of the 8,000 teachers in southern Sudan are women, which was merely seven percent (Nduru, 2003).

In rural areas, social and cultural patterns combined with relatively poor quality of schooling place girls, their education and development in a disadvantaged and vulnerable position. Girls bear the heaviest burden for household responsibilities, including care of sick parents and siblings, and are first ones to drop out of school.

2.17 Education and Gender Equality in Ghana

In Ghana, education policies do not and have never discriminated against any section of the community on the basis of gender. Boys and girls, men and women are all entitled to equal educational opportunities under the law. However, cultural beliefs and practices as well as inadequate provision of educational facilities have hindered the full participation of girls and women in formal education (GES, 2004). Notably, poverty reduces more with female's heads of households than male's heads in a family (GSS, 2014). This therefore implies that, provision of opportunity through available resources and friendly cultural environment for the education of girls and women is critical in poverty reduction and economic growth.

In keeping with the tenets of the 1992 Constitution of Ghana (Article 28) and in compliance with the children's Act of 1988 (Act 560), issues concerning children continue to receive the attention and concern of the Government. In the education sector, during the period under review, significant development took place towards the improvement of education delivery and in the promotion of children rights.

However, there are still barriers militating against efforts to get girl-children enrolled in school, participate in education and achieve their potential; some of these are:

- a. Extreme poverty in certain parts of the country, especially, the three Northern Regions of Ghana.

- b. The presence of anti-girl-child socio-economic practices, for example, forced marriages, female genital mutilation.
- c. Lack of direct private financial support for girls, especially, at the basic level.
- d. Poor quality of teaching and learning.
- e. Parents unwillingness to allow their children, especially girls walk very long distances to school for safety reasons.
- f. Absence of girl-friendly school facilities in some communities forcing girls to drop out of school during the adolescent age.

The establishment of the girls' Education Unit in 1997 marked a major step in the country's commitment to ensuring the respect for the general principle of securing a non-discriminatory environment and the reduction of gender disparities in the education sector. Further show of commitment to the education of the girl-child by the Government came when in 2001; a Minister of state was appointed for the education of the girl-child. The governments' determination to ensure equity by the year 2005 and equality by the year 2015 in education continues to be reinforced in its policies. The Education Strategic Plan (2003-2015) is very much gender-sensitive with its allocation of funds for the education of girls.

In order to facilitate and advocate for the education of the girl-child, the Girls' Education Unit has developed a programme that promotes the education of the girl-child as a means of attaining gender parity in education, particularly, at the basic level. Additionally, aspects of the curricula have been strengthened through the development of materials devoid of gender bias for the teaching of Life Skills, HIV/AIDS and Child Rights Promotion especially for girls, in schools. Some NGO'S collaborators are assisting by providing small grants to families to undertake income generating projects to enable them send girl-children to school.

The World Food Programme and the Catholic Relief Services also provided food rations to ensure the retention of girls in schools. The government also introduced school feeding programme to deprived schools to enable their retention. School uniforms and sandals have also been introduced to disadvantaged communities in order to encourage children to stay in school. The strategies adopted to promote girls' education have yielded returns. The Gross Enrolment Rate (GER) has improved from 75.5% in 1987/88 to 80% for 2002. The GER gender gap in favour of boys decreased from 10% in 1996/97 to 7% in 2002.

There has been a steady increase in school attendance for over 7 years leading to the last census in 2010. As at 2012/13, the Gross Attendance Rate (GAR) for all localities, including the rural Savannah, is above 100 percent. The introduction of the Capitation Grant, Free School Feeding and Free School Uniforms in primary school could be contributory factors in the high primary GAR. While the NAR in JHS increased between 2005/06 and 2012/13 for girls in Accra that for boys showed a decline. Boys in urban households in the fourth quintile also witnessed a drop in NAR in JHS from 41 percent to 29 percent for the period 2005 and 2013. The rate decreased slightly for girls in urban coastal zone, and for boys in the forest zone between 2005 and 2013. The GAR for JHS by sex and quintile groups increased successively for both boys and girls between 2005 and 2013 with the exception of boys in the fourth quintile group where there was a 3 percent decline in 2013. The GAR for girls in the top quintile is significantly high (GSS, 2014).

The NAR for SHS varies significantly across localities with the lowest attendance rates being recorded for both boys and girls in rural Savannah. Examination of the net attendance rates by standard of living shows an increase over time across all the localities for both boys and

girls. The GAR shows a steady rise over the last 7 years across quintile groups but for girls only in the highest quintile (GSS, 2014).

The government policy on waiving school fees, the Capitation Grant and also the Free School Feeding Programme at the basic school level are likely to continue to act as catalysts in accelerating school attendance at the lower levels. When this happens, it may have a positive spillover effects at the higher levels. In addition, with the Free SHS policy which government announced would commence in 2015/2016 academic year, it is expected that school attendance at the SHS level would improve tremendously in the next few years.

2.18 Summary of Review of Pertinent Literature

The literature reviewed has revealed that the existence of poverty is an ontological reality. It exists in its complexity and requires a variety of strategies to address it. The literature has also revealed that the effect of formal education on poverty reduction cannot be doubted as no country has ever developed without its people being educated. Education is not only essential for poverty reduction, but is also a key to wealth creation (UNICEF, 2000). It is notable that education and poverty are inversely related (Masood, et al., 2011).

The theories of poverty show that poverty is cumulative and cyclical because the individual and the community are caught up in a spiral of opportunity and problems, that once problems dominate, they close other opportunities and create a cumulative set of problems that make any effective response nearly impossible (Bradshaw, 2000). The present study adapts the systems theory for its conceptual framework. The systems theory offers a generally appropriate instrument for describing the structures and processes that make up reality.

The literature has further revealed that the Northern, Upper East and West Regions continue to lag far behind the other regions in the country in poverty reduction, a situation which existed from the time of colonial rule in the Gold Coast (Bening, 1990; GSS, 2014). The GSS data also revealed that, the key area that continues to worsen and is a clear source of worry is equity, because Ghana's inequality measure, the Gini Coefficient, rose from 41.9 in 2005/06 to 42.3 in 2012/13, an indication that increasingly, income is shared inequitably across the population, especially in the three Northern Regions relative to the rest of the country.

On gender equality in education, the literature revealed that the situation is chronic and persistent in many countries but failed to uncover any direct gender biases or discrimination in Ghana. Boys and girls, men and women are all entitled to equal educational opportunities under the Education Act of 1961, section 2 (1). However, inadequate educational facilities, cultural and religious beliefs have hampered equal educational opportunities for boys and girls in Ghana.

The study could not locate any current literature on poverty reduction through formal education in Northern Ghana apart from data from the Ghana Statistical Service surveys which first started in 1987. Most of the conclusions drawn on the effect of education on poverty reduction were either from America, Europe, Asia and other African countries. Such conclusions can only be cautiously applied to the Ghanaian situation because of either methodological, historical, institutional, governmental policies or geographical and cultural differences. The conclusions need to be tested and that is underscored in this study.

Nonetheless, the literature review leads us to three conclusions. First, education can increase an individual's earnings by enhancing productivity and thus can significantly help reduce

poverty. Second, the effect of education on poverty does not work only via income or a productivity mechanism (direct effect) but also through a number of externalities (indirect effect), e.g., through reduced infant mortality, better decisions, improved health and parental education, etc. Third, the effect of education on poverty can vary across regions due to a number of factors including economic circumstances, labour market requirements and the level and quality of education. These three conclusions suggest that education is a key variable in poverty reduction.

Here, an empirical investigation of plausible poverty determinants becomes indispensable. Many research analyses highlight the significance of income and income inequality as determinants of poverty. A significant amount of work on poverty has been done using income-based determinants, but poverty is not confined to income or income differentials. Different studies discuss income variables, income growth, and income inequality as the only possible determinants of poverty, and provide mixed evidence. If the study assumes on the basis of these findings that income variables do not adequately explain poverty reduction, then there is the need to explore other possible determinants of poverty, e.g., lack of formal education. This then makes the study of the “effect of formal education on poverty reduction” relevant and compelling. Education does have an overarching impact on all variables. Education is a vital instrument of enhancing civilization.

In the next chapter, the methodology to be used to investigate the effect of formal education on poverty reduction in the Jirapa District of the Upper West Region of Ghana is discussed.

CHAPTER THREE

BACKGROUND TO THE STUDY AREA AND RESEARCH METHODOLOGY

3.0 Introduction

The previous chapter extensively reviewed existing literature on formal education and poverty. Among the reviewed themes included: Definition and measurement of poverty, theories of poverty, poverty and educational level of household head, evidence of poverty trends in Ghana, Geography and poverty traps, the politics and economics of colonial education in Northern Ghana, the gender debate on education and poverty, among others. The chapter also provided a conceptual and theoretical framework of formal education and poverty, the linkage between formal education and poverty reduction.

The current chapter (Chapter Three) proceeds from the outcome of the reviewed literature to indicate the research paradigm and methodological approach necessary for an effective and successful empirical research. Such processes include research design, sampling technique, data requirement and sources, study variables, instruments for data collection and a framework for data analysis among others. Figure 3.1 shows a map of the study area.

3.1 Profile of the Study Area

The Jirapa District was carved out of the then Jirapa-Lambussie District in 2007 as part of Ghana's decentralization process. The District forms part of the 11 districts in the Upper West Region. The administrative capital of the District is Jirapa. It is located in the North Western corner of the Upper West Region of Ghana. It shares boundaries with Lambussie District to the North, to the West with Lawra District, to the South with Nadowli District, to the South East with Daffiama-Bussie-Issa District and to the North East with Sissala West District. The administrative capital of the District, Jirapa, is located in zone one in the map Figure 3.1. Most of the urban households are found in this zone.

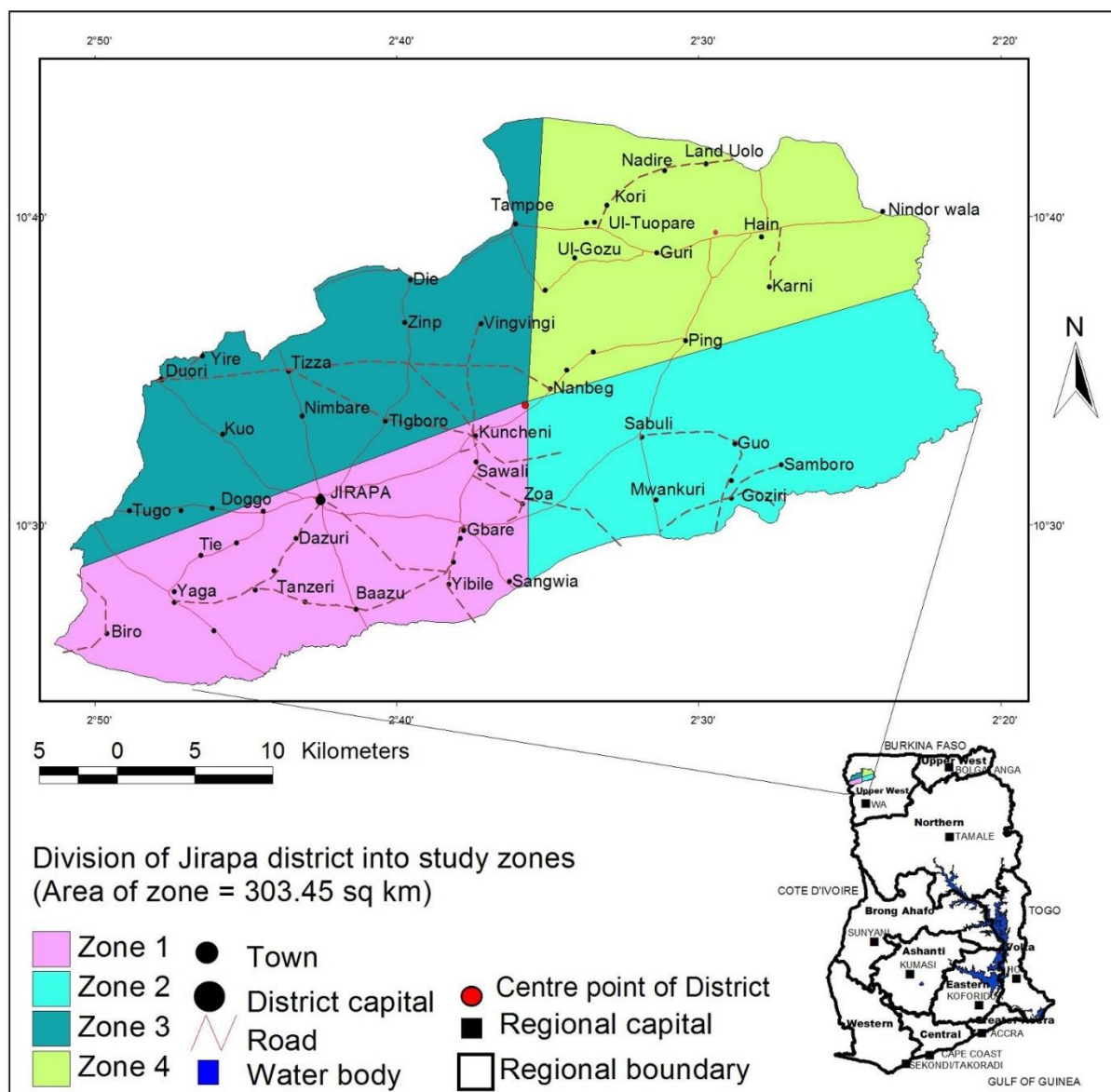


Figure 3.1 Map of the Study District in National Context

Source: Arc (GIS) Geographic Information System Software, 2016

3.2 Physical Characteristics

The Jirapa District is situated in the tropical continental climatic zone with mean-annual temperature ranging between 28 degrees Celsius to 31 degrees Celsius. It experiences a single rainy season which starts in June and ends in October, giving way to a long dry season from November to May. The rainfall pattern is erratic and varies from year to year, resulting

sometimes in intermittent droughts and floods. Generally, the annual rainfall ranges between 900 -1,100mm. (Jirapa District Website). The single rainfall pattern in the District affects farmer's ability to farm all year around. This results in inactivity of majority of the inhabitants in most part of the year. The resultant effect is lack of employment, income and thus increases their poverty level. The increase in poverty level affects their ability to send their children to school.

3.3 Demography and Economic Activities of the District

The 2010 National Population Census put the Population of the Jirapa District at 88,402 distributed across all ages and different sexes. The total population consists of 53.0 percent females and 47.0 percent for males. In relation to the other districts in the region, the Jirapa District is the fourth largest in area and second in terms of population size. With a population size of 88,402 and a total area of 1,667.6 square kilometers, the District has a population density of 58.1 persons per square kilometer. This figure is almost double the regional density of 31.2. Therefore, it means that there is emerging pressure on land and other resources. About 5% of the people live in major towns of the District while a significant 95% live in rural settlements. The District is therefore considered as a rural district. The major tribes are the Dagaabas and Sissala.

About 80% of the people are engaged in agriculture and other related activities. The major crops are millet, maize, sorghum, cotton and groundnuts. Livestock farming is practiced throughout the district (GSS, 2010 - Population Census). Agriculture depends heavily on rainfall in the District as a result of non-availability of irrigation dams. The rainfall pattern is estimated to be among the worst in Ghana. This results in low yield of the major crops produces in the area. The resultant effect is their inability to send their children to school and therefore remain in the poverty trap.

ZONE 1	ZONE 2	ZONE 3	ZONE 4
Jirapa	Sabuli	Tizza	Ullo
Kuncheni	Mwankuri	Die	Ul- Gozu
Nambeg	Guo	Nimbare	Hain
Yibile	Samboro	Tigboro	Ul – Tampoe
Gbare	Nanbeg	Kuo	Ping
Gyanvuuri	Goziri	Vingvingi	Karni
Dazuri		Yire	Nindor Waala
Baaza		Doggo	Ul – Kpong
Yaga		Duori	Ul – Tuopare
Sawali			Kogri
			Chapuri

Figure 3.2 Study Communities in the Jirapa District

Source: Authors Construct, 2017

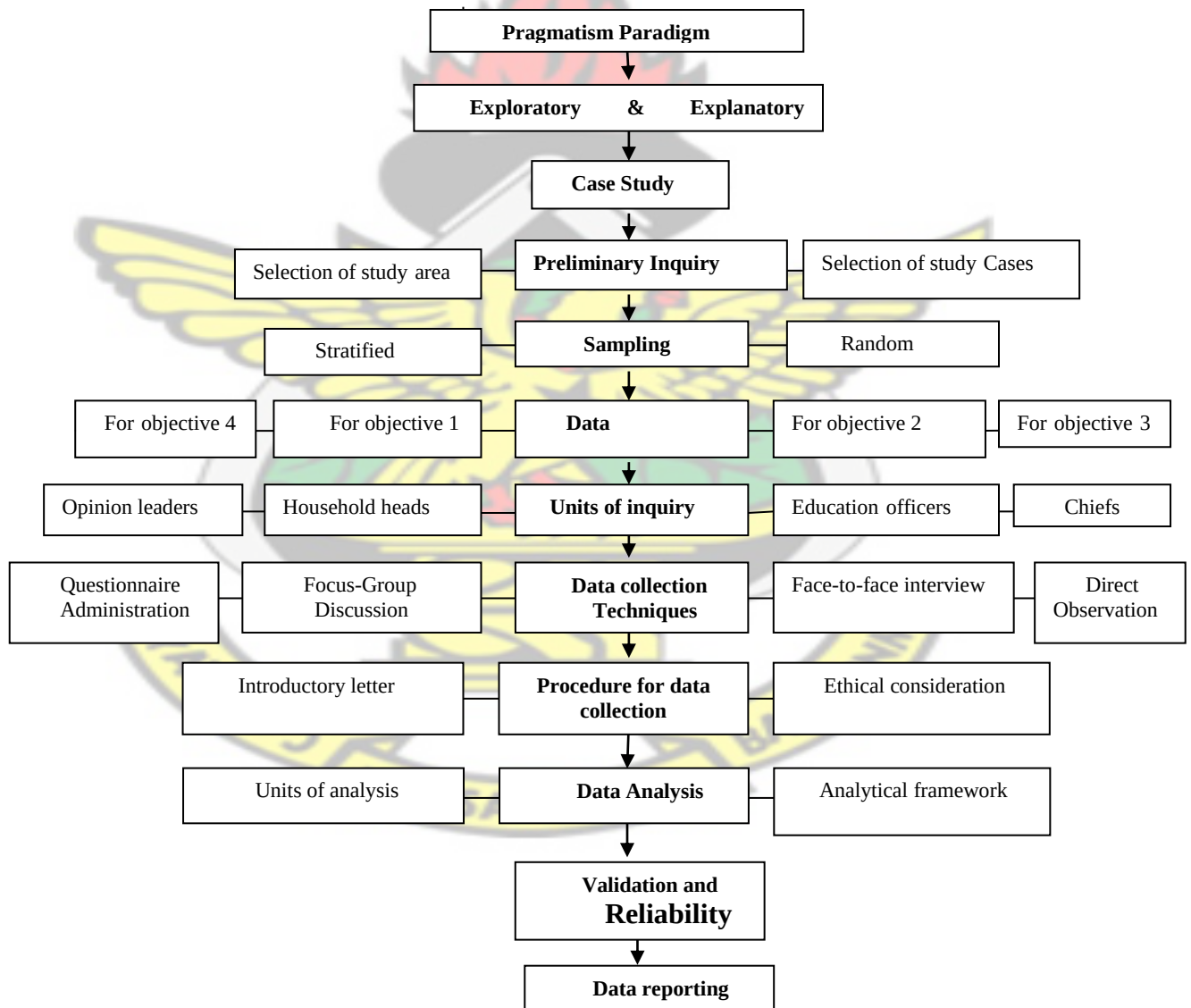


Figure 3.2: A Flow Chart of the Research Methodology

Source: Author's Construct, 2017

3.4 Methodology

3.4.1 Philosophical Worldview

Research methodology is a philosophical stance of worldview that underpins and informs the dimension, shape and style of research (Sapsford & Jupp, 2006). In the words of Creswell (2009) research methodology embodies the overall approach that transcends from the theoretical underpinnings to the collection and analysis of data. Therefore, it can be inferred from the above explanations that philosophical worldview of things is very imperative in designing and approaching a research. This research adopts the pragmatic worldview which provides a balanced point between the inductive and deductive perspective of thinking which offers practical answers for merging different paradigms. This is deemed relevant to the study because it provides an opportunity to holistically understand the issues and provide better analysis of the phenomenon under investigation, since the use of either inductive or deductive approached does not completely address the research problem (Creswell & Clark, 2011). A pragmatic approach ensures that areas to be studies are of interest, and takes into consideration the propriety of the methods and making sure that the findings are used in a more positive manner which harmonises a recognized value system (Creswell, 2009).

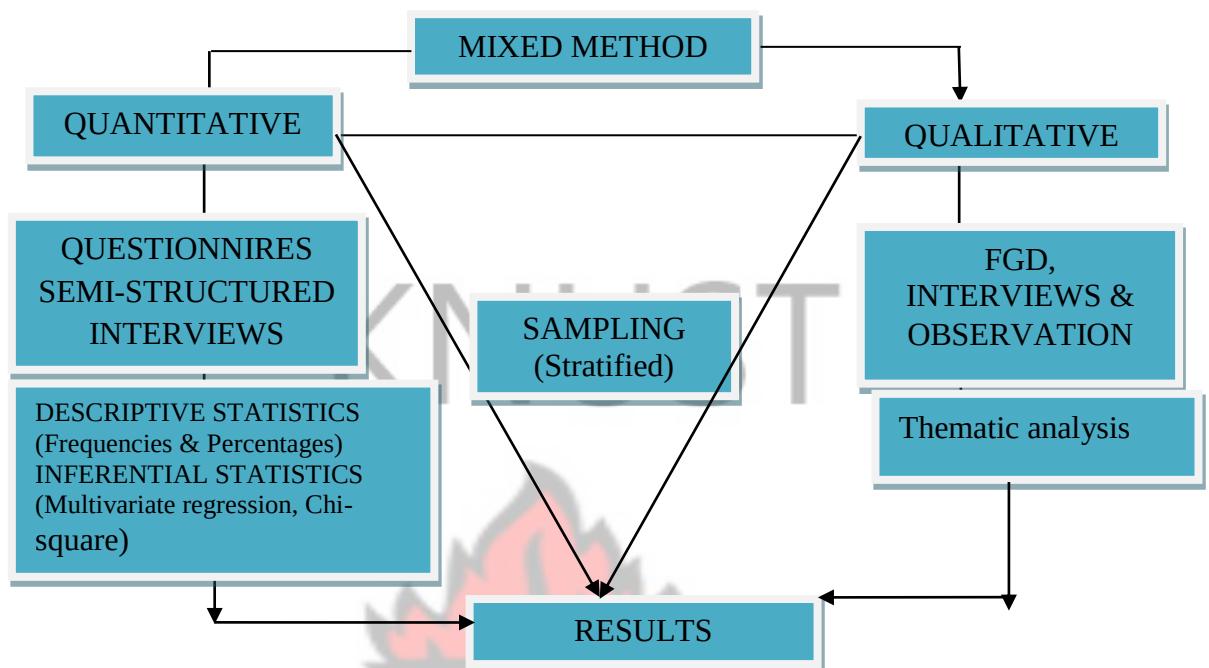


Figure 3.3 Methodological Framework

Source: Author's construct, 2016

3.4.2 Research Approach

There are three major approaches to social science research namely; quantitative, qualitative and mixed method (Creswell & Clark, 2011). This study adopted the mixed method approach which is seen as the most ideal approach for pragmatic philosophical paradigm (Creswell, 2009). This approach provides an opportunity of combining both the quantitative and qualitative approaches in a single study (Creswell & Clark, 2011). The pragmatic research philosophy provides for the adoption of mixed methods of data collection and analysis which provides a window to ensure objectivity and subjectivity in analyzing the perspectives of participants (Saunders et al., 2009). The main reason for the adoption of mixed method approach is the research questions, where the use of either quantitative or qualitative approaches does not provide an opportunity to holistically understand the research problem than the combination of the approaches offers (Creswell & Clark, 2011). The concurrent

strategy of the mixed method approach was employed for the data collection method. This strategy involves the collection of both quantitative and qualitative data concurrently on the field.

