UNIVERSITY OF CAPE COAST

BENEFIT INCIDENCE ANALYSIS OF POVERTY REDUCTION INTERVENTIONS IN THE BONGO DISTRICT OF UPPER EAST REGION OF GHANA

AMOS KWABENA MARSHALL AYINGA

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BY

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THESIS SUBMITTED TO THE INSTITUTE FOR DEVELOPMENT STUDIES OF THE FACULTY OF SOCIAL SCIENCES, UNIVERSITY OF CAPE COAST IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF PHILOSOPHY DEGREE IN PEACE AND DEVELOPMENT STUDIES.

MAY 2013

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this University or elsewhere.

Candidate's Signature:…….. Date:……

Name: Amos Kwabena Marshall Ayinga (SS/MDS/09/0015)

Supervisors' Declaration

We hereby declare that the preparation and presentation of this thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

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ABSTRACT

Households in Bongo District accessed benefits from poverty reduction interventions. The study specifically sought to examine the kinds of benefits derived by households and to estimate how the benefits were distributed across various household income groups in order to determine the progressivity of the interventions. The study was also interested in exploring alternative ways of enhancing the benefits of the interventions.

To achieve these objectives of the study, a structured interview and questionnaire were administered to 435 households and 5 officials of the implementing agencies. Descriptive statistics was used to analyze the kinds of benefits and the alternative means to enhance the benefits. Benefit incidence approach was used to estimate the distribution of the benefits in terms of cash transfers to household quintiles (population groups) and to determine the pro-poorness and progressivity of the interventions.

The results of the study showed that households received various kinds of benefits in agriculture, safe water, education, and health interventions. The benefit incidence analyses showed that the poorest households benefited largely from the education and Food and Agricultural Budgetary Support (FABS) interventions. It also showed that the interventions, which targeted at the poor were progressive. The households also suggested alternative means of enhancing the benefits of the interventions. It is necessary for Government to design and implement pro-poor programmes that consider the needs of the poor in order to lift them out of the poverty.

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DEDICATION

I dedicate this work to my wife and daughter, Christy and Yinboolum respectively, my parents and to the Glory of God.

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LIST OF ACRONYMS

Acronym	Full Meaning
AC	Area Council
AfDB	African Development Bank
ASIF	Armenia Social Investment Fund
BDA	Bongo District Assembly
BDMTDP	Bongo District Medium Term Development Plan
BIA	Benefit Incidence Analysis
BWTC	Bongo Women Training College
CSEE	Quintile Cumulative Share of Education Expenditure
CSAE	Quintile Cumulative Share of Agriculture Expenditure
CWSA	Community Water and Sanitation Agency
CRS	Catholic Relief Services
CSM	Cerebro-Spinal Meningitis
DACF	District Assembly Common Fund
DHMT	District Health Management Team
DMTDP	District Medium Term Development Plan
DPT	District Planning Team
ERP	Economic Recovery Programme
FABS	Food and Agricultural Budgetary Support Programme
F	Female
FGT	Foster Greer and Thorbecke
GDP	Gross Domestic Programme
GES	Ghana Education Service

GHS	Ghana Health Service
GLSS	Ghana Living Standards Survey
GOG	Government of Ghana
GPRS I	Ghana Poverty Reduction Strategy
GPRS II	Growth and Poverty Reduction Strategy
GSS	Ghana Statistical Service
HH	Household
HIPC	Highly Indebted Poor Countries
HU	Housing Unit
IFAD	International Fund for Agricultural Development
ISSER	Institute of Statistical, Social and Economic Research
JHS	Junior High School
KVIP	Kumasi Ventilated Improved Pit
LACOSREP	Land Conservation for Smallholder Rehabilitation Programme
M	Male
MCA	Millennium Challenge Account
MDBS	Multi-lateral Donor and budgetary Support
MDGs	Millennium Development Goals
MDRI	Multi-Donor Relief Initiative
MIA	Marginal Incidence Analysis
MS	Middle School
MNCs	Multinational Corporations
MOFA	Ministry of Food and Agriculture

MTDP	Medium Term Development Plan
NDPC	National Development Planning Commission
NHIS	National Health Insurance Scheme
OECD/DAC	Organization for Economic Cooperation and Development/Development Assistance Committee
PAMSCAD	Programme of Action to Mitigate the Social Cost of Adjustment
PHC	Population and Housing Census
PRGF	Poverty Reduction and Growth Facility
PRI	Poverty Reduction Intervention
PRSP	Poverty Reduction Strategy Paper
SAP	Structural Adjustment Programme
SEND	Social Entreprise for Development
SEE	Quintile Share of Education Expenditure
SAE	Quintile Share of Agriculture Expenditure
SES	Socio-Economic Survey
SHS	Senior High School
SPSS	Statistical Product and Service Solutions
SSA	Sub-Saharan Africa
T	Total
UNDP	United Nations Development Programme
UNWWDR	United Nations World Water Development Report
VIP	Ventilated Improved Pit
WB	World Bank

WDR	World Development Report
WFP	World Food Programme
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

Background of the study

Defiant of a single conceptualization and characterization, poverty is defined severally in terms of capacity deprivation (Sen, 1995; Sen & Grown, 1987), lack of access to opportunities for sustainable livelihood such as income, assets, skills, knowledge and decision making (May, Manzini & Mande, 2009). It is also defined as lack of sufficient health, education, nutrition, low self-worth, powerlessness and isolation (Coudouel, Henctschel & Wodon, 2005; 2003; Hyman, 2002; Narayan et al., 2000; Gillis, Perkins, Roemer & Snodgrass, 1987; Chambers, 1995; UN, 1995). In the view of Ramcharan (2003), poverty constitutes a deprivation of human rights but he asserts that the concept of poverty has acquired a specific connotation that ties it closely to lack of command over economic resources. According to King and Palmer, (2006), Shaffer (1998) perceives poverty, as physiological deprivation, in terms of basic material or biological needs such as insufficient or lack of education, health, nutrition and shelter, and indicates that it is associated with income or consumption. And social deprivation embodies powerlessness, voicelessness, social exclusion, cultural impoverishment and loss of identity and dignity.

The multi-dimensional nature of poverty means that the measurement of poverty has to consider monetary and non-monetary indicators. In practice, income and consumption are the broadly used indicators for measuring poverty and often serve as proxies for intangible deprivations such as lack of freedom to participate in decision making and feeling of powerlessness (Coudouel et al. 2005). Physiological deprivations are measured with focus on such money-metric indicators (income and consumption of goods) and intangible indicators of well-being (Awaworyi & Danso, 2010; King & Palmer, 2006; Lipton, 1997). Measurement of social deprivations however tends to focus on non-monetary indicators and more intangible criteria such as freedom, dignity, security or justice (King & Palmer, 2006).

Poverty measurements require a poverty threshold (baseline) that sets the deprivation level for aggregate poverty such as headcount poverty (poverty incidence), the depth of poverty (poverty gap) and poverty severity (squared poverty gap). According to Ellis (1984), choosing a poverty baseline is often difficult because social situations keep changing and thus affect the standard of measurement. In spite of the difficulty in choosing poverty baseline, welfare indicators such as per capita consumption are useful in measuring aggregate poverty (Ofori, 2011).

In Ghana poverty manifests in low income, illiteracy, malnutrition, ill-health, water and sanitation, and access to roads and insecurity (Nkum & Ghartey, 2000). In economic context, the Ghana Statistical Service defines the poor people as those subsisting on a per capita income of less than two-thirds of the national

average of per capita income (GSS, 1999). Poverty is also defined by the Ghana Poverty Reduction Strategy (GPRS I) as the unacceptable physiological and social deprivation. The stakeholders at the district and community levels in Bongo District have also identified similar deprivations such as lack of basic needs like food, health, shelter and education as poverty (BDMTDP, 2006/2009). What can be imputed to these views about poverty is that poverty is a deprivation of basic needs, prevention of active participation in economic, social and political activities, and a limitation of the opportunities of the poor, which makes it difficult for them to achieve their potentials to the fullest (Mensah, Enu-Kwesi & Akorsu, 2008).

With the World Bank's income baseline of US$ 1.25 per day which expresses the purchasing power parity that facilitate international comparisons of poverty (Sachs, 2005; Hyman, 2002), 1.4 billion people are living in hardcore poverty (less than US$ 1.25). Per the World Banks upper poverty baseline of US$ 2.50 per day about 3 billion people are poor (Zukang, 2009).

The Ghana Statistical Service (GSS) surveys also highlight deepening poverty, vulnerability and social exclusion in Ghana, both in the urban and rural areas (NDPC/GOG/UNDP, 2010; Sultan & Schrofer, 2008; GSS, 2008; Ashong and Smith, 2001). Evidence from the 2005/2006 living standards survey shows that poverty is more pronounced in the Upper East, Upper West and Northern Regions (GOG/NDPC, 2010; Braimah & Obeng Nti, 2009; GSS, 2008; ISSER, 2007), where there is lack of natural resources and little or a general absence of capital investment and social services (Azeem et al., 2006). Per the GH¢370.89

upper poverty line set by the Ghana Statistical Service (GSS) for the 2005/2006 Ghana Living Standards Survey (GLSS V), 28.5 per cent Ghanaians in 2005/2006 survey were captured as poor. With its lower poverty line of GH¢288.47 for the same survey, 18.2 per cent Ghanaians are extremely poor (GSS, 2008). In Greater Accra, the headcount poverty was below the national averages: About 11.8 per cent and 6.2 per cent people lived below the threshold for poor and extreme poor respectively. In Upper East the records in 2005/2006 survey showed that 70.4 per cent and 60.1 per cent of the people were living as poor and extreme poor respectively (GOG/NDPC, 2010, 2003; GSS, 2008; ISSER, 2007).

Poverty has been attributed to diverse causes by different theories explaining poverty. The individual theory of poverty attributes poverty to individual deficiencies, that is, the indolence of the poor (Bradshaw, 2006). Rainwater (1970) according to Bradshaw (2006), states that the poor deserve to suffer due to their moral failings. This position is corroborated by Rank, Yoon and Hirshcl (2003) who argue that poverty is the result of personal failing. Another strand of the individual attribution of poverty is that poverty results from the lack of genetic qualities such as intelligence. In line with this the view of the Maxwell School (2006) according to Mensah, Enu-Kwesi and Akorsu as cited by Kendie and Marten (2008) is that personal circumstance such as intelligence among others like education, skill and experience cause poverty and inequality at the individual level. Contrary to the position of the individual theory of poverty is the culture of poverty theory whose underlining argument

attributes the causes of poverty to dysfunctional culture and subculture. It contends that poverty is created by a transmission of a socially generated set of belief and values held and perpetuated by individuals over generations (Bradshaw, 2006). The belief of this theory is that people acquire differing values, beliefs and norms of behaviour that psychologically confine them as poor or rich (Kwadwo, 2010).

The social theory of economic, political and social discriminations also blames the prevalence of poverty on structural and political barriers. The theory argues that the structural and political barriers limit individuals' opportunities and resources to achieve income and well-being. The poor people are unable to mobilize economic benefits and justices because the political system imposes difficulties on them to do so (Bradshaw, 2006). The restriction of opportunities is thus responsible for the prevalence of poverty in developing world Grondona, 2000; Harrison, 2000). The geographically based theories of poverty argue in a different dimension that rural poverty and third-world poverty represent a spatial characterization of poverty (Bradshaw, 2006). According to Shaw (1996) capitalism restructures space and the geography of poverty is a spatial expression of capitalist system. Regardless of which theory is accurate, the fact is that poverty in any of its form affects the poor. The most vulnerable groups such as older people, unemployed youth, and children especially those from poor families, women and people with disability are the most affected (May et al, 2009; Derbyshire, 1999; Offei-Aboagye, 1999 cited by Oduro, 2001).

Poverty has consigned the poor to perpetual exclusion from normal living condition (Abane, n.d, cited by Kendie and Martens, 2008). Due to poverty the skills and knowledge based development potentials of people have reduced as a result of which they are denigrated and dehumanized in society. The poor are unable to afford education, which aggravates their capacity deprivation (Sen, 1995), exacerbates their poverty and vulnerability level, and widens the gap of inequality between them and the rich (Coudouel et al. 2005). Nwankwo (1995) notes that material impoverishment of African's millions adds to the problem of slum and shanty dwelling and the evolution of subculture of crime, violence, civil unrest, prostitution and other form of social and moral depravity. This reduces the percentage of the active population engaging in productive and creative ventures and thereby compounding the problem of development.

To tackle the development problems, emphasis should be placed on development policies hoped to promote growth that will inure to the benefit of the poor segment in society. Most economists believe that economic growth will provide the solution (Roemer and Gugerty, 1997). The World Bank and IMF through the 1980 to the early 1990s implemented Economic Recovery Programme in over 30 African countries that included market liberalization and promotion of macroeconomic growth (Issahaku, 2000).

Per Capita income in Ghana fell in the 1970s and early 1980s after it had remained almost constant during the 1960s (Easterling, Fox & Sand, 2008). The dwindling per capita income and downward economic spiral for the two decades resulted in the adoption of an Economic Recovery Programme (ERP) in 1983

(Easterling et al. 2008; Sowa, 2002; Botchie & Ahadzie, 2004; Kunfaa, 1999). ERP, christened Structural Adjustment Programme (SAP) in Ghana sought to induce macroeconomic reforms, fiscal and monetary stability, export growth, trade liberalization and rehabilitation of physical infrastructure for sustainable development (Bradshaw, Viques & Linneker, 2004; Botchie & Ahadzie 2004; Kunfaa, 1999). The first ERP, which was implemented in April 1983 over the period of 1983-1986, relegated the role of the 'state or public sector' systematically in favour of open market in the economy. State owned enterprises were privatized to pave way for private sector investment. Key economic sectors were thus deregulated as a development strategy (Aryeetey & Kanbur, 2008; Asamoah, 1996; WB, 1995 cited by Botchie & Ahadze, 2004; Kunfa, 1999). The adjustment programme culminated in impoverishing Ghanaians the more even though in the immediate years after its implementation some hefty positive growth rate of 9 per cent was realized in 1984 (Aryeetey & Kanbur, 2008; Sowa, 2002; Botchie & Ahadze, 2004). Starting in 1986, the second phase of the reform (ERP II) was implemented to correct the structural imbalances in order to engender sustained healthy economic growth (Aryeetey & Kanbur, 2008; Asamoah, 1996). A major programme that was designed and implemented in 1987 under SAP with the aim of addressing the social concerns of the SAP was the Programme of Action to Mitigate the Social Cost of Adjustment (PAMSCAD). PAMSCAD targeted small farmer and hired labour, poor households with limited access to basic services, the urban youth and households in the northern regions (The Future Agriculture, 2009; Apusigah, 2007;

Hutchful, 2002; Sowa, 2002). It ended in 1990 without addressing the social cost concerns that bedeviled the adjustment (Sowa, 2000).

The extensive liberalization and adjustment in the 1980 could not sustain growth in the agriculture and manufacturing sectors to the extent that poverty in the 1990s reached undesirable levels (GOG/NDPC, 2003). The economy of Ghana experience high inflation and interest rates. Coupled with dwindling foreign reserves, currency depreciation and short fall in aid flows as well as mounting public debt (Linsay, 2009; GOG/NDPC, 2003), the government prepared the Ghana Poverty Reduction Strategy (GPRS I) as a development framework so as to access the HIPC fund linked to World Bank and IMF prescribed (PRSP). As a comprehensive development policy framework for poverty reduction and growth, the GPRS I focused on macro-economic stability for sustainable economic development to support poverty reduction (GOG/NDPC, 2003) embedded with the poverty reduction strategy paper's (PRSP) Poverty Reduction and Growth Facility (PRGF) (Malaluan & Guttal, 2003). The PRGF is claimed by the Bank-IMF as a framework for achieving sustainable poverty reduction (Malaluan & Guttal, 2003; Abugre, 2000). In the view of Maluluan and Guttal (2003), however, poverty is used as window dressing to peddle the same SAP which had caused chronic economic crisis in low income countries. The GPRS I span the period 2003-2005. From 2006 to 2009, Growth and Poverty reduction Strategy (GPRS II) was implemented to continue with achievements as well as to address the failure of GPRS I (ISSER, 2010; NDPC/GOG & UNDP Ghana, 2010).

Ghana's qualification for accessing the HIPC fund was rooted in the fact that it had implemented the SAP programme. With the GPRS in place, Ghana benefited from the HIPC facility and other international development assistance support from Multi-Donor Budgetary Support (MDBS) since 2003 and Multilateral Debt Relief Initiative (MDRI) in 2006 as well as the United states (US) funded Millennium Challenge Accounts (MCA) programme (NDPC/GOG & UNDP Ghana, 2010). The HIPC debt relief fund have been injected onto GPRS programmes in support of both poverty reduction and growth enhancement (NDPC/GOG & UNDP Ghana, 2010). As a decentralization policy, the districts of Ghana have had to develop a medium term development plan in line with GPRS programmes.

Like other districts in the country, Bongo district has since the implementation of the GPRS benefited from poverty reduction expenditure component of the GPRS. With the support of the District Assembly Common Fund (DACF) and funds internally generated, Bongo District disbursed GH¢151,900,000 to 235 beneficiaries for farming and other activities that promoted trade and artisanship from 2002-2004 (BDMTDP, 2002/2004). There has also been an upswing of education infrastructure from 240 in 2003 to 327 schools in 2005 (BDMTDP, 2006/2009). In the area of health, the district implemented a community Health Planning and Service (CHPS) concept in seven zones that provide health care delivery service. Special programmes for the vulnerable and excluded, and community-based programme for the elderly, which are embedded in the broad objectives of the GPRS I and II have also been

carried out (BMTDP, 2002-2004/2006-2009). These interventions have sought to translate into a reduction of poverty in the district. Spending on education, health and agriculture and other social services impacts on poverty if there generate efficient services targeted to the poor (Oduro, 2001).

To assess the welfare impact of the expenditures of social interventions on the beneficiary household two approaches are usually used. One is the benefit incidence analysis (BIA), developed by Meerman (1979) and Selowsky (1979) in a twin World Bank study reviewed by Pradhan (1996) and Demery (2003, 1995). This approach calculates the average benefit of the social intervention received by the beneficiary household. The second approach is the behavioural approach or analysis (Van de Walle, 2003; Lanjourn & Ravallion, 1999). The behavioural analysis incorporates behavioural responses of the beneficiaries and the intervention providers into the incidence analysis. An example of the behavioural approach or analysis is the marginal incidence analysis (MIA) which measures the incidence of actual increases or proposed cuts in programme spending (Van de Walle 2003). MIA requires panel data, that is, data that contain information on household income and access to social services/interventions and the intervention expenditure over time for various areas (Van de Walle, 2003). A single cross-sectional data used by Ravallion (1999) can also be employed to compare the average incidence across geographic areas with differing degree of intervention sizes.