3.4.3 Research Design

The case study design was employed for the study. The case study is a research approach that is employed to provide an in-depth understanding of a complex issue under investigation in its real-life context (Yin, 2009). It is an established research design that is extensively used among scientific research disciplines, especially the social sciences. This design is relevant in providing an opportunity to understand and explain causal relationships between and among variables (Yin, 2009). Case study may be approached in different ways depending on the epistemological perspective and orientation of the researcher: it may take an interpretivist approach (qualitative), positivist approach (quantitative) or pragmatist approach (mixed) (Brazier et al., 2008). This particular study employed, used the case study in a mixed method design for the data collection and analysis. The case study design also provide an opportunity to collect data from several sources using varieties of quantitative and qualitative data collection tools to increase internal validity of a study (Stake, 1995).

3.4.4 Methods of Data Collection and Variables Description and Measurement

The study obtained field data from respondents. The data collected were both quantitative and qualitative in nature. Socio-demographic data of respondents were collected. These included age, sex, and household average income levels, size of household, level of education and years of schooling of respondents. The demographic data gave details of the socio-economic status of respondents and whether a household was male headed or female headed. Even though several methods have been used to measure poverty, educational standards is found to

influence most of the poverty determinants in Africa and particularly in Ghana including household possessions and assets, (GSS, 2014). For this reason, the use of education was important for quantitative analysis of relevant information on household's socio-economic status and for that matter its poverty level.

The two main variables identified to assess poverty were the level of education and earnings/income. With regard to income, information on the average monthly income of household heads in the communities selected for the survey was elicited. This allowed respondents to be put into different socio-economic groupings using relative income levels based on the National Minimum Wage of GH¢ 7 a day per person (GSS, 2014). The basis for the classification was to examine how educational levels influence income. The first group defined as the low income earners comprised households whose average monthly income earning falls far below the minimum wage of the country i.e. households that earned below GH ¢210 are described as low income earners. In other words, they form the low socio-economic group, and are hence poor. The second group described as the average socio-economic group comprised those whose average household income earnings falls a little below or above the minimum wage of the country i.e. households that earned between GH ¢210 and GH ¢500 per month.

Lastly, the third group described as the high socio-economic group comprised those whose average household monthly income earnings falls relatively far above the minimum wage of the country i.e. households that earned GH ¢500 or above. In other words, they form the high socio-economic group which the survey described as the income non-poor. Within the low and high socio-economic groups, households that earned below GH ¢200 as their average monthly income were described as households with a very low socio-economic status;

whereas households that earned above GH ₵500 as their average monthly income were described as households with very high socio-economic status.

Data on education levels of respondents were elicited to complement income levels to assess the poverty situation of the rural people and also as basis to assess the level of knowledge of respondents about their human capital formation/manpower development vis-a-vis their employment opportunities. Three levels of education were used for the purpose of this survey to determine levels of knowledge of respondents in the various study communities. The first category of people were those defined as people with lower level of education comprised heads of household with basic education as well as those without formal education.

The second category of people described as people with average educational levels comprised heads of household with different levels of secondary education. Lastly, the third category of people defined as higher educational level group comprised heads of household with different levels or forms of tertiary education. Educational levels of respondents were used because of its potential to influence the income levels of household heads.

With regard to the educational level of households and communities, data on dropouts which are common in the identified rural communities and the frequency of their occurrence were collated based on self-reported cases. These were complemented with data collected from the Jirapa District education office on the educational status of households in the study communities. This information provided the basis to examine the relationship between formal educational status of households and their poverty levels in the communities of the Jirapa District.

3.4.3 Sampling Technique

A four stage multiple sampling strategy was employed for the study. The first stage involved the use of stratified sampling technique to put the district into two main strata namely; rural and urban. The second stage involved the use of purposive sampling with the help of expert advice in selecting the study communities in the Jirapa District. The third stage involved the stratification of the study communities into four zones to ensure equal representation of the study communities. The stratification of the communities into zones was to ensure the representation of all the various communities with varied poverty levels. The fourth and final stage involved the use of simple random sampling strategy in selecting household heads from the four stratified zones of the communities. The table of random digits, facilitated by computer software was employed as strategies for the simple random sampling. This technique allowed the researcher to determine desired levels of sampling precision for each group in a zone, and provided administrative efficiency. The main advantage of the approach is that it is able to give the most representative sample of a population (Hunt & Tyrrell, 2001). The household sampled constitute the sampling units. The sampling in this technique is mainly geographically driven. The sampling frame is also often readily available for each category (urban or rural).

3.4.4 Sample Size

The entire Jirapa District was divided into four zones which were made up of 12,400 households. This is divided into two household areas. Urban households are 2,400 and rural households are 10,000. Using Krejcie and Morgan (1970) recommended sample size determination table, a total sample size of 701 out of the total population of 12,400 was used (Table 3.1). Out of the 2,400 urban household population, 136 household heads were proportionally selected while 565 household heads out of the total rural household population

of 12,400 were proportionally selected for the study using the mathematical formula: $HP/THP * TSS$ where HP is the household population; THP is the total household population and TSS being the total sample size. The division of the entire Jirapa District into zones and further divided into urban and rural households was to ensure that different geographical locations in the District were given equal chance of selection for data collection. It was to ensure representation of communities from different segments of the District for data collection.

The head of each of the selected households acted as the unit of inquiry (respondent) for the household. In addition to the heads of household from whom data was elicited, ten more respondents were randomly selected from each zone, five from among each strata for focus group discussion to compare differences in poverty conditions between urban households and rural households of the study area. The 136 respondents from the urban areas included heads of household with relatively higher level of education, higher income, urban culture which includes, good housing condition, means of transport and access to health care facilities, to help properly assess how differences in educational levels, socio-cultural and geographical variations could affect poverty. Due to the homogenous nature of the rural communities and that of the urban communities in terms of their socio-economic, socio-cultural and demographic characteristics, the sample size of 701 households was considered as appropriate for a thorough investigation into the problem in the study area.

To simplify the process of determining the sample size for a finite population, Krejcie and Morgan (1970), came up with a table using sample size formula for finite population as shown in table 3.1.

Table: 3.1 Table for determining sample size for finite population

<i>Table for Determining Sample Size of a Known Population</i>									
N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	190	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size **Source: Krejcie & Morgan, 1970**

In the sample size determination table, ‘N’ stands for population size and ‘S’ stands for sample size. The table was used for a known population. The population columns are in green and the sample size is in white. The rural population of the study was identified by the Ghana Statistical Service to be 10,000 while the urban population was 2,400.

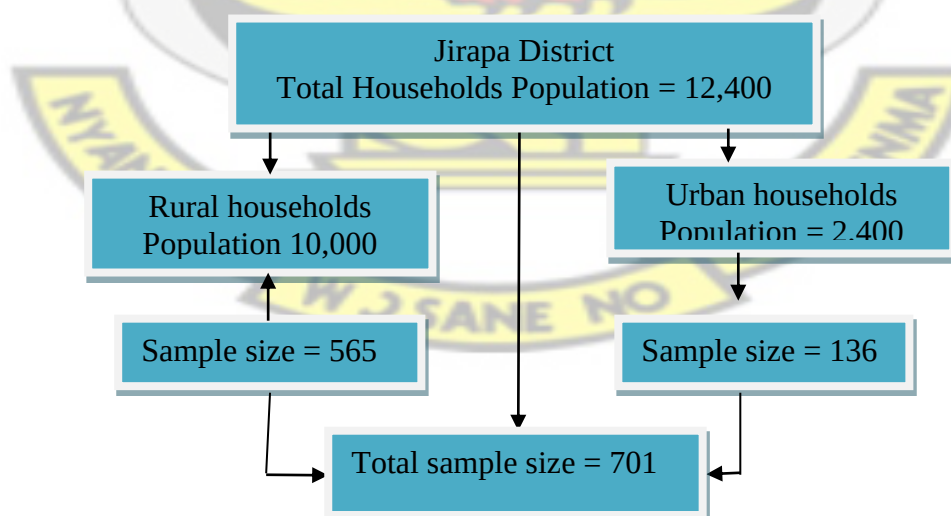


Figure 3.4 Sample Size Determination Diagram. Source: Author's construct based on Krejcie & Morgan, 1970 determination table.

3.4.5 Data Collection

Both primary and secondary sources of data were used for the research. The primary information was elicited from selected respondents living in both the rural and urban areas about their education, access to job opportunities, health care, and their poverty status in terms of income, housing etc. Data from education officers and practitioners directly involved in the provision of educational facilities for both the urban and rural communities were collated for analysis. Other education and poverty related documents were also consulted for information to put the problem in its right perspective. Semi-Structured interview, focus group discussions and non-participant observation were the methods used for data collection.

However, the semi-structured interview was the dominant data collection method on the principal respondents (household heads). Respondents were visited in their houses in the study areas for adequate and relevant data. In each case, questions were semi-structured and read out to respondents in their own local dialect for clarity and understanding of questions. This was necessary to ensure that the data collection process was interactive and participatory, and that respondents understood well the questions to which they were to respond. This was because majority of the people within the target group were illiterate, hence, a direct and face to face interaction with them was to make the data collection more efficient and reliable.

The semi-structured interview method was further used to help avoid call-backs and non-response to questionnaires. Significantly too, it gave heads of household and education officers who were the units of inquiry the opportunity to participate in the survey process. The questions were designed into sections to specifically focus on the various research objectives. The first section covers the socio-demographic characteristics of respondents. The

second section focused on the causes of poverty as perceived by the respondents. The third section looked at the effects of formal education on poverty. The fourth section focused on the effects of formal education on the levels of household vulnerability and isolation. The fifth section emphasized the differential effects of gender and formal education on household livelihoods security. The final section touched on the relationship between formal education and socio-political participation.

Focus group discussions were conducted to supplement data obtained with the semi-structured interview. The discussions involved both male and female heads of household to primarily elicit their perspectives of the effects of formal education on their poverty levels in the study area. Focus group discussions of ten members per group, with five members each from the urban and rural clusters was purposively selected as discussants for the focus group in the study communities. The researcher moderated and controlled the focus group to ensure that members do not veer off from the main issues under investigation. In all, four separate focus group discussions were held in the four zones of the study communities: one focus group discussion for each of the four zones. The focus group discussion was centered on the research objectives. The first section focused on the causes of poverty as perceived by the respondents. The second section looked at the effects of formal education on poverty. The third section focused on the effects of formal education on the levels of household vulnerability and isolation. The fourth section emphasized the differential effects of gender and formal education on household livelihoods. The final section encapsulates the relationship between formal education and socio-political participation.

3.4.6 Data Analysis

3.4.6.1 Quantitative Data Analysis

The data were analysed using both qualitative and quantitative analytic tools. The quantitative data were analysed using both descriptive and inferential statistics. The descriptive statistical tools employed for the study include frequencies and percentages, cross-tabulations and chi-squares. These were presented in the form of tables, graphs and charts for easy identification and quick visual impression. Inferentially, simple linear regression as well as multivariate binary logistic regression was also used to show the relationship between some explanatory and response variables. The regression analysis was also used to test the hypotheses of the study. The IBM Statistical Package for Social Sciences (SPSS software) version 22 was a suitable tool for the analysis of the quantitative data elicited from the primary respondents (household heads). The SPSS software was appropriate because it is a statistical software package that is capable of organizing and analyzing quantifiable data as well as cross- tabulating the relationship between variables. Before the data were analysed, they were carefully cleaned to do away with some errors associated with the entry. Such corrections were possible because of the numbers assigned to each of the questionnaires used for the data collection.

3.4.6.2 Qualitative Data Analysis

The qualitative data were analysed using content analysis. The qualitative data collected from the focus group discussion were recorded using a tape recorder and later transcribed into text. The transcribed text was later analysed based on the content of the responses provided by the respondents during the focus group discussion. The analyses of the content of the data were possible through the grouping of the responses into sections with each section focusing on a particular objective. The sections were used as broad themes that emerged from the focus

group discussion. Direct quotations of some discussants were used to buttress the quantitative responses. For ethical consideration, the names of quotations of the respondents were not used in order to preserve the anonymity of their identity.

3.5 Limitations of the Study

The main problems that affected this research were the conventional limitations of availability of and access to all respondents at the data collection stage. Reconnaissance/preliminary surveys were undertaken so as to facilitate community familiarization and identification of main respondents towards the main data collection. This was because of the relocation of some farmers during the dry season to the south of Ghana for contract farming. As a result, a mop up exercise was conducted to ensure that all respondents were contacted. Some of the problems that hindered the progress of this research were inadequate funds and the quantification of some variables. It was necessary to train research assistants who were remunerated at a cost when they were engaged to assist in the collection of data. During focus group discussions, participants demanded for meals and transportation allowances to their various destinations.

Adequate funds were needed to purchase electronic devices such as audio tapes, and a computer to facilitate the data collection and analysis of the research materials. The research was self-financed through contributions from family members and friend priests. These financial supports helped the researcher to overcome the problems that would have affected the validity of the data and, therefore, the conclusions of the study.

3.6 Summary of Research Methodology

The chapter started with a description of the study area. Then a flow chart was provided that illustrates the research process and methods. Among the topics discussed included the profile of the District, the physical characteristics, demography, philosophical worldview of the study, data collection techniques, analysis among others.

The study adapted the pragmatic worldview that involves the Concurrent Mixed Methods approach, that is, data were collected using quantitative and qualitative methods side by side. This approach allowed the triangulation of quantitative and qualitative data. The purpose of using this method was to confirm, cross-validate, or corroborate findings from quantitative data.

A multiple sampling technique was used to select respondents for data collection. This helped ensure a higher level of representation. The District was divided into urban and rural households and further divided into four zonal areas. This was to ensure equitable representation of both urban and rural households and to ensure that all locations of the District were well represented. The study used the IBM Statistical Package for Social Sciences (SPSS software) Version 22 tool for the analysis of the quantitative data elicited from the study area. The SPSS software was used to organize the survey findings and to cross- tabulate the relationship between variables. The multivariate binary logistic regression was used to analyse the data. The qualitative data were analysed using the content analytic technique. In the next chapter, the results of the study are presented and analysed. The results give meaning to the objectives of the study.

CHAPTER FOUR

POVERTY AND FORMAL EDUCATION NEXUS

4.0. Introduction

This chapter presents the empirical results in relation to the study objectives. Interpretations of the empirical results obtained from the analyses of field data are also presented in this chapter. The demographic characteristics of the respondents from the study field are presented and appropriate implications are drawn from the results.

4.1 Demographic Characteristics of Respondents

4.1.1 Introduction

This section presents an analysis of the demographic characteristics of the respondents. It presents an overview of the demographic characteristics of the study population, such as age and sex, as well as other socio-demographic variables, including marital status and education. The results are presented at both individual and household levels. This helps to create a larger picture about each respondent and the household in which the respondent lives. It also describes some of the outcomes that are used as a basis for analyses in the next chapter. Age and sex are among the most important factors that affect education and poverty. There is a large literature focusing on sex differences in educational attainment and poverty reduction. While different authors argue on the importance of either biological or socio-economic and behaviour factors in these sex differences, it is generally agreed that women live longer than men. On average, women in developed countries live five years longer than men (Waldron, 1983; Verbrugge, 1989). On the other hand, they are the most vulnerable, uneducated and poorer than their male counterparts.

Table 4.1: Proportionate Zonal Sample Size Tabulation

Zones	Zonal Household Population	Proportionate Zonal Sample Size <i>*(HZP/THP x TSS)</i>
Zone 1	5562	314
Zone 2	1718	97
Zone 3	620	35
Zone 4	4500	254
Total Household Population	12400	
Total Sample Size	700	

**ZHP is Zonal Household Population; THP is Total Household Population; TSS is Total Sample Size*

4.1.2 Sex Distribution of Respondents

From Table 4.1, it is generally evident that most of the respondents are males (605) constituting 86.4% of the respondents and females constitute minority of the respondents (95) constituting 13.6% of the respondents. This is understandably so since the study area practises the patrilineal system of inheritance in which the household head is a male in most cases. It is therefore a male dominated household heads society.

Table 4.2: Spatial Analysis of the Sex distribution of respondents

Sex	Zone 1		Zone 2		Zone 3		Zone 4		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Male	257	36.7	86	12.3	31	4.4	231	33.0	605	86.4
Female	57	8.1	11	1.6	4	0.6	23	3.3	95	13.6
Total	314	44.9	97	13.9	35	5.0	254	36.3	700	100

Source: Field Survey 2016

Across the various communities in the zones, the male respondents dominated. Their dominance may be due to the sampling technique that was employed. The sex distribution of respondents is critically important to understand the gender debate of male and female education and the differences in their poverty levels. It is evident that the study area is a patrilineal society where men are generally considered as heads of households. Interactions among the people indicate that women become households heads in the following instances; when a woman is not married, is divorced, loses her husband through death or when woman

becomes the breadwinner as a result of her financial capability due to her educational level and employment status. Reference will be made to this spatial analysis on the effect of female education on the quality of house type in the study area in the subsequent empirical results.

4.1.3 Age Distribution of Respondents

It is also observed that, most of the respondents (31.1%) were in the 30 -39 age group while the minority of the respondents (1.1%) was in the less than 20 age group. However, respondents with age of less than 20 - 29 years were also made up of 25.3% of the respondents while respondents with 40-49 were made up of 19.7% of the respondents. Respondents who were 60 – 69 years constitute 7.1% while 70 -79 also accounted for 1.7% as indicated in Table 4.2.

This background information shows that the study area has more young people and less older people aged 60 or more. This is evident of the fact that a lot of people die before their 60th birthday as a result of poverty that deprived them of the necessary nutrition, good and available health care system. However, in terms of spatiality the data show that, majority of the respondents less than 20 years were in Zone 1 (7 or 1.0%). It is also evident that majority of the respondents who were between the ages of 20 and 29 years were also in Zone 1 (91 or 13.0%). The situation was not different from the respondents who were between the ages of 30 and 39 years (109 or 15.6%).

However, the data showed some level of variations across the various communities with regard to their ages. From Table 4.2, it is evident that majority of the respondent between the ages of 40 and 49 years (55 or 7.9%) were found in Zone 4. This was similar to those between the ages of 50 and 59 years (47 or 6.7%); 70 and 79 years (9 or 1.3%) and those

between 70 and 79 years (9 or 1.3%) who were all located in Zone 4. This means that majority of the respondents in Zone 4 were more older in terms of age than those in Zone 1, 2 and 3.

The implication is that the population in Zone 4 is relatively aging with a long term effect of potentially influencing their activeness in engaging in economic activities (e.g. farming) to improve their economic status and reduce their poverty levels. It also implies that, majority of the respondents in Zone 4 has a longer life span than the other Zones. Information gathered from the chiefs, district education officers and opinion leaders indicates that Zone 4 has more educated people than the other Zones. This could account to their ability to live longer than the other Zones since the probability of having good health care and hygiene would be better than the less educated Zones (table 4.2).

Table 4.3: Age distribution of respondents

Age	Zone 1		Zone 2		Zone 3		Zone 4		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
<20	7	1.0	1	0.1	0	0.0	0	0.0	8	1.1
20-29	91	13.0	27	3.9	11	1.6	48	6.9	177	25.3
30-39	109	15.6	29	4.1	15	2.1	65	9.3	218	31.1
40-49	54	7.7	21	3.0	8	1.1	55	7.9	138	19.7
50-59	32	4.6	9	1.3	0	0.0	47	6.7	88	12.6
60-69	18	2.6	6	0.9	1	0.1	25	3.6	50	7.1
70-79	2	0.3	1	0.1	0	0.0	9	1.3	12	1.7
>80	1	0.1	3	0.4	0	0.0	5	0.7	9	1.3
Total	314	44.9	97	13.9	35	5.0	254	36.3	700	100

Source: Field Survey 2016

4.1.4 Marital Status of Respondents

Table 4.3 shows the marital status of respondents. Most of the respondents sampled were married, representing 86.7%, followed by those who were single (13.3%). This is an indication that majority of the heads of households were married. Geographically, the result indicates some spatial variation in terms of the marital status of the respondents across the

various communities in the Zones. It is quite evident that majority of the respondents in Zone 4 were married (325 or 46.4%). This was followed by those in Zone 1 (184 or 26.3%). Also it was observed that respondents in relatively smaller number of the respondents in Zone 2 were also married with only a few married respondents found in Zone 3 (26 or 3.7%). The situation was quite different with respect to the respondents who were single. Majority of them (46 or 6.6%) were in Zone 1 followed by those in Zone 4 (21 or 3.0). A relatively small number of the respondents who were single formed 1.3% with a frequency of 9.

This means that majority of the respondents in Zone 4 who were married would potentially have more responsibilities than those who were single, especially the Zone 1 communities. It also implies that they were financially able than the other Zones since they were able to marry and keep a family. The results are found in table 4.3.

Table 4.4: Marital Status of respondents

Marital status	Zone 1		Zone 2		Zone 3		Zone 4		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Married	184	26.3	72	10.3	26	3.7	325	46.4	607	86.7
Single	46	6.6	17	2.4	9	1.3	21	3.0	93	13.3
Total	230	32.9	89	12.7	35	5.0	346	49.4	700	100

Source: Field Survey 2016

4.1.5 Employment Status

From Table 4.4 and Figure 4.1, it is evident that most of the respondents are employed (367) constituting 52.4% of the respondents and females constitute minority of the respondents who were employed (333) constituting 47.6% of the respondents. Geographically, out of the 367 (52.4%) who were employed, majority of them were found in Zone 1 (161 or 23%). This was followed by those in Zone 4 (136 or 19.4%). Those in Zone 2 who were employed were 49 respondents (7%). The least number of those who were employed were found in Zone 3 (21 or 3%).

However, with respect to those who were unemployed, majority of the respondents were in Zone 4 (210 or 30%). This was followed by the respondents in Zone 1 (69 or 9.9%). A relatively small number of those who were unemployed were in Zone 2 (89 or 12.7%) with the least number of those unemployed in the various being in Zone 3 (35 or 5.0%). What it means is that majority of the respondents who are likely to be trapped by the incidence of poverty are those in the communities of Zone 4. Because such respondents are unemployed, their source of livelihood becomes problematic with poor living conditions or they end up becoming a burden on others with the potential of drawing those they depend on also into the poverty trap.

Table 4.5: Employment Status of respondents

Employment Status	Zone 1		Zone 2		Zone 3		Zone 4		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Employment	161	23.0	49	7.0	21	3.0	136	19.4	367	52.4
Unemployment	69	9.9	40	5.7	14	2.2	210	30.0	333	47.6
Total	230	32.9	89	12.7	35	5.0	364	49.4	700	100

Source: Field Survey, 2016

4.1.6 Educational Level of Respondents

The study revealed that, out of the total respondents of 700, majority of the respondents (273 or 39.0%) had never schooled, followed by those with tertiary level of education (252 or 36.0%). Those who had secondary level of education (95) also constituted 13.6% while those who had basic level of education (80) also constitute 11.4%. This means that many of the respondents in the study communities are potentially poor. This is because it is argued that formal education influences the poverty level of people. In terms of spatiality, the result shows that majority of the respondents who had basic education were in Zone 4 (53 or 7.6).

Majority of the respondents in Zone 4 (226 or 32.3%) had no formal education. However, the situation is different when it comes to respondents who have secondary and tertiary education

across the various communities in the Zones. Majority of the respondents who has attained secondary education were found to be in Zone 1 (44 or 6.35%). Similarly, majority of the respondents in Zone 1 (154 or 22%) also attained tertiary education. The implication could be that majority of the respondents in Zone 4 are likely to experience the incidence of poverty more than those in Zone 1,2 and 3. This also means that majority of the respondents in Zone 1 had more years of formal education, and hence have the potential of becoming self-employed through the knowledge and skills acquired. This will potentially make them economically active to buy goods and services to improve their quality of life. (Table 4.5)

Table 4.6: Educational levels of respondents

Levels of Education	Zone 1		Zone 2		Zone 3		Zone 4		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Basic	21	3.0	6	0.9	0	0.0	53	7.6	80	11.4
Secondary	44	6.3	10	1.4	8	1.1	33	4.7	95	13.6
Tertiary	154	22	39	5.6	25	3.6	34	4.9	252	36
Not Schooled	11	1.6	34	4.9	2	0.3	226	32.3	273	39
Total	230	32.9	89	12.7	35	5.0	346	49.7	700	100

Source: Field Survey 2016

4.1.7 Size of Household

From Table 4.6, It was realized that majority of the respondents 430 representing 61.4% have 6 to 9 household size whiles 159 representing 22.7% have 2 to 5 household size. It was also realized that 78 representing 11.2% have 10 to 13 household sizes. Also, 19 respondents representing 2.7% have 14 to 17 household sizes. Six (6) representing 0.9% had a household size of between 18 and 21; with those have more than 21 household size being 8 (1.1%). This is an indication of extreme poverty in the study area as many people are not able to afford their own houses but live in a congested household. This precarious situation is considered by the World Bank as unacceptable and inhuman.

In terms of spatial distribution, the results show that majority of the respondents with large household size were found in communities within Zone 4 (Table 4.7). Majority of those who

had a household size of between 2 and 5 (71 or 10.1%) were found in Zone 4. Those with a household size of between 6 and 9 (205 or 29.3%) were also in Zone 4 with the least household size of 24 (3.4%) in Zone 3. It was also observed that majority of the respondents with a household size of 10-13 (47 or 6.7%) were in Zone 4 with a small number of respondents (6 or 0.9%) found in Zone 3. Moreover, majority of the respondents with household of between 14 and 17 were in Zone 4 with no one being in Zone 3 (0 or 0.0%).

Similarly, respondents with a household size of between 18 and 21 (5 or 0.7) were found in Zone 4 with no one (0 or 0.0%) found in Zone 3. The same situation applies to respondents who had more than 21 household sizes. It was observed that those with a household size of more than 21 were found in Zone 4 (4 or 0.5%) with no one found in Zone 3 (0 or 0.0%). This means that majority of the respondents in Zone 4 with high household size are more likely to experience poverty than those in Zone 3. The larger the household size, the greater the dependents and the greater the likelihood the household heads becoming poor because of the huge responsibility in feeding the several mouths.

Table 4.7: Size of households

HHS	Zone 1		Zone 2		Zone 3		Zone 4		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
2-5	55	7.9	28	4.0	5	0.7	71	10.1	159	22.7
6-9	152	21.7	49	7.0	24	3.4	205	29.3	430	61.4
10-13	17	2.4	8	1.1	6	0.9	47	6.7	78	11.2
14-17	3	0.4	2	0.3	0	0.0	14	2.0	19	2.7
18-21	0	0.0	1	0.1	0	0.0	5	0.7	6	0.9
>21	3	0.4	1	0.1	0	0.0	4	0.5	8	1.1
Total	230	32.9	89	12.7	35	5.0	346	49.4	700	100

Source: Field Survey 2016

4.2 Social Darwinism and Structural Theories on the Magnitude of Poverty.

4.2.1 Introduction

This section presents and discusses issues concerning objective one of the study. It discusses the evidence that the social Darwinism and structural theories have a considerable effect on

the magnitude of poverty in the study area. Respondents were asked to indicate their perceptions and experiences based on agreement towards the statement in the questionnaires, using the Five- point Likert-Scale answers. The scale ranged between 1=don't know, 2=disagree, 3=strongly disagree, 4=Agree and 5=strongly agree. The section discusses issues in the area of social Darwinist and structural theories with particular reference to education, politicians and government policies, culture and soil and the general environment of the people that are rooted in either the theories of Darwinism or Structuralism of the study communities.

4.2.2 Poverty comes from Sickness of the Body, Mind and Soul

The study showed that 41.1% of the respondents agreed that poverty comes from sickness of the body, mind and soul as against 22% who disagreed to the fact poverty comes from sickness of the body, mind and soul. This implies that majority of the respondents were of the view that poverty comes from sickness of the body, mind and soul. Figure 4.1 gives a pictorial presentation of the issue.

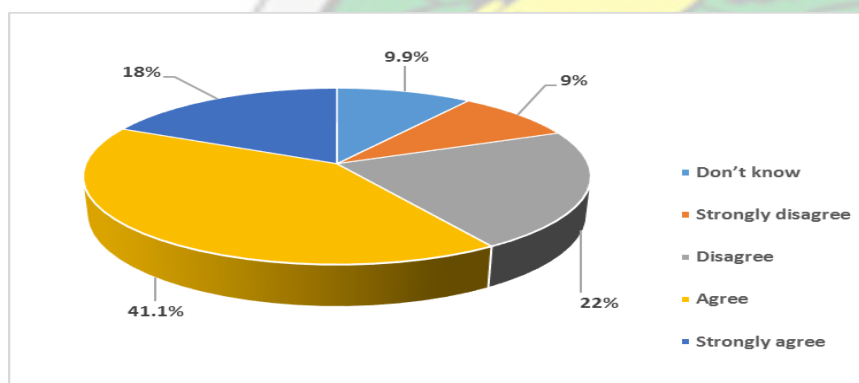


Figure 4.1. Poverty comes from sicknesses of the body, mind and soul

Source: Author's construct based on data from the field survey, 2016.

The result is in support of Darwin's theory which suggests that, the weaker ones (either in body, mind or soul) will certainly lag behind the strongest. The weaker can only be helped

out of poverty through political and institutional structures as posited by the structuralist theories. The study communities can come out from their poverty situation if there is political will power by institutions of the state and other international organizations. However, one social Darwinist argued that governments should not interfere with human competition by attempting to regulate the economy or cure social ills such as poverty. In *Social Statics* (1850) and other works, Spencer argued that through competition social evolution would automatically produce prosperity and personal liberty unparalleled in human history (<http://www.britannica.com/topic/social-Darwinism>, 2016).

However, the study communities argued during the focus group discussion that they deserve to live like any other Ghanaian and, therefore, need the support of those whom they have voted into political office to address their grievances (FGD, 2016). They further argued that “they live in perpetual ‘Nang’ – Poverty, that is, the inability to get one basic needs (FGD, 2016). This situation, whether due to their fault or not is considered unacceptable according to SDG (2015).

4.2.3 Poverty comes from not going to School

The data showed that 45% of the respondents agree that poverty comes from not going to school whilst 21% of the respondents also disagree to the fact that poverty comes from not going to school (figure 4.2). This simply means that majority of the respondents are of the view that poverty comes from not going to school. This is supported of empirical evidence from the Asian countries, for example, Hong Kong, The Republic of Korea, Singapore and Taiwan, who have escaped from poverty as result of their massive investment in education and human capital formation in the 1970s to 1980s (World Bank, 1993).

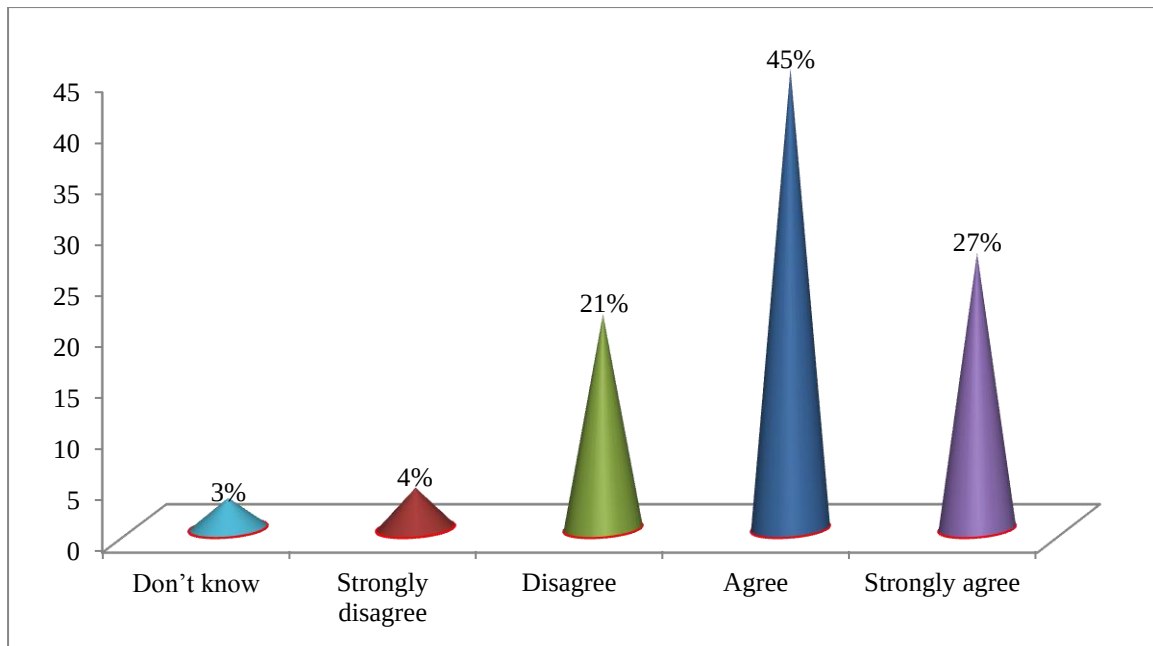


Figure 4.2. Poverty comes from not going to school

Source: Author's construct based on data from the field survey, 2016.

The result is in agreement with empirical studies by Masood, et al. (2011), which concluded that Education and poverty are inversely related. The higher the level of education of the population, the lesser will be the number of poor persons because education imparts knowledge and skills which is supportive in higher wages. The direct effect of education on poverty reduction is through increasing the income or wages. The indirect effect of education on poverty is important with respect to 'human poverty' because as education improves the income, the fulfilment of basic necessities becomes easier and raises the living standard which surely means a fall in human poverty.

Ghana Statistical Service round six reports (2014) supported the view that formal education is a means of poverty reduction by relating poverty to lack of formal education in the northern part of Ghana. This is also in line with World Bank (2016) report which, in turn, is supported by the SDGs' top development priorities for poverty reduction as stated by Nicolai et al.

(2016). It also supports Bening's (1990) assertion that the deliberate neglect of late introduction of formal education in the northern part of Ghana by the colonial governments led to the chronic poverty trap of that part of the country. Education is a structural issue and therefore needs policy direction from government to achieve its goals of human capital formation and poverty reduction.

4.2.4 Poverty comes from Politicians and Government Policies

Figure 4.3 shows that 40% of the respondents also agree to the fact that the poverty comes from politicians and government policies as against 11% who disagree that poverty comes from politicians and government policies. This simply means that majority of the respondents agreed to the fact that poverty comes from politicians and government policies.

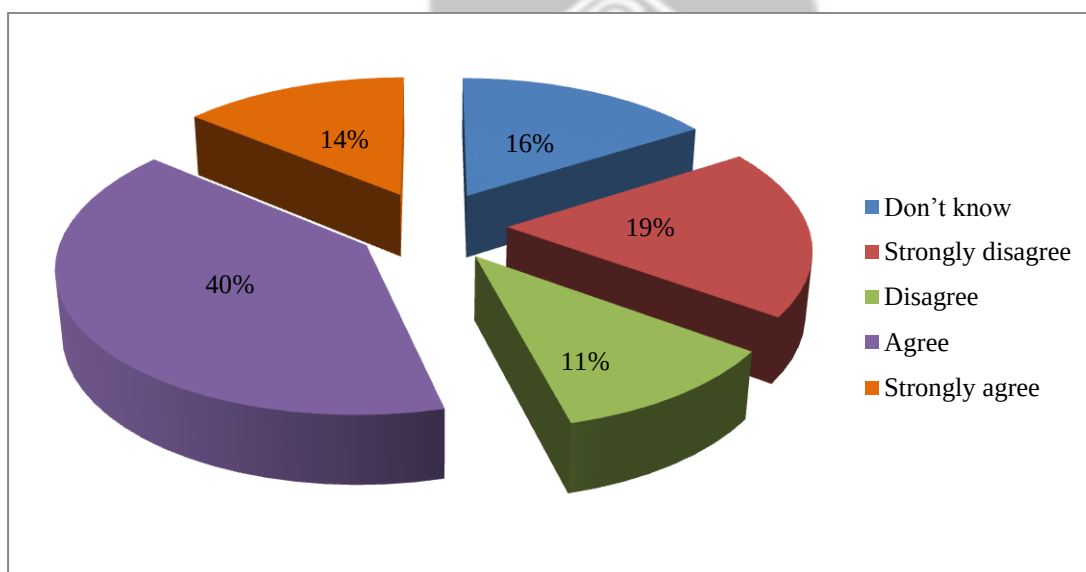


Figure 4.3: Poverty comes from politicians and government policies

Source: Author's construct based on data from the field survey, 2016.

This result supports the views of the structuralist theories which emphasizes the importance of social and political circumstances and social forces in determining the life-courses and life chances of people. Economic growth, labour market opportunities, educational provision,

social security systems and many other structural features of society provide a powerful contextual framework in which our living standards and social and political relations are created and recreated. And, as many social policy commentators have argued, in order to change these circumstances and relations these structural frameworks must themselves be changed, by policy action (Alcock, 2006). This is also in support of Bening's (1990) assertion that the Northern Territories (now the three Northern Regions) constituted a labour reserve zone and the people were therefore, not given the opportunity for formal education as was the case in the rest of the colony. This has persisted in contributing to creating the uneven development in the northern part of Ghana as against the rest of the country.

4.2.5 Poverty comes from our Culture

Figure 4.4 shows that 56% of the respondents agreed to the fact that poverty comes from our culture while 17% also disagreed towards the fact that poverty comes from our culture. This simply means that majority of the respondents agreed to the fact that poverty comes from our culture.

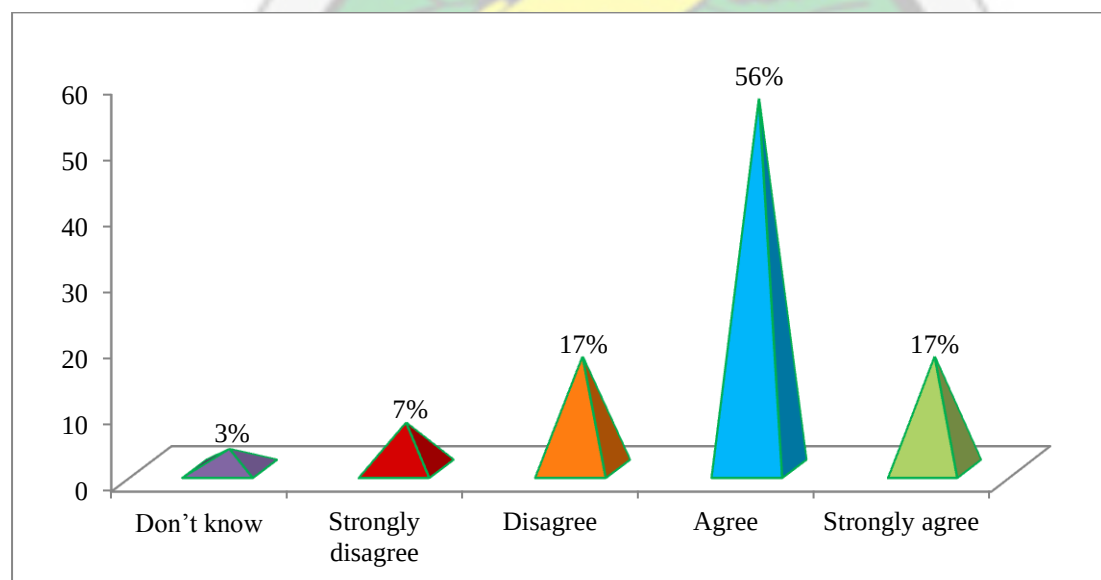


Figure 4.4: Poverty comes from our culture

Source: Author's construct based on data from the field survey, 2016.

This is supported by the theory of culture that suggests that poverty is created by the transmission over generations of a set of beliefs, values, and skills that are socially generated but individually held. Individuals are not necessarily to blame because they are victims of their dysfunctional subculture or culture (Ted, 2006). Culture is socially generated and perpetuated, reflecting the interaction of individual and community. This makes the “culture of poverty” theory different from the “individual” theories that link poverty explicitly to individual abilities and motivation. Technically, the culture of poverty is a subculture of poor people in ghettos, poor regions, or social contexts where they develop a shared set of beliefs, values and norms for behaviour that are separate from but embedded in the culture of the main society (Ted, 2006).

Ted (2006) indicated that, the 19th century social intellectuals developed a full attack on the individual theory of poverty by exploring how social and economic systems overrode and created individual poverty situations. For example, Marx showed how the economic system of capitalism created the “reserve army of the unemployed” as a conscientious strategy to keep wages low. Later Durkheim showed that even the most personal of actions (suicide) was in fact mediated by social systems. It can be understood that social systems become a culture by themselves in a defined community after some period of time. Discrimination was separated from skill in one after another area, defining opportunity as socially mediated.

It was realized during the focus group discussion that majority of the rural households prefer boys education to that of girls even though by law there is equal opportunity for both girls and boys education as can be noted from the legal framework for Education in Ghana. The girl’s place, as they is the kitchen. This is in contrast to the 1992 Constitution of Ghana which

gives impetus to the provision of education as a basic right for all Ghanaians. Article 38 sub-section 2 states:

The Government shall within two years after parliament first meets after coming into force of this constitution draws up a programme for the implementation within the following ten years for the provision of a free, compulsory universal basic education.

In 1996 the Free Compulsory Universal Basic Education Programme was launched. This is a 10-year programme (1996-2005) designed to establish the policy framework, strategies and activities to achieve free and compulsory basic education for all children of school going age, GES (2004).

This is certainly not the case as the culture of the people in the rural areas of the study communities discriminate against girl child education which eventually makes women the poorest of the poor in the communities. This is similar to what happened in the Kenyan culture where girl-child education is elusive. Mwangi (2004) wrote that a combination of poverty, disease and backward cultural practices continued to deny the girl-child her right to education. Even with the introduction of free primary education, access to education is still remaining a wide dream to many Kenyan children. Despite the introduction of free primary education in the country which accounted for an increase in enrolment, a sizeable number of children, especially girls, still find themselves out of school owing to a number of reasons. The reasons for this are: demand for their labour in the homes such as assisting in looking after their young siblings; child marriage, doing house chores, death of mother, and looking after the sick members of the family.

It can be deduced that poverty reduction will be an elusive dream if the structure of the culture of the people in the study communities remains the same, as supported by a participant at the focus group discussion (FGD, 2016) who stated, as part of his contribution in the focus group discussion that our culture still remains a stumbling block in achieving a reasonable poverty reduction if formal education still remains a male dominated area even though females are the majority of the population. Ocho (2005) opined that, education is a process through which the young acquires knowledge and realizes her potentialities and uses them for self-actualization, to be useful to herself and others. It is a means of preserving, transmitting and improving the culture of the society.

In every society education connotes acquisition of something good, something worthwhile. There is an adage that says “educate a man, you educate an individual, but educate a woman, you educate a nation” The above summarizes the essence of education to the girl-child and indeed, to every educable human being, and so calls for special attention to be focused on education of the girl-child.

No nation can afford to toy with the education of her citizens, especially, the child, who will be the father or mother of tomorrow, because education is the bedrock of all facets of development. Children are future leaders of tomorrow and mothers are guardians of the future, and the first aim of every family and society should be to raise healthy and productive individuals who are physically, psychologically, socially, and mentally well developed. These can be achieved through the education of the girl-child who is the mother of tomorrow, (Offorma, 2009).

4.2.6 Poverty comes from the Soil and the Generally Harsh Environment

Figure 4.5 shows that 69% of the respondents agree towards the fact that poverty comes from soil and general difficult environment whiles 9% disagree that poverty comes from soil and general difficult environment. This simply means that majority of the respondents agree to the view that poverty comes from soil and general difficult environment.