Statement of the Problem

One of the imperatives in government policies is to improve individuals' and households' welfare. That is, to address the problem of deprivation by helping the poor to escape from poverty in society (Van de Walle, 2003; Martinez-Vasquez, 2001; Demery, 2000; Van de Walle, 1996). This is reflected in public spending on basic services and other valuable interventions to improve access to basic requirement of life in order to improve the general well-being of the people.

The benefit incidence of these interventions to poor households concern development economists and policy makers because of the inequality that may characterize the distribution of the intervention benefits. The value or share of benefits of the interventions to households can be seen as a stream of benefits which are a function of savings and expenses from paying fully for the services or intervention from alternative providers: indirect benefits in terms of time freed up to get water into household from long distance; and of other indirect benefits related for example to improved health or education outcomes (Alabi et al., 2010). Higher access to basic services like education and other poverty reduction interventions by poor households is critical in many developing countries like Ghana.

Against this background, the analysis of distribution of public spending on benefits of poverty reduction interventions using benefit incidence analysis is paramount in Bongo District. The need is further strengthened by the fact that empirical data have showed that benefit incidence studies of basic social services

such as education and health have been done in the country (Canagarjah & Ye, 2002; Demery, 1997; Demery, Chaos, Bernier & Mehrak, 1995) but none has specifically examined the benefit incidence of poverty reduction interventions in the Bongo district to establish how pro-poor and progressive the interventions have been. This study thus seeks to estimate the distribution of the benefits of poverty reduction interventions in the district from 2006 to 2011 using the benefit incidence approach.

Critical to BIA is combined information about the unit cost of providing the intervention and information on the users of these interventions, usually obtained from the intervention providers and through household survey. The cost of intervention is used to impute the benefits to the users ranked by some agreed welfare standards (Van de Walle 2003, 1996; Demery, 2000).

Benefit incidence analysis does not focus on service quality but seeks particularly, to tell who benefits from the intervention. It also seeks to describe the welfare impact of the intervention on different income groups accessing the intervention so that progressiveness and targeting of the intervention can be established. The approach is non-rival in nature (that is, it cannot be readily assigned to individuals), hence it can only cover a small proportion of the spending on the programmes (Demery, 2000).

Objectives of the Study

The general objective of this study was to assess households' accessibility of poverty interventions benefits in Bongo District during the period of 2006 to 2011.

The study therefore sought specifically to:

1. examine the benefits households derived from poverty reduction interventions in the Bongo District;
2. estimate the distribution of the benefits of the interventions across the various household income groups using the benefit incidence approach;
3. determine the progressiveness of the benefit incidence of the interventions; and
4. explore alternative means of enhancing the benefits of the interventions to the poor in Bongo District.

Research Questions

The following research questions were set to solicit responses to achieve the objectives above.

1. What are the benefits of poverty reduction interventions that households derived in Bongo District?
2. How are the benefits of the poverty reduction interventions distributed across various household income groups in the Bongo district?
3. How progressive are the benefits of the interventions to the beneficiary households in Bongo District?
4. What are the alternative means by which the benefits of the interventions can be enhanced in Bongo District?

Relevance of the Study

The significance of this study was underpinned by the fact that poverty reduction interventions need an understanding of various dimensions and

determinants of poverty (Coudouel et al., 2005). It is how well these interventions are targeted that will result in their benefits accruing to the poor, which in essence will bridge their poverty gap. By examining the benefits households derived from various poverty interventions and thereby estimating their distribution across household income groups has resulted in establishing the programmes' level of targeting in the district to the poor income group. This information is crucial to the implementing institutions for better targeting in order to manage wastage and achieve their poverty reduction objectives.

Empirical findings of studies serve as basis for further studies. The benefit incidence analysis adopted in this study has produced findings that may also boost existing literature in the field of benefit incidence analyses of poverty reducing interventions and could be used as references for other studies.

Scope of the Study

For the study to greatly impact policy development for poverty reduction the use of the behavioral approach was more appropriated for a nationwide coverage of the study. With the absence of panel data as it is the case for developing countries, a single cross-sectional data suffice for a marginal incidence analysis based on geographic variation in terms of differences in intervention expenditure size. Due to several constraints relating to time and financial resources, the study was conducted in 29 communities in 3 area councils in the Bongo District, a predominantly rural community. The marginal incidence analysis was thus unsuitable for the study seeking to establish more targeted spending on interventions that benefit the poor in a rural area. Although

the research was limited to Bongo District, it could be used as a general representation of the country and in that sense its findings hope to serve as basis for further studies particularly on benefit incidence studies.

Structure of the Study

The study is organized and presented in five chapters. Chapter one focuses on the introduction, which comprises the background of the study, statement of the problem, objectives of the study, research question and relevance of the study. It also contains the scope and structure of the study. Chapter two presents the review of relevant theoretical and empirical literature. Literature was reviewed on theories evolved to explain the sources of poverty. The chapter covers some poverty reducing efforts in Ghana in the last three decades. Empirical works on average and marginal benefit incidence are also looked at. The methodological approach to achieving the objectives of the study is captured in chapter three. Chapter four is devoted to the presentation of results and the accompanying discussions. The findings, summary, conclusions and recommendations as well as suggestion for further studies are all distilled in chapter five.

Field Challenges

Ghana Health Service (GHS), Community Water and Sanitation Agency (CWSA) and the Bongo District Assembly failed to provide secondary data on their interventions expenditures and the list of beneficiaries which are relevant for benefit incidence. These constraints therefore affected the benefit incidence

analysis of health, safe water, and skills development in dress making households benefited in the district.

The Regional and District Statistical Service of Upper East Region and Bongo District also failed to provide data on household consumption expenditures in Bongo district because their data is not usually disaggregated on district basis but on regional basis. As a result a supplementary questionnaire was adopted from the Ghana Statistical Service's Core Welfare Indicator Questionnaire to collect data on household consumption expenditure and income.

Notwithstanding these difficulties encountered by the study, they did not entirely compromise the benefit incidence analyses since benefit incidence of the education and agriculture interventions were analyzed. The distribution of the benefits of these interventions across different income households, their targeting and progressivity were determined. Besides, the other two important objectives of the study, which seek to examine the kinds benefits households derived from the interventions and to explore alternatives ways of enhancing the benefits were successfully assessed and explored using descriptive statistics. The results and findings of the study were thus within the focus of the study. The data was collected from 27th February to 16th April, 2014.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

This chapter focuses on the review of relevant literature to benefit incidence studies on benefits of poverty reduction interventions to households. The discourse includes poverty conceptualizations, theoretical underpinnings to sources of poverty and development as well as anti-poverty interventions.

Governments spend on poverty reductions interventions to address poverty. The distribution of benefits (in terms of cash transfers) of poverty reduction intervention to beneficiaries across income groups are therefore usually of interest to policy makers. This interest emanates from their desire to pursue programmes that are pro-poor and progressive. Against this background, benefit incidence approach usually used for such assessments thus forms part of the appraisal of the study in this chapter.

The literature on benefit incidence has guided the adoption of an appropriate conceptual framework. The literature framework looks at public expenditure or investment allocation rules by local government, which influence access rates of households to the benefits of two interventions implemented in rich and poor districts or municipalities or metropolis.

The Concept of Poverty

Poverty is understood in different ways. The poor according to Hyman (2002) refer to people who are unable to earn the minimum acceptable living standard in a society at a given time. Roe and Elliot (2005) also acknowledges that the international agencies' talk about poor people generally refers to the chronically poor on the basis of an income level of less than $1.25 a day set by the World Bank as the minimum amount required for a person to meet his or her daily physical needs. The poor who live on less than US$ 2.50 a day are categorized as moderate poor and those living on less than US$ 1.25 per day, hardcore poor (World Bank, 2001). This definition by the World Bank centres on income poverty to the neglect of the nature of household or individual poverty in specific countries since countries have different cost of living.

Bradshaw (2006:4) however opines that "poverty in most general sense is the lack of necessities" but acknowledges however that necessities are not uniform to all persons. Needs according to Sen (1999) as captured by Bradshaw (2006) may be relative to what is possible and are based on social definition and past experience. For May, Manzini and Nzimande (2009), poverty is an inability of individuals, households or communities to command sufficient resources to satisfy a socially acceptable minimum standard of living. In the same vein, Sohani (2005) views the poor as those who are unable to meet economic and social standard of well-being particularly the most basic requirements of life – mainly food and shelter. Sen (1995) on the other hand has identified the nature of poverty as capability deprivation. Sen argued that poverty results from a failure

or the inability of a person to achieve certain capabilities that will enable him or her to satisfy certain minimally adequate levels of functioning. This functioning may vary from being well nourished, adequately clothed and sheltered to being able to appear in public without shame (Sen, 1984). Thus conceptualizing poverty in income space rather than capability failure makes the concept of poverty inadequate (Sen, 1984).

The multi-dimensionality of poverty outlines five key complex and interwoven elements. These elements include lack of economic (income, livelihood, decent work), human (health, education), political (empowerment, rights, voice), socio-cultural (status, dignity) and protective (insecurity, risk, vulnerable) capabilities (Sohani, 2005; OECD DAC, 2001). The vulnerable and excluded categories of the human population such as children and women (Derbyshire, 1999; Offei-Aboagye, 1999 cited by Oduro, 2001), older people, unemployed especially the youth, and people living with disability who have difficulty of physical access, high living cost, low incomes and problems of social exclusion and finally living in poor areas are usually the most affected (May et al., 2009).

Households or individuals are seen as being either absolutely or relatively poor (Bourguignon, 2004; Gillis et al., 1987). Relative poverty is defined as having little in a specific dimension compared to other members of society. That is, the poverty line is not established in terms of some well defined basic need, but as a fixed proportion of some standard in the population (Bourguignon, 2004). This concept accentuates the idea that individuals' or households' perceive their

position in society as an important aspect of their welfare (Coudouel, et al., 2005). For Bourguignon (2004) such a relative definition of poverty sometimes referred to as 'relative deprivation' becomes in some sense independent of economic growth and absolute level of income and therefore a large part of development process ceases to matter any longer.

In absolute sense, poverty refers to a set standard which is consistent over time and between countries. By absolute poverty therefore one deals with poverty line which has fixed purchasing power determined so as to cover needs that are physically and socially essential (Bourguignon, 2004). The poverty line is typically chosen to ensure that predetermined physiological and social needs are met, given prevailing standards and need not be the same across countries since these basic needs are bound to differ across societies (Ravallion, 2005; Bourguignon, 2004). Absolute poverty thus refers to a condition that applies to people with the lowest incomes, the least education, the lowest social status and the fewest opportunities.

Poverty Measurement

The problem of poverty can be addressed when the nature and extent of poverty is appropriately measured and analyzed. According to Coudouel et al (2005) and the World Bank (1995), three ingredients are required in computing poverty measure. These include the choice of relevant welfare indicator, the selection of a poverty line that is the standard measurement for determining deprivation level of household or individual, and the use of a poverty measure for

reporting aggregate poverty for the whole population or for a population subgroup.

Poverty measured in monetary terms was championed in the work of Booth (1892) and Rowntree (1901) when they studied poverty in London and York respectively. Lipton (1997) has indicated that measuring poverty in monetary terms ascribes deprivation to inadequate command over commodities. The monetary approach thus relates to consumption and income poverty below a standard income or consumption threshold. According to Rowntree, the threshold refers to the monetary estimate requirement for a nutritionally adequate diet and needs for clothing and rent. In this sense, income and consumption which concentrate on quantitative objective measures of poverty are in practice used to measure poverty (Coudouel et al., 2005). Consumption however is assumed a better outcome indicator than income because actual consumption is more closely related to a person's well-being in the sense of having enough to meet current basic needs. But both income and consumption often serve as proxies for intangible deprivations (Coudouel et al., 2005).

Poverty is also associated with non-monetary deprivations such as insufficient outcomes in health, nutrition, and literacy, and with deficient social relations, insecurity, and low self-esteem and powerlessness (Coudouel et al., 2005; Hyman, 2002; Gillis et al., 1987). Sen (1984) regards health and education poverty, social exclusion and powerlessness as crucial dimensions of poverty. The lack of these according to Sen is tantamount to capability deprivation. Thus for Sen, measurement of poverty should not be limited to primary consumable goods

and utilities but should consider the capabilities of a person which offers the person the real freedom that s/he has reason to value.

Measurement of poverty requires a standard deprivation level that is, a poverty threshold. Defining this standard of measurement is often difficult because social situations keep changing and thus affect the standard of measurement (Ellis, 1984). The poverty threshold is used to determine in absolute terms, aggregate poverty such as poverty incidence, poverty severity and poverty gap index classified as the Foster, Greer and Thorbeche (FGT) indices of poverty (Ofori, 2011). Poverty incidence refers to the share of the population whose income or consumption is below the poverty line and cannot afford to buy a basic basket of goods (Poverty Manual, 2005; Coudouel et al., 2005). But poverty severity takes into account inequality among the poor and the distance separating the poor from the poverty line and so higher weight is placed on those households further away from the poverty line (Poverty Manual, 2005) and poverty gap deals with how far off households on average fall below poverty line. Another critical measure of aggregate poverty is the Time-Taken-To-Exit indice derived by Morduch (1998) as noted in the Poverty Manual (2005).

When dealing with poverty reduction strategies, it may be useful to show how long it would take, at different potential economic growth rates, for the average poor person to exit poverty. A poverty statistic with this property is derived by Morduch (1998) as cited in Poverty Manual (2005). This statistic is decomposable by population sub-groups and is also sensitive to how expenditure (or income) is distributed among the poor.

Theoretical Positions on Sources of Poverty and Development

Various poverty and development theories have varied critical perspectives on what accounts for poverty and development. The theories have accordingly suggested anti-poverty measures or interventions that could enhance development and reduce poverty. This work focuses on theories that attribute poverty to individual deficiency, culture and subculture, structural failing and disparity in geographical locations as well as modernization and dependency theories.

The individual theory of poverty at the individual level places emphasis on the individual as responsible for their poverty situation. Individuals are blamed for their own predicament manifested in their indolence and deficiencies (Kwadwo, 2010, Bradshaw, 2006). Individual factors such as attitude, human capital and welfare participation are thus considered to fuel poverty (Schwartz, 2000; Gans, 1995). According to Bradshaw (2006), politically conservative theorists blame individuals in poverty for creating their own problems and argue that with harder work and better choices the poor could have avoided their problems. Rank (2004) has also noted the same belief in the theory of individualism, which asserts that it is only by hard work and responsibility that individuals can acquire basic needs including food, health care services and shelter. Rank (2004) and Schwartz (2000) have on the contrary established in their studies that the poor rather tend to emphasize hard work, dislike for welfare, and personal responsibility and refute societal belief in the negative attitudinal cause of poverty.

Bradshaw (2006) again noted that other variations of the individual theory ascribe poverty to lack of genetic qualities such as intelligence. The Maxwell School (2006) according to Mensah, Enu-Kwesi and Akorsu, cited in Kendie and Marten (2008) explains poverty and inequality at the individual level by personal circumstance such as intelligence and other factors such as amount of education, skill and experience cause poverty. Rainwater (1970) as indicated by Bradshaw (2006) claimed that the poor are meant to suffer because of their moral failings. Neo-classical economics reinforces individual cause of poverty by arguing that individuals make choices and investments to maximize their own well being. Therefore when such individuals choose short term and low-payoff returns, economic theory holds them largely responsible for their individual choices (Bradshaw, 2006). For example, to forego college education or other training that will lead to better paying jobs in the future. The economic theory thus blames the welfare system's generosity on the perpetuation of poverty.

In contrast to the position of the individual theory of poverty, the theory of "Culture of Poverty" theory, associates the source of poverty with intergenerational transmission of a cultural set of beliefs, values, and skills that are socially generated and held individually. The theory is built on the belief that the rich and poor who have different pattern of values, beliefs and behavioural norms become rich and poor because they have acquired certain psychological behaviours associated with riches and poverty (Kwadwo, 2010). For Oscar Lewis, as noted by Kwadwo (2010) and Bradshaw (2006), poverty is transmitted from generation to generation because children are socialized with values and goals

associated with poverty. Poor people are viewed as victims of their dysfunctional subculture or culture and are therefore not to blame (Bradshaw, 2006). According to Bradshaw, the culture of poverty is technically, a subculture of poor people in ghettos, poor regions, or social contexts where they develop a shared set of beliefs, values and norms for behavior that are separate from but embedded in the culture of the main society. According to Mandell and Schram (2003) and McIntyre (2002), the culture of poverty holds that the poor could fight and break away from poverty.

Culture of poverty theory provides explanation to how poverty strategies by government reward a section of the population considered poor who manipulate the policy in order to benefit from a welfare programme. The underlying argument of conservatives such as Charles Murray (1984) as reported by Bradshaw (2006) is that government welfare perpetuate 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. Asen (2002:48) has summed this up in a phrase that, "From the war on poverty to the war on welfare." Bradshaw (2006) has noted that the sub-cultural values for higher education and entrepreneurship among Asian and Indian immigrant groups epitomizes how subcultures can work in the favour of groups trying to escape poverty.

Another theory explaining the causes of poverty is the theory based on structural failing. This theory, which is a more progressive social theory, has tied the causes of poverty to the economic, political, and social system (Bradshaw,

2006). Large economic and social factors have been found to account for poverty (Kwadwo, 2010). The assertion is that economic, political and social distortions and discrimination limit opportunities and resources with which to achieve income and well being (Bradshaw, 2006). The problem of the working poor is increasingly viewed as a wage problem linked to structural barriers as a result of which poor families are unable to secure better jobs which are limited in number and complicated with lack of growth in sectors supporting lower skilled jobs (Tobin, 1994). Poor people therefore fall behind regardless of their capabilities and competence level (Bradshaw, 2006).

Building on the other theories, the theory of geographic disparities argues that rural poverty and third-world poverty hinges on spatial characterization of poverty. The geographically based theory maintains that people, institutions, and cultures in certain areas lack the objective resources needed to generate well being and income. They also lack the power to claim redistribution (Bradshaw, 2006). Shaw (1996) has indicated that, space is restructured by capitalism and contributes to the survival of capitalism. The geography of poverty is thus a spatial expression of the capitalist system. According to Morrill and Wohlenberg (1971) in Bradshaw (2006) poverty is most intense in certain areas and the reasons adduced for the lack of economic base for these regions to compete include disinvestment, proximity to natural resources, density, and diffusion of innovation. Niles Hansen (1970), according to Bradshaw (2006) contents that, rural areas are often the last stop of technologies, and low wages and competitive

pricing dominated production. The lack of infrastructure that allows development of human resources limits economic activity that might use these resources.

Another perspective on spatial concentration of poverty is the idea of the emergence of strong industrial cluster. The contention here is that the propinquity of similar firms attracts supportive services and markets, which further attracts more firms (Bradshaw, King, and Wahlstrom, 1999). In contrast, the propinquity of poverty and the conditions that encourage the prevalence of poverty as well as the consequences of poverty such as crime and inadequate social services generate more poverty, while competitive areas attract business clusters, drawing away from impoverished communities (Bradshaw, King, and Wahlstrom, 1999). Rural poverty is also attributed to selective out-migration. The explanation is that rural dwellers endowed with greatest skills, highest education, abreast with global issues and therefore have extensive opportunities migrate to other places with better opportunities. These rural migrants happen to be the icons and role models in their communities and are often civic leaders (Wilson, 1987 cited in Bradshaw, 2006).

Development theories have also drawn a link between development and poverty reduction. Modernization theory on one hand has identified five core stages of development that countries must progressively pass through to develop. These stages include the traditional society, pre-condition to take-off, take-off, drive to maturity and the age of high mass consumption (Rostow, 1960). The position of this theory is that a society must progress beyond its traditionally low productive methods, which is a characteristic of the traditional society, by

introducing modern scientific ideas, encouraging entrepreneurship and spending on infrastructure in order to develop (Mutunhu, 2011; Green, 2008). According to Green (2008), modernity posits that the pace of change at the stage of tradition society is limited due to primitive methods of production, combined with social structure and values. Hence it is necessary for societies to embrace dramatic technological development in both agriculture and industry in order to develop. Besides they should be an increase in investment to engender growth for economic take-off. The emergence of industries command higher profits and more investment and require massive external investment collectively referred to as 'big push' (Green, 2008; Easterling, 2005; Rosenstein-Rodam, 2005). The 'big push' in the view of Hettne (1990), can solve the problem of 'poverty trap'.

Modernization in agriculture according to Ellis and Briggs (2001), also involves encouraging the farmers to try new market skills and production methods such as the use of artificial fertilizers, insecticides, tractors, and application of other scientific knowledge to replace traditional agricultural practices. As economies modernized and industries expand, productivity and wages increase thus yielding lower poverty.

Jennings (1994) and Becker (1993) have also noted that Modernization is associated with expanded educational opportunities because higher education becomes paramount for labourers in order that they can compete in the labour market and command a living wage. According to Oxaal (1997), human capital theory asserts that education creates skills which facilitate higher levels of productivity among the educated. Therefore increase in educational level leads to

increase in professional and skilled labour supply, which has the effect of decreasing the income gap or disparity between the skilled and unskilled (Nielsen & Alderson, 1995). Kreutzmann (1998) therefore believes that modernization is the panacea to development through the application of growth –oriented strategies.

This transformational process held by modernization theory influenced Ghana to anchor her poverty reduction strategy on the tenets of modernization theory (Green, 2008). Ghana pursued her Ghana Poverty reduction Strategy on the path of transformation through accelerated growth and better coordination of the development process that will facilitate poverty reduction (GPRS II, 2006/2009). The governments of Ghana have sought to initiate a 'big push' financed by tax reforms, external and foreign aid, in order to establish conditions for 'take-off' (Green, 2008). The plan included the development of health and education to ensure that citizens become economically and socially productive and the development of road, airport and power infrastructure provide critical support to business. Besides, a business environment was created and technology enhanced in order to raise business productivity (Green, 2008).

It has been conceived that the development aid associated with modernization either through bilateral or multilateral negotiations with the exception of humanitarian aid, have inhibiting conditions attached to them that have always benefited the developed countries more than the recipient countries (Mutunhu, 2011). Mutunhu (2011) and Haynes (2008) have identified that modernization theory has failed to consider the political and economic diversity

of developing countries. It has only succeeded in disseminating knowledge and information about more efficient techniques of production to improve the living standard of the poor without considering the poor as the centerpiece in its imposed poverty reduction initiatives. As a result of its failure to involve the targeted communities, it has undermined the creativity and support of the targeted community on the intervention strategies thereby impoverishing Africa the more (Mutunhu, 2011). Reid (1995) has made similar observation when he said that the optimism that faster economic growth modernization in developing countries would benefit the broad masses of poor people has not been fulfilled.

The failure of the modernization theory to achieve its objective paved way for Dependency theory. Proponents of dependency theory, opinionate that the impoverishment of Africa can be attributed to the external powers' systematic repatriation of the benefits they made on the soil of Africa using African labour and resources (Mutunhu, 2011). It has been viewed that the economic development of rural areas smacks of the same metropolitan-satellite relationship at different level in the socio-economic structure of the economy; the relationship is based upon regional control of economic and political resources between regions, sectors of the economy and different social groups (Gabriel, 1991; Nyereye, 1973, captured in Mutunhu, 2011). It is apparent, therefore that the worker is poor because of exploitation by the system or the employer. Thus poverty at all level according to Mutunhu, (2011) is attributable to inhibiting relationship between the urban areas and rural areas and also between individuals

with different economic powers; the rich are found exploiting poor individuals and the chain goes on.

The short fall of the dependency theory lies in its assumption that the locals do not have the expertise and ability to fight their poverty. Hence, it is top down in its prescription for development. Mutunhu (2011) has noted that development that seeks to satisfy basic needs of people should not adopt the top down approach or be imposed either by law or decree. Rather, it must emanate directly from the actions, expectations and creative as well as critical awareness of the protagonist themselves. The people, particularly the poor, must take the lead role in development and be traditional object of development (Max-Neef, 1991). Thus, Magaloni et al. (2005) has however concluded that, poverty reducing programs have normally turned out to be unrelated to poverty. Hence, it is not surprising that Africa continues to be poor despite the abundance of its natural resources and the billions worth of bilateral and multilateral aid from the developed countries.

Anti-poverty Interventions from the Perspectives of Theories

It has been observed that welfare and social policy that have emerged for decades have employed Community development strategy as the antidote to poverty caused by individual deficiency (Bradshaw, 2006). In contemporary times one key initiative is to push the poor into work, which Maskovsky (2001) referred to as the "workist consensus." According to Maskovsky (2001), such an initiative is accompanied by an increasing emphasis on "self help" strategies for the poor to pull themselves from poverty and does not encourage any other forms of

assistance. An aspect of this strategy is earned income tax credits that assure that the poor work even at below living-wage jobs.

Bradshaw (2006) has observed with a community development point of view that addressing poverty by focusing on individual characteristics and bad choices raise fundamental conflicts in philosophy. Bradshaw (2006) indicates therefore that individual level poverty reduction efforts should have a social component, in that it must require the provision of a reliable safety-net that can help people who are otherwise not able to help themselves as a civic responsibility. Bradshaw (2006) argues that people with disability, elderly, children, and even the unlucky are part of every community whose needs should be provided for by a collective action without blame.

To address poverty, which results from transmitted cultural and sub-cultural values and beliefs of the disadvantaged or deprived persons, then local strategies or interventions must focus at helping to change the culture. Valentine (1968) according to Bradshaw (2006) has identified three ways in which this strategy is feasible. One way is replacing dysfunctional system of belief and knowledge with a more functional supportive culture, which will promote productive work, investment, and social responsibility. Goetz (2003), and Goering, Feins, and Richardson (2003), have noted that experiments with this strategy have relocated the poor from ghetto housing projects into suburbs hoping that the new culture they would imbibe would help the family emerge from poverty. This experiment has produced mixed results according to Mutunhu, (2011).

The second strategy, which is particular about an opportunistic and nonproductive subculture that has perpetuated over generations, focuses at the youth to stop the recreation of the detrimental culture. Zigler and Styfco (1996) have observed that many educational programs are viable interventions that will provide an alternative socialization for the next generation to reduce poverty. The authors, however, have acknowledged that the programs need more coherence and quality. For Bradshaw (2006), after-school-programmes could be established with the involvement of community developers for teens where their peer culture is monitored and positive social values are established, while keeping them away from gangs and detrimental behavior. These programmes in the view of Levitan, Mangum and Sum (2003) are a policy favorite because they have the potency of changing the culture of youth while at the same time keeping their values and norms still malleable.

The third approach is to work within the culture in order to redefine, culturally, appropriate strategies to improve the group's well-being. Cultural values of the people can be built upon to make them an asset for economic development. A good example is establishing local crafts cooperatives and programmes that tap the traditions of small business and entrepreneurship found in subcultures (Bradshaw, 2006). Meanwhile programs that promise micro-enterprise as antidote to poverty is often oversold (Goldstein, 2001). Klugman (2002) has observed that community groups often work in partnership with demand-responsive support organizations and service providers, with the inclusion of non-governmental organizations (NGOs) and the private sector. The

community-driven development is thus a strategy for poverty reduction achieved through the provision of social and infrastructure services. It also achieves its objective of addressing poverty by organizing economic activities and resource management, empowering poor people, improving governance, and enhancing security of the poor (Bradshaw, 2006).

With the proposition that the cause of poverty is due to structural failures, the focus of any strategy for addressing poverty must be geared toward changing the system. Efforts that place emphasis on reducing physiological and social deprivations through the creation of more jobs, improvement in access to education for the poor, and ensuring equality and equity in income distributions, require interventions that will penetrate the system so as to allow the poor to access the benefits of society (Bradshaw, 2006). The efforts also need strategies that will crack the structural barriers and eliminate discrimination bias from housing, education, and employment, and assure equal political participation by poor persons in the society. Changing the system can start from a grassroots level, where social movements can exert pressures on vulnerable parts of the system to force desired change (Bradshaw, 2006). The need for such an intervention that will penetrate the system is corroborated by Rank (2004) who states that change could be mobilized to support better jobs for the poor and a more effective system. For example, public pressure including those of labour unions and pressure groups can increase wages and gain employment for persons systematically excluded. Civil rights movements and woman's movement have had strong impact on breaking down formal barriers. According to Rank (2004)

community organizing in the Alinsky (1945) tradition has helped reduce poverty across the country. In the view of Page and Simmons (2000) however, changing the system through the policy process is a workable strategy. Page and Simmons content that the range of social policies such as providing jobs, raising wages, expanding the safety net, assuring effective access to medical care, and coordinating social insurance programs can be adjusted to accomplish poverty reduction.

Another strategy proposed for changing the system involves the establishment of alternative institutions which have access, openness, innovation, and a willingness to help the poor gain well-being. In the opinion of Bradshaw (2006), this strategy is at the cornerstone of most community development corporations which aim to provide alternative businesses, housing and schooling programs. Bradshaw states further that business strategies such as employee ownership or minority networks or women's businesses as well as community owned businesses such as community banks are imperative strategy options.

Strategies for reducing poverty as maintained by the geographical disparities theory is that interventions or policies have to be directed at solving the key dynamics that lead to decline in depressed areas while other areas are growing. It proposes a shift in focus from individuals, businesses, governments, welfare systems, or cultural processes to concentrating on the places and the processes by which they can become self-sustaining (Bradshaw, 2006). According to Bradshaw, the viability of this strategy is not questionable since according to

him a few disadvantaged communities around the world are finding their way out of poverty.

To the extent that poverty is multidimensional and its causes diverse, approaches to its reduction have embraced other development policies and strategies. A growing concern emerged for some decades now that economic growth can lead to poverty reduction (Rodrik, 2000). But persistent poverty in the developing economies has inspired some skepticism in the efficacy of economic growth and development impacting on poverty reduction (Roemer & Gugerty, 1997).

Economic Growth and Poverty Reduction Debate

It has been argued that economic growth is a key development driver that is central to poverty reduction (Mensah, Enu-Kwesi & Akorsu, 2008; Rodrik, 2000). Some economists assert that poverty reduction can be achieved through economic growth due to its trickle-down effect on poverty (Dollar & Kraay, 2002; Nelson, 1995; Gillis, et al., 1987). Nelson (1995) has indicated that economic growth leads to the creation of more jobs and revenue mobilization through the introduction of more tax, which helps the poor. The argument is that economic growth and development leads to the establishment of new businesses and the expansion of existing ones through investment. Ravallion (2001) has shown in a household survey of 50 developing countries that a 1 per cent growth results in an average of 2.5 per cent reduction of headcount poverty. Ravallion has however noted that inequality impinges on the growth and poverty reduction nexus, therefore growth has to be pro-poor to achieve the objective of poverty

reduction. According to Ravallion and Chen (2003), pro-poor growth is growth that reduces poverty. Mensah, Enu-Kwesi and Akorsu (2008) who accept the debate on the centrality of growth to poverty reduction have indicated however that government needs to "recreate and promote policy environments that support the expansion of sectors that increase income-generating capacities of the poor" (136). Kraay (2005) has also noted that sustained poverty reduction is impossible without sustained growth. Rodrik (2000) has observed that all developing countries that have experienced sustained growth over the last few decades have reduced their absolute poverty levels.

The positive impact of pro-poor growth on poverty is however considered by others as only an intuitively appealing opinion because for them it could result in a lower rate of poverty reduction (Kakwani, 1993). White and Killick (2001), have established that increase in growth in the 1990s in African countries has impacted minimally on the poorest segment of the population. There are signs of worsening deprivation of weaker groups in some countries in which the growth is insufficient to offset other adverse trends of the policies. For economic growth to impact on poverty reduction, policies should be geared toward enhancing the capacity of poor people to participate in the growth (World Bank, 2005). The growth should be consistent with the direction of change in poverty; a positive rate of pro-poor growth should produce a reduction in poverty and vice versa (Ravallion, 2001).

Economic growth should also satisfy three standard axioms for poverty measurement such as the focus axiom (the measure is invariant to income

changes for the non-poor), the monotonicity axiom (any income loss to the poor increases poverty), and the transfer axiom (inequality-reducing transfers amongst the poor are poverty reducing) (Ravallion & Chen, 2003; Kakwani, 1993). A further axiom identified is additive decomposability that is aggregate poverty written as a population weighted means of the poverty measures across disjoint subgroups. This implies if poverty increases in any sub-group then it must increase in the aggregate ceteris paribus (Ravallion & Chen, 2003). Pure economic growth alone therefore cannot ensure the transfer and additive decomposability axioms, as growth leads to more functional and size distribution of income to the non-poor as income is distributed according to the ownership pattern of productive resources (Gillis et al., 1987). Given the exposition on the impact of growth on poverty, economic growth alone is not enough to transform the lives of the poor. Roemer and Gugerty (1997) have thus indicated that governments need to intervene in the growth process and in redistribution of income because for them poverty is still heightening giving rise to pessimism about the effect of economic growth on poverty.

Incidence of Global Poverty and Poverty in Ghana

The World Bank uses two standard incomes of US$ 1.25 and US$ 2.50 per day per person as the poverty thresholds to measure extreme and moderate poverty respectively. These thresholds represent the minimum and maximum standards of living and are used for international comparisons (Sachs, 2005; Hyman, 2002). Based on the US$1.25 per day per person, the World Bank (2001) estimated that the number of people living in extreme poverty was 1.4

billion of the world's 6 billion people. However, about1.2 billion people were said to live on less than US$2.50. Of these statistics, about 44 per cent of poor people lived in South Asia, 24.3 per cent in Sub-Saharan Africa (SSA), 23.2 per cent in East Asia and Pacific, 6.5 per cent in Latin America and Caribbean, 2.0% in Europe and Central Asia and 0.5 per cent in Middle East and North Africa. This indicated that about 93 per cent of the world's poor in 2001 lived in East Asia, South Asia, and SSA.

In Ghana, poverty is pervasive. According to 2005/2006 official data from the Ghana Statistical Service, the extreme poor constitute 18.2 per cent with lower poverty line of GH¢ 288.47, which is a decline from 26.8 per cent in 1998/99 based on a lower poverty line of GH¢ 70.00. 1n 1991/92, the national average of extreme poverty was 37.2 per cent. In terms of the poor, the records show a decline of national average from 39.5 per cent in 1998/99 to 28.5 per cent in 2005/06 with upper poverty lines of GH¢ 90.00 and GH¢ 370.89 respectively (GSS, 2007; ISSER, 2007; GOG/NDPC, 2003). The consistent decline of poverty at the national level does not reflect in some regions. While some regions continue to experience a drop in poverty incidence, others have a contrary experience, with poverty incidence far exceeding the national averages recorded in the last waves of Ghana Living Standards Survey (GLSS, 2005/06). In Table 1, Greater Accra, Volta, Ashanti and Western Regions have consistent decline in moderate and extreme poverty levels in the 1991/1992, 1998/99 and 2005/2006 surveys. However, regions such as Upper East, Upper West and Northern have a contrary situation with the poverty levels exceeding the national

averages (Abane, 2005; GSS, 2007). It has been noted that nine out of ten people in the Upper East; eight out of ten in Upper West, seven out of ten in Northern Region and five out of ten in Central and Eastern Regions were classified as poor in 1999 (GOG/NDPC, 2003).

Table 1: Poverty Incidence by Regions in Ghana

	Poverty			Extreme Poverty		
Region	**1991/92**	**1998/99**	**2005/06**	**1991/92**	**1998/99**	**2005/06**
Western	59.6	27.3	18.4	42.0	13.6	7.9
Central	44.3	48.4	19.9	24.1	31.5	9.7
Greater Accra	25.8	15.2	11.8	13.4	2.4	6.2
Volta	57.0	37.7	31.4	42.1	20.4	15.2
Eastern	48.0	43.7	15.1	34.8	30.4	6.6
Ashanti	41.2	27.7	20.3	25.9	16.4	11.2
Brong Ahafo	65.0	35.8	29.5	45.9	18.8	14.9
Northern	**63.4**	**69.2**	**52.3**	**54.1**	**57.4**	**38.7**
Upper East	**66.9**	**88.2**	**70.4**	**53.5**	**79.6**	**60.1**
Upper West	**88.4**	**83.9**	**87.9**	**74.3**	**68.3**	**79.0**
ALL	**52.0**	**39.5**	**28.5**	**37.2**	**26.8**	**18.2**

Source: Ghana Statistical Service (2007), Pattern and Trends of Poverty in Ghana, 1991-2006, April 2007, Tables A1 and A1.5

Poverty Reduction Efforts in Ghana

Barely a decade after independence, the Ghanaian economy went into a period of crunch for almost two decades though interspaced with temporal reliefs (Sowa, 2002). The period spanning 1960 and 1980 saw a decline in the output levels against high population growth rate (Sowa, 2002; Asamoah, 1996). In the 1970s and the beginning of the 1980s there was a slide in the per capita income and the performance of the economy (Easterling et al, 2008; Sowa, 2002). Cocoa output and production in other sectors of the economy declined drastically in 1981. The volume of foodstuff reduced by 66 per cent, while real per capita income fell by 30 per cent. Cocoa, the country's main foreign exchange earner declined to 45 per cent of the 1965 peak volume (Asamoah, 1996:99). Social services and infrastructure also deteriorated to the extent that boarding schools were faced with feeding problems, hospital challenged with serious shortage of drugs and other basic facilities, public buildings dilapidated and industrial plants broke down (Asamoah, 1996). High volume of import characterized the economy. The external debt skyrocketed. At the end of 1982, external debts stood at 105.7 per cent of Ghana's GDP (translated to US dollars at parallel market rates) (Issahaku, 2000). To muddy the waters, a severe drought hit Ghana causing crop failure in 1983, which was worsened by raging uncontrollable bush fires that virtually wiped agricultural production. As a result hunger, starvation, under-nourishment, malnutrition stared the face of Ghana (Sowa, 2002; Asamoah, 1996). With close link to this was the nearly two million Ghanaians who were expelled from Nigeria into the country. Consequently Ghanaians in

general were impoverished and living standards deteriorated (Sowa, 2002; Asamoah, 1996). Against this backdrop, the government of Ghana adopted a World Bank-IMF development policy to resuscitate the national economy.