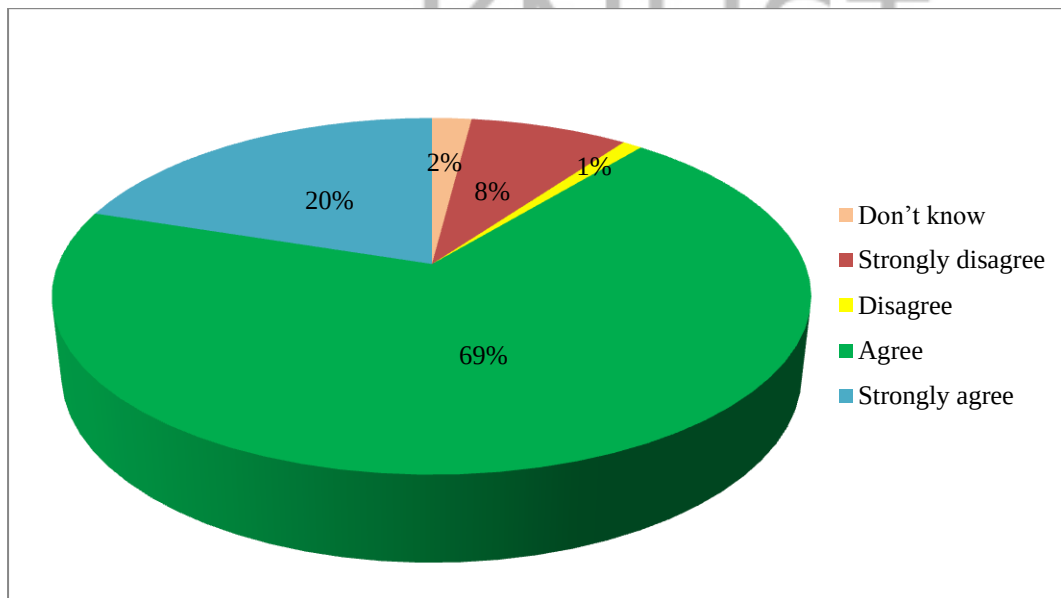


Figure 4.5: Poverty comes from soil and the general harsh environment

Source: Author's Construct based on data from the field survey, 2016.

Soil and the environment are essentially a spatial poverty trap issue in the Jirapa District as can be physically observed at first hand. The District has only one rainy season which is normally not predictable and sufficient for crop cultivation as the main economic activity of majority of the people. 'First nature' geographic characteristics, such as topography or proximity to the coast, play an important role in the existence of spatial poverty. But, as Kanbur and Venables (2005) highlight, 'second nature geography' – the geographical distribution of infrastructure and public services – is also critical in explaining spatial

disparities which is an observable characteristic of the study communities in the Jirapa District.

Bird et al. (2010), in their contribution, surveyed the literature to propose that the following factors contribute to the emergence of spatial poverty traps, Agro-ecology, an area's agro-ecological characteristics, can influence the ability of residents to meet their basic needs. Institutional, political and governance failures, at both national, regional and district levels, can contribute to the emergence of spatial poverty traps. The 'contract' between central government and citizens in remote, marginal and less favoured areas like Jirapa District, might be weak and, even when political will exists, the additional costs and constraints in working in a particular area may compromise the quality of service delivery as stated by (Farrington and Gerard, 2002, in Bird et al., 2010) and in support of the observable situation in the study communities.

Following Jalan and Ravallion's original work in China, several studies demonstrate empirically, the existence, and drivers, of spatial poverty traps. Bird and Shepherd (2003), in their empirical study of semi-arid zones in Zimbabwe, identified a clear link between high levels of remoteness, low levels of public and private investment and high incidence of chronic poverty. This in support of the story of the people in the Jirapa District during one of the focus group discussions where participants tried to explain the reasons for the chronic poverty in the area. The discussants linked their poverty situation to; inadequate formal education, lack of private and public investment, unfavourable weather conditions and political failures to address the concerns of the people.

Spatial poverty traps present many challenges to development policy to the study communities and will remain so until there are structural and institutional political intervention. Generally, respondents were asked to identify the major cause of poverty in their respective communities. The various responses as perceived by the respondents were analysed and the results are represented in Figure: 4.6.

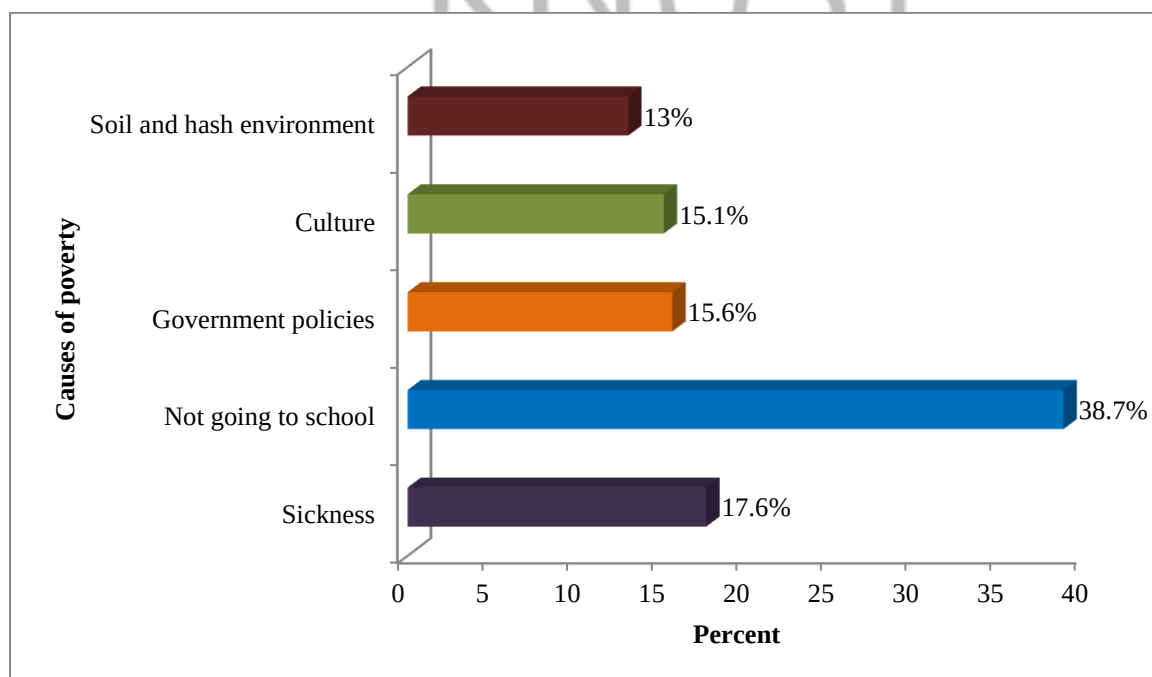


Figure 4.6 General Causes of Poverty

Source: Author's Construct based on data from the field of study, 2016.

From the results, it is clear that education has a major significant impact on the poverty levels of people. This means that even though the causes of poverty is multi-dimensional, lack of formal education is perceived as the major cause of poverty among rural and urban households in the Jirapa District.

Masood et al. (2011), state that Education and poverty are inversely related. The higher the level of education of the population, the lesser will be the number of poor persons because education imparts knowledge and skills which is supportive in higher wages. The direct effect of education on poverty reduction is through increasing the income or wages. The indirect effect of education on poverty is important with respect to 'human poverty' because as education improves the income, the fulfilment of basic necessities becomes easier and raises the living standard which surely means a fall in human poverty. In the focus group discussion in Tizza, in Zone 2 of the study area, a participant remarked that:

a generation of lack of formal education results in a generation of extreme poverty. We are trapped in poverty and therefore need external support to come out of our chronic poverty situation. Schools are now available in some of the communities and classes a full at the lower primary but they drop out in later years to help their families in farming or go to Brong Ahafo Region for contract farming for the part of boys and potters for girls in Kumasi and Accra (FGD, 2016)

Data from Ghana Statistical Service reports (2014) highlights the view that formal education is a means of poverty reduction when it related poverty to lack of formal education in the Northern part of Ghana. This is also in line with World Bank (2016) report and supported by the SDGs top development priorities for poverty reduction as stated by (Nicolai et al., 2016). It is also in support of Bening's (1990) that the deliberate neglect of early introduction of formal education in the northern part of Ghana by the colonial governments results to the chronic poverty trap of that part of the country. Educational facilities are too capital intensive for the poor to provide. It is therefore a structural issue that needs policy direction from government to achieve its goals of human capital formation and poverty reduction.

4.3. Effect of Formal Education on Occupancy of type of dwelling unit

This section of the chapter presents and discusses the empirical results on the effect of formal education on house type. The results are presented in Table 4.7.

Table 4.8. Empirical Results on the Effect of Formal Education on Type of dwelling unit

Variable	Coefficient	Standard Error	Wald-Statistic	Marginal Probability	P-value
Basic	-.117	.364	.103	.890	.749
Secondary	.713*	.402	3.142	2.039	.076
Tertiary	1.077***	.332	10.505	2.937	.001

*denotes statistical significance at the 10 percent level, **denotes statistical significance at the 5 percent level and ***denotes statistical significance at the 1 percent level. $\chi^2(8, N=636)=42.747, p=.007$

Source: Author's construction based on data obtained from the field of study, 2016.

The results show statistically insignificant difference in the probability of occupying more modernized housing type (detached, semi-detached and flat) between the non-educated without income-generating asset and those with basic education regardless of income, household size and asset holding (ownership of livestock and crop farm) even at the 10 percent level of significance. In other words respondents with basic education have equal chance of occupying more modernized house type with uneducated. This is intuitively plausible since individuals educated to the basic level earn meagre amount of income, thus experiencing a constraint to occupy more modernised housing structure. However, some of the uneducated learn trade early so that they are able to migrate to the level of individuals with basic education in terms of income levels and other livelihood conditions. Thus, there are negligible differences in living conditions especially with respect to the housing structure they occupy, between the uneducated and those with basic level education.

Another revelation by the study is that there is quite a significant difference between secondary schools leavers and the uneducated at the 10% level of significance everything being equal. The secondary school leavers are more likely to occupy more modernised house type relative to the non-educated given their household size, income, and asset holding. The odds in favour of occupying more modernized house type is more than twice relative to the uneducated. This result is intuitively correct. Those who are educated to the secondary level

migrate on the social ladder or upgrade their social convoy with their occupation, income levels, friends association thus to “keep up with the joneses” they must improve their living conditions by occupying a more modernised housing structure. In terms of the odds of occupying more modernised structure, the secondary school leavers are doing more than twice better than the uneducated. Thus, the gap between secondary leavers and the uneducated is quite substantial giving credence to relevance of education in improving livelihood of the people in the district, the country, Africa and the world at large.

The study further shows that there was a highly significant difference between tertiary portfolio respondents and the uneducated at the 1% level of significance. Tertiary portfolio respondents are more likely to occupy more modernized housing structure relative to the uneducated, *ceteris paribus*. Odds for tertiary portfolio respondents is three times more than the uneducated with zero income-generating asset holding. There is a wide gap between those with tertiary education and the uneducated in terms of livelihood, all other things being equal.

Those educated at the tertiary level are able to rise up quickly in the social ladder. They have access to better jobs, better levels of income, better association and links with significant people, to mention a few. Thus, they have better chances to enjoy better living condition relative to their uneducated counterparts who are mostly farmers or traders who earn low income from primitive farming and get a poor price for their products. Those who learn trades have to squeeze water out of stones to make ends meet. Thus, they cannot afford to occupy more modernised housing structures. Not only that, there is a significant difference between the uneducated and tertiary educated but also the gap between them is very wide. The odds ratio revealed that the tertiary educated individuals are three times better than the

non-educated with respect to occupying modernised housing structure. Figure 4.7 shows a house of an uneducated family in one of the study communities.

Figure: 4.7 A house in Guri with infrastructural problems, a study community in Zone 4, 2016



Figure: 4.7 A house in Guri with infrastructural problems, a study community in Zone 4, 2016

The house shows the reality of the house type of an uneducated family in one of the study communities. The house is an example of a mud house with a section roofed with grass and the other section roofed with aluminium. In an interview with the household head of the type of house he occupies and houses occupied by the educated in the community, the head has this to say:

The educated live in houses plastered with cement, and even if they do not own a house, they rent a house built with blocks and roofed with aluminium materials. Teachers posted to the village school will never talk of renting my type of house, which, apart from it being a mud house, is also without electricity, toilet facilities and potable drinking water. The difference between a house inhabited by the educated and the uneducated cannot be confused (Guri, a Study Community, 2016)

Interviews with some of the chiefs revealed that majority of the youth who were educated prefer living in bigger towns that have good housing facilities to living their own home

towns. This is understandably so, because education gives them the opportunity to search for white-collar jobs and modern way of living in urban households and not in rural households. As Coulombe and Wodon (2007) found out the probability of being poor is associated with the following characteristics: living in the northern regions (versus other regions); rurality (versus urbanity); being in a household with an older household head (poverty tendency increases with household head age); larger households (versus smaller households); having low levels of education (the probability of being poor decreases as education of the household head increases); being reliant on agriculture for your livelihood (followed by manufacturing and construction); being self-employed in agriculture (followed by wage earners in the private informal sector). These characteristics are associated with the uneducated and the type of house they owned in the study area. Household heads who are farmers are not just the poorest in Ghana, but they contribute the most to Ghana's poverty. Household heads engaged as private employees and self-employed in non-agricultural sectors are less likely to be poor than those engaged in the agricultural sector (GSS, 014).

Table 4.9 Effect of income livestock farming, crop farming and household size on house type

Variable	Coefficient	Standard Error	Wald-Statistic	Marginal Probability	P-value
Income	.005**	.003	4.048	1.005	.044
Livestock	.748**	.334	4.999	2.112	.025
Household Size	-.047	.037	1.582	.954	.209
Crop Farm	.272	.404	.452	.501	1.312

$\chi^2(8, N=636)=42.747, p=.05$

Source: Authors Construction based on data from the field of study 2016.

The empirical results also indicate that income of the respondents exert significant effect on the probability of occupying more modernized housing structure at the 5% level of significance. The higher the income levels of the respondents, the more likely for the people to occupy modernised housing structure given their educational level, the size of household,

and income-generating asset holding. The odd in favour of occupying more modernised housing structure is one as income increases by GH¢1.00. One of the key determinants of demand for goods and services is income. It renders the individual the purchasing power to command goods and services.

Hence, all things being equal, the higher the income level the higher the demand for goods and services. Economic theory recognizes that not all goods and services that will respond positively to increases in income levels of the consumer. Those that respond positively are termed as normal goods while negative effects are termed as inferior goods. Thus, judging from the empirical results, one can conclude that modernized house type is a normal good in the surveyed district. Prestige is accorded once one owns such a more modernized housing structure and thus, an individual who experiences increases their income levels or purchasing power are more likely to increase their demand for such housing type. The odds is one for one. That is GH¢1.00 increase in income increases the chances of occupying a more modernised housing structure by one. Thus, GH¢ 100 increment in income levels will increase odds by 100 units.

The results further indicate there is a significant difference in the probability of occupying more modernised housing structure between the respondents who own livestock and the reference group at the 5% level of significance. The respondents who own livestock are more likely to occupy more modernised housing structure relative to the uneducated with no income-generating assets. The odds in favour of occupying modernised housing structure is 2 times higher for the educated than the uneducated without income generating assets. Assets are one of the determinants of consumption of goods and services. Owning assets gives the individual the space to spend on luxurious product such as automobiles, patronage of airline,

owning and occupying more modernized house and to mention a few. Thus, like income, owning an asset especially income-generating assets improve your purchase power and being able to afford normal and luxurious goods and services.

Finally, both household size and ownership of crop farm exert no significant effect on the probability of occupying more modernised housing structure even at the 10 percent level of significance. The size of a given household does not influence the probability of occupying modernized housing structure likewise there is no significant difference between non-educated without income-generating asset relative to those who own farm. The reasons behind the insignificant effect of household size on the probability of occupying more modernised housing structure may be due to the that fact the number of children born is viewed as an asset thus, contributing to the family incomes and livelihood hence rendering insignificant the probability of occupying more modernised housing structure. For the farm ownership, perhaps they face similar problems bedeviling the agricultural sector such as scarcity, inadequate supply of farm inputs, lack of storage facility, poor price for their products and to mention a few. Thus, inability to generate sufficient income to command normal and luxurious products and services such as modernized housing structure.

The results of the present study are consistent with empirical results obtained by Arimah (1992). He estimated demand functions for a set of housing attributes for the city of Ibadan in Nigeria using a two-step method. The empirical results showed that income, price, household size and the occupational status of the head of household were the most important determinants of the demand for housing attributes. Besides income and wealth, sociological and demographic characteristics of the household influenced the difference in housing demands. The number of people in the household influences the consumption demand

positively since they require more space. Moreover, the nature of professional activity such as being employed or self-employed and professional status (retired vs. in activity) also affected housing demand.

4.4. Effect of Gender Education on Housing Condition

This section presents and discusses the empirical results on the effect of gender education on housing condition. The results are presented in Table 4.9.

Table 4.10 Effect of Gender Education on Housing Condition

Variable	Coefficient	Standard Error	Wald-Statistic	Marginal Probability	P-value
Male educated	-.484*	.256	3.575	.616	.059
Dilapidated	-.502**	.256	3.845	.605	.050
Non-dilapidated	**-.621	.267	5.409	.537	.020

*denotes statistical significance at the 10 percent level, and **denotes statistical significance at the 5 percent level. $\chi^2(8, N=636)=50.747, p=.000$

Source: Author's construction based on data obtained from the field of study 2016.

The empirical results revealed that there was a significant difference in the probability of occupying dilapidated housing structure between male educated head of household and the female educated head of household at the 10% level of significance. Given the employment status and ownership of income-generating asset, the male educated head of households had less probability of occupying dilapidated housing structure with their female counterparts. The odds in favour of not occupying a dilapidated house for the male educated is 0.6 more than the female educated.

The males perceived as breadwinners or potential breadwinners of their family, thus, exert more effort in production and other related activities trying to satisfy the family or his potential partner. The females on the other hand view themselves as supportive partners rather than performing the leading role in the provision of basic needs and luxurious

products. Thus, they are reluctant or put in less effort in income-generation thinking that the male or the man will provide.

However, the chances of the male educated performing better than the female counterpart in relation to occupying non-dilapidated housing structure is very marginal. The results is in contrast to the study by GSS (2014) which states that, an educated female headed households are better of moving out of poverty than male headed households in the study area. On the other hand, the result is a confirmation of the perception of the members in the focus group discussion where they argued that the man is the natural head of the family and therefore has the very important role of providing for the woman and the family (FGD, 2016). This is understandable so because the study area practices patrilineal inheritance.

Employment status of the respondents also exerts a significant effect on the probability of occupying dilapidated structures at the 5 percent level of significance. Employed respondents are less likely to occupy dilapidated structures given their gender and educational status and income-generating asset holding. The odds in favour of not occupying dilapidated structure for those employed are 0.6 more than the unemployed.

To sustain the levels of expenditures on basic needs and some luxurious products one must be gainfully employed. Thus, employment enables the individual to earn sustainable income, improve his or her purchasing power thus, given the individual the space to meet his/her basic needs and move a step further to climb the social ladder by way of patronizing luxurious products such as non-dilapidated housing structure. However, the odds were very marginal; those who were employed were just 0.6 doing better than those who are jobless. Perhaps

those who were unemployed were dependent on relatives abroad and at home for the provision of housing needs.

Finally, income-generating asset exerts significant effect on the probability of occupying dilapidated structures at the 5% level of significance. Owners of livestock are less likely to occupy dilapidated structures relative to the non-holders income-generating given that their educational and employment status remain the same. The odds in favour of not occupying dilapidated structures for the holders of income-generating assets were 0.5 more than the non-holders. As explained earlier, engaging in income-generating such as the rearing of livestock enhances the purchasing power of the individual to afford basic needs and beyond. Thus, owners of livestock are able to generate enough income to give them sufficient space to patronise other services beyond their basic needs. Thus, being able to afford non-dilapidated house structure.

4.5. Effect of Formal Education on Nutrition

This section of the chapter presents and discusses the empirical results on the effect of formal education on the nutritional status of the respondents. The results are presented in Table 4.10

Table 4.11 Empirical Results on the Effect of Formal Education on Nutrition

Variable	Coefficient	Standard Error	Wald-Statistic	Marginal Probability	P-value
Gender	1.540**	.625	6.067	4.663	.014
Basic	1.897*	1.100	2.972	6.663	.085
Secondary	2.782***	.835	11.112	16.155	.001
Tertiary	2.819***	.690	16.674	16.757	.000
Income	.000	.001	.024	1.000	.877
Livestock	.453**	.204	4.959	1.574	.026
Household Size	.014	.026	.280	1.014	.597
Male Basic	-1.511	1.132	1.781	.221	.182
Male Secondary	-2.897***	.864	11.248	.055	.001
Male Tertiary	-1.756**	.708	6.157	.173	.013

*denotes statistical significance at the 10 percent level, **denotes statistical significance at the 5 percent level and ***denotes statistical significance at the 1 percent level. $\chi^2(8, N=636)=46.749, p=.005$

Source: Author's construction based on data obtained from the field of study, 2016.

Gender plays a significant role in determining the respondent's ability to meet nutritional requirements. The present study showed that gender of the respondents exerts significant effect on the probability of meeting nutritional requirement at the 1 percent level of significance. The results indicate that males were more likely to meet their nutritional requirement relative to their female counterpart, holding their income levels, educational status, income-generating asset holding and house size constant. The odds in favour of meeting nutritional requirement of males are 5 times higher than the females. Since the people in the study area are mostly farmers, the males are generally stronger than the females, thus able to cultivate different kinds of crops relative to their female counterpart. This enabled them to meet their nutritional requirement. The odds indicate that the males had greater chances of meeting their nutritional requirement 5 times more than females, thus reflecting the differences in strength and ability to cultivate different kinds of crops on a large scale.

Again, there was a significant difference between respondents with basic education and the uneducated at the 10% level of significance. The respondents with basic education were more likely to meet their nutritional requirement relative to the uneducated, *ceteris paribus*. The odds in favour of meeting nutritional requirement of respondents with basic education are 6 times higher than the uneducated. Even where the basic school leavers did not have adequate income, they had the basic knowledge on kind of food that their resources would command which may generate the minimum nutritional requirements if not all that is needed by the body. The uneducated lacks both adequate income and the knowledge to meet their nutritional requirement.

The empirical results also revealed that there was a significant difference between respondents with secondary education and non-educated at the 1% level of significance. Respondents with secondary education were more likely to meet their nutritional requirement relative to uneducated everything remaining the same. Again the odds in favour of meeting nutritional requirement were 16 times higher than the non-educated. Individuals with secondary education earn relatively more than the uneducated and at the same time have adequate knowledge on nutrition. With these combined effects, secondary school leavers were more likely to meet their nutritional requirement relative to the uneducated. The odds affirmed to this assertion as the secondary school leavers had the chance of meeting nutritional requirement 16 times better than the uneducated.