Confronted with the challenge of drastic economic decline Structural Adjustment Programme (SAP) or Economic Recovery Programme (ERP) was launched in Ghana to steam the concomitant general debilitating impoverishment of the Ghanaian populace (Aryeetey & Kanbur, 2008; Sowa, 2002; Kunfaa, 1999). The aim was to arrest the over decade decline in production in all sectors of the economy, particularly agriculture (Asamoah, 1996). The adjustment appeared successful in the initial years and the Ghanaian economy reversed back on track. Output began to improve with an annual growth of about 5 per cent between 1984 and 1989. From 1986 the budget started showing surpluses, domestic credit was severely controlled and inflation dwindled from three-digit levels it recorded in the preceding years to an annual average of about 25 per cent amid high growth of aggregate money supply due to external inflows (Sowa, 2002; Asamoah, 1996). This growth rate was not enough to lead to significant reduction in poverty (Sowa, 2002). Gyimah-Boadi (1991), observed that the economic growth resulting from the ERP did not translate into direct benefits for the general public. It led to immediate job losses and a reduction in the employment opportunities in the state sector due to state contraction. Withdrawal of subsidies, which was an important feature of ERP caused a decrease in social wages. Other related policies like cost recovery, the introduction of user fees and a steep devaluation of the national currency led to

increase in the cost of basic social services and consumer items. Sowa (2002) has noted that removal of subsidies affected vital services and poverty levels.

The ERP inflicted severe short-run hardship on certain vulnerable groups like rural households, low income underemployed or unemployed urban households and retrenched workers who lacked productive employment. According to Malaluan & Guttal (2003), an assessment conducted by the Structural Adjustment Participatory Review International Network (SAPRIN) revealed that ERP created and entrenched continuing cycles of impoverishment and inequality, and that the anticipated gains in efficiency, competitiveness, revenues and savings did not materialize. William Easterly is noted by Sowa (2002) to have reported that structural adjustment in developing countries produced lower per capita income growth as compared to twenty years before the introduction of SAP.

Becoming fully aware of the hardships associated with the implementation of the ERP, government introduced the Programme of Action to Mitigate the Social Costs of Adjustment (PAMSCAD) under the ERP in 1987 (Aryeetey & Kanbur, 2008; Sowa, 2002; Kunfaa, 1999; Asamoah, 1996). PAMSCAD aimed at curbing the social impact of ERP on the poor and other vulnerable groups (Hutchful, 2002; Asamoah, 1996). PAMSCAD was faced with several problems some of which included long delays in commencing the programme due to lack of technical personnel from Ghana to design projects and large number of unrelated projects and agencies involvement which gave rise to problems of coordination and conflict over jurisdiction. Another problem was the

fact that certain components of the programme were not income or resource generating thus PAMSCAD ended in 1990 (Sowa, 2002; Asamoah, 1996).

Although extensive liberalization and adjustment in the 1980s, produced some growth, it did little to sustain the growth especially in sectors such as in agriculture and manufacturing. Ghana's economy, in the early 1990s, was characterized by high rates of inflation, currency depreciation, high interest rates, dwindling foreign reserves, shortfall in aid flows, excessive public debt overhang and stagnant economic growth (Lindsay, 2009; GOG/NDPC, 2003). As a result, both growth and incomes in the 1990s produced less than acceptable levels of poverty reduction (GPRS, 2003). There was growing and deepening poverty that intensified vulnerability and exclusion among some socio-economic groups (GOG/NDPC, 2003). Kendie and Martens (2008) have equally observed that statistics on poverty still indicated that Ghana was grappling with poverty.

In September 1999, when the World Bank and the IMF introduced the Poverty Reduction Strategy (PRSP) initiative as a condition for accessing the HIPC fund, the Government of Ghana (GOG) prepared Ghana Poverty Reduction Strategy (GPRS I) for 2003-2005 as its development framework in order to benefit from the HIPC fund (GOG/NDPC, 2003). The GPRS I has since been used as an outline for growth and poverty reduction. According to Tsekpo and Jebuni in Aryeetey and Kanbur (2008), the GPRS with its poverty reduction focus suggest that the resources allocation within the context of the budget will recognize expenditures that are more likely to have significant impact on the poor or sectors and activities where the poor are expected to benefit most. But

review indicates however that GPRS has more microeconomic consideration dominating it (Aryeetey & Kanbur, 2008).

There have been positive results in implementing the GPRS I in terms of attaining relative economic stability and progress made towards achieving the objectives of MDGs. As a result a national development policy framework was formulated in 2006 dubbed the Growth and Poverty Reduction Strategy II for the period 2006-2009 (GPRS II: 2006-2009). GPRS II was implemented to build on the successes and to address the failures of GPRS I. It aimed at an employment centered development approach that will lead to accelerated growth and poverty reduction (ISSER, 20010). In line with this the policy sought to ensure that production and employment within the economy expand alongside each other and the benefits derived from growth are distributed through better job prospects, with improved incomes, leading to poverty reduction. The objective of the employment sector strategy with GPRS II according to the GOG (2006) was to ensure an adequate well regulated, stable labour market that will offer ample support to growth. It also sought to promote economic growth policies and programmes that will induce growth and support wealth creation and poverty reduction. The GPRS II framework also included the development of infrastructure such as roads, power and airports which were critical for business. Besides emphasis was also placed on creating an ideal environment for business, and enhance technology in order to raise business productivity (Green, 2008). Thus spending under the HIPC debt relief fund on the GPRS I and II

programmes have continued with activities that support growth and poverty reduction enhancement (NDPC/GOG and UNDP Ghana, 2010).

Public Spending on Poverty Reduction Intervention

Ghana, like other developing countries acknowledges that public sector spending constitutes an important component in poverty reduction (Oduro, 2001). Government spending on poverty reduction in Ghana is targeted at reducing overall poverty levels. This is reflected in the transfer of resources for the provision of basic necessities of life (GOG/NDPC, 2009, 2003). As noted by Oduro (2001), spending on interventions geared toward poverty reduction can reduce poverty when the resources for such interventions are adequately provided and used efficiently to ensure the provision of quality services. Also, the resources need to be injected into the broad sectors of the economy while giving priority to specific targeted programme areas of benefit to the poor, mostly in the social and economic sectors (GOG/NDPC, 2009).

Evidence in Ghana suggests however that public spending is not adequately pro-poor. Public subsidies going to sectors that benefit the poor are not sufficiently taken up by the poor (Oduro, 2001). This flaw is identified by the benefit incidence studies of Canagarajah and Ye (2002). Their analysis show that from 1992 to 1998, education unit subsidy to poorest quintile in secondary and tertiary education although had improved, had still favoured the richest quintile. At the basic level, there was a decline in the share of the poorest quintile and an increase in the share of the richest quintile. Better targeting of pro-poor

interventions is therefore required, especially in basic social services accessed by the poor in society.

Tools for Assessing Spending on Poverty Reduction Intervention

Crucial to public expenditure on basic services is not the analysis of the cost-benefit criterion but the analysis on how the expenditure on the programme impacts on the poor (Pradhan, 1996). Expenditure of publicly provided goods or any poverty reduction intervention has the core aim of increasing accessibility to users particularly the poor. To what extent the poor will benefit from the intervention budget however depends on the service or intervention being spent on, the size of the spending and behaviour of the poor themselves (Van de Walle 2003).

To assess the distribution impact of spending on interventions to individual participants required an evaluation at the individual's own valuation of the good/intervention benefit (that is, his or her demand or virtual-price). This basic principle was set up by Aaron and McGuire (1970) captured in Demery (2003). In their work they argued that a rationed publicly-provided good/service should be evaluated at the individual's own valuation of the good. Such prices will vary from individual to individual. But the difficulties inherent in estimating these valuations according to Cornes, (1995) as indicated by Demery (2003) led to less demanding approaches in which public-provided goods and services are valued at their marginal cost (Brennan, 1976 cited in Demery, 2003). Since then the literature has been characterized by two approaches. The first approach known as benefit incidence analysis (BIA) was pioneered by Meerman (1979) in

Malaysia and Selowsky (1979) in Columbia in a joint World Bank study reviewed by Pradhan (1996). Benefit Incidence Analysis (BIA), which combines the cost of providing public services with information on their use in order to generate distributions of the benefit of government spending (Demery, 2003). The second termed Marginal Incidence Analysis (Van de Walle, 1998) was used by Lanjouw and Ravallion (1999) to assess the impact of the public spending programmes. This approach emphasizes the measurement of individual preferences for the goods in question and is well founded in microeconomic theory, but is data extensive. It requires for example, knowledge of the underlying demand functions of individuals or households (Demery, 2003).

The thrust of BIA is to tell who is the benefiting from a social intervention and to describe impact of the cash or in-kind benefits transferred to the different groups accessing the intervention (Demery, 2000). The approach assumes that the benefit that users of the intervention derive is identified by the cost of providing it. The benefits are then assigned to their users or consumers ranked by some agreed measure of current welfare (Van de Walle, 2003, 1996). BIA thus takes into account the total cost of providing the programmes including the administrative cost and participation cost of the poor and other behavioural responses of both the poor and non-poor.

Because expenditures on publicly provided goods are expected to have a redistributive impact (Alabi, et al., 2010), BIA seeks to show how the initial "pre-intervention" position of individuals is altered by the intervention actual budget or how well the intervention expenditure serves to redistribute resources to the poor

(Van de Walle, 1995). The BIA thus provides a profile of the distribution of the specific component of public spending on the intervention across the distribution of the chosen welfare indicator and the various ways of assessing the progressive (inequality reducing) or regressive (inequality increasing) effect of the intervention provided. That is, whether the intervention improves the distribution of welfare proxied by household income or expenditure (Cuenda, 2008). In a sense, BIA provides a means to determine whether or not the component of spending on interventions is an effective way to transfer benefits to the poor in comparison with other services provided (Van de Walle, 2003).

In order to benefit from public subsidies or expenditure on social intervention, households must necessarily be users of the publicly-funded services. The use of the services also implies incurring some costs, which could be a major item of expenditure for households and may affect participation (Demery, 1995).

BIA presents results on the distribution of standard (average) benefit of the intervention budget at one point in time (Van de Walle, 1996). Standard or average benefit incidence attempts to estimate how the average benefits from the intervention are distributed at one point in time (Van de Walle, 2003, 1996). Average benefit incidence may be a misleading indicator of the distribution of the gains from intervention at one point (Lipton & Ravallion, 1995). This is based on the fact it is possible that the political economy will trigger incidence in which the rich tend to receive a larger share of the infra-marginal subsidies, while the poor benefit most from extra spending (Van de Walle, 2003).

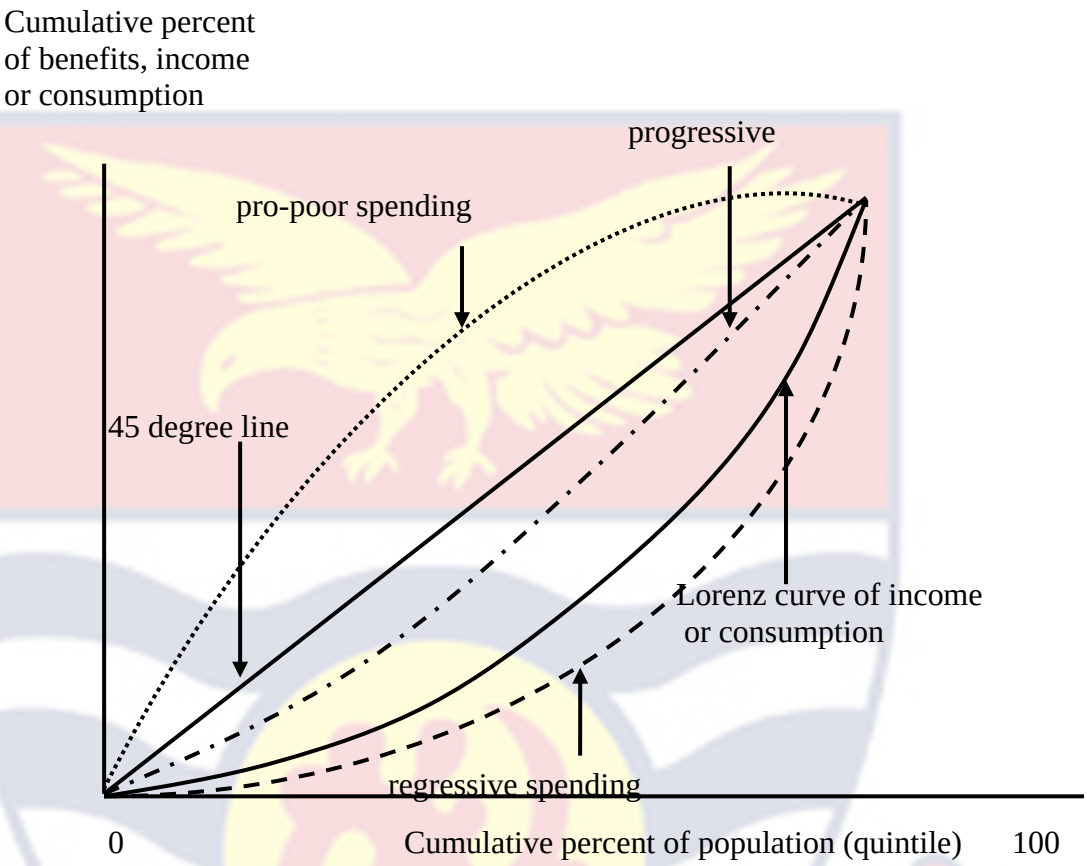
In principle, BIA concentrates on the benefits of social interventions to the poorer segments of the population, which require targeting (Alabi, et al., 2010). As a tool used for selecting users of an intervention, targeting helps in ensuring the efficiency of the intervention by increasing the benefits that the poor can get with a fixed intervention budget (Alabi, et al., 2010; Coady et al., 2004). An added advantage is that targeting helps the intervention provider to reduce the budget requirement of the intervention while still delivering the same level of benefits to the poor. Chase (2002) in studying the impact of social investment fund in Armenia found that regressive rural targeting of the Armenia Social Investment Fund (ASIF) resources may result from the 10 per cent contribution that ASIF requires of beneficiary communities, since poorest communities' households were unwilling or unable to contribute for the community public goods such as schools or improved water systems.

A graphical representation of the distribution of the intervention benefits is used to assess the function of targeting and the progressivity of poverty intervention spending. This graphical representation as shown in Figure 1 is generated by plotting a cumulative distribution of "benefits" of an intervention on the y-axis against the cumulative distribution of population quintile sorted by per capita income on the x-axis. The ensuing graph produces what is termed the concentration curves. The benefit concentration curves are compared with a 45-degree diagonal and the Lorenz curve of income/consumption determine targeting and progressivity of the intervention spending (Alabi et al, 2010). The 45-degree diagonal indicates neutrality in the distribution of the intervention's benefits in

that when the concentration curve lies along 45-degree diagonal, the first (poorest) decile (10 per cent) or quintile (20 per cent) of the population gets 10 per cent or 20 per cent of the spending on the intervention respectively either in terms of income or consumption (Alabi et al, 2010; Davoodi, Tiongson & Asawanuchit, 2003). But a concentration curve that lies above or below the diagonal indicates that the poorest 10 per cent and 20 per cent of the population receives more or less than 10 per cent and 20 per cent of the benefits (Alabi et al, 2010).

Benefits from spending on an intervention are said to be targeting (pro-poor) if the concentration curve for these benefits is above the 45-degree line (Figure 1) (Alabi et al, 2010; Demery, 2000; Sahn and Younger, 1999, 2000; Milanovic 1995). Such a concentration curve is concave rather than convex because the first (poorest) quintile receives larger than 20 per cent of the intervention benefits which exceeds the share of the fifth (richest) quintile represented as a fraction of income or consumption (Davoodi, Tiongson & Asawanuchit, 2003). In this case, the concentration curve for these benefits is above the Lorenz curve for income or consumption, but could be below the 45-degree line as shown in Figure 1.

Figure 1: Lorenz and Cumulative Curves



Source: Alabi et al., 2010

A benefit concentration curve that lies above or below the Lorenz curve of income signifies progressive or regressive benefit transfers or distribution of the intervention expenditure respectively relative to income or consumption of population quintile (Alabi, 2010; Hakro & Akram, 2007). It is worthy of note that pro-poor distributions of benefits are a proper subset of progressive distributions of intervention benefits. Therefore when benefits from the intervention spending are pro-poor, they are progressive as well, but not vice versa because the concentration curve lies above the 45-degree and therefore accordingly lies above the Lorenz curve (Davoodi, et al, 2003). An implication is that households in the

lower income category or group gain higher share of the benefits from the intervention relative to the richer income groups (Alabi et al., 2010). Conversely, benefits of the interventions are said to be pro-rich if the poorest quintile receives less than the richest quintile. That is, when benefits from the interventions are distributed less equally than either income or consumption or when the concentration curve for the benefits lies below the 45-degree line. In this case the concentration curve can be either convex or concave (Alabi et al., 2010; Davoodi, et al., 2003). The benefits are pro-rich and also regressive, when the concentration curves lie below the Lorenz curve for income or consumption (Figure 1) (Alabi, et al., 2011; Davoodi et al., 2003). By implication a regressive intervention spending is said to occur when the lower income group gains less of the intervention expenditure than the richest income group.

Limitations of Benefit Incidence Analysis

Despite the influence of BIA, a number of concerns have been raised about the benefits incidence methodology. One of the concerns relate to serious recommendations solely based on evidence from average incidence of benefit transfers (Davoodi, et al., 2003; Van de Walle, 1996. The most common criticism is that the unit cost of provision may have little relation to the value of the benefits to the individual. A simple example is that, the cost of immunizing a child is typically small compared to the lifelong benefits. Or the cost of providing an exercise book or uniform may be typically small compared to the lifelong benefit of literacy and numeracy (Van de Walle, 1996).

Another limitation is that benefit incidence studies do not give a complete representation of welfare effects of public spending. This point relates to the multidimensionality of well-being. Benefit incidence studies interpret all spending on interventions– whether in cash or in kind – in terms of the monetary transfer equivalent to see how those transfers alter the distribution of income or consumption (Davoodi, et al., 2003; Van de Walle, 1996). But what is also important is the impact on other dimensions of living standards: whether agriculture productivity improved as a result of spending on agriculture intervention such as providing inputs, equipment and so on; or the increased spending on schools reflected in higher literacy; or school feeding had complementary effects on cognitive achievements. Policy makers are more often interested in how well a social intervention performed in its intended effect than in who benefit more from the distribution of income (Van de Walle, 1996).

BIA may not also capture some important second-round effects on welfare. The method tries to identify direct transfers impact. Yet, indirect benefits may be of considerable consequences to the distributional outcome. For example, while the poor are not direct beneficiaries of subsidies to tertiary education, the indirect benefits – transmitted through good governance, the existence of a class technocrats, agricultural specialists, good educators, health personnel and so on – may be of significance to the well-being and livelihood of the poor. Indirect benefits and externalities are difficult to estimate and so little is known about their likely magnitude (Van de Walle, 1996).

A second general approach to measurement of the impact of a social service or intervention to their intended beneficiaries is the behavioural approach or analysis, which attempts to address some of the weaknesses of the BIA (Van de Walle, 2003; Lanjouw & Ravallion, 1999). This behavioural analysis approach has moved in the direction of incorporating behaviour responses into incidence studies. The technique attempts to estimate marginal incidence and can be used to explore the impacts of public spending on social services or interventions for which specific users cannot be identified as well as to determine impacts on multiple dimensions of welfare (Van de Walle, 1996). The behaviour approach explores differences in policy across time and space to value benefits using either a monetary or non-monetary welfare metric (econometric techniques). It estimates the impact of the interventions spending on measure of well-being while controlling for other factors which could also be influencing outcomes, such as the behaviour of the user or the service provider (Van de Walle, 1996). An example of the behaviour incidence analysis is the marginal incidence analysis (MIA) (Van de Walle, 2003).

MIA is used to determine whether a government or service provider maximizes average access rates across municipalities over time. The MIA does this by measuring the incidence of actual increases or proposed cuts in programme spending (Van de Walle, 2003). Typically, therefore it requires panel data, which contains information on both income or consumption and access to services across the various areas or administrative entities (Alabi et al, 2011; Van de Walle, 2003). Without such panel data, it is not possible to control for

unobserved heterogeneity with respect to location. Unfortunately, panel data is unavailable in developing countries like Ghana.

As a result of the commonly encountered data limitation there is the need for a technique to identify the beneficiaries of increased public service provisions which only uses single cross-sectional data (Alabi et al., 2011:16). Ajawad and Wodon (2007) and Lanjouw and Ravallion (1999) as reported by Alabi et al (2011) proposed an alternative empirical method which uses a single cross section of data. Ajawad and Wodon (2007) and Lanjouw and Ravallion (1999) used departmental and geographic variation respectively in access rates of intervention budget across regions in a country to estimate the expected evolution in a given region followed over time. Cross sectional variation in access rates were thus used to conduct a marginal benefit incidence analysis. Alabi et al. (2011) following the procedure used by Ajawad and Wodon (2007) estimated MIA of public spending in Nigeria.

The problem with the behavioural approach is that it represents a more data intensive and technologically and methodologically complicated undertaking (Van de walle, 2003, 1996). Severe difficulty often arises in obtaining unbiased estimates of programme effects. The source of bias can emerge from simultaneity whereby the policy's placement is determined in part by the measured welfare indicator. An example of this source of bias would occur if a school feeding programme were started in a village due to high under nutrition of children in that community. Nutritional status then explains the existence of the intervention and is affected by it when it is realized that another agency is providing the same

intervention at the same time which has an impact on the nutritional status of the children (Alabi et al., 2011).

Evidence from Benefit Incidence Studies

Conducting benefit incidence studies on public spending on Education and Health in Ghana in 1992, Demery (1995) established that, on average, each Ghanaian gained ¢10,644 and ¢3,959 from government spending on education and on health respectively. Demery's findings revealed that education resources are more evenly distributed and better targeted to the poor. Ajwad and Wodon (2003) estimated average benefit and marginal benefit incidence for Sri Lanka. Their study revealed that the highest disparities between the access rates of rich and poor households are found in access to electricity and indoor taps that is pipe water connection within the house. For electricity for lighting, less than 40 per cent of the poorest households have access while 80 per cent of the richest household have access. With indoor taps, only 4 per cent of poor have taps within their house against more than a third of households among the richest households. In the case of access to a property title, protected well, unprotected well, private and public latrine, primary and main road, the richest quintile of households benefited more than the average households from an expansion in access. Generally, Ajwad and Wodon (2003) concluded that marginal benefit incidence tends to be more pro-poor than average benefit incidence, especially once the non-poor already have levels of access.

In analyzing the marginal benefit incidence of public spending in Nigeria, Alabi, et al. (2010), found that school age children enrolment in public primary

and secondary schools favoured the richest quintile (90 per cent and 70 per cent respectively) against the poorest quintile (60 per cent and 39 per cent respectively). Hence those in the richest group benefited more than those in the poorest group in public education expenditure in Nigeria. The poorest shared about 15 per cent and 14 per cent of public spending on public primary and secondary schools respectively while their counterparts in the richest quintile shared about 23 per cent and 25 per cent of public spending on primary and secondary school respectively. In terms of marginal benefits, the results suggest that any commitment that results in 1 per cent expansion in primary school and secondary school enrolments will lead to 0.92 per cent and 0.78 per cent increase respectively for the poor income group and the values for the richest income group are about 0.84 per cent and 0.79 per cent respectively. Their conclusion therefore is that the expansion of public primary and secondary school will benefit those of the poorest income group more than those of the richest income group. The reason is that children from the poorest group attend public primary and secondary schools and therefore will access more if there is expansion. Those of the richest group attend private schools and so will access less from any expansion.

Ajwad and Wodon (2002) applied marginal benefit incidence analysis to local-level data from Bolivia and Paraguay to ascertain whether poor people benefit more or less than the non-poor from an expansion in access to public services. Their results indicated that the marginal benefit incidence is higher for the poor than for many non-poor in education, but there was exception for many

basic infrastructure services. More generally, the poor seem to gain access only once the non-poor already have high levels of access. They concluded therefore, that pro-poor policies must be implemented if the poor are to reap the benefits of social utilities.

Kruse et al. (2009) estimated marginal benefit incidence analysis for Indonesia and taking into account behaviour responses to changes in public spending, they realized that increased public health spending improves targeting of public funds to the poor. The findings indicated that increase in local public health spending leads to net public resource transfers from the richest to the poorest quarter of the population. This is because it increases both public health care utilization by the poor and the average benefit of public funds through the use of these services. However they concluded that initial utilization shares still dominated the marginal benefits such that the bulk of the benefits accrue to the two middle quintiles. Hence, they recommended an effective targeting of public resources to the poor and increased public health spending induced through reallocation of central resources complemented with more directly targeted demand side interventions, such as price subsidies for the poor or social health insurance.

Conceptual Framework for Average and Marginal Benefit Incidence of Poverty Reduction Spending

This study has adopted a framework proposed by Ajwad (1999) and Ajwad and Wodon (2007) and adopted by Alabi et al. (2010). The framework is useful for analysing investment or expenditure allocation rules in public service by local government. The framework assumes that there is an administrative

autonomous unit called Department. The Department is categorized into rich (R) and poor (P) municipalities. The local government at the two different municipalities invests in the provision of education and expansion of access to agriculture intervention. The two municipalities are also assumed to be responsible for public spending on the two types of interventions. A third assumption is that the two municipalities have their own budget allocation for each of the two interventions in which the local government has no discretion but the policy maker has discretion over the budget allocation. The Department has an exogenously determined budget constraint, E, for each of the services.

This budget can be allocated between the rich and poor municipalities, subject to $E = E_R + E_P$, where E_R and E_P are the spending or investment for expanding access of the interventions in the rich and poor municipalities respectively. The household access rate in each municipality's programme is $S_i = f_i(E_i)$, for i = R, P. This specification allows municipal characteristics such as wealth, distance from existing service to affect the impact of investment expenditures on the intervention's access rates. The functions f_R and f_P are increasing and strictly concave, such that $f'_i(E_i) > 0$ and $f''_i(E_i) < 0$ for i = R, P. Access rates thus increase with investment or expenditures but the marginal gains diminish with investment or expenditures. For any given level of investment or expenditures, it is assumed that the access rate in the rich municipality is higher than the access rate in the poor municipality. It is thus assumed that f_R (e) is > f_P(e) for all expenditure levels between 0 and E for both education and agriculture interventions. This implies that access to schools and to agriculture interventions

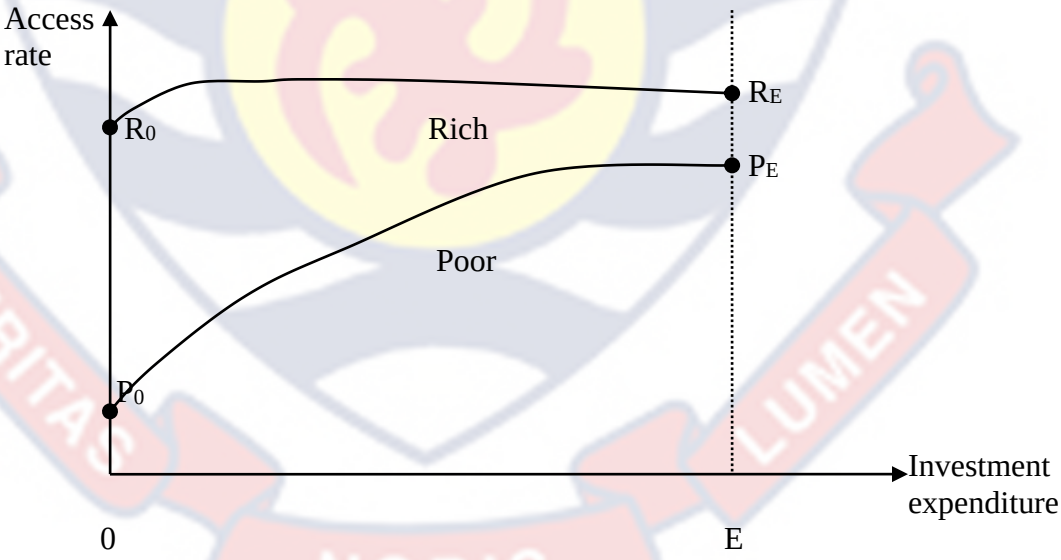
is higher in the rich municipality. The crucial difference between education and agriculture interventions is that, for agriculture an increase in expenditures raises access rates more in the rich than in the poor municipality, such that $f_P'(e)$ is < $f_R''(e)$ for all e ∈[0, E] (Ajwad and Wodon, 2007; Ajwad (1999). The higher marginal impact of expenditures on access rates in the rich municipality may occur because rich households tend to be located closer to existing infrastructure than poor households. Poor households tend to live in sparsely populated areas, which are often difficult to reach (Ajwad and Wodon, 2007; Ajwad (1999). Therefore, the cost of providing access to an additional household living in the rich municipality is lower than the cost of providing access to an additional household living in the poor municipality. To prevent a corner solution where all public expenditures are spent in the rich department, it can be assumed that the last dollar spent in the poor municipality has a larger impact on access rates than the first dollar spent on the rich municipality, i.e. $f_P'(E) > f_R''(0)$ () (Ajwad and Wodon, 2007; Ajwad (1999).

For education, it can be assumed that an increase in public expenditures raises the school enrolment rate more in the rich municipality, with $f_P'(e) < f_R''(e)$ for all e ∈[0, E]. Because those living in the rich municipality are likely to send their children to school even if a low density of public schools in their own municipality means that the school is relatively far away. Stated differently, the absence of a conveniently located school in a rich neighbourhood is presumed to pose a smaller barrier to education than absence of a school in a poor neighbourhood. As in the case of agriculture, corner solution can be avoided by

assuming that the first Ghana cedi spent in the rich municipality increases the school enrolment rate by more than the last Ghana cedi added in the poor municipality, i.e., $f_P'(E) < f_R''(0)$ (Ajwad and Wodon, 2007; Ajwad (1999).

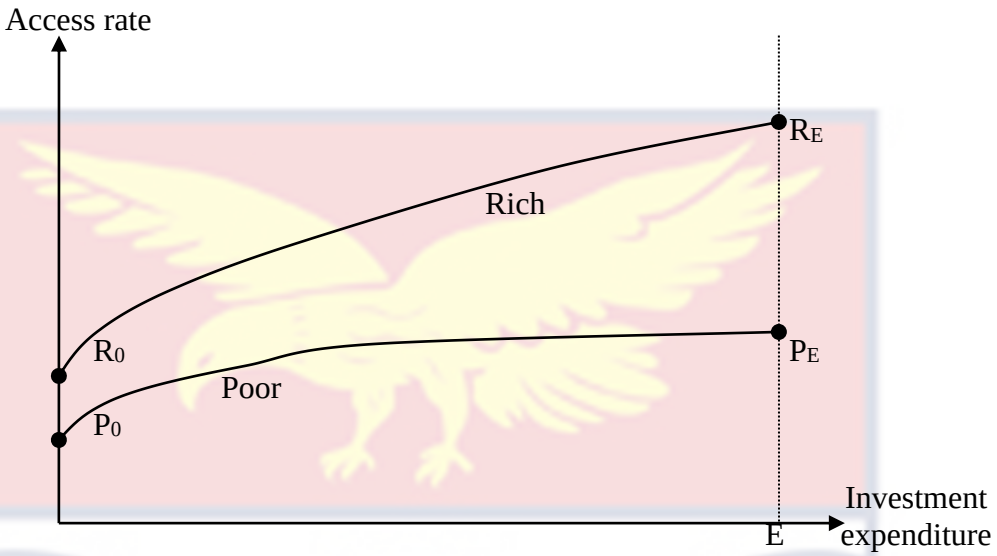
In figure 2 and 3 the profile of access to schools and agriculture as a function of local public expenditures is illustrated respectively. The access rate profile for the rich (R_0R_E) and poor (P_0P_E) municipalities are such that the slope of the access rate production function in the poor municipality is always greater than the slope in the rich municipality for education. The opposite is true for agriculture. The combination (P_E,R_0) in the following graph would occur if the departments funds were entirely allocated to the poor municipality, while, (P_0, R_E) would result if all the funds were allocated or spent in the rich municipality.

Figure 2: Access Rates in Education as a Function of Expenditure



Source: Alabi et al., 2011

Figure 3: Access Rates in Agriculture as a Function of Expenditure



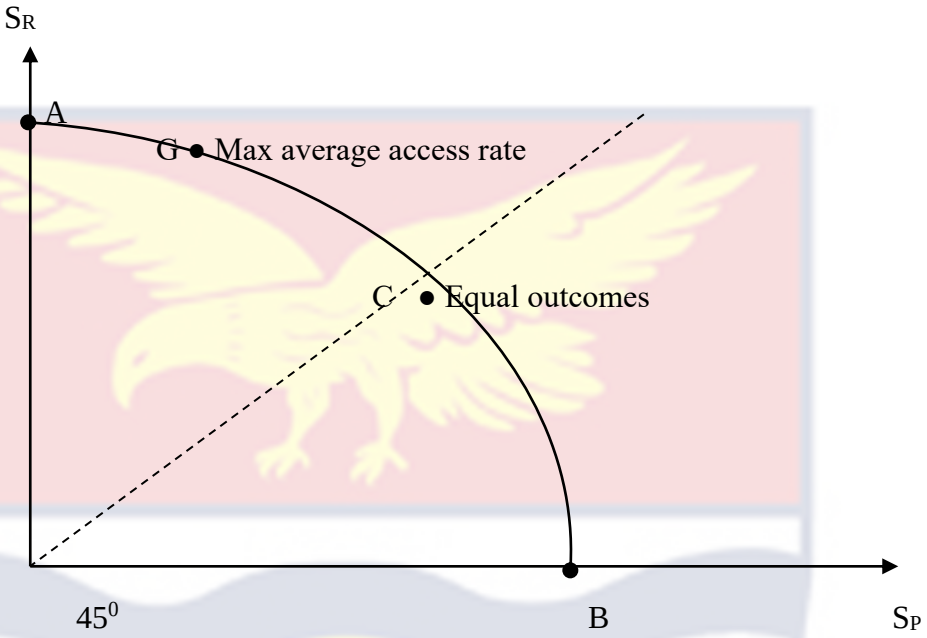
Source: Alabi et al, 2011

The resource constraint $E = E_R + E_P$ and the functions $f_i'(E_i) > 0$ for i = R, P can be combined to generate a transformation curve for the relationship between the access rates in both departments. Writing the access rates as $S_R = f_R(E - E_P)$ and $S_P = f_P(E_P)$ in the rich and poor municipalities, and taking the total differentials of these functions, yields $dS_R = -f_R'(E - E_P)dE_P$ and $dS_P = f_P'(E_P)dE_P$. The slope of the formation curve is thus:

$$\frac{dS_R}{dS_P} = \frac{-f'_R(E - E_P)}{f'_P(E_P)} < 0$$

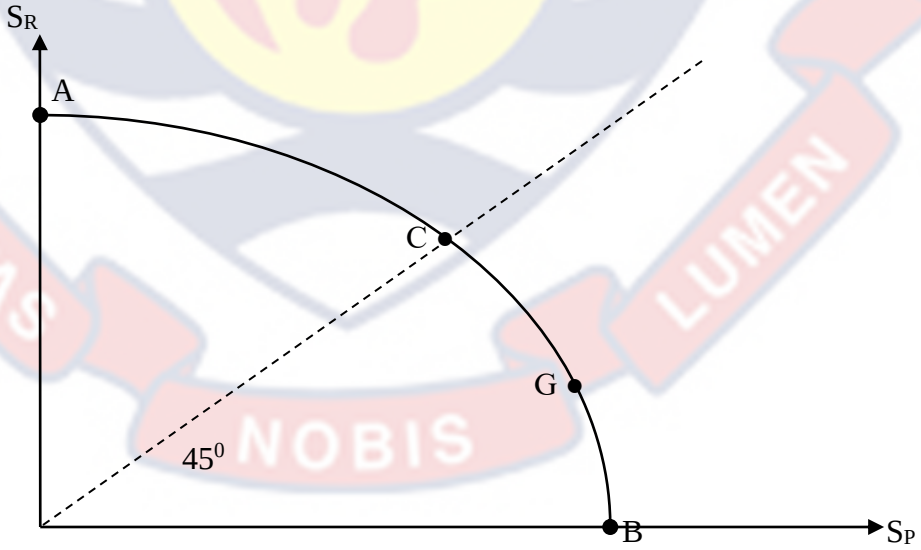
With a fixed budget, a higher increase in the access rates resulting from investment or expenditures in one municipality implies a smaller increase in access rates in the other municipality. In figure 4 and 5 the transformation curves are plotted for the access rates in the two municipalities for education and agriculture, respectively.