The results indicate that there is a significant difference between respondents with tertiary education and the uneducated at the 1% level of significance. The results imply that respondents with tertiary education are more likely to meet their nutritional requirement relative to the uneducated all things being equal. The odd in favour of meeting nutritional requirement is 16 times higher than the uneducated. As explained in the case of secondary school leavers, people with tertiary education earn adequate incomes and have adequate knowledge thus, would be able to meet their nutritional requirement relative to the uneducated. The odds revealed supports this assertion as the chances of meeting one's nutritional requirement for the people with tertiary education is 16 times more than the uneducated.

The results further revealed that household size and income of the respondents exerted no significant effect on the likelihood to meet nutritional requirement even at the 10% level of significance. In other words, the ability to meet nutritional requirement was independent of

the income and size of the household of a given respondents. This is a surprising result since the size of household had effect on purchasing and on the household's ability to meet nutritional requirement.

Income-generating assets exerted a significant effect on the probability of meeting nutritional requirement at the 5% level of significance. The results revealed that there was a significant difference between income-generating asset holders and those who did not have this type of asset. The income-generating assets were more likely to meet their nutritional requirement relative to the non-holders, given the level of education, income, household size and gender. The odds in favour of meeting nutritional requirement for income-generating asset were 2 times more than in favour of non-holders. Ownership of income-generating assets gives the space and the capacity to patronage relevant foods that contain the essential nutrients for the nourishment of the body. Thus, those who own income-generating assets have the great chance to meet their nutritional requirement. There is no significant difference between males who were educated at the basic level and their female counterpart even at 10% level of significant. Both groups had equal chance of meeting their nutritional requirement all other things being equal.

There is a significant difference between secondary educated male and their female counterpart at the 1% level of significance. The males with secondary level education were less likely to meet their nutritional requirement relative to their female counterpart given the level of income-generating asset, income and household size. The odds in favour of meeting nutritional requirement of male secondary school leavers was 0.06 less than the female counterpart. An educated female had access to adequate information about nutritional requirement for their health relative to the males. Thus, they could buy the essential foods

that contain the essential nutrients meant to nourish body and keep them healthy. Again they most at times prefer to cook rather than buy from outside relative to their male counterparts especially when they are bachelors and spinsters. However, the odds were very marginal.

Again there was a significant difference between tertiary educated male and their female counterpart at 1% level of significance. The tertiary educated males are less likely to meet their nutritional requirement relative to their female counterpart given level of income-generating asset, income and household. The odds in favour of meeting nutritional requirement for tertiary educated males are 0.17 less than their female counterparts. The female tertiary educated likewise female secondary school leavers were more conscious of their nutritional needs and their family relative to their male counterparts. This was evident in one of the focus group discussions in the Ullo community when a contributor remarked that:

generally, the uneducated poor people whether male or female eat meat only when an animal dies, or when the family received a distance visitor, or when animal sacrifices are made in the family, or during festive occasions like Christmas and New Year days but not necessarily for the purpose of their nutritional needs (FGD, 2016).

One member also remarked that “animals are kept in the family for solving problems and not for eating” (FGD, 2016). In other words an animal is killed when the family has problems to be solved. This is in contrast to the educated members of most of the communities in the study area where people add meat to their meals to increase the nutritional value of their food on a daily bases.

Formal education is therefore critically important in the fight against poverty, as one can be rich in natural resources and yet poor because of lack of education to utilize what is available in one’s environment. Poor hygiene and poor nutrition could be as result of poor educational attainment.

4.6 Summary of Findings of Chapter Four

The chapter started with an overview of the demographic characteristics of the study population, such as age and sex, as well as other socio-demographic variables, including marital status and education. The results are presented at both individual and household levels. This helps to create a larger picture about each respondent and the household in which the respondent lives. It also describes some of the outcomes that are used as a basis for analyses in the next chapter. Age and sex are among the most important factors that affect education and poverty.

The finding of the study on objective one reveals a significant relationship between social Darwinism and structural theories on the level of poverty in the study communities. Social Darwinism and structuralist theories explain the magnitude of poverty in the study area. In the opinion of respondents, culture, soil and the general difficult environmental conditions, lack of schooling, government policies and sickness of body, mind and soul were some of the causes of poverty as perceived by the respondents and reiterated during the focus group discussions and in-depth interviews.

The results of Objective Two which was to investigate the effect of variations in levels of formal education of heads of households on quality of life shows no significant difference in the probability of occupying more modernized house type (detached, semi-detached and flat) between the basic school leavers and the non-educated. This is intuitively plausible since individuals educated at basic level earn meagre amounts of income, thus serving as a constraint to occupy modernised housing structure. In fact the non-educated learn trade early so that they are able to migrate to the level of individuals with basic education in terms of

income levels and other livelihood conditions. It was also established that secondary school leavers are more likely to occupy modernised housing structure.

This result is intuitively correct. Those who are educated to the secondary level migrate on the social ladder or upgrade their social convoy with their occupation, income levels, and friends association thus to “keep up with the Jones” they must improve their living conditions by occupying a more modernized housing structure. The tertiary educated individuals have greater chance of occupying modernized housing structure in the study area. The tertiary educated are able to rise up quickly in the social ladder. They have access to better jobs, better levels of income, better association and links and to mention a few. Thus, they have more chance to enjoy better living condition relative to the non-educated counterpart who are mostly farmers or traders who earn low income due to primitive farming and poor price for their products.

Apart from the key variables being significant, some of the control variables were also significant. Income of the respondents and ownership of livestock are predictors of the likelihood of occupying modernized house. The empirical results indicate that income of the respondents exert significant effect on the probability of occupying more modernized housing structure.

Prestige is accorded once one owns a modernized housing structure and thus, an individual who experiences increases in their income levels or purchasing power are more likely to increase their demand for such housing type. Income gives the individual the space to spend on luxurious product such as automobiles, fridges, owning and occupying more modernized house and to mention a few. Thus, like income, owning an asset especially income-generating

assets improve your purchasing power and being able to afford normal and luxurious goods and services that leads to the improvement of the quality of life of the household.

Objective Four was meant to evaluate the differential effect of male and female education on household livelihood. The empirical results have revealed a significant difference in the probability of occupying dilapidated housing structure between male educated headed household and the female educated headed household. The males are perceived as breadwinners or potential breadwinners of their family, thus, they exert more effort in production and other related activities trying to satisfy the family or his potential partner needs. The females on the other hand viewed themselves as supportive partners rather than performing the leading role in the provision of basic needs and luxurious product thus, they are reluctant or exert less effort in income-generation activities thinking that the male or the man would provide.

Gender plays a significant role in determining the respondent's ability to meet nutritional requirement. The results indicate males are more likely to meet their nutritional requirement relative to their female counter. Income-generating asset exerts significant effect on the probability of meeting nutritional requirement. Ownership of income-generating assets gives the space and the capacity to patronage relevant foods that contain the essential nutrients for the nourishment of the body.

The results further revealed that household size and income of the respondents exerted no significant effect on the likelihood to meet nutritional requirement even at the 10 percent level of significance. In other words, the ability to meet nutritional requirement was independent of the income and size of the household of a given respondents. This is a

surprising result since the size of household was expected to depend on purchasing power and the household ability to meet nutritional requirement.

In the next chapter, the empirical results of Formal Education and Socio-economic Vulnerability nexus would be presented and discussed.

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CHAPTER FIVE

FORMAL EDUCATION AND SOCIO-ECONOMIC VULNERABILITY NEXUS

5.0. Introduction

This chapter presents the empirical results in relation to the study objectives. Interpretations of the empirical results obtained from the analyses of field data are also presented in this chapter. The nexus between formal education and socio-economic vulnerability is presented and appropriate implications are drawn from the results.

5.1 Relationship between Vulnerability and Formal Education

5.1.1 Introduction

This sub-section discusses the relationship between formal education and vulnerability in the context of regular monthly income, general economic condition of the household, degree of financial dependency and job security. According to Allen (2003) vulnerability represents the set of socio-economic factors that determine people's ability to cope with stress or change.

The results on the relationships between these measures and formal education are presented in sub-section 5.2., 5.3, 5.4 and 5.5.

5.2. Regularity of Household Monthly Income and Formal Education

This sub-section discusses the relationship between regularity of household monthly income and formal education. It further disaggregates formal education into basic, secondary and tertiary and how these levels of formal education related to the incidence of regularity of household monthly income compared with the uneducated.

The results reveal a Chi-square value of 104.024 with $p < .001$. This gives the indication that there is a statistically significant relationship between one's educational status and regularity

of household monthly income at the 1 percent level of significance. In other words, the regularity of monthly income is dependent on one's educational status. The results are presented in Table 5.1.

Table 5.1: Relationship Between Educational Status and Regularity of Household Monthly Income

Educational Status	Regularity of Household Monthly Income		Total
	Regular	Not Regular	
Non-Educated	83 32.5%	172 67.5%	255 100%
Educated	246 60.1%	162 39.6%	408 100%
Chi-square Test	104.024, p=.000		

*Missing value = 37

Source: Author's construction based on data obtained from the field of study, 2016.

There was a significant relationship between formal education and regularity of household monthly income at the 1% level of significance. In other words, the regularity of monthly income was dependent on one's educational status of the individual. The results indicate that majority of the respondents with no formal education representing 67.5 indicated that the monthly income of their household are irregular. The remaining 32.5 % of them indicated that their monthly incomes were regular.

By inference, the probability of uneducated being vulnerable in the context of irregular source of monthly income is 68%. On the other hand majority (60.1%) of the respondents who had had formal education indicated that their monthly income was regular. The minority of them representing 39.6 % indicated that their monthly income was not regular. Hence, the probability of the educated being vulnerable in the context of irregular source of monthly income was 39. 6%. The two probability values indicate that individual with no formal education are more vulnerable in the context of regular source of income relative to those with formal education. Individuals with formal educational have the skills and credentials that enable them to secure jobs that turn gives them maximum security such as regular source

of income. They are employed in government institutions and thus have high levels of job security, and regular sources of income. Some are also employed in the private sector such as the manufacturing companies as floor managers, general managers and financial institutions such as banking institutions, insurance companies and research institutions, N.G.Os. Besides being employed in the formal sector which gives them regular source of income, they are also financially literate and have better information on investment ventures such as investment in securities like bonds and treasury bills as well as investment in the stock market. All these supplement their income, thus enhancing their income security.

The uneducated on the other hand are mostly employed in the informal sector. Their income sources are based on market performance. In periods where market is bad they earn very little and in the periods where market is good they reap a lot. Thus, their source of income is irregular. Besides they lack financial literacy, hence are unable to take investment decisions such as investment in government securities. It can be shown that regularity of income is dependent upon educational status, $\chi^2 (1, N=408) = 104.02, p < .001$.

In terms of spatial disparity of the regularity of income of the non-educated respondents, the study indicated that majority of them were found in across three zones namely, Zone 1 (21 or 8.2%), Zone 2 (21 or 8.2%) and Zone 3 (21 or 8.2%) as shown in Table 5.3. However, the least number of respondents who were non-educated with a regular income were 20 (7.9%) were found in Zone 4. With respect to the non-educated respondents with irregular income, the study found that majority of them were found in Zone 4 (44 or 17.2%).

On the other hand, the study also found that majority of the respondents who are educated with a regular income were found in Zone 1 (66 or 16.1%) with the least number of them

found in Zone 2 (55 or 13.4%). Also, the respondents who had education but with non-regular income were concentrated in Zone 4 (50 or 12.2%) with the least number of them found in Zone 3 (30 or 7.4%). This means that the non-educated people in communities in Zones 4 engage in some sustainable livelihood activities that help them to get regular income to support their families and improve their standard of living. Also, people who were educated with regular income were found in Zone 4, indicating that their level of education has made them employable to earn regular income to improve upon their living conditions. In the focus group discussions, one member said that, “the people of Ullo are generally hardworking even though they are the least educated among the 4 zones” (FGD, 2016). It was observed that the competition and zeal for formal education among the youth in Zone 4 was growing strongly as most young people were found to be in school at the time of the data collection. Table 5.2 shows the differences in the regularity of household monthly income among the four zones.

Table 5.2: Relationship between Educational Status and Regularity of Household Monthly Income

Educational Status	Regularity of Monthly Income									
	ZONE 1		ZONE 2		ZONE 3		ZONE 4		Total	
	Regular	Not regular	Regular	Not regular	Regular	Not regular	Regular	Not regular		
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Non-educated	21 8.2	42 16.5	21 8.2	43 16.9	20 7.9	43 16.9	21 8.2	44 17.2	255	100
Educated	66 16.1	43 10.5	55 13.4	39 9.5	60 14.7	30 7.4	65 15.9	50 12.2	408	100
Total									663	100

***Missing value = 37**

Source: Author's construct based on data obtained from the field of study, 2016.

Table 5.3: Relationship Between Educational Status and Regularity of Household Monthly Income

Educational Status	Regularity of Household Monthly Income		Total
	Regular	Not Regular	
Non-Educated	83 32.5%	172 67.5%	255 100%
Basic	36 47.4%	40 52.6%	76 100%
Secondary	29 33.0%	58 65.9%	87 100%
Tertiary	181 73.9%	64 26.1%	245 100%
Chi-square Test	104.024 (0.000)		

***Missing value = 37**

Source: Author's construction based on data obtained from the field of study 2016.

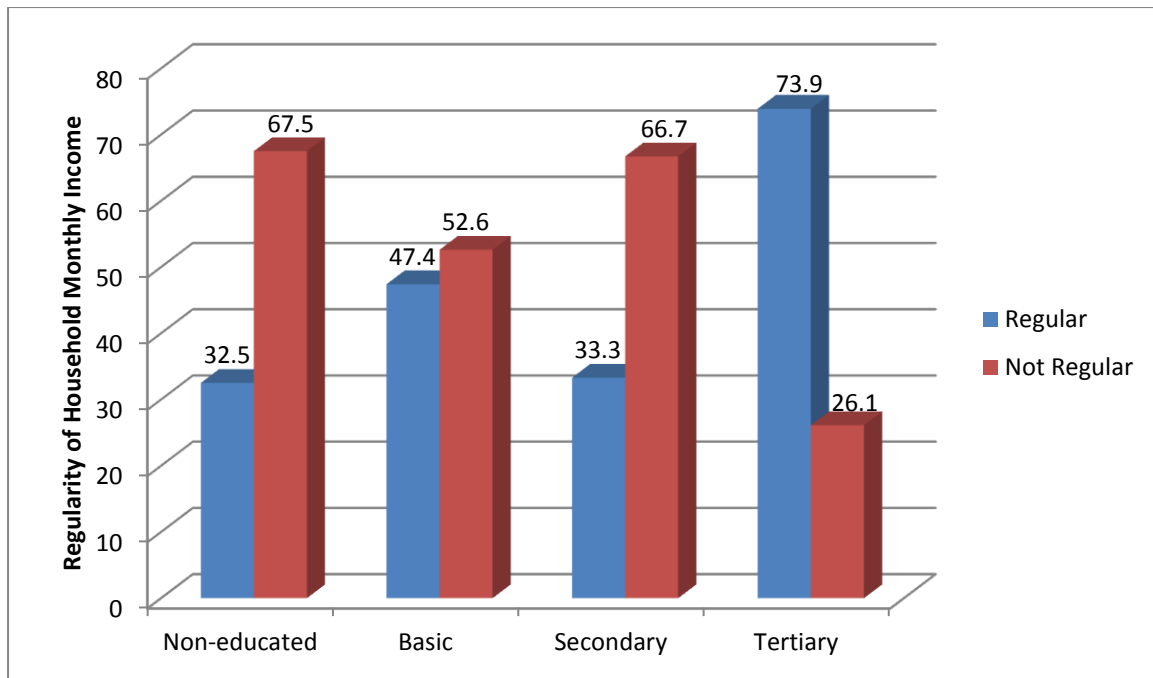


Figure 5.1: Regularity of Household Monthly Income

The study also found a significant difference between the levels of formal education and uneducated at the 1% level of significance, $\chi^2 (701, 3) = 104.24, p < .001$. The results show that 52.5% of the respondents with basic education did not have regular monthly income. The remaining 47.4% have regular source of monthly income. Thus, the probability that a respondent with basic education would be vulnerable in the context of irregular source of monthly income was 52.5%. This is quite high. Comparatively, the basic educated respondents were less vulnerable relative to the uneducated. The results further reveal that the majority (65.9%) of the respondents with secondary education had irregular source of monthly income. The remaining 33% of the respondents indicated that they have regular source of monthly income. Thus, the probability of the respondents with secondary education being vulnerable in the context of irregular source of monthly income is 65.9%. Comparatively, the secondary educated respondents are more vulnerable relative to the uneducated.

Finally, the majority (73.9%) of the respondents with tertiary level education indicated that they had regular source of monthly income. The remaining minority representing (26.1%) indicated that their monthly income is not regular. Thus, the probability of respondents with tertiary education being vulnerable in the context of irregular source of monthly income is 26.1%. Thus, the tertiary educated are least likely to be vulnerable compared with non-educated, basic and secondary.

Levels of education and vulnerability change in both directions as one climbs the academic ladder. In other words from basic to secondary the individual is more vulnerable and from secondary to tertiary the individual is less vulnerable. Those with basic level of education are likely to be in the informal sector of employment and thus, face similar predicament by those with no formal education. Individuals with secondary education are expected to be gainfully employed mainly in the industrial sector. However, over the past two decades the industrial sector has performed abysmally due to liberalization of the trade sector making the sector face fierce competition from imported-related products. Thus, it has been unable to absorb secondary school leavers. This group has no option but to join the people in the informal sector with no basic education, thus, increasing their vulnerability in the context of regular source of monthly income.

People with tertiary education are mostly absorbed by the formal sector which gives them regular source of income. Government institutions, private sector such as banking institutions, insurance companies, and to mention a few are readily available to absorb these graduate from the tertiary institution. Thus, most of them are secure when it comes to regular source of income.

5.3 Economic Condition and Formal Education

This sub-section discusses the relationship between the respondents' economic condition and formal education. The results are presented in Table 5.4.

Table 5.4 Economic Condition and Formal Education

Educational Status	Economic Condition					Total
	Much worse	Worse	Same	Better	Much better	
Non-educated	16 6.4%	95 38.2%	87 34.9%	47 18.9%	3 1.2%	249 100%
Educated	17 4.4%	128 33.1%	122 31.5%	111 28.7%	9 2.3%	387 100%
Chi-square Test	11.848 (0.037)					

*Missing value = 64

Source: Author's construction based on data obtained from the field of study, 2016.

The Chi-square revealed that there is significant relationship between economic condition and educational status of the respondents at the 1 percent level of significance, χ^2 (636, 4) = 11.848, $p = .037$. That is economic condition varies across the educational background of the respondents. The results revealed that 16 of the non-educated representing 6.4 percent indicated that their economic condition is much worse relative to previous year's economic condition. Majority of the respondents of the non-educated representing 38.2 percent indicated that their economic condition were worse relative to the previous year. Total number of 87, 47, 3 representing 34.9%, 18.9% and 1.2 % percent respectively indicated that their economic conditions are the same, better and much better respectively. On the aggregate, the probability of being worse off for non-educated is 44.2 percent (6.4 percent plus 38.2 percent). The total number of the educated respondents was 387. Out of this number, 17 of them indicated that their economic conditions are much worse representing 4.4 percent which is lower than the uneducated. Again, 128 of them indicated that their economic condition is worse representing 33.1 percent. 31.5 percent, 28.7 percent and 2.3 percent indicated that their economic conditions are the same, better and much better respectively.

Thus, the probability of being worse off for the educated is 37.5 percent (4.4 percent plus 33.1 percent) which is statistically smaller than the uneducated. Thus, the educated are less likely to be vulnerable in terms of economic condition relative to the non-educated. This was highlighted in the focus group discussion in Ul-Dantie when a contributor, in his submission indicated remarked:

look around and see those in good cloths are mostly the educated people but the uneducated are those without good cloths, without good housing, without good food, without good health care and without good sanitary facilities as compared with the educated (FGD, 2016).

A good observation of the study communities shows a clear disparity between the educated and the uneducated. Government efforts to reduce regional imbalances must be supplemented by local action (Bening, 1990). The chronic and persistent poverty in the northern Regions of Ghana is attributable to the geography and poverty traps as a result of low school enrollment and other variables in development. GSS (2014) data reveal that, the key area that continues to worsen and is a clear source of concern is that of equity. Ghana's inequality measure, the Gini Coefficient, has risen from 41.9 in 2005/06 to 42.3 in 2012/13, an indication that increasingly, income is shared inequitably across the population. This is particularly so in the Jirapa District. This level of inequality has adverse implications towards Government's efforts at reducing poverty in the country.

Table 5.5 Economic Condition and Formal Education

Educational Status	Economic Condition					Total
	Much worse	Worse	Same	Better	Much better	
Non-educated	16 6.4%	95 38.2%	87 34.9%	47 18.9%	3 1.2%	249 100%
Basic	4 5.2%	31 40.3%	24 31.2%	17 22.1%	1 1.3%	77 100%
Secondary	8 10%	33 41.2%	19 23.8%	19 23.8%	1 1.2%	80 100%
Tertiary	5 2.2%	64 27.8%	79 34.3%	75 32.6%	7 3%	230 100%
Chi-square Test	30.747 P=.009					

*Missing value = 64

Source: Author's construction based on data obtained from the field of study 2016.

The results revealed a significant relationship between economic condition and each level of formal education, $\chi^2(636, 8)=30.747$, $p=.009$. That is, economic condition varies across the educational background of the respondents. The results revealed that (6.4%) of uneducated indicated that their economic condition was much worse relative to the previous year. Majority of the respondents of the non-educated representing 38.2 percent indicated that their economic condition were worse relative to the previous year. Nearly 35%, 19% and 1% indicated that their economic conditions are the same, better and much better, respectively. On the aggregate, the probability of being worse off for uneducated was 44.2 %. The total number of the educated respondents was 387. Again, 33.1% of them indicated that their economic condition was worse while 31.5%, 28.7% and 2.3% indicated that their economic conditions are the same, better and much better, respectively. Thus, the probability of being worse off for the educated was 37.5% (4.4% plus 33.1%) which was smaller than the uneducated. Thus, the educated were less likely to be vulnerable in terms of worse economic condition relative to the non-educated.