Figure 4: Access Rate Transformation Curve for Agriculture Intervention



Source: Alabi et al, 2011

Figure 5: Access Rate Transformation Curve for Education Itervention



Source: Alabi et al, 2011

In Figure 4, point A is equivalent to the ($R_{E,}$ P_0) combination in graph 2, a point that is reached when all available funds are distributed to the rich municipalities, while point B is equivalent to the ($P_{E,}$ R_0) combination in graph 2, which results when E is fully spent in the poor municipality.

If the policymaker has a higher implicit weight on the welfare of either of these groups intervention, then one of these outcomes are more likely to be observed. At point G, average access rates are maximized (there is tangency with a linear objective function at this point, giving equal weight to the poor and rich municipalities). Investment productivity is equalized in the two departments at the point G, with the transformation curve having a slope equal to -1, since maximizing the average access rate $[f_P(E_P) + f_R(E - E_P)]/2$ requires that $f_P'(E_P) = f_R(E - E_P)$. Point C on the 45 degree line represents the allocation that equates the access rates in the two departments ($S_R = S_P$). At point C, the slope equals $-f_R'(E_R)/f_P'(E_P)$. Given that $E_P > E_R$, this ratio could have an absolute value of either greater or less than one. For education, $f_P'(e) > f_R'(e)$ so the slope of the transformation curve is less than -1 at C. On the other hand, $f_P'(e) < f_R'(e)$ for agriculture and the slope of the transformation curve is thus greater than – 1 at C (Ajwad and Wodon, 2007; Ajwad (1999).

Despite the fact that the position of G relative to C may be ambiguous, one conclusion can still be shown from the model if it is assumed that authorities have one consistent goal regardless of the type of public services provided. Consider the goal of maximizing access rates, in the department regardless of the distributional outcomes. To maximize average access rates, the government

chooses point G for both education and agriculture. In the case of agriculture or any other service for which the marginal impact of spending on access is higher in the rich department, G will be uphill from C, such that the rich municipality receives more of the benefits. This is contrasted by the situation where G lies downhill from C, in which case the poor department receives more of the benefit from the additional expenditures because of a higher marginal impact of spending on access in the poor municipality (for example, education). Thus, the relative position of G and C depends on whether the rich or the poor experience the highest impacts from investments in their respective municipality (Ajwad and Wodon, 2007; Ajwad (1999).

Ajwad and Wodon, (2007), as noted by Alabi et al. (2011), have stated that there are at least three other possible outcomes given the model's framework. One is that an increase in access to public services offers the greatest benefits to the rich for both agriculture and education. This would suggest that policymakers place more weight on the welfare of the rich, possibly due to this group's lobbying power. Another is for an increase in access to public services to disproportionately benefit the poor for both types of services. This outcome may result if policymakers place a higher weight on the welfare of the poor or if policymakers pursue a strategy of equalizing outcomes for both services. This could occur if current access to public services favoured rich departments. A third case is when increase in access to education disproportionately benefits the rich while increases in agriculture are more targeted to the poor. A situation that could reasonably lead to this outcome would exist if policymakers did not need to

provide agriculture services to rich municipality who are already serviced by private agriculture intervention, while the rich continue to use public education because tertiary education services tend to be provided by the state in poor countries.

From the related literature reviewed it is abundantly clear that the concept of poverty does not yield to any particular conceptualization. Varied views are expressed, the harmonization of which points to one fact, that poverty has both monetary and non-monetary dimensions and as such should be assessed with both money-metric and non-money-metric indicators of welfare.

Based on different theoretical explanations to the causes of poverty, the literature has established that addressing it requires different strategies. The strategy options proposed by the theories cannot be undermined because there is proof of their viability, especially many education programmes, which however require more coherence and quality (Zigler and Styfco, 1996), and micro-enterprise programmes (Goldstein, 2001). All that is required is commitment from both the provider and the beneficiary households from the implementation to the final stages to ensure that their behaviour or decisions result in programme targeting to the poor and vulnerable groups in society in order that the strategies can reality transform poor people into non-poor people.

Every investment or expenditure on the poverty reduction interventions should be pro-poor and this can be established by employing the two main approaches: the standard (average) incidence analysis and/or the marginal incidence analysis. These two approaches will help determine the distribution of

the benefits of the interventions to beneficiary groups with different consumption expenditure or income levels to enhance inference on the progressiveness or repressiveness of the interventions. Evidence shows that empirical studies on benefit incidence of poverty reduction spending has not been carried out in Bongo District, which is predominantly rural and thus faced with high poverty levels in the country. The expenditures on the benefits of the various interventions in the district thus make it necessary to examine which household income group derived the most in order to determine targeting and progressivity of the interventions implemented.

CHAPTER THREE

METHODOLOGY

Introduction

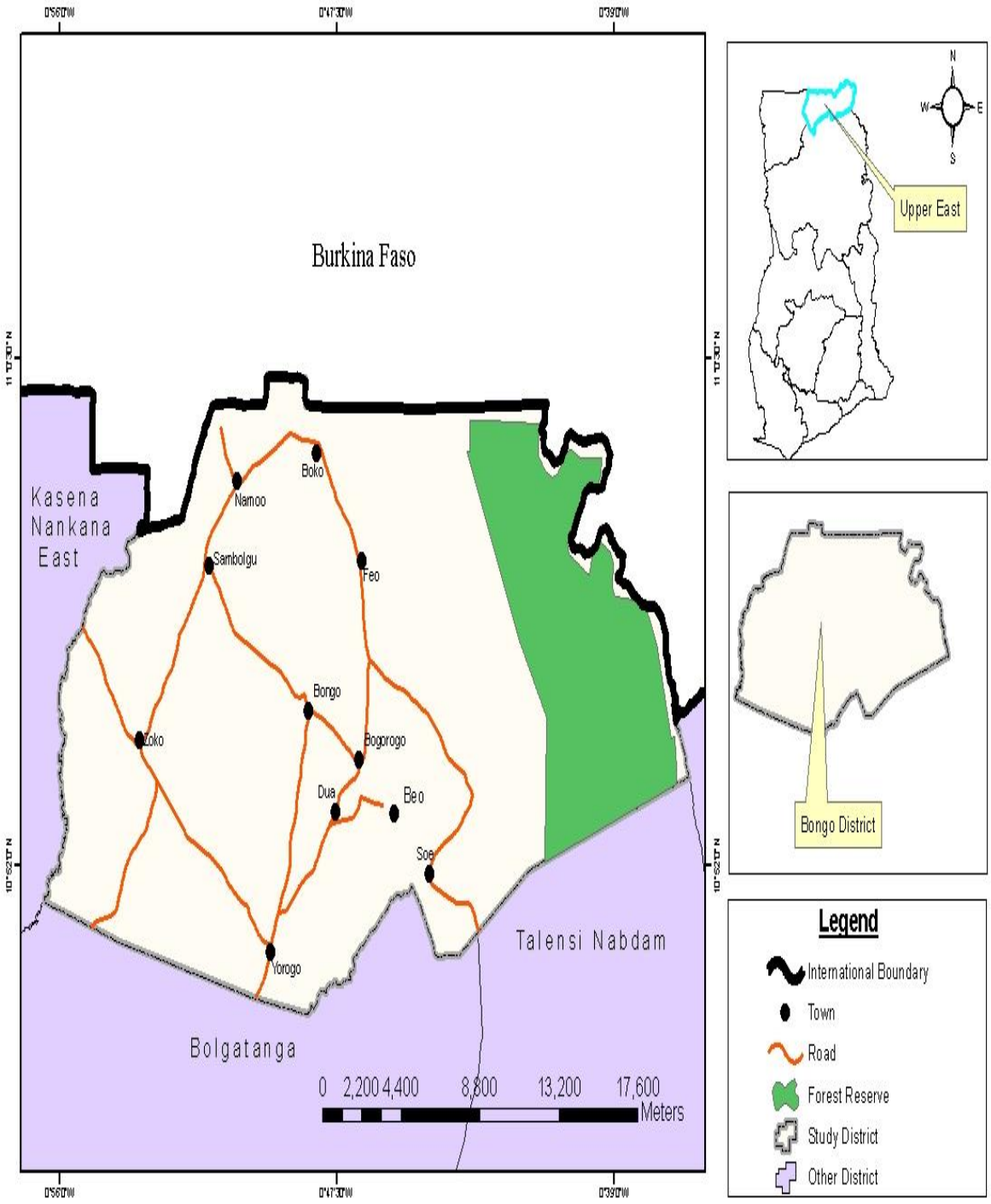
The study is based on the syllogism that several poverty reduction interventions in agriculture, education, and health and safe water have been implemented in Bongo District. Public spending on these interventions was considered critical for outcomes such as improving the welfare of individuals or households (Oduro, 2001). Therefore analyzing the benefit incidence of these interventions is necessary to offer policy recommendations for better targeting of programs to the poor in Bongo District in particular and Ghana as a whole.

This chapter thus spells out the manner in which the research was conducted to achieve the objectives of the study. The chapter covers discussion on the profile of the study area and description of research design. It also defines the population covered for the study, and the sample and sampling procedure. How instruments for the study were developed and the procedure followed to collect data are also discussed as well as methods used to process and analyze data obtained from the field.

Profile of the Study Area

The Bongo District is currently among thirteen districts in the Upper East Region. It shares boundaries with Burkina Faso to the North and East, Kasena-Nankana District to the West and Bolgatanga Municipality to the South. Bongo district is 459.5 square kilometers with forty per cent (40 per cent) of the total land surface covered with rocks. The rocky nature of the district makes farming and other activities difficult to carry out. The district lies within the onchocerciasis-free zone and between Latitude 10.50 N and Longitudes 0.45 W (BDMTDP, 2006/2009). Bongo District is selected for the study based on the fact that it has the highest poverty incidence in Upper East Region. Another reason for the choice of this study area is that no benefit incidence study has been conducted in the District on its poverty reduction interventions (Canajaragah & Ye, 2002; Demery et al., 1995).

Figure 6: Map Showing Bongo District



Source: Department of Geography and Regional Planning, UCC, 2013

The 2010 Population and Housing Census show that the population of Bongo District is 84,545 people and the total households in the district is 15,188 with an average household size of 5.5 (GSS, 2013). But because the 2010 PHC data were not officially published at the time of the survey (27th February-16th April, 2012), the figures of the 2000 Population and Housing Census were used for the sample. According to the 2000 Population and Housing Census (PHC), Bongo had a total of 77, 885 people. The female population constituted 41,586 (about 53 per cent) while the remaining 36,299 (barely 47 per cent) represented the male population of the area. The total number of houses and households were 10,450 and 13,348 respectively and the average household size of the district in 2000 was 5.8 persons (PHC, 2000). The household size reduced to 5.5 as of 2010 (PHC, 2010).

The district is predominantly rural, characterized by large household size, high population density, high dependency ratio and high fertility rates as in other parts of the region. The dependency ratio in the district, according to the 2000 Population and Housing Census, was 107, the highest in the region. This implied that each economically active person had 1.07 people to cater for their livelihood. The district has two drainage basins – Atankuidi-Yaragatan-Atanure and the Red Volta, and one big dam at Vea. Small dams and dug-outs are also located in Bongo, Zorko, Balungu, Adaboya, Akulmasa, Namoo and Soe-Yidongo (BDMTDP, 2006/2009).

The district is dominated by Guruse who constitute 94.2 per cent of the total population. The Bossi who are found in Bongo Township and its environs

are the majority of the Guruse. The remaining 5.8 per cent is made up of the Kusasi, Nankani, Builsa, Kasena, Dargarte among others. The major religion in the district is traditional worship. About 53.6 per cent of the population is traditional worshipers. Christians constitute 28.3 per cent and Muslims form about 6.4 per cent of the population (PHC, 2000).

The active labour force of females in the district is 67.7 per cent and that of male 64.7 per cent of males. The general proportion of female labour force is 51.1 per cent while male labour force is 48.9 per cent (BDMTDP, 2006/2009). These statistics indicates that more females are employed than males. The unemployment rate in the district as of 2000 was 26 per cent which was more than twice the national average of 10.4 per cent and higher than the regional average of 20.1 per cent (BDMTDP, 2006/2009).

Occupational distribution by sex shows that 66.3 per cent of male and 51.4 per cent of female are employed in agriculture constituting a total of 58.8 per cent of the entire district population. In commerce 21.4 per cent of male and 35.6 per cent of female are employed. Collectively, 28.5 per cent of the population is engaged in commerce. Those who are in public service are 9.4 per cent male and 8.4 per cent female which form 8.9 per cent. In industry, which is mainly shea butter extraction, malt processing, basket and hat weaving, 2.6 per cent are male and 3.3 per cent are female (The Planning Team, 2006). According to the 2000 Population and Housing Census Report, about 60.3 per cent of children of school going age in Bongo are engaged in agricultural and its related activities and nearly 29.2 per cent are engaged in industrial activities whiles

about 10 per cent are engaged in retail activities. This situation poses a big challenge to the District Assembly.

Poverty Reduction Interventions in Bongo District

Through the Bongo District Medium Term Development Plan, the District Assembly designed various strategies and implemented programmes to reduce poverty in the district. The strategies span activities geared toward boosting agricultural productivity and gainful employment such as basketry, hat weaving, ropes and smocks production, leather works and blacksmithing. Others included capacity building, skills development and technology development intervention using the district's Social Investment Fund. The rest were provision of basic social services - education, health, safe water and environmental health (BDMTDP, 2002/2004, 2006/2009).

The economy of Bongo District thrives on agriculture related activities. The district therefore supported economic groups with credit facilities through the poverty alleviation fund of the District Assembly to support food production in order to control food-induced inflation. In 2000 and 2001, GH¢ 151,900,000 was injected into the economy as credit to boost agriculture related activities such as farming, sale of foodstuff, food processing, and butchering, and economic ventures in trading and artisan activities (BDMTDP, 2002/2004). Through a Ministry of Food and Agriculture (MOFA) project, Land Conservation Smallholder Rehabilitation Programme (LACOSREP II) funded by IFAD, a total of GH¢ 93,900.000 was used to support farmers to increase their production. In addition, 3 ponds in the Vea Dam were rehabilitated by MOFA in

collaboration with IFAD funded projects (LACOSREP II). Farmers numbering 433 were also supported with GH¢ 21,160.1 through MOFA's Food and Agricultural Budgetary Support (FABS) programme to improve yield (MOFA, 2007; BDMTDP, 2006-2009, 2002-2004).

In the area of human resource development and basic services, the district benefited from a Girl-Child Education unit of the Ghana Education Unit. With the support of Supplementary School Feeding Programme funded by the World Food Program (WFP) and Catholic Relief Services (CRS) and other donors, the drop-out rate of student in the district has reduced. Enrolment has also increased in primary and secondary schools especially of girls from 44 per cent in 1998/99 to 45 per cent in 1999/2000 academic years. It further increased to 50 per cent in 2000/2001 (BDMTDP, 2002-2004). For the academic years 2002/2003, 2003/2004 and 2004/2005, the girls enrolment were about 43 per cent, 46 per cent and 54 per cent respectively for JSS against 57 per cent, 54 per cent and 46 per cent for boys. In the primary school, the girls enrolment slopped from about 50 per cent to 49 per cent then moved up to about 50 per cent during the same period. In the case of boys, the district realized a marginal increase from 50.5 per cent to 50.8 per cent in 2002/2003 and 2003/2004 respectively and then declined to 49.4 per cent in 2004/2005 academic year (BDMTDP, 2006/2009).

For education infrastructure, classrooms over the period 2003-2005 increased. At the primary level, the schools increased from 240 in 2003 to 327 in 2005. For the JSS in the same period, the increase was from 65 to 95 schools and in the pre-school level the number of schools moved from 27 to 33. The total

number of classrooms in the district therefore stood at 455 at the end of 2005. Pupils' desk at the basic school also rose from 5597 in 2002 to 7297 in 2005. One hundred and fifty-one (151) schools have been provided with adequate toilet facilities and a total of 34 teachers' residences have been constructed between 2002 and 2005 (BDMTDP, 2006/2009).

In the health sector, the district benefited from the implementation of a new health care delivery system known as the Community Health Planning and Service (CHPS) concept. It is a community based program and currently, there are 7 functional CHPS zones in the district. These CHPS centres have helped to address the extreme pressure on the single district hospital and the six sub-district clinics located in the district capital, Bongo, and at Adaboya, Dua, Soe, Namoo and Zokko respectively,

The importance of potable water and a clean environment to socio-economic development cannot be disputed. Access to potable water minimizes if not eliminates debilitating water-borne diseases such as cholera, diarrhoea and bilharzia. Ghana governmnent's commitment to poverty reduction therefore recognizes access to potable water as a critical pillar (Water Aid-Ghana Report, 2009). To address the water needs of the district, a total of 211 functioning boreholes and hand-dug wells have been constructed and installed. These boreholes and hand-dug wells serve as the major sources of drinking water. Twenty-two (22) of the 31 hand-dug wells are fitted with caps (BDMTDP, 2006/2009).

The figures above show that households relied extensively on underground water and thus were prone to dental fluorosis, a major problem in the district (BDMTDP, 2006/2009). It is noted in the UN World Water Development Report (UNWWDR) (2006) as cited by Hagan (2007) that water is an essential life sustaining element because it pervades our lives and is deeply embedded in our cultural backgrounds. But fluorine concentration in underground water from which most households in the district rely on as safe water is characteristically higher than the WHO recommended maximum level of 1.5 (mg) in drinking water. This can give rise to skeletal and non-skeletal or dental fluorosis. A survey in 1995 by the health service showed that 33 per cent of school children suffer from dental fluorosis and 62 per cent of children in Bongo Central suffer from this disease. The prevalence rate of this disease in adults was also shown to present a bad picture (BDMTDP, 2006/2009).