The formally educated individual most at times are able to project into the future what state of the economy will be. This enables them to take precautionary measures against such future economic turbulence. For example, they are able to predict the investment climatic conditions of the economy, real interest rate, inflation, volatility of exchange rate and other related macroeconomic issues. With these anticipations, they position themselves well to mitigate these negative economic outcomes. The uneducated on other hand, find it difficult to read numbers and let alone to understand the figures and general economic environment. Thus, they are unable to mitigate against negative outcomes in the future. Hence, making them looking more vulnerable to changes in economic conditions.

Majority (40.3%) of the respondents with basic education indicated that their economic condition was worse compared with the previous year while 5.2% indicated that their economic condition was much worse. About 31%, 22% and 1% indicated that their economic conditions were the same, better and much better, respectively. On the whole the likelihood of a respondent with basic education being vulnerable in terms of worse economic condition was 45.5%. This is higher than those with no formal education.

This finding is not surprising since basic education accords the individual with little knowledge with respect to financial literacy and economic related issues. Besides, they spent nine years in basic education, foregoing incomes that could have been earned to protect them against economic misfortunes. The respondents with secondary education 41.2% reported having worse economic condition. About 23.8% of the respondent indicated that their economic condition was the same and the same percentage also indicated that their economic condition was better. Only one respondent (1.2%) indicated that his/her economic condition was much better while 10% of the respondents indicated that their economic condition was

much worse. On the whole, majority of the respondents with secondary education reported worse economic conditions.

Comparatively, the respondents with secondary education were more likely to experience worse economic condition relative to those with no education. Even though individuals with secondary education have fundamental knowledge on financial literacy and economic related issues and techniques required to take precautionary measures against negative economic outcomes or misfortunes, lack of employment might not position them to forestall economic misfortunes.

As it is evident in the country there is massive youth unemployment and majority of them are likely to be secondary school leavers. Sometimes they feel embarrassed to join the informal sector for livelihood waiting to be employed in the formal sector, thus worsening their economic conditions when there are negative economic outcomes. Further, in the present study 34.3% of the respondents with tertiary education indicated that their economic conditions were the same. About 32.6% also indicated that their economic condition is better compared with previous year. A few of the respondents (2.2%) indicated that their economic condition is much worse. About 27.8% and 3% of the respondents indicated their economic conditions are worse and much better, respectively. The probability that the respondents with tertiary education will be vulnerable with respect to worse economic condition is 30%. Comparatively, the respondents with tertiary education are less likely to be vulnerable relative to those with no education. Individuals with tertiary education have greater chances to be employed in the formal sector thus earning formal wages and salaries.

All other things being equal, their level of financial literacy is relatively advanced. They have access to better information on investment market, macroeconomic indicators, and the ability

to understand these indicators and on top of it take decisions based on these figures. Besides, their employers protect them against negative economic outcomes such as high inflation, volatile exchange rate, and to mention a few. Through various unions they agitate for salary increment whenever there are high levels of inflation, thus protecting their purchasing power and purse. The result of the present study supports GSS (2014) report which suggests that a strong negative relationship exists between poverty and educational level, such that the more educated the household head is the less likely they are to be poor.

5.4 Financial Dependency and Formal Education

The results show that there was a relationship between the degree of financial dependency and formal education, χ^2 (676, 3)=12.095, p=0.007. Respondents who were not educated representing 38 percent were dependent when it comes to finances and 11.6 percent indicated that they are highly financial independent. About 12.4 percent and 37.5 percent of the respondents indicated that their finances are highly dependent and independent respectively. Thus, the probability that the respondents with no education to be vulnerable in the context of financial dependency is 51 percent (12.4% plus 38.6%). The results are presented Table 5.6.

Table 5.6 Financial Dependency and Formal Education

Educational Status	Degree of Financial Dependency				
	Highly Dependent	Dependent	Independent	Highly Independent	Total
Non-educated	32 12.4%	100 38.6%	97 37.5%	30 11.6%	259 100%
Educated	39 9.4%	140 33.6%	209 50.1%	29 7%	417 100%
Chi-square Test	$\chi^2=12.095$, p=.007				

*Missing value = 24

Source: Author's construction based on data obtained from the field of study, 2016.

The results further revealed that the majority of the respondents with formal education indicated that they were financially independent (Table 5.7). This represents 50.1 percent of the total respondents who were educated. The minority of the respondents representing 7 percent indicated that they are highly financially independent. About 9.4 percent and 33.6 percent reported that they were highly financially dependent and financially dependent respectively.

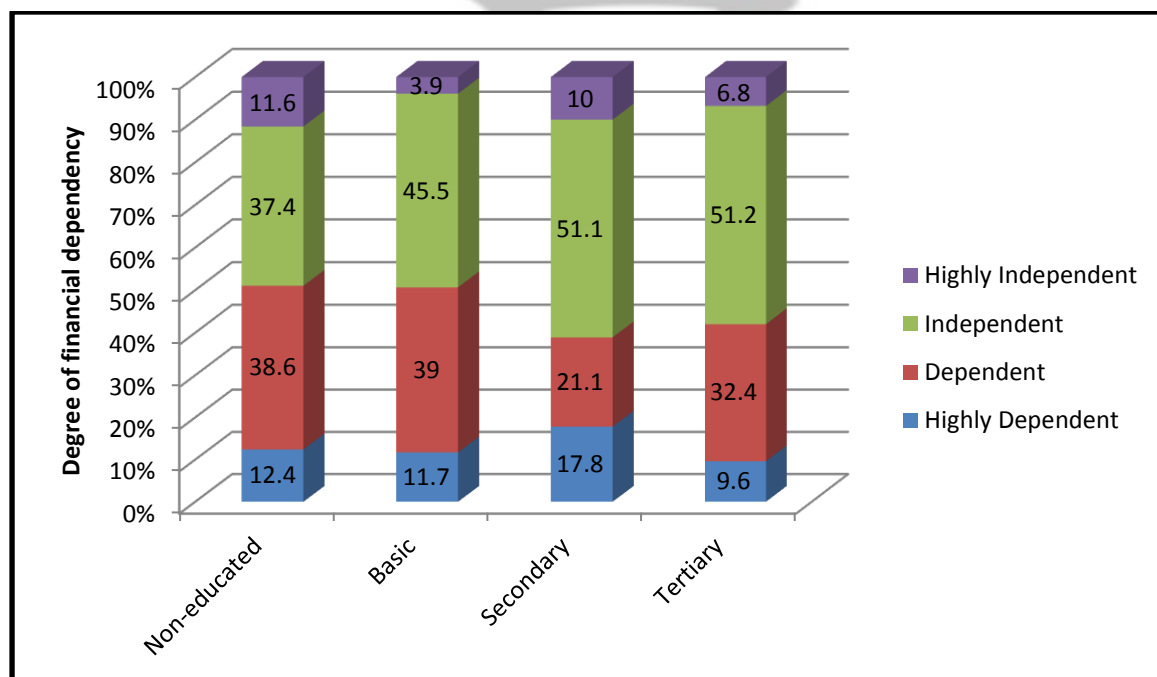
Thus, the respondents with no education are more likely to be vulnerable relative to those who are educated in terms of financial dependency. About 12.4% and 37.5% of the respondents indicated that their finances are highly dependent and independent respectively. Thus, the probability that a respondent with no education would be vulnerable in the context of financial dependency was 51%. The results further revealed that the majority of the respondents with formal education indicated that they were financially independent. A minority (7%) of the respondents indicated that they are highly financially independent. About 9.4% and 33.6% reported that they are highly financially dependent and financial independent, respectively. Thus, the respondents with no education were more likely to be vulnerable relative those who are educated in terms of financial dependency. Individuals with no formal education most of the times do not diversify their sources of income, thus relying on one source of income. Most of them have poor attitude towards savings. This makes them more financially dependent on their jobs. The educated, on the other hand, have good habit of savings; diversify their sources of income, therefore do not rely on one source of income for livelihood.

Table 5.7 Financial Dependency and Formal Education

Educational Status	Degree of Financial Dependency				
	Highly Dependent	Dependent	Independent	Highly Independent	Total
Non-educated	32 12.4%	100 38.6%	97 37.5%	30 11.6%	259 100%
Basic	9 11.7%	30 39.0%	35 45.5%	3 3.9%	77 100%
Secondary	16 18.2%	50 51.1%	46 51.1%	9 10%	90 100%
Tertiary	24 9.6%	81 32.4%	128 51.2%	17 6.8%	250 100%
Chi-square Test	$\chi^2=16.804$, p.052				

*Missing value = 24

Source: Author's construct based on data obtained from the field of study, 2016.

**Figure 5.2 Financial Dependency and Formal Education**

The chi-square test indicates significant relationship between financial dependency and levels of formal education, $\chi^2(676, 6)=16.804, p=.052$ at 10% level. The results revealed that nearly 46% of the respondents with basic formal education were financially independent. The

results revealed that majority of the respondents (45.5%) with basic formal education are financially independent. Again, about 4% of them indicated that they are highly financially independent which represents minority of the group. About 11.7% and 39% indicated that they were highly financially dependent and financially dependent respectively. About 51% of the respondents with secondary education indicated that they were financially independent while 10% said they were highly financially dependent.

The minority of the group representing 6.7% indicates that they were highly dependent while 32.2% percent purport to be financially dependent. Thus, the probability of the respondents with secondary education being vulnerable in terms of financial dependency 38.9%. Comparatively, this is lower than the respondents with no formal education. The results further revealed majority of the respondents with tertiary education were financially independent representing 51.2%. About 10%, 32.4% and 6.8% indicated that they were highly dependent, dependent and highly independent respectively. The probability that a respondent with tertiary education would be vulnerable in terms of financial dependency was 42.2%.

Comparatively, respondents with tertiary education were less likely to be vulnerable in terms of financial dependency relative to those with no formal education. The results revealed that higher levels of education such as secondary and tertiary makes the individual less vulnerable in terms of financial dependency. This is in line with (World Bank, 2016) reports which states that lack of education leads to extreme vulnerability to ill health, economic dislocation, natural disasters. Uneducated people are often exposed to ill treatment by institutions of the state and society and are powerless to influence key decisions affecting their lives. On the other hand, the educated are often better placed in society as they are able to influence

decision making and diversify their source of income, thus making them less vulnerable to the powers of state and society both in political and economic terms.

5.5. Relationship between Job Security and Formal Education

The study further investigated the relationship between respondents' state of finances when there is a shock and change of educational status of the respondents. The Chi-square test revealed that there was a significant relationship between educational status and job security, $\chi^2(676, 3)=12.095, p=.007$. The Chi-square test revealed that there is significant relationship between educational status and job security. Thirty eight of the respondents who are uneducated indicated that they are very insecure representing 15% of the total respondents for the uneducated. Majority of the respondents (61%) indicated that they were insecure. About 205 and 12% of uneducated group indicated that they were secure and very secure, respectively. Hence, the probability that a respondents who was uneducated being vulnerable in terms of job insecurity was 76%. Majority of the respondents (50.1%) with education on other hand indicated that they were secure. About 9%, 34% and 7% indicated that they were very secure, insecure and very secure, respectively.

Thus, one can conclude that the probability of a respondent with education being vulnerable in terms of job security was 43%. This is intuitively plausible as majority of the uneducated in the rural communities are farmers thus their jobs being tied to harsh weather conditions and lack of rainfall for most part of the year. On the contrary most of the educated individuals are found in the formal sector employment. They were secure because unions protect their interest and moreover the level of financial literacy makes them diversify their sources of income against future eventualities. The results are presented in Table 5.8.

Table 5.8 Position After Shock and Formal Education

Educational Status	Degree of Financial Dependency					
	Very Insecure	Insecure	Secure	Very Secure	Total	
uneducated	38 15.0%	155 61.0%	50 19.7%	30 11.6%	259	100%
Educated	39 9.4%	140 33.6%	209 50.1%	29 7.0%	417	100%
Chi-square Test	$\chi^2=12.095$, $p=.007$					

*Missing value = 24

Source: Author's construct based on data obtained from the field of study, 2016.

On the various levels of education, the results revealed that 10 percent of the respondents with basic education are very insecure. Majority of them also indicated they were insecure. About 31 percent and 4 percent of the respondents with basic education indicated that they were secure and very secured respectively. The likelihood that a respondent with basic education will be insecure is 67.5 percent. This relatively smaller than the non-educated. The results are presented in Table 5.9.

Table 5.9 Relationship between Job Security and Levels of Education

Educational Status	Degree of Job Insecurity				
	Very insecure	Insecure	Secure	Very secure	Total
Non-educated	38 15%	155 61%	50 19.7%	30 11.6%	259 100%
Basic	8 10.4%	44 57.1%	24 31.2%	1 1.3%	77 100%
Secondary	16 18.2%	50 56.8%	20 22.7%	2 2.3%	90 100%
Tertiary	27 10.8%	117 47.0%	94 37.8%	4.4%	250 100%
Chi-square Test	16.804 0.052				

*Missing value = 24

Source: Author's construct based on data obtained from the field of study, 2016.

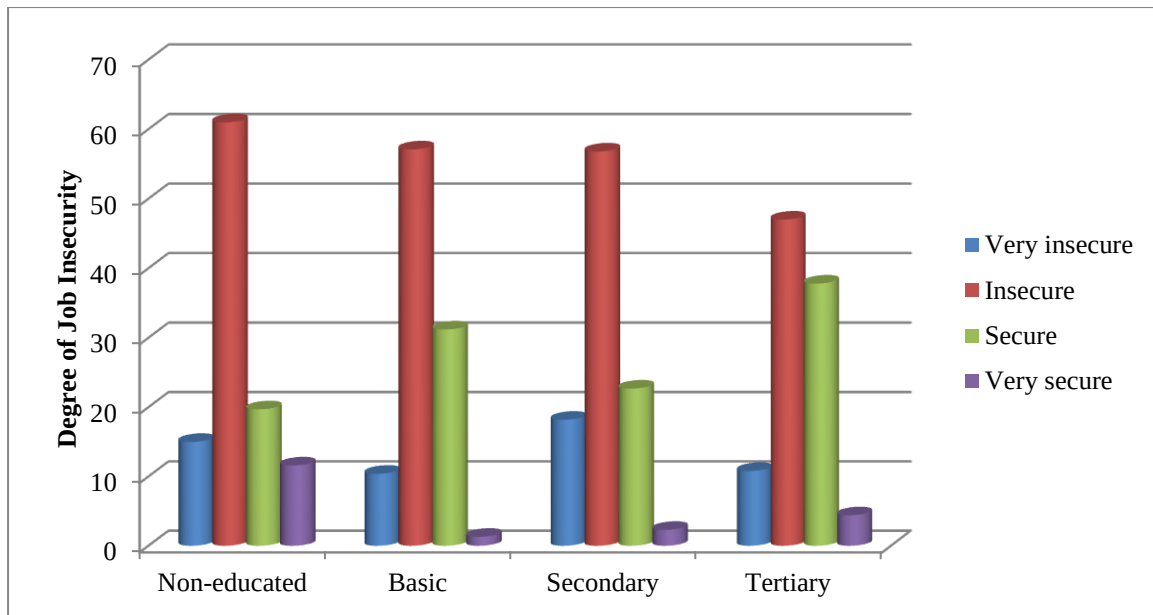


Figure 5.3 Relationship between Job Security and Levels of Education

The results also revealed 10% of the respondents with basic education indicated that they were very insecure. Majority (67.5) of them also indicated they are insecure. About 31% and 1% of the respondents with basic education indicated that they were secure and very secure respectively. The likelihood that a respondent with basic education would be insecure was 67.5%. The results further revealed that respondents with secondary education who indicated that they were insecure was 18.2% while 56.8% indicated that they were secure. About 23% and 2% indicated that they were secure and very secured respectively.

Thus, the likelihood for a respondent with basic education being insecure was 75%. Comparatively this is lower than those with no education. Finally, about 10.8% of the respondents indicated that they were very insecure while 47% indicated that they were insecure. About 38% and 7% of them indicated that they were secure and very secure respectively. Therefore, those who were likely to be vulnerable with tertiary education in terms job insecurity were 57.8%. Relatively, this is smaller than those with no formal educational background.

All the three levels of formal education persistently performed better than the uneducated, though the figures were not encouraging with respect to majority of the respondents who were insecure. The finding suggests that majority of them did not take entrepreneurial initiative to establish businesses that would mitigate the risk of losing in the formal sector. In addition, lower educational attainment not only leads to lower, but also less secure employment and more frequent and longer spells of unemployment and thus generates the dynamics of detachment from the labour market that can lead to long-term social exclusion (Wilson, 1987; Gottschalk, et al., 1994; Mincy, 1994; Walker, 1997).

Apart from poor educational attainment, poor educational achievement, as measured by literacy and numeracy tests, has an even stronger impact on unemployment rates. OECD (1997) has shown that poor literacy and numeracy leads to higher unemployment rates, longer spells of unemployment, and greater risks of permanent detachment from the labour force. The dominant mode of analysis has focused on the concept of human capital. From this perspective education or schooling increases productivity as it equips individuals' with skills and knowledge.

As productivity is reflected in earnings and rates of labour market participation, education offers an important means of social mobility, particularly for the poor. Widespread changes in the economy such as the emergence of high- level service sector jobs have opened up important opportunities, to those with the necessary levels of education. The government certainly adopts this perspective. This is in line with Bening's (1990) assertion that, accelerating economic growth and poverty reduction depends ultimately on people; the abundance of natural resources and capital investment alone may not necessarily generate economic growth.

The improvement of the level and quality of the human resources is all important and the absence of a system of education capable of producing the men with the right skills and attitudes as a result of the proscription of secondary and technical education impeded progress and frustrated the results expected from investment. As stated earlier on, Bening (1990) supported this view with an example from 1940, where the officer in charge of the Water Supplies Division of the Geological Department of the Gold Coast responsible for sinking wells in the Northern Territories complained of slow progress owing to shortage of European staff. To speed up the work he had to recruit indigenous staff as foremen but this was not possible because their standard of education was too low, yet people from Ashanti and the Colony did not get on well with those of the Protectorate. It can, therefore, be understood that job security depends on human capital formation and human capital formation depends on education and skilled training.

5.6 Relationship between Formal Education and Social Exclusion

This section of the study presents and analyses the relationship between formal education and social exclusion. Table 4.10 and Table 4.11 show the results.

Table 5.10 Relationship between Formal Education and Social Exclusion

Educational Status	Social Exclusion					
	Yes		No		Total	
Non-Educated	53	20.5%	205	79.5%	258	100%
Educated	65	15.7%	348	84.3%	413	100%
Chi-square Test	$\chi^2=2.529$, $p=.112$					

*Missing value = 29

Source: Author's construction based on data obtained from the field of study, 2016.

The results revealed that there is no significant relationship between educational status and the state of social exclusion. In other words there no differences in the state of social exclusion across educational status of the respondents. The results however show that

majority of the respondents with no education purported that they were not socially excluded from the society was 79.5%. Only 20.5% indicated that they were socially excluded from the society. Thus, the probability a respondent with education to be isolated from society is 20.5%. With the educated group majority of the respondents indicated that they were not socially excluded from the society which represents 84.3%. Only 15.7% indicated that they are socially excluded from the society.

Table 5.11 Relationship between Levels of Formal Education and Social Exclusion

Educational Status	Social Exclusion				
	Yes		No		Total
Non-Educated	53	20.5%	205	79.5%	258 100%
Basic	19	25.0%	57	75%	76 100%
Secondary	14	15.2%	78	84.8%	92 100%
Tertiary	32	13.1%	213	86.9%	245 100%
Chi-square Test	$\chi^2=8.190$ $p=.017$				

*Missing value = 29

Source: Author's construction based on data obtained from the field of study, 2016.

The results revealed that there was no significant relationship between educational status and the state of social exclusion. In other words there are no differences in the state of social exclusion across educational status of the respondents. Majority of the respondents with no education were not isolated from the society which is about 80%. Only 20.5% indicated that they were socially excluded from the society. Thus, the probability of a respondent with no education to be isolated from society was 20.5%. With the educated group, majority (84.3%) of the respondents indicated that they were not socially excluded from the society. Only 15.7% indicated that they were socially excluded from the society. In the rural community, individuals see themselves as one thus, irrespective of once educational status, they associate with each other, form associations and discuss social issues that border on their lives.

The chi-square test revealed that there was a significant relationship between the levels of education and social isolation, $\chi^2(553, 3)=8.190$, $p=.017$. The respondents with basic education who felt isolated from the community were 19 (25%). The remaining 75% of the respondents indicated that they were not isolated from the community. Thus, the likelihood that respondents with basic education being isolated from the community was 25%. Comparatively, this is bigger than the uneducated. The results further revealed that the respondents with secondary education who felt isolated from the community were 14 (15.2%). The majority (84.8%) of them indicated that they did not feel isolated from the community. Hence, the probability that a respondent with secondary education would feel isolated from the community was 15.2%. Comparatively, this is smaller than that of the respondents with basic education.

Majority of the respondents with tertiary education indicated that they did not feel isolated from the community while the remaining 13.1% felt isolated. Thus, the probability that a respondent with tertiary education to be considered isolated from the community was 13.1%. The probability of being isolated from the community was relatively smaller than the non-educated. Irrespective of the level of education, the people saw themselves as one, interacted and communicated with each other on the regular basis. According to Klazen there are good reasons to perceive educational achievement or rather, the access to and utilisation of education, training and learning opportunities as a key factor in the process of becoming excluded. Lack of equality in access to good education (from early childhood on) can contribute to or at least increase the chance on becoming excluded, since it highly determines (apart from intelligence and aptitude to learn) the further educational career and with that the working career of a person.

Spatially the study showed some variations regarding the impact of formal education on social exclusion as demonstrated in Table 5.12

Table 5.12 Relationship between Formal Education and Social Exclusion

Educational Status	Social Exclusion									
	ZONE 1		ZONE 2		ZONE 3		ZONE 4		Total	
	Yes	No	Yes	No	Yes	No	Yes	No		
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Non-educated	14 5.4	50 19.3	12 4.6	52 20.2	12 4.6	51 19.8	15 5.9	52 20.2	258	100
Educated	13 3.1	90 21.8	12 2.9	88 21.3	16 3.9	75 18.2	24 5.8	95 23	413	100
Total										671 100

*Missing value = 29

From Table 5.13 the study showed that majority of the non-educated respondents who were socially excluded were found in Zone 4 (15 or 5.9%). However, it was observed that majority of the respondents who are educated but socially excluded were in Zone 1 (24 or 5.8%). This means that majority of the people in communities in Zone 4 who are uneducated are socially excluded. This implies that lack of access to formal education (from early childhood on) can contribute to or at least increase the chance on becoming excluded. Again, majority of people in communities in Zone 1 who are educated were also found to be socially excluded.

5.7 Relationship between Formal Education and Political Exclusion

The study also examined the relationship between formal education and political exclusion.

Table 5.13 reveals the empirical results.