Poor sanitation is manifested in health hazards such as tuberculosis, diarrhoea, anaemia, intestinal disorders, malaria and skin diseases. Women and children are particularly vulnerable to these diseases. The district therefore gave training on sanitation and food hygiene to staff of relevant sector agencies, intensified hygiene education and provided additional toilet facilities and refuse dumps and sites for final disposal for households. A total of 224 public and household toilet facilities comprising 10 septic tank latrines, 4 Kumasi Ventilated Improved Pits (KVIP) (12seater), and 210 household Ventilated Improved Pits (VIP) exist in the district (BDMTDP, 2006/2009).

Household Size and Income of Bongo Area Councils

Analysis of the socio-economic survey conducted in 2008 in the district revealed that the district has an average household size of 9.06 persons. This analysis was also done for all the 7 area councils. Before the implementation of District Medium Term Development Plan (DMTDP) from 2002-2005 the average income per head was GH¢ 30 (BDMTDP, 2002/2005). However, the household income, as computed by the district planning team in 2006, indicates an average of GH¢ 368.60 per annum. This figure puts the annual average income per head in the district to about GH¢ 40.68 (BDMTDP, 2006/2009).

Study Design

The study was evaluative in the sense that it mainly sought to assess the distribution of the investments or expenditure on benefits of poverty reduction interventions implemented in Bongo District across household beneficiaries. Hence the benefit incidence approach was adopted for the analysis. As required by this approach, survey on household usage of the intervention was carried out in order to establish which of the interventions they benefited. It was also to establish their welfare level proxied by income, which was used to group them into household quintiles. The difficulty in conducting a census necessitated the use of a representative sample of the household population in Bongo District. Interventions in agriculture, education, health and safe drinking water were specifically selected for the study. The selection of agriculture intervention was based on the fact that more than half (about 59 per cent) of the population engage in farming as a source of livelihood. Besides, agriculture improvement

productivity and the provision of basic services such as education, health and safe water have featured prominently in the medium term development plan of Bongo District like other districts. This is in line with the GPRS I and II development framework.

Study Population

The population was all households in Bongo district. The study assumed that households were users of education, health, safe water services and engaged particularly in agriculture productivity. Because the entire district could not be covered due to resource constraints, household survey was conducted in 3 out of 7 Area Councils (AC) in the district.

Sample and Sampling Procedure

For the purpose of collecting data for the study, two techniques were used to sample the ACs, households and personnel from five local government administrative autonomous units. These were simple random sampling and purposive sampling. First, the 3 ACs were purposively sampled from 7 ACs in the district. The 3 ACs were Beo AC with 9 communities, Namoo AC with 12 communities and Bongo AC with 8 communities totaling 29 communities with a total of 3,152 housing units (HU). The 3 ACs have 29 communities out of 79 communities in the district. The study sampled 435 households including beneficiary households of Food and Agriculture Budgetary (FAB) programme from a target population of 1,450 households in the 3 ACs. Five personnel, one each from the Bongo District Assembly (BDA), Ghana Education Service (GES), Ghana Health Service (GHS), Ministry of Food and Agriculture (MOFA)

and Community Water and Sanitation Agency (CWSA) were also selected. Beo and Namoo ACs were purposively sampled because they had the two extreme average household incomes in the district. Beo AC had GH¢ 244.8 and Namoo AC had GH¢ 632 average household income (District Planning Team (DPT), 2006; Socio-economic Survey (SES), 2008) captured in BDMTDP (2006-2009). The two extremes would help rank households by income level. Bongo AC was however selected because it is the hub of the local government administration. All the local government administrative autonomous units are located in bongo Central. Besides, the only district hospital and one of the three secondary schools are located in Bongo central.

Table 2: Average Household Size and Income by Area Councils in Bongo District

No	Area Council	Average Household Size	Average Income (GH¢)
1	Bongo AC	8.1	450.60
2	Balungu AC	8.7	399.00
3	Soe AC	7.8	477.00
4	Beo AC	10.3	244.80
5	Valley Zone AC	10.7	478.80
6	Zorko AC	9.4	612.00
7	Namoo AC	8.4	632.00
	Bongo District	**9.06**	**470.6**

Source: Planning Team, 2006 and Socio-Economic survey 2008 (captured in BDMTDP 2006-2009)

1. AC: Area Council

Table 3: **Sample Size Determination from the Study Population**

Targeted Group	Population	Sample Size of population	Sampling technique	Instrument for data collection
Area Councils	7	3	Purposive	
Communities	79	29	Census	
Households	1,450	390	Random sampling	Structured interview
FABS HH Beneficiaries	433	45	Random Sampling	Structured interview
Sub-total of HH respondents	**1,450**	**435**	-	-
BDA Official		1	Purposive	Questionnaire
GES Official		1	Purposive	Questionnaire
GHS Official		1	Purposive	Questionnaire
MOFA Official		1	Purposive	Questionnaire
CWSA Official		1	Purposive	Questionnaire
Sub-total of Official		**5**	-	-
Total Respondents		**440**		

Source: Bongo Population details: 2000 Population and Housing Census

1. FABS: Food and Agricultural Budgetary Support Programme
2. HH: Household
3. BDA: Bongo District Assembly
4. GES: Ghana Education Service
5. GHS: Ghana Health Service
6. MOFA: Ministry of Food and Agriculture
7. CWSA: Community Water and Sanitation Agency

Table 4: Sampled Household Respondents by Communities of Area Councils

Communities	No of Sampled Households	
	Frequency	Per cent
Beo AC		
Beo-Nayikura	140	4
Beo-Tankoo	172	4
Beo-Wagliga	94	2
Beo-Atonoborogo	39	1
Beo-Dusobligo	9	0.3
Beo-Kasingo	110	3
Beo-Lembusi	25	0.7
Beo-Sapooro	125	3
Beo-Kabusigo	65	2
Sub-total	**779**	**20**
Namoo AC		
	284	7
Namoo		
Namoo-Akunka	30	1
Nayorogo-Apubeo	80	2
Nayorogo-Galarom	88	2
Nayorogo-Nayiri	116	3
Sambolgo-Amanga	169	4
Sambolgo-Ayeopia	159	4
Sambolgo-Abokobisi	79	2
Sambolgo-Kansoe	103	3
Sambolgo-Nayiri	88	2
Sambolgo-Sikabisi	110	3
Sambolgo-Towongo	23	1
Sub-total	**1329**	**34**
Bongo AC		
Bongo	796	20
Anafobisi Kanseringa	168	4
AnafobisiKunkua	132	3
Apatanga	162	4
Asibiga	66	2
Atampintin	212	5
Atampisi-Bongo	155	4
Akunduo	140	4
Sub-total	**1831**	**46**
Total	**3939**	**100**

Source: PHC, 2000

Per the 2000 PHC, Beo AC had 667 housing units (HU) with 779 households. Namoo had 1,053 HU with 1,329 households whilst Bongo AC had 1,432 HU with 1,831 households. The total number of households in the 3 ACs according to the 2000 Population and Housing Census (PHC) was 3,939 (2000 PHC). The 2000 PHC Data was used for this study because as at February, 2012 when the field survey was conducted the official statistics for the 2010 PHC had not been released. However, the 2010 PHC indicates that the population of Bongo has increased to 84,545 people and the households increased to 15, 188 with a average household size of 5.5 (GSS, 2010)

Based on each selected AC's total number of households as a percentage of the 3,939 households in the three ACs, 156 households were sampled from Beo AC, 452 from Namoo AC and 842 from Bongo AC totaling 1,450 households from the 29 communities. The targeted population for the study was therefore 1,450 households in the 3 ACS as shown in Table 3. Bartlett, Kotrlik and Higgins (2001) have indicated that a representative sample size based on 0.05 margin of error and a confidence level of 95 per cent for a population of 1,500 is 306. In this regard, the study sampled 435 households including 45 beneficiary households of FABS programme out of the 1,450 households in the 29 Communities of the three ACs. This was to ensure that the sample size was representative and that users of FABS programmes were also captured. The 45 beneficiaries were randomly sampled from a total of 433 household beneficiaries of the FABS programme.

The simple random sampling was chosen for two considerations. One reason was to account for equal chances of selection for all the households in the targeted population. The second reason was due to the fact that the targeted population was judged to be homogenous (Twumasi, 2001). The lottery method was used. Names of the housing units were written with the help of the Assembly Members in each of the administrative zones (ACs). Numbers were assigned to each household in housing units that had more than one household with the name of the housing unit properly labeled against the households. The folded names were shuffled and a household picked. This process continued until the required sample size was obtained so as to avoid being bias.

The five personnel from the local government departments were also purposively sampled in view of the influential positions they hold in their respective departments. In GES, the human resource person was selected while in GHS it was the director for the District Health Management Team (DHMT). Because the district planning officer and the coordinating director are more permanent personnel in the District Assembly, the coordinating director was selected because he has authority over the district planning officer. In MOFA and CWSA, the directors were selected. By virtue of the functions these personnel perform in their respective departments, they have access to relevant documents on their intervention activities and have the authority to provide relevant primary and secondary data for the study. Purposively sampling them was thus based fundamentally on the judgment that those officials could best provide information useful for the study (Kumar, 1999). According to Twumasi

(2001, p27) the researcher uses purposive sampling "to select respondents who can answer his research questions. Thus the researcher selects cases that are judged to typify the views of the group". The total sample size for the study including the five officials was therefore 440.

Data Collection Procedure

The study used structured interview and questionnaire to collect data. Data from households were elicited through structured interview (Appendix A). The study assumed that some household heads or their representatives may not be able to read. To address the problem of possibly compromising data quality and to provide a platform for uniform translation of questions into the local language the structured interview was used. It was also expected to provide opportunity for further probing in order to obtain clearer and desired responses. It further sought to provide opportunity to household respondents to seek for clarifications to questions in order to adequately provide appropriate responses. Questionnaire was however administered to the five personnel of the local administrative units (Appendix B). It was to allow them time to respond to the questionnaire at their own convenience. It was also to curb the problem of bias which could emanate due to the presence of the researcher. The survey recorded 100 per cent response rate from the households. But after sorting the data it was realized that data on 33 households' expenditure characteristics, ownership of assets and savings as well as agriculture produce and other assets were not sufficiently captured to facilitate ranking of households into quintiles. Thus the percentage of household response used for the analysis was about 92 per cent. In

the case of the response rate of the implementing agencies, 80 per cent was covered.

Data Types and Sources

The study relied on two types of data - primary and secondary data. Primary data was collected on the types of benefits of interventions households accessed and household consumption expenditure and income and/or asset ownership using a structured interview. The core welfare questionnaire designed by the Ghana statistical service was adopted to collect data on household consumption expenditure and asset ownership. These welfare indicators of the households were used to rank the households according to their average annual income. The prices of household's agricultural produce and land were obtained from the Bolga Municipal Agriculture Office and Lands Commission respectively. Rent of single and double rooms for mud and block houses were also obtained from the rent control office in Bolga Municipality. The household's income based on their wages, remittance and value of their assets was thus normalized by comparing it with the Ghana Statistical Service's 2005/2006 poverty lines of GH¢370.89 (upper poverty line) and GH¢288.47 (lower poverty line) (GSS, 2007) and the national average household annual income of GH¢1,217 and average per capita income of about GH¢400 (GSS, 2008). Primary data was also taken from the local administrative units on the interventions they implemented and the actual budgets of the interventions as well as the total number of beneficiaries. The primary data formed the basis for the descriptive

statistics or analysis and findings and both primary and secondary data were used for the benefit incidence analysis in the next chapter.

For the sake of benefit incidence analysis, documents containing information on interventions implemented, the list of beneficiaries and total cost of providing the intervention were also elicited from Bongo District Assembly, Ghana Education Service (GES), and Ministry of Food and Agriculture (MOFA), Ghana Health Service (GHS), and Community Water and Sanitation Agency (CWSA). CWSA and GHS were unable to provide the document covering their interventions. However, they responded to the questionnaire without providing responses to the list of beneficiaries and the intervention total cost. BDA did not provide both primary and secondary data on the cost of providing the interventions they carried out and the list of beneficiaries.

Data Processing and Analyses

The data collected were cross-checked, sorted and grouped and then standardised for analysis with the aid of Statistical Product and Service Solutions Version 16.0 (SPSS Ver. 16.0) and Microsoft excel. Household accessibility of interventions in agriculture, education, health and safe water and a public-private partnership skills training in dress making were descriptively analysed using SPSS. The descriptive analyses were done using tables and percentages to present results on the kinds of benefits households derived from the interventions and the alternative means by which the benefits of these interventions could be enhanced in the district.

Microsoft excel was used to rank sampled households according to mean annual household income. Components of households income included salaries/wages/interests, agriculture produce and other consumable and non-consumable assets of the households. Market prices of these items were used. Quintiles of households were defined over the entire number of households sampled. The poorest (lowest income) quintile referred to the poorest 20 per cent of the households sampled in the district. The poorest and richest households were determined by comparing the household group's average annual income with the GH¢370.89 upper poverty line and GH¢288.47 lower poverty line set by Ghana Statistical Service (GSS, 2007) and the national average household annual income of GH¢1,217 and average per capita income of about GH¢400 (GSS, 2008). Microsoft excel was used to impute the value transfers of the interventions expenditure to the household groups in the district in the benefit incidence analyses.

First the total cost of providing the intervention was calculated and the unit cost to the households was determined using the formula developed by Meerman (1979) Malaysia and Selowsky (1979) on Columbia in a joint World Bank Study (cited in Demery, 2003, 1995 and Pradhan, 1996; Davoodi et al., 2003; Van de Walle, 2003). This was determined by:

$$\boldsymbol{X_j = \sum_{i=1}^{3} E_{ij} \frac{S_i}{E_i} = \sum_{i=1}^{3} \frac{E_{ij}}{E_i} S_i} \qquad (1)$$

Where:

- X represents the value or share of total programme spending to participants (household beneficiary);
- E means number of programme participants or beneficiaries;
- j subscript stands for group of participants (households beneficiaries);
- i subscript (1,…,3) is programme participation level;
- S denotes institution net spending on programme;
- E_{ij} represents the number of group j households beneficiaries participating in the programme at level i;
- E_i means the total number of participants (households beneficiaries) at program level i;
- S_i represents net spending on programme level **i** (with fees and other cost recovery netted out);
- X_j equals the value or share of the total programme subsidy imputed to group j;
- $\frac{S_i}{E_i}$ was the unit subsidy of providing the program at level i ; and
- $\frac{E_{ij}}{E_i}$ was the standard (average) value or share of benefit to group j.

When both sides of equation or expression (1) are divided by total (net government intervention spending, *s*, the share of benefits accrued to quintile *j* from the total government spending on the intervention would be obtained. The share of the total intervention spending imputed to group *j* (X_j) is thus:

$$X_j = \sum_{i=1}^{3} \left(\frac{E_{ij}}{E_i}\right) \times \left(\frac{S_i}{S}\right) \equiv \sum_{i=1}^{3} e_{ij}\, s_i \qquad (2) \qquad j = 1,2,3,4,5$$

Where $X_j = X_j/S$ and $S = \sum_{i=1}^{3} S_i$

This study reported estimates of X_j for primary and JHS levels for education intervention and for male and female for the agriculture intervention. Estimates of X_j should add up to one, but in percentage terms it adds up to 100 as reflected in this study. It must also be noted for the sake of this study that what determines a quintile's benefit incidence is a quintile's participation or access rate of the intervention (e_{ij}) and therefore the share of the total or net expenditure at a particular level of the quintile's participation.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter is devoted to presentations and discussions of results in the order of the four specific objectives the study sought to achieve. First is the presentation of the descriptive analysis of the kinds of benefits households received in Agriculture, Safe Water, Education, Health interventions and a Public-Private Partnership skills development programme in dressmaking. This discussion is followed by a descriptive analysis of the alternative means of enhancing the benefits of these interventions. The third and fourth sections focus on the average benefit incidence of education interventions (at the primary and Junior High levels) as well as the Food and Agricultural Budgetary Support (FABS) programme to determine their distribution across household income groups and progressiveness of the interventions. A graphical representation using concentration curves of a cumulative distribution of the total household consumption expenditure of the interventions is plotted on the Y-axis against the cumulative population quintiles ranked by mean household annual income on the X-axis to establish whether the intervention is progressive or regressive.

Socio-Demographic Characteristics of Household Respondents

Overall picture indicates that 56 per cent of household respondents did not attend school and 22 per cent had primary education (Table, 5). Nine per cent of the respondents had secondary education and about 8 per cent of the household respondents progressed up to junior high or middle school. While respondents within 0-20 years did not get tertiary education, respondents from age 21 up to 49 had college/university education than those above 49 years (Table 5).

Table 5: Age Distribution of Household Respondent by Educational Level

Age		Never	Primary	JHS/MS	SHS	College	Total
<20	M	0(0%)	2(17%)	4(33%)	6(50%	0(0%)	12
	F	0(0%)	1(17%)	2(33%)	3(50%	0(0%)	6
	T	**0(0%)**	**3 (17%)**	**6 (33%)**	**9(50%)**	**0(0%)**	**18**
21-35	M	14(21%)	25(37%	8(12%)	11(16%)	3(4%)	67
	F	25(40%)	20(32%	7(11%)	4(6%)	3(5%)	62
	T	**39(30%)**	**45(35%)**	**15(12%)**	**15(12%)**	**6(5%)**	**129**
36-49	M	26(53%)	15(31%)	2(4%)	3(6%)	3(6%)	49
	F	31(77%)	6(15%)	1(2%)	3(7%)	0(0%)	41
	T	**57(63%)**	**21(23%)**	**3(3%)**	**6(7%)**	**3(3%)**	**90**
50 +	M	44(60%)	16(22%)	6(8%)	5(7%)	2(3%)	73
	F	85(92%)	5(5%)	0(0%)	1(1%)	1(1%)	92
	T	**129(78%)**	**21(13%)**	**6(4%)**	**6(4%)**	**3(2%)**	**165**
Total		**225(56%)**	**90(22%)**	**30(8%)**	**36(9%)**	**21(5%)**	**402**

Source: Author's Field Survey, February 2012

1. M: Male
2. F: Female
3. T: Total

Benefits of Poverty Reduction Interventions Households Derived

The study found that households in Bongo District benefited from five broad interventions implemented to reduce poverty. The interventions included Agriculture, Safe Water, Education, Health and Public-Private Partnership skills development (Table 6). The survey revealed that households benefited from two or more of these interventions. All households accessed safe water whilst about 99 per cent (399 households) of the households benefited from health intervention. Almost 93 per cent of the households also benefited from education intervention and nearly 12 per cent received Agriculture intervention. 1.5 per cent (6 respondents) of the households had access to the Public-Private partnership programmes. These five interventions have various kinds of benefits households derived.