Table 5.13 Relationship between Formal Education and Political Exclusion

Educational Status	Political Exclusion		Total
	Yes	No	
Non-Educated	153 58.4%	109 41.6%	262 100%
Educated	281 66.6%	141 33.4%	422 100%
Chi-square Test	4.676 (0.031)		

*Missing value = 16

Source: Author's construction based on data obtained from the field of study, 2016.

The results revealed that there was a significant relationship between formal education and political exclusion at the 5% level of significance. The respondents with no formal education indicated that they had equal opportunity in the participation of governance representing 58.4%. The remaining 41.6% of the uneducated respondents indicated that they did not have equal opportunity in the participation of government. The probability that respondents with no formal education would be politically excluded was 41.6%. The results further revealed that 281 (66.6%) of the respondents with education indicated that they had equal opportunity in the participation of governance. The remaining 141 (33.4%) of the respondents indicated that they did not have equal opportunity in the participation of governance. The probability is that respondents with education who were socially excluded were 33.4%.

The educated have the confidence and charisma to express their views concerning the governance of the nation. Some even take up position such as assembly men to lobby for the welfare of the people in their locality. The uneducated on other hand find it difficult to express their view, not confident to contest for District Assembly elections, to mention a few. One of the most consistently documented relationships in the field of political behaviour is the close association between educational attainment and political participation. For more than half a century, researchers have found that more educated citizens are more likely to vote in elections and participate in campaigns (for reviews, see Campbell et al. 1960; Hillygus, 2005; Nie, et al., 1996; Schlozman, 2002; Wolfinger and Rosenstone, 1980). For some scholars, the reason for this relationship is clear: education gives citizens the skills and resources needed to participate in politics. For instance, Verba et al. (1995) argue that education not only directly increases levels of participation, but also allows citizens to acquire the civic skills necessary to effectively communicate their concerns to politicians. Table 5.14 speaks for the issue.

Table 5.14 Relationship between Levels of Formal Education and Political Exclusion

Educational Status	Social Exclusion					
	Yes		No		Total	
Non-Educated	153	58.4%	109	41.6%	262	100%
Basic	49	63.6%	28	36.4%	77	100%
Secondary	56	59.6%	38	40.4%	94	100%
Tertiary	176	70.1%	75	29.9%	251	100%
Chi-square Test	$\chi^2=8.30$, $p=.04$					

*Missing value = 16

Source: Author's construction based on data obtained from the field of study, 2016.

The chi-square test shows that there was significant relationship between levels of formal education and political exclusion. The results revealed that the respondents with basic education who claimed to have equal opportunity to participate in governance were 49, representing 63.6%. Only 28 (36.4%) of the respondents with basic education indicated that they did not have equal opportunity in the participation of governance. Thus, the probability that a respondent with basic education would be politically excluded was 36.4%. This is relatively lower than the respondents with no education. The results further indicate that the respondents with secondary education who claimed they had equal opportunity in governance were 56, which represents 59.6% and the remaining 40.4% indicated that they did not have opportunity in the participation of governance. Hence, the probability that a respondent with secondary education would be politically excluded was 40.4%.

Comparatively, the respondents with no basic education are more likely to be politically excluded relative to the respondents with secondary education. Again the majority (70.1%) of the respondents with tertiary education indicated that they had equal chance of participating in governance. The remaining 29.9% indicated that they don't have equal chance in the participation of governance. Thus, the probability that a respondent with tertiary education

will be politically excluded is 29.9%. This is relatively lower than the respondents with no education.

The results show that all the levels of education were doing better in the governance of the country relative to the uneducated. This is plausible because at least with basic education one is able to express one's views, and ideas about the governance of the country. Educated people have the confidence and charisma to participate in social and economic decisions at the district level and the country at the large. Similarly, Rosenstein and Hansen argue that education "imparts the knowledge and skills most essential to a citizen's task....Because of their schooling, the well-educated have the skills people need to understand the abstract subject of politics, to follow the political campaign, and to research and evaluate the issues and candidates" (1993, p. 136). From this point of view, it is the process of formal education that causes increased political participation.

Rosenstein and Hansen's views were supported by Bening (1990) when he stated that, "Mr. J.A. Braimah attributed all the grievances of the people of the North to the inadequate facilities for primary schools, the lack of opportunities for higher education and the absence of northerners in the political service and the senior grades of other departments. He observed that knowledge is power and unless action was taken, political domination from the South would be accentuated." (p.195) Bening also quoted Mr. S.D. Dombo, Duori Na, who observed that, "With only 1% of our people educated, our education is the lowest in the whole of the Gold Coast. He felt there was the need to find means of asking the Government to look into the question of education as well as general development of the Protectorate. Our boys should be offered scholarships to the Southern Colleges and abroad in great numbers to learn more and more to provide us with efficient administration in this Region." (Bening,

1990, p.197) Education, therefore, offered the opportunity to participate actively in decision making, governance and the political life of one's community.

Geographically, the study showed some spatial variation in terms of the educational level of respondents and how politically they are excluded (Table 5.15).

Table 5.15: Relationship between Formal Education and Political Exclusion

Educational Status	Political Exclusion									
	ZONE 1		ZONE 2		ZONE 3		ZONE 4		Total	
	Yes	No	Yes	No	Yes	No	Yes	No		
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Non-educated	45 17.2	25 9.5	35 13.4	27 10.3	30 11.4	27 10.3	43 16.4	30 11.5	262	100
Educated	70 16.5	35 8.3	69 16.4	30 7.1	73 17.3	32 7.6	69 16.4	44 10.4	422	100
Total										684 100

*Missing value = 16

From the study the results show that majority of the uneducated respondents who are politically excluded from the governance and administration of their communities were found in Zone 1 (45 or 17.2%) with the least number of them being in Zone 3 (30 or 11.4%). It was also observed from the study that majority of the educated respondents who are politically excluded from the governance of the communities were found in Zone 3 (73 or 17.3%) with the least number of them being in communities in Zone 2 (69 or 16.4%) and Zone 4 (69 or 16.4%). This means that uneducated households in communities in Zone 4 were not considered in the administration and governance system at the local level due to their level of knowledge or formal education required for the management and administration of the communities. In an in-depth interview with a headmaster of a Senior High School in the study community, he was emphatic that:

those who take active interest in politics and the governance of their communities are those with some form of tertiary education or at least secondary education. The educated are the people who educate the uneducated about political choices of would be political power seekers and help them decide whom to choose to manage the affairs of their

communities. In doing so, there is high trust giving to the educated in the community to lead (In-depth interview, March, 2016).

Formal education opens the mind for self-determination to govern or to be part of the governance process in one's locality. Without formal education, one becomes voiceless in the decision making of the community.

5.7 Summary of the Findings of Chapter Five

Chapter Five has discussed the relationship between formal education and vulnerability in the context of regular monthly income, general economic condition of the household, degree of financial dependency and job security. According to Allen (2003) vulnerability represents the set of socio-economic factors that determine people's ability to cope with stress or change.

Objective Three was meant to assess the incidence of vulnerability and isolation as key indicators of lack of formal education. The result shows a significant relationship between formal education and regularity of household monthly income. In other words, the regularity of monthly income was found to be dependent on one's educational status. The probability of the uneducated being vulnerable in the context of irregular source of monthly income was 68 percent. The probability that a respondent with basic education would be vulnerable in the context of irregular source of monthly income was 52.5 percent. This is quite high.

Comparatively, the basic educated respondents are less vulnerable relative to the uneducated. The probability of the respondents with secondary education being vulnerable in the context of irregular source of monthly income was 65.9 percent. People who have had secondary education were more vulnerable relative to the uneducated. The probability of respondents with tertiary education being vulnerable in the context of irregular source of monthly income was 26.1%. Thus, the tertiary educated were least likely to be vulnerable compared with non-

educated, basic and secondary. Levels of education and vulnerability change in both directions as one climbs the academic ladder. In other words from basic to secondary the individual was more vulnerable and from secondary to tertiary the individual is less vulnerable.

The study also revealed that there was significant relationship between financial dependency and levels of formal education. The probability that a respondent with no education would be vulnerable in the context of financial dependency was 51 percent. The probability that a respondent with basic education would be financially dependent was 50.9 percent. The probability that the respondent with secondary education would be vulnerable in terms of financial dependency was 38.9 percent. Comparatively, this is lower than the respondents with no formal education. The probability that a respondent with tertiary education would be vulnerable in terms of financial dependency was 42.2 percent. Comparatively, respondents with tertiary education were less likely to be vulnerable in terms of financial dependency relative to those with no formal education. The results revealed that higher levels of education such as secondary and tertiary make the individual less vulnerable in terms of financial dependency. As explained earlier, they diversify their sources of income, thus making them less vulnerable.

The Chi-square test showed a significant relationship between educational status and job security. The probability that a respondent who was uneducated would be vulnerable in terms of job insecurity was 76 percent. The likelihood that a respondent with basic education would be insecure was 67.5 percent. Comparatively, this was lower than those with no education. Therefore, those who were likely to be vulnerable with tertiary education in terms of job insecurity were 57.8 percent. Relatively this is smaller than those with no formal educational

background. All the three levels of formal education persistently performed better than the uneducated, though the figures were not encouraging with respect to majority of the respondents who are insecure. This result suggests that, majority of them did not take entrepreneurial initiative to establish businesses that would mitigate the risk of losing jobs in the formal sector.

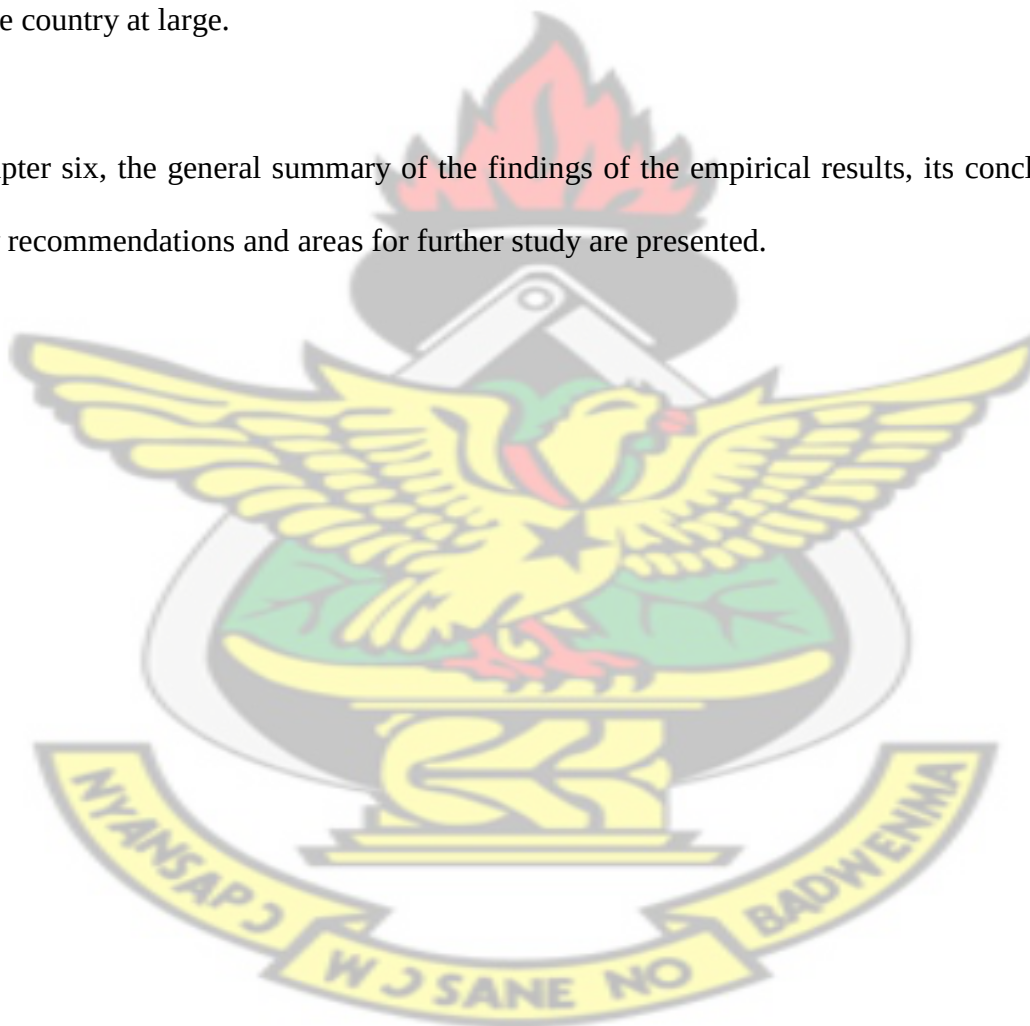
Objective Five was to analyse the relationship between formal education and social and political exclusion (and inclusion) within the local context. The study has shown that there was a significant relationship between levels of education and social exclusion. The probability that a respondent with no education would be isolated was 20.5 percent. The likelihood that respondents with basic education would be isolated from the community was 25 percent. Comparatively, this probably is higher than that in respect of the uneducated. The probability that a respondent with secondary education would feel isolated from the community was 15.2 percent. Comparatively, this probability is smaller than that of the respondents with no education. The probability that a respondent with tertiary education would be isolated from the community was 13.1 percent. The probability of being isolated from the community is relatively smaller than that of the uneducated.

The results further revealed that there is a significant relationship between formal education and political exclusion. The respondents with no formal education (58.4%) indicated that they had equal opportunity in the participation of governance. The remaining 41.6 percent of the uneducated respondents indicated that they did not have equal opportunity in the participation of government. The probability that respondents with no formal education would be politically excluded was 41.6 percent. The probability that a respondent with basic education

would be politically excluded was 36.4 percent. This was relatively lower than the respondents with no education.

All the levels of education were doing better than the uneducated in terms of the governance of the country relative to the uneducated. Thus, at least with basic education one is able to express his or her views, and ideas about the governance of the country. They have the confidence and charisma to participate in social and economic decisions at the district level and the country at large.

In chapter six, the general summary of the findings of the empirical results, its conclusions, policy recommendations and areas for further study are presented.



CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1. Introduction

This chapter summarizes and concludes the findings of the study. Appropriate policy recommendations are distilled out of the empirical results for implementation.

6.2. Summary of the Findings

The study examined the effect of formal education on poverty reduction. A logistic regression model was employed to estimate the likelihood of education reducing poverty or improving one's livelihood. Cross-tabulation and chi-square test were used to determine the relationship between formal education and degree of vulnerability and formal education and social or political exclusion. The following are a summary of the findings.

6.3 Social Darwinism and structuralism theories on the magnitude of poverty.

The results reveal a significant relationship between social Darwinism and structuralism theories on the level of poverty in the study communities. Social Darwinism and structuralism theories explain the magnitude of poverty in the study area. In the opinion of respondents, culture, soil and the general difficult environmental conditions, lack of schooling, government policies and sickness of body, mind and soul were some of the causes of poverty as perceived by the respondents and reiterated during the focus group discussions.

The spatial analysis indicated that majority of the respondents in Zone 4 experienced the incidence of poverty more than those in Zone 1,2 and 3. This also means that majority of the respondents in Zone 1 had more years of formal education, and hence have the potential of becoming self-employed through the knowledge and skills acquired. This has the potential to

make them economically active to buy goods and services to improve their quality of life and reduce the incidence of poverty in the community.

6.4 Effect of Formal Education on Household Livelihood

The results showed no significant difference in the probability of occupying more modernized house type (detached, semi-detached and flat) between the basic school leavers and the uneducated. This is intuitively plausible since individuals educated at basic level earn meager amounts of income, thus serving as a constraint to occupy modernised housing structure. In fact the uneducated learn trade early so that they are able to migrate to the level of individuals with basic education in terms of income levels and other livelihood conditions. It was also established that secondary school leavers were more likely to occupy modernised housing structure. This result is intuitively correct. Those who are educated to the secondary level migrate on the social ladder or upgrade their social convoy with their occupation, income levels, and friends association thus to “keep up with the Jones” they must improve their living conditions by occupying a more modernized housing structure. The individuals with tertiary education had greater chance of occupying modernized housing structure in the study area. The tertiary educated were able to rise up quickly in the social ladder. They had access to better jobs, better levels of income, better association and links and to mention a few. Thus, they had more chances to enjoy better living conditions relative to their uneducated counterparts who are mostly farmers or traders who earned low income due to primitive farming and poor price for their products.

Income of the respondents and ownership of livestock are predictors of the likelihood of occupying modernized house. The empirical results indicate that income of the respondents exert significant effect on the probability of occupying more modernized housing structure.

Prestige is accorded once one owns a modernized housing structure and thus, an individual who experiences increases in their income levels or purchasing power are more likely to increase their demand for such housing type. Ownership of livestock gives the individual the space to spend on luxurious product such as automobiles, fridges, owning and occupying more modernized house and to mention a few. Thus, like income, owning an asset especially income-generating assets improve your purchasing power and being able to afford normal and luxurious goods and services. Finally, both household size and ownership of crop farm exert no significant effect on the probability of occupying more modernised housing structure.

6.5 Effect of Gender Education on Household Livelihood

The empirical results have revealed a statistically significant difference in the probability of occupying dilapidated housing structure between male educated headed household and the female educated headed household. The males are perceived as breadwinners or potential breadwinners of their family, thus, they exert more effort in production and other related activities trying to satisfy the family or his potential partner needs. The females on the other hand viewed themselves as supportive partners rather than performing the leading role in the provision of basic needs and luxurious product thus, they are reluctant or exert less effort in income-generation activities thinking that the male or the man would provide.

Employment status and ownership of livestock exerts significant effect on the probability of occupying dilapidated structures. To sustain the levels of expenditures on basic needs and some luxurious products one must be gainfully employed. Thus, employment enables the individual to earn sustainable income, improve his or her purchasing power thus, given the

individual the space to meet their basic needs and move a step further to climb the social ladder by way of patronizing luxurious products such as non-dilapidated housing structure.

The study also showed a significant difference between secondary educated male and their female counterpart. The secondary educated male is less likely to meet their nutritional requirement relative to their female counterpart. An educated female has access to adequate information about nutritional requirement for their health relative to the males. Thus, they buy the essential foods that contain the essential nutrients meant to nourish the body and keep them healthy. Again there was a significant difference between tertiary educated male and their female counter part at 1 percent level of significance. The tertiary educated males are less likely to meet their nutritional requirement relative to their female counterpart. The female with tertiary education, like the female with secondary education, is more conscious of their nutritional needs and their family relative to their male counterpart.

Gender plays a significant role in determining the respondent's ability to meet nutritional requirement. The results indicate males are more likely to meet their nutritional requirement relative to their female counter. Income-generating asset exerts significant effect on the probability of meeting nutritional requirement. Ownership of income-generating assets gives the space and the capacity to patronage relevant foods that contain the essential nutrients for the nourishment of the body.

The results further revealed that household size and income of the respondents exerted no significant effect on the likelihood to meet nutritional requirement even at the 10 percent level of significance. In other words, the ability to meet nutritional requirement was independent of the income and size of the household of a given respondents. This is a

surprising result since the size of household was expected to depend on purchasing power and the household ability to meet nutritional requirement.

6.6 Vulnerability and Isolation as Incidence of lack of Formal Education

There was a significant relationship between formal education and regularity of household monthly income. In other words, the regularity of monthly income was found to be dependent on one's educational status. The probability of the uneducated being vulnerable in the context of irregular source of monthly income was 68 percent. The probability that a respondent with basic education would be vulnerable in the context of irregular source of monthly income was 52.5 percent. This is quite high.

Comparatively, the basic educated respondents are less vulnerable relative to the uneducated. The probability of the respondents with secondary education being vulnerable in the context of irregular source of monthly income was 65.9 percent. In the same vein, respondents with secondary education were more vulnerable relative to the uneducated. The probability of respondents with tertiary education being vulnerable in the context of irregular source of monthly income was 26.1%. Thus, the tertiary educated were least likely to be vulnerable compared with uneducated, basic and secondary. Levels of education and vulnerability changes in both directions as one climbs the academic ladder. In other words from basic to secondary the individual was more vulnerable and from secondary to tertiary the individual was less vulnerable.

Those with basic level of education are likely to be in the informal sector of employment thus, facing similar predicament by those with no formal education. Individuals with secondary education are expected to be gainfully employed mainly in the industrial sector.

However, over the past two decades the industrial sector has performed abysmally due to liberalization of the trade sector making them face fierce competition from imported products. Thus, they are unable to absorb secondary school leavers. People with tertiary education are mostly absorbed in the formal sector which gives them regular source of income.

There was a significant relationship between formal education and economic condition. That is economic condition varies across the educational background of the respondents. The results revealed that the probability of being worse off for uneducated was 44.2 percent. On the whole the likelihood of a respondent with basic education to be vulnerable in terms of worse economic condition was 45.5 percent. This is higher than those with no formal education. However, this is not surprising since basic education accords the individual with little knowledge with respect to financial literacy and economic related issues. Besides, they spend 9 years in basic education, foregoing incomes that could have been earned to safeguard against economic misfortunes. Comparatively, the respondents with secondary education are more likely to experience worse economic conditions relative to those with no education. Even though individuals with secondary education have fundamental knowledge in financial literacy and economic related issues and techniques required to take precautionary measures against negative economic outcomes or misfortunes, lack of employment might not protect them against economic misfortunes.

As is evident in Ghana, where there is massive youth unemployment, majority of them tends to be secondary school leavers. Sometimes they feel it embarrassing to join the informal sector for livelihood waiting to be employed in the formal sector, thus worsening their economic conditions when there are negative economic outcomes. The probability that the

respondents with tertiary education would be vulnerable with respect to worse economic condition was 30 percent. Comparatively, the respondents with tertiary education are less likely to be vulnerable relative to those with no education. Individuals with tertiary education have greater chances of being employed in the formal sector thus earning formal wages and salaries. All other things being equal, their level of financial literacy is far advanced. They have access to better information on investment market, macroeconomic indicators, and the ability to understand these indicators and on top of it take decisions based on these figures.

The study also revealed that there was significant relationship between financial dependency and levels of formal education. The probability that a respondent with no education would be vulnerable in the context of financial dependency was 51 percent. The probability that a respondent with basic education would be financially dependent was 50.9 percent. The probability that the respondent with secondary education would be vulnerable in terms of financial dependency was 38.9 percent. Comparatively, this is lower than the respondents with no formal education. The probability that a respondent with tertiary education would be vulnerable in terms of financial dependency was 42.2 percent. Again, comparatively, respondents with tertiary education were less likely to be vulnerable in terms of financial dependency relative to those with no formal education. The results revealed that higher levels of education such as secondary and tertiary make the individual less vulnerable in terms of financial dependency. As explained earlier, this is because they diversify their sources of income, thus making them less vulnerable.

The Chi-square test showed a significant relationship between educational status and job security. The probability that a respondent who was uneducated would be vulnerable in terms of job insecurity was 76 percent. The likelihood that a respondent with basic education would

be insecure was 67.5 percent. Comparatively, this was lower than those with no education. Therefore, those who were likely to be vulnerable with tertiary education in terms job insecurity were 57.8 percent. Relatively, this is smaller than those with no formal educational background. All the three levels of formal education persistently performed better than the uneducated, though the figures were not encouraging with respect to majority of the respondents who are insecure. This result suggests that, majority of them did not take entrepreneurial initiative to establish businesses that would mitigate the risk of losing jobs in the formal sector.

6.7 Relationship between Formal Education and Social Exclusion

The study has shown that there was significant relationship between levels of education and social exclusion. The probability that a respondent with no education would be isolated was 20.5 percent. The likelihood that respondents with basic education would be isolated from the community was 25 percent. Comparatively, this probably is higher than that in respect of the uneducated. The probability that a respondent with secondary education would feel isolated from the community was 15.2 percent. This probability is smaller than that of the respondents with no education. The probability that a respondent with tertiary education would be isolated from the community was 13.1 percent. The probability of being isolated from the community is relatively smaller than that of the uneducated.

6.8 Relationship between Formal Education and Political Exclusion

The results have revealed that there is a significant relationship between formal education and political exclusion. The respondents with no formal education (58.4%) indicated that they had equal opportunity in the participation of governance. The remaining 41.6 percent of the uneducated respondents indicated that they did not have equal opportunity in the participation

of government. The probability that respondents with no formal education would be politically excluded was 41.6 percent. The probability that a respondent with basic education would be politically excluded was 36.4 percent. This is relatively lower than the respondents with no education.

The result further showed that the probability that a respondent with secondary education would be politically excluded was 40.4 percent. Comparatively, the respondents with no basic education were more likely to be politically excluded relative to the respondents with secondary education. The probability that a respondent with tertiary education would be politically excluded was 29.9 percent. This probability is relatively lower than that of the respondents with no education. All the levels of education were doing better than the uneducated in terms of the governance of the country relative to the uneducated. Thus, at least with basic education one is able to express his or her views, and ideas about the governance of the country. They have the confidence and charisma to participate in social and economic decisions at the district level and the country at the large.

6.9 Conclusions

The results revealed that the causes of poverty in the study area includes, the soil and general difficult environment, lack of schooling, government policies, sickness of body, mind and soul and culture. It can therefore be concluded that, the causes of poverty in the study area are endemic in that the people are trapped in a geographical difficult environment which affects their income and for that matter the ability to access formal education that leads to human capital formation and job creation. It could be deduced that, there is a vicious cycle of poverty among the people and that would only get worse until there are governmental and international interventions.

The results also revealed that formal education reduces levels of poverty through educational empowerment. It was established that formal education increases the chances of occupying modernized housing structure and also one's ability to meet his or her nutritional requirement. It was revealed that the formally educated individual especially to the higher level of education such as tertiary education insulates the individual from becoming poor. It could therefore be concluded that, formal education is one of the surest means of human capital formation and employment generation which translates to higher income and the resultant effect is the ability to afford modernized houses and meets ones nutritional requirements. In other words they are less vulnerable in economic sense.

However, for persons with basic and secondary education, their chances of being trapped in poverty through vulnerability were very high. It can be concluded that, the level of human capital formation at this stage is low for the individual to be competitive in the job market. The resultant effect is that they would be poorer as compared to those who have had tertiary education. The hypothesis and the theories have been proven to be effective and right through the revealed results.

The results further revealed that formally educated have greater chance to be part of the social fabric as well as participate in the governance of their locality, the district and nation at large. It can, therefore, be concluded that formal education consolidates the individual's position as being non-poor entity.

6.10 Recommendations

The following policy recommendations are made based on the empirical results. It was established in the study that formal education at the secondary and tertiary levels has a

significant effect on the chances of improving one's livelihood in terms of occupying modernized housing structure and achieving one's nutritional needs. It is therefore recommended that education at secondary level should be freely accessible in order to improve the lot of the poor and reduce levels of poverty. The poor districts and communities should be allowed to be given free access education to the secondary level so that they get better chances of improving their livelihood and to mention a few. This would go a long way to reduce the levels of poverty through educational empowerment, human capital formation and skills training and employment opportunities. Since educational facilities are capital intensive, it is recommended that the government should take the lead in the provision of these facilities and make it freely accessible to all.

Again, the study revealed that the female educated has greater chance of improving their livelihood through improvement in nutrition compared with the male educated. Therefore, it is recommended that, females should be given special incentives that would motivate the parents and their female ward to be enrolled in formal education so that they take better care of their nutritional needs and their families at large. It is recommended that the District Assembly, central government, NGO's and international organisations should lead in the provision of special incentives that would motivate the females to be in school. The implementation of this strategy is likely to bring down the levels of poverty in the poor communities, district and the country at large since females form a greater percentage of the inhabitants in the study communities and in the country at large.

The results persistently revealed that the tertiary educated individual has the least chance to be vulnerable in the context of economic condition, financial dependency, irregular source of monthly income and job security. The results imply that non-poor with basic and secondary

education are likely to be poor when there are shocks to the economy such as financial crisis and their local economy as well.

It is therefore recommended that individuals who have qualification up to the secondary school level should be supported financially by the district or central government to be enrolled at the tertiary level or specialized training. This in a way will open up their tentacles in financial literacy and horizon so as to insulate them from negative economic shocks. Related to this, educational curricula at the basic and secondary levels should be upgraded to incorporate the teaching of financial literacy and other related knowledge that will position the students to militate against any negative economic outcomes. This will serve a great deal to protect the people from being relegated to poor conditions or to poverty state when there are shocks in the economy.

Finally, the results revealed that the uneducated are more likely to be politically excluded from participation in the governance of the country even though there are area and local councils, they not able to participate effectively as compared to their educated counterparts. In view of this, it is recommended that political structures should be amended by the government to be all-encompassing. This will render the uneducated an opportunity to voice out their opinions and also channel their grievances to the authorities. Such a policy is likely to be one of the most effective tools of reducing poverty at the community and district levels.

Strategic Framework of Study Recommendations

Table 6.1 Strategic Framework of Study Recommendations

s/n	What	How	When	Who	Why
1.	Education at the Secondary level should be freely accessible.	Education facilities should be provided. Non-payment of fees. Free feeding and uniforms should be provided. The youth should be encouraged to take advantage of free education.	This recommendation should start within the next two years. There should be continues improvement and upgrading of facilities.	Government, Donor partners, Non-Governmental organisations.	Education is known to reduce poverty. Formal education is inversely related to poverty reduction.
2	Individuals who have qualification up to the Secondary level should exert more effort to increase their chances of getting enrolment at the tertiary level or specialized training.	They should be educated on the advantages of specialized training and tertiary education.	Tertiary level education or specialized training could begin immediately after secondary education.	Parents, guardians, opinion leaders, school counselors.	To guide against economic shocks and vulnerability.
3.	Political structures should be amended to be all-encompassing.	Communities should be encouraged to vote for those without formal education as assemble men and women. The local dialect could be used as the medium of communication in the District assembles deliberations.	The implementation of this strategy should be an immediate policy action.	Central government. District assemble	To protect the individual against political and social exclusion.

Source: Authors constructs based on results from field of study, 2016

6.11 Areas for Further Study

1. Coping and poverty reduction strategies among uneducated households in the Jirapa District.
2. Evaluating the differential effects of uneducated and household size on poverty levels among rural households in the Jirapa District.

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APPENDICES

Appendix 1: Questionnaire

Questionnaire for the Study of “the Effects of Formal Education on Poverty Reduction in Ghana: The Case of Jirapa District.”

This questionnaire is designed to investigate the effects of formal education on poverty reduction in Ghana: The case of Jirapa District. Your response to the questions will be very much appreciated. The study by a PhD student of KNUST is solely for academic purposes and confidentiality is very much assured. Thanks a lot for your time and for sharing your experience to enrich the study.

SECTION A: SOCIO-DEMOGRAPHIC DATA

NO.	QUESTION	RESPONSE OPTIONS
1	What is your name?	
2	Which town do you come from?	
3	Sex	1. Male 2. Female
4	What is your occupation?	
5	What is your age?	
6	What is your income per month (household)?	
7	Marital status	1. Married 3.Widowed 2. Single 4.Divorced
8	Occupation of spouse (if married)	
9	Employment status	1. Employed 2. Unemployed
10	Educational status	1. Basic 2. Secondary 3. Tertiary 4. Never schooled
11	Years of schooling	1. 9 2. 12 3. 15 4. 16
12	Size of household	1. 2-5 2. 6-8 3. 9-11 4. 12 5. Others (specify)
13	Health insurance	1. Fully insured (Private) 2. Partly insured (NHIS) 3. Uninsured

SECTION B: CAUSES OF POVERTY

NO.	QUESTION	RESPONSE OPTIONS
14	What are the things that constitute poverty?	1. Housing [] 2. Employment [] 3. Income/money [] 4. Health and nutrition [] 5. Participation exclusion []
15	Who are the poor in Jirapa?	
16	Who are the poorest in Jirapa?	1. Men [] 2. Women [] 3. Children []
17	What are the things that make people poor in Jirapa?	

Indicate your level of agreement or disagreement with the following statements about the causes of poverty in Jirapa

No.	Statement	Don't know	Strongly disagree	Disagree	Agree	Strongly agree
18	Poverty is inherited from parents. If your parents are poor; you would be poor too					
19	Poverty comes from laziness. If you are lazy you would be poor					
20	Poverty comes from God. Some people are created poor					
21	Poverty comes from sickness of the body, mind and soul					
23	Poverty comes from not going to school. If you are illiterate you will be poor					
24	Poverty comes from curses					
25	Poverty comes from politicians and government policies					
26	Poverty comes from what you believe in. Religion can make you poor					
27	Poverty comes from our culture. Some aspects of our culture causes poverty					
28	Poverty comes from the soil and the general difficult environment					
29	Poverty comes from excessive drinking and womanizing					
30	Poverty comes from having too many children that one cannot adequately cater for					
31	Death can cause poverty					

SECTION C: EDUCATION

NO.	QUESTION	RESPONSE OPTION															
32	How many members of your household can read and write any language																
33	Can you read and write in language?	1. Yes 2. No															
34	how many adult members of the household could not go through the following institutions	<table border="1"> <thead> <tr> <th>INSTITUTION</th><th>NUMBER</th><th>REASON(S)</th></tr> </thead> <tbody> <tr> <td>Basic school</td><td></td><td></td></tr> <tr> <td>Secondary school</td><td></td><td></td></tr> <tr> <td>Tertiary institution</td><td></td><td></td></tr> <tr> <td>Apprenticeship</td><td></td><td></td></tr> </tbody> </table> Reasons: 1. Couldn't afford 2. Illness 3. Poor academic performance 4. Unwillingness	INSTITUTION	NUMBER	REASON(S)	Basic school			Secondary school			Tertiary institution			Apprenticeship		
INSTITUTION	NUMBER	REASON(S)															
Basic school																	
Secondary school																	
Tertiary institution																	
Apprenticeship																	
35	How many basic schools are in this community?																
36	How would you describe the present condition of the school's facilities?	1. Very poor 2. Poor 3. Good 4. Very good															

SECTION D: HOUSING CONDITION

NO.	QUESTION	RESPONSE OPTIONS
37	In what type of dwelling does the household live?	1. Separate house 2. Semi-detached house 3. Flat/Apartment 4. Hut 5. Others (specify)
38	What is the material of the wall of the house	1. Stones 2. Concrete/Sandcrete 3. Burnt brick 4. Mud 5. Wood/Bamboo 6. Others (specify).....
39	What is the main source of drinking water for the household	1. Pipe within compound 2. Public outdoor taps 3. Borehole 4. Protected well 5. Unprotected well/Rain water 6. Rivers/Lake/Pond 7. Others (specify).....
40	Are they well constructed gutters/runoff channels around your house?	1. Yes 2. No
41	If yes what construction material is the floor of the channel made of?	1. Mud 2. Sand/Gravels

		3. Concrete 4. Others (specify).....
42	Does the dwelling have an inbuilt toilet facility?	1. Yes 2. No
43	What kind of toilet facility does the household usually use?	1. Flush toilet 2. Pan/Bucket latrine 3. Covered pit latrine 4. Uncovered pit latrine 5. KVIP 6. Others (specify).....
44	Does the household have electricity	1. Yes 2. No
45	What is the status of the household in the dwelling?	1. Owns the dwelling 2. Rents 3. Uses without paying 4. Others (specify).....
46	How many living rooms does the household occupy?	..... .....
47	How many people live in that dwelling?	
48	What is the room occupancy rate?	1. <2 2. 2-4 3. 5-7 4. 8+
49	Which of the following represents your housing condition?	1. Overcrowded 2. Crowded 3. Spacious 4. Very spacious
50	Give reason(s) for your answer to question 31?	..... .....
51	Would you say that your dwelling is well protected from disease causing vectors such as mosquitoes?	1. Yes 2. No
52	If 'no' give reason(s) for your answer to question 33?	..... .....
53	What in your opinion are some characteristic of a poor housing condition?	..... .....
54	How would you describe the general housing condition of the household?	1. Very poor 2. Poor 3. Good 4. Very good

SECTION E: CASHPOR HOUSING INDEX

55. Tick as appropriate the condition of the structure of your house.

STRUCTURE CONDITION

Condition	Tick
1. Dilapidated	
2. Not dilapidated	

56. Tick as appropriate the quality of walls of your house.

QUALITY OF WALLS

Condition	Tick
1. Poor quality	
2. Good quality	

57. Tick as appropriate the condition of the quality of roof of your house.

QUALITY OF ROOF

Condition	Tick
1. THATCH/LEAVES	
2. Iron sheet	

SECTION F: ISOLATION/VULNERABILITY

NO.	QUESTION	RESPONSE OPTIONS
58	Do you feel satisfied with your condition as a Ghanaian like some people feel?	6. Yes 7. No
59	Would you say you have equal opportunity to actively participate in the governance of the country?	1. Yes 2. No
60	Give reason(s) for your answer to question 41?	..... .....
61	Do you feel isolated from the rest of the members in this part of the community?	1. Yes 2. No
62	Give reason(s) for your answer to question 43?	..... .....
63	Do socioeconomic conditions of the community encourage you to stay in the community throughout your life?	1. Yes 2. No
64	Give reason(s) for your answer to question 45?	..... .....
65	Which of the following describes the rate at which people leave this community for other parts of Ghana for greener pastures?	1. Very frequent 2. Frequent 3. Less frequent 4. Never 5. Don't Know
66	Which of the following represents the state of your household as compared to the socioeconomic	1. Very deprived 2. Deprived 3. Privileged

	conditions of other households in the districts as of now?	4. Highly privileged
67	Give reason(s) for your answer to question 48?	..... .....
68	Do you feel stressful as a result of socioeconomic conditions of the household?	1. Yes 2. No
69	Give any health problems which can result from stressful condition?	..... ..... .....

SECTION G: INCOME AND EXPENDITURE

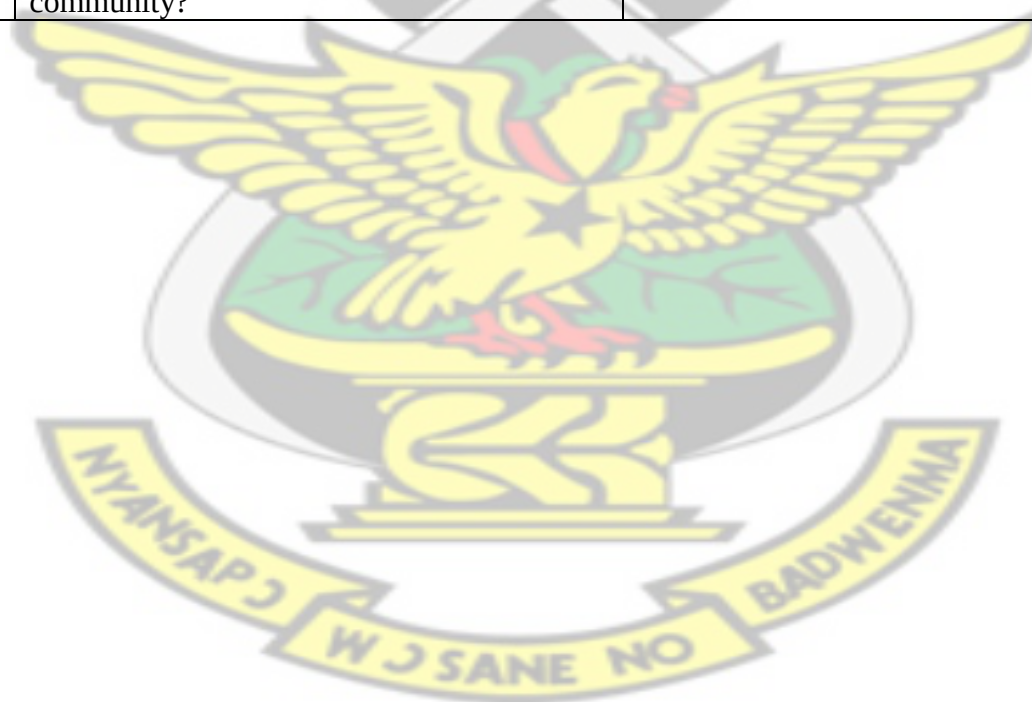
NO.	QUESTION	RESPONSE OPTIONS
70	What is the average monthly income of the household	
71	How would you compare the overall economic situation of the household with that of one year ago?	1. Much worse 2. Worse 3. Same Better 4. Much better
72	Who contributed much to the household cash income?	..... .....
73	What is his/her average contribution to the monthly income of the household?	..... ..... .....
74	Does the household own any of the following?	
	ITEMS	1. YES 2. NO
	1. Livestock/Poultry	
	2. Television	
	3. Electric iron	
	4. Video deck	
	5. Mattress/Bed	
	6. Stove	
	7. Fan	
	8. Iron	
	9. Audio cassette player	
	10. Crop farm	
	11. Sofa	
75	How much of the household monthly income is spent on the following	
	ITEMS	1. EXPENDITURE 2. PERCENTAGE (%)
	Health Care	
	Bills and rates	
	Food, meat and fish	
	Education	
	Others (specify).....	

76	Do you have additional income from a relative outside your household	1. Yes 2. No
77	Is the household monthly income regular?	1. Yes 2. No
78	If no, give reason(s) for your answer to question 59	
79	Is the household monthly income able to meet the nutritional requirements of the household adequately?	1. Yes 2. No
80	Give reason(s) for your answer to question 61?	..... .....
81	How satisfied are you with the financial situation of the household?	1. Very dissatisfied 2. Dissatisfied 3. Satisfied 4. Very satisfied
82	How often does the household buy food items on credit	1. Very often 2. Often 3. Seldom 4. Never
83	Which of these best represent the financial condition of the household?	1. Very poor 2. Poor 3. Normal 4. Non poor
84	If there is a crisis such as poor crop yield, loss of job or ill health how would you rate the household's ability to survive?	1. Very insecure 2. Insecure 3. Secure 4. Very secure
85	Compare with one year ago, would you say the financial situation of the household has improved?	1. Not at all 2. Not quite 3. Quite well 4. So much
86	Which of the following represents the financial situation of the household?	1. Highly dependent 2. Dependent 3. Independent 4. Highly independent
87	Compare with other households in the community, how would you describe the financial situation of the household?	1. Very bad 2. Bad 3. Good 4. Very good

88	Would you agree that members of your community suffer income poverty due to the following reasons?					
	REASONS	1. Strongly Agree	2. Agree	3. Disagree	4. Strongly Disagree	5. Don't Know
	1. Lack of jobs					
	2. Laziness					
	3. Poor skills and training					
	5. Poor working conditions					
89	Would you agree that lack of formal education results in the following?					
	INDICATORS	1. Strongly Agree	2. Agree	3. Disagree	4. Strongly Disagree	5. Don't Know
	1. Low income					
	2. Poor Housing					
	3. Vulnerable					
	4. Exclusion					
	5. Inequality					
	6. Poor Hygiene					
	7. Powerlessness					
90	What recommendations would you give to resolve three most pressing Socio-economic problems of the Household/Community?					
		PROBLEMS		RECOMMENDATIONS		
	1. HOUSEHOLD	1.....		1.....		
2.....		2.....				
3.....		3.....				
.....						
	2. COMMUNITY	1.....		1.....		
2.....		2.....				
3.....		3.....				
.....						
91	To what extent would you agree that Poor socio-economic condition leads to Poor education?		1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree			
92	Would you agree that income poverty leads to poor utilization of educational facilities in your community?		1. Strongly agree 2. Agree 3. Disagree 4. Strongly disagree			
93	How would you agree that educational status affects your socio-economic situation?		Give reasons-			

SECTION H: INEQUALITY, EXCLUSION / INCLUSION

NO.	QUESTIONS	RESPONSE OPTIONS
94.	Do you think there is a sharp gap between you and the other members of the community in terms of income and assets ownership?	Yes No
95.	Give reasons for your answer in question 1.	
96.	Can you say that you have equal access to education, health care and other public services in the community?	Yes No
97.	To what extent can you say that you have been excluded or discriminated in your community as a result of your educational background	
98.	Do you think that you have been included in educational, economic and social activities in the community?	Yes No
99	If yes in questions 78, is it on favourable terms like all others?	
100.	Do you think that girls have equal rights with the boys in education in your community?	



Appendix 2: Introductory letter from KNUST



DEPARTMENT OF GEOGRAPHY AND RURAL DEVELOPMENT
FACULTY OF SOCIAL SCIENCES
COLLEGE OF HUMANITIES AND SOCIAL SCIENCES
KWAME NKRUMAH UNIVERSITY OF SCIENCE & TECHNOLOGY



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Our Ref:.....
1st June, 2016
Date:.....

University Post Office
Kumasi - Ghana
West Africa
Tel: 03220 61288/9
geogdept@knust.edu.gh

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

DATA COLLECTION

This is to introduce to you **REV. ALPHONSUS BENI** who is a Fourth Year Graduate student in the Department of Geography and Rural Development. The above mentioned student is collecting data for the preparation of a thesis on:

**“THE EFFECT OF FORMAL EDUCATION ON POVERTY REDUCTION IN GHANA:
THE CASE STUDY OF JIRAPA DISTRICT”**

as part of the requirements for the completion of a Doctor of Philosophy Degree programme in Geography and Rural Development.

We shall be grateful for any assistance that you and your organization can give. We wish to assure you that any information or material given will be treated in strict confidentiality and used only for the purposes and subject to any other conditions that you may impose.

Yours faithfully,

Prince Osei-Wusu Adjei (PhD)
HEAD OF DEPARTMENT