Table 6: Poverty Reduction Interventions Households Benefited

Poverty Reduction Intervention	Number of Household Beneficiaries *	Per cent of Household Beneficiaries
Safe Water	402	100
Health	399	99
Education	375	93
Agriculture	48	12
Public-Private partnership Programme	6	1.5

Source: Author's Field Survey, February 2012
*Multiple Responses

As one of its objectives, the study focused on the kinds of benefits households derived under each of the five interventions. Households received farm inputs, farm equipment, credit facility and had their farm lands ploughed as part of the agriculture intervention. Households received either one or two of these benefits. Forty per cent of the households, most of whom were from Beo and Tankoo communities, received agricultural inputs and had their lands ploughed and 34 per cent were given inputs (rice seeds and fertilizer) (Table 7). Those households which benefited from land ploughing only and farm equipment only were 7 per cent and 6 per cent respectively. Credit facility was also given to 6 per cent of the households whilst the rest of the households of about 7 per cent received inputs and farm equipment.

Table 7: Benefits of Agriculture Intervention Households Derived

Agriculture Benefits	Per cent
Inputs and ploughing of farm land	40
Inputs (rice seed, fertilizer)	34
Ploughing of farm land	7
Inputs and farm equipment	7
Farm equipment (bullock plough, Wellington boots, Carts)	6
Credit facility	6
Total	**100**

Source: Author's Field Survey, February 2012

The findings from the field revealed that households had access to underground water, pipe water and dam water. Seven-eight per cent of the households accessed borehole water and 13 per cent got pipe water. The analysis

also showed that 4 per cent of households benefited from well water and another 4 per cent had access to both borehole and well water (Table 8). Dam water was available to about 1 per cent of the households. It was observed during the data collection that more households within Bongo Township benefited from the provision of pipe borne water than those in the 2 other ACs covered in the study.

Table 8: Benefits of Safe Water Intervention Households Derived

Safe Water Benefits	Per cent
Borehole	78
Pipe	13
Well	4
Borehole and Well	4
Dam	1
Total	**100**

Source: Author's Field Survey, February 2012

With regard to education, the benefits households derived included free tuition, education materials such as school uniforms and book, and supplementary school feeding. Seventy-seven per cent of households benefited from both free tuition and education materials and 11 per cent gained only free tuition (Table 9). While 10 per cent households benefited from free tuition, education materials and feeding, 2 per cent had access to only education materials.

Table 9: Benefits of Education Intervention Households Derived

Education Benefits	Per cent
Free tuition and education materials	77
Free tuition	11
Free tuition, education material and feeding	10
Education material (uniform, books and sandals)	2
Total	**100**

Source: Author's Field Survey, February 2012

The benefits of health interventions were categorized under preventive treatment, curative treatment, food grants (for lactating mothers who gave birth in the health facilities) and health education. Preventive interventions included the distribution of free mosquito nets, and administration of free cerebrum-spinal meningitis (CSM), tetanus as well as polio vaccinations, and elephantiasis drugs. The curative interventions included treatment of sicknesses such as malaria, diarrhea, anaemia and other related sicknesses. The households derived either one or more of these health benefits. The results in Table 10 show that more than half of the households (58 per cent) received both preventive and curative treatments while about a quarter of the households (26 per cent) accessed only preventive treatment. Fourteen per cent of households however received all the three health benefits (preventive, curative and food) and only 1 per cent households derived only curative treatment.

Table 10: Benefits of Health Interventions Households Derived

Health Benefits	Per cent
Preventive and curative services	58
Preventive service (mosq nets, tetanus, CSM, polio vaccination and elephantiasis drugs)	26
Preventive, curative and food	14
Curative service (malaria, diarrhea anaemia treatment)	1
Preventive and food	1
Total	**100**

Source: Author's Field Survey, February 2012

The households that benefited from the Public-Private Partnership programme derived only skills development in dress making only. Only 6 households constituting nearly 1.5 per cent derived this benefit.

Distribution of Benefit Incidence of the Benefits of Education and Food and Agricultural Budgetary Support Interventions

A crucial part of this study was to estimate the distribution of the interventions spending using the benefit incidence approach. Benefit incidence analyses of all the interventions reaching the households was contingent on the availability of data on the list of beneficiaries and costs of providing the interventions from the implementing agencies. The lack of such data on health and safe water interventions necessitated the exemption of these interventions including that of the skills development programme in dress making in the incidence analysis. The study thus carried out the benefit incidence analysis on

only the education and agriculture interventions to determine the distributions of the interventions' budgets across various household income groups.

Mean annual household income was used to rank households into quintiles. Household quintile participation or access rate in terms of enrolment at each level of education and number of participants in the Food and Agricultural Budgetary Support (FABS) programmes were calculated and the share of the particular intervention net spending to each quintile was then estimated for each programme. The average share of the intervention expenditure as defined by the study was the proportion of intervention actual spending to each income quintile expressed in terms of the share of cash transfers and/or percentages of the cost of providing the intervention.

Table 11: Distribution of Benefit Incidence of the Benefits of Education Intervention in Bongo district, 2011

Population Quintile	Mean HH Income (GH¢)	Quintile Share of Education Spending (eij) — Education Levels: Cash transfer (GH¢) Prim.	Per cent	Cash transfer (GH¢) JHS	Per cent	Cash transfer (GH¢) All Levels	Per cent
First	403.1	2,098.44	29	761.67	20	2,860.11	26
Second	796.1	2858.22	39	1,305.72	35	4,163.94	37
Third	1,239.2	1664.28	23	1,269.45	34	2,933.73	26
Fourth	1,670	325.62	4	181.35	5	506.97	5
Fifth	3,275.7	397.98	5	253.89	6	651.87	6
Bongo Dist.	**1,476.84**	**7,344.54**	**100**	**3,772.08**	**100**	**11,116.62**	**100**
Institution spending on education intervention:							
Net share (S_i) by Levels		*7,344.54*		*3,772.08*		*11,116.62*	
Per cent Share by Level		*66* per cent		*34* per cent		*100* per cent	

Source: Author's Field Survey, February 2012

The average incidence analysis showed that both the rich and the poor households received some proportion of the cash (value) transfer from the net expenditure at the primary level and JHS level and the total expenditure on the benefits households derived from the education intervention at elementary school

level. The net spending at the primary constituted 66 per cent. At the JHS level however, it was 34 per cent of the total expenditure.

At the Primary level as shown in Table 11, the first and second quintiles received 29 per cent and 39 per cent of the cash transfers respectively. That means the first (poorest) and the second (poorer) household population quintiles had the most gains from the net education expenditure at the primary level. However it showed least gains for those households in the fourth (richer) and fifth (richest) bracket; 4 per cent and 5 per cent of the education intervention spending went to the fourth and fifth quintiles respectively. The third (average poor) quintile however gained 23 per cent. This pattern is reflected at the JHS level, where the first quintile received 20 per cent with the second quintiles obtaining 35 per cent as against 5 per cent and 6 per cent for the fourth and fifth quintiles accordingly. But the third quintile gained 34 per cent which is about five times more than the share that goes to the richest quintile.

Combining the eij's (share of intervention spending to j group at level i and si's (net GES spending at level i) gave the overall benefit incidence of education spending designated 'All' levels (both primary and JHS). The results showed the same reflection - the poorest quintile gain more than the richest groups. Twenty-six per cent of the total spending was transferred to the first quintile and 37 per cent went to the second quintile while households in the fourth and fifth categories gained as low as 5 per cent and 6 per cent respectively). The third quintile also gained 26 per cent.

The general observation in the findings is that the first and the second household quintile gained the most from the benefits of the education intervention in terms of cash transfers. The second households received the most gains while the first and third households received the same share. The implication is that households in the lower income groups accessed more primary and JHS education interventions and therefore gained greater share of the education budget at these two educational levels than the well to do groups. This confirms the study of Demery (1995) and but at variance with the study conducted by Alabi et al. (2010) and Canajaragah and Ye (2002). Demery (1995) carried out a benefit incidence studies on public spending on education and health in Ghana in 1992 and found that government spending on education are more evenly distributed and better targeted to the poor. The benefit incidence analysis of Canagarajah and Ye (2002) in Ghana showed that the unit subsidy of education from 1992-1998 realized a decline in the share of the poorest quintile and an increase in the value of the education expenditure transferred to the richest quintile at the basic level. At the secondary and tertiary level however, the unit subsidy to the poorest quintile although had improved still favoured the richest most. Hence they recommended better targeting of pro-poor interventions in basic social services. Alabi et al. (2010) in analyzing the marginal benefit incidence of public spending in Nigeria discovered that school age children enrolment in public primary and secondary schools favoured the richest quintile against the poorest quintile in public education expenditure. Alabi et al. (2010) thus concluded that the expansion of public primary and secondary schools will

benefit school age children of the poorest income group more than those of the richest group. In the work of Ajwad and Wodon (2002) in Bolivia and Paraguay, they ascertained higher marginal benefit incidence for the poorer than for many non-poor in education.

Table 12: Distribution of Benefit Incidence of the Benefits of Food and Agriculture Budgetary Support Programme in Bongo District, 2007

Population Quintle	Household Per Capita Income (GH¢)	Share of Spending (Per cent) Male (eij)	Share of Spending (Per cent) Female (eij)	Share of Spending (Per cent) All (∑eij)	Average Household Size
Poorest	403.1	38	27	30	8.4
Second	796.1	26	37	34	8.1
Third	1239.2	21	18	19	7.2
Fourth	1670.1	6	9	8	6.8
Fifth	3275.7	9	9	9	4.7
Bongo Dist	**1476.84**	**100**	**100**	**100**	**7.04**

Bongo Dist. MOFA spending: GH¢ 21,360 (2007)

Net share (Si) by sex	*5,126.4*	*16,233.6*	*21,360*
Per cent *share by sex*	*24* per cent	*76* per cent	*100* per cent

Source: Author's Field Survey, February 2012

The average benefit incidence of FABS programme was analysed by sex and then aggregated for the overall incidence because the programme was implemented on sex-basis. The results showed that male receive 24 per cent of the cash transfer from the FABS expenditure while the female got 76 per cent. The male and female poor households as well as the rich households obtained a share of the cash transfers. The poorest male quintile gains more (38 per cent)

than their female counterparts (27 per cent) but with regard to the second quintile the reverse held true – the female second quintile gained 37 per cent and the male second quintile gained 26 per cent. The fourth and fifth quintiles for the male category received 6 per cent and 9 per cent respectively while the percentage gain for female in both the fourth and the fifth quintiles were the same (9 per cent) (Table 12). In general terms, the results indicate that the poorest and poorer quintiles in the male and female categories were the most gainers while the fourth and fifth quintiles received the least benefit transfers. But while the male third quintile received slightly more than 20 per cent, the female third quintile gained 18 per cent.

Aggregating the net expenditures of the FABS intervention for both the male and female, designated 'All', the distribution of the value transfer across the income groups (household quintile) follows a similar pattern (Table 12). The first quintile gained the most while the fifth gained the least value transfer. The first quintile gained 30 per cent and the fifth quintile gained 9 per cent, which is about a third of the gains made by the first quintile (Table 12). The second quintile benefited more than the first quintile (poorest) from FABS expenditure. The fourth and fifth quintiles received the least shares (9 per cent and 8 per cent respectively).

Expressing the share of the education and FABS programme expenditures to the households as a percentage of the households' incomes revealed more of how progressive or regressive these programs were. The education spending imputed to the first (poorest) quintile amounted to about 26 per cent of the total

expenditure, contrasted to just about 6 per cent for the fifth (richest) quintile. The education spending may not have been very well targeted to the first quintile, yet they did receive more than the fifth quintile in relation to their income levels (Table 11). In the case of the FABS programme and taking the aggregated expenditure of the programme to farmers the first quintile received the highest total expenditure of 30 per cent while the fifth quintile received 9 per cent. Results of targeting in this programme were similar to the education expenditure. The first quintile received higher FABS expenditure than the rich in relation to their incomes (Table 12). As such the benefits of both education and FABS interventions can be said to be pro-poor. The implication in both interventions (education and FABS) is that the distributions of their benefits were in favour of the poorest households against the richest households

Progressivity of the Benefits of Education and Agriculture Interventions in Bongo District

To establish targeting (pro-poorness) and progressivity of the interventions more accurately graphical representation was used. The graphical representation helps to compare curves (concentration curves and the Lorenz curve/45 degrees). The study thus used the concentration curves for spending on the education and Food and Agricultural Budgetary Support interventions (FABS) interventions in Bongo District to show how progressive or regressive the interventions expenditures were. As discussed in chapter 3, the intervention can be said to be pro-poor and progressive when the concentration curve lies above the 45 degrees. The converse effect is also true when the concentration curve lies below the 45 degree. The concentration curves were constructed using

the cumulative distribution of the benefit incidence of the intervention to the quintile population (Tables 13 and 14 for education and FABS interventions respectively). Targeting and progressivity of education and FABS interventions were also determined graphically (Figures 7 and 8 respectively).

Table 13: Cumulative Distribution of the Benefit Incidence of the Benefits of Education Intervention in Bongo District, 2011

	Education Level					
	Primary level		JHS Level		All Levels	
Quintile	SEE	CSEE	SEE	CSEE	SEE	CSEE
Poorest	0.29	0.29	0.202	0.202	0.26	0.26
Second	0.39	0.68	0.346	0.548	0.37	0.63
Third	0.23	0.91	0.337	0.885	0.26	0.89
Fourth	0.04	0.95	0.048	0.933	0.05	0.94
Fifth	0.05	1.00	0.067	1.00	0.06	1.00
Total	**1.00**		**1.00**		**1.00**	

Source: Author's Field Survey, February 2012

1. SEE means quintile share of education expenditure.
2. CSEE means quintile cumulative share of education expenditure.

Table 13 deals with the cumulative distribution of the household group consumption of education intervention net expenditure at primary and junior high levels in Bongo District in 2011. This table is used for the graphical representation of the distribution of the intervention's benefits across the various income groups to determine progressiveness of the intervention.

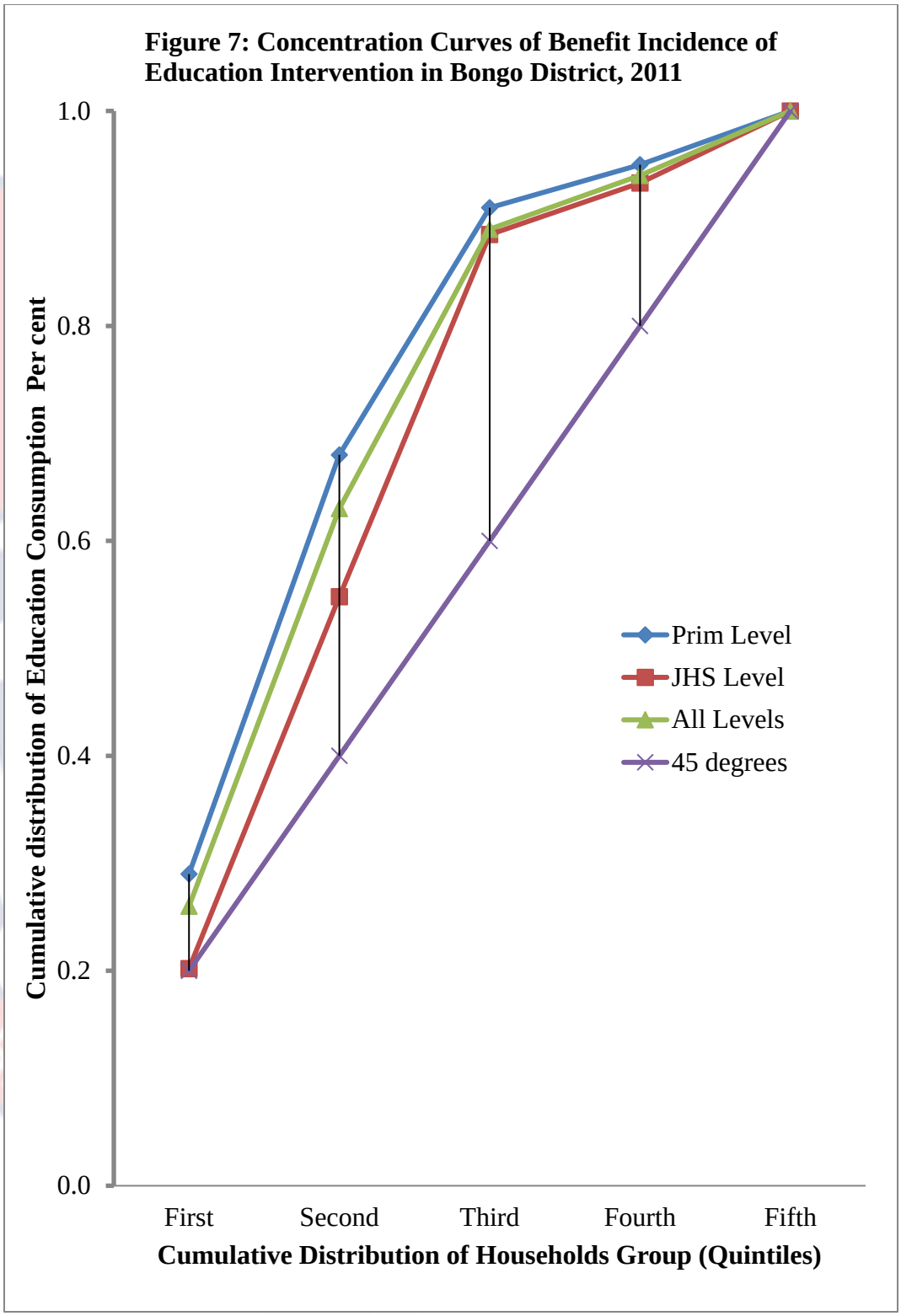
Table 14: Cumulative Distribution of Benefit Incidence of the Benefits of Food and Agriculture Budgetary Support Programme in Bongo District, 2007

	Gender					
	Male		Female		All	
Quintile	SAE	CSAE	SAE	CSAE	SAE	CSAE
Poorest	0.38	0.38	0.273	0.273	0.3	0.3
Second	0.26	0.64	0.363	0.636	0.34	0.64
Third	0.21	0.85	0.182	0.818	0.19	0.83
Fourth	0.06	0.91	0.091	0.909	0.08	0.91
Fifth	0.09	1.00	0.091	1.00	0.09	1.00
Total	**1.00**		**1.00**		**1.00**	

Source: Author's Field Survey, February 2012

1. SAE means quintile share of agriculture expenditure.
2. CSAE means quintile cumulative share of agriculture expenditure.

Table 14 also represents the cumulative distribution of the household group consumption of net expenditure of the Food and agriculture Budgetary Support (FABS) intervention by sex in Bongo District in 2007. This table is used for the graphical representation of the distribution of the intervention across the various beneficiary household income groups to establish how pro-poor (progressive) the intervention has been.

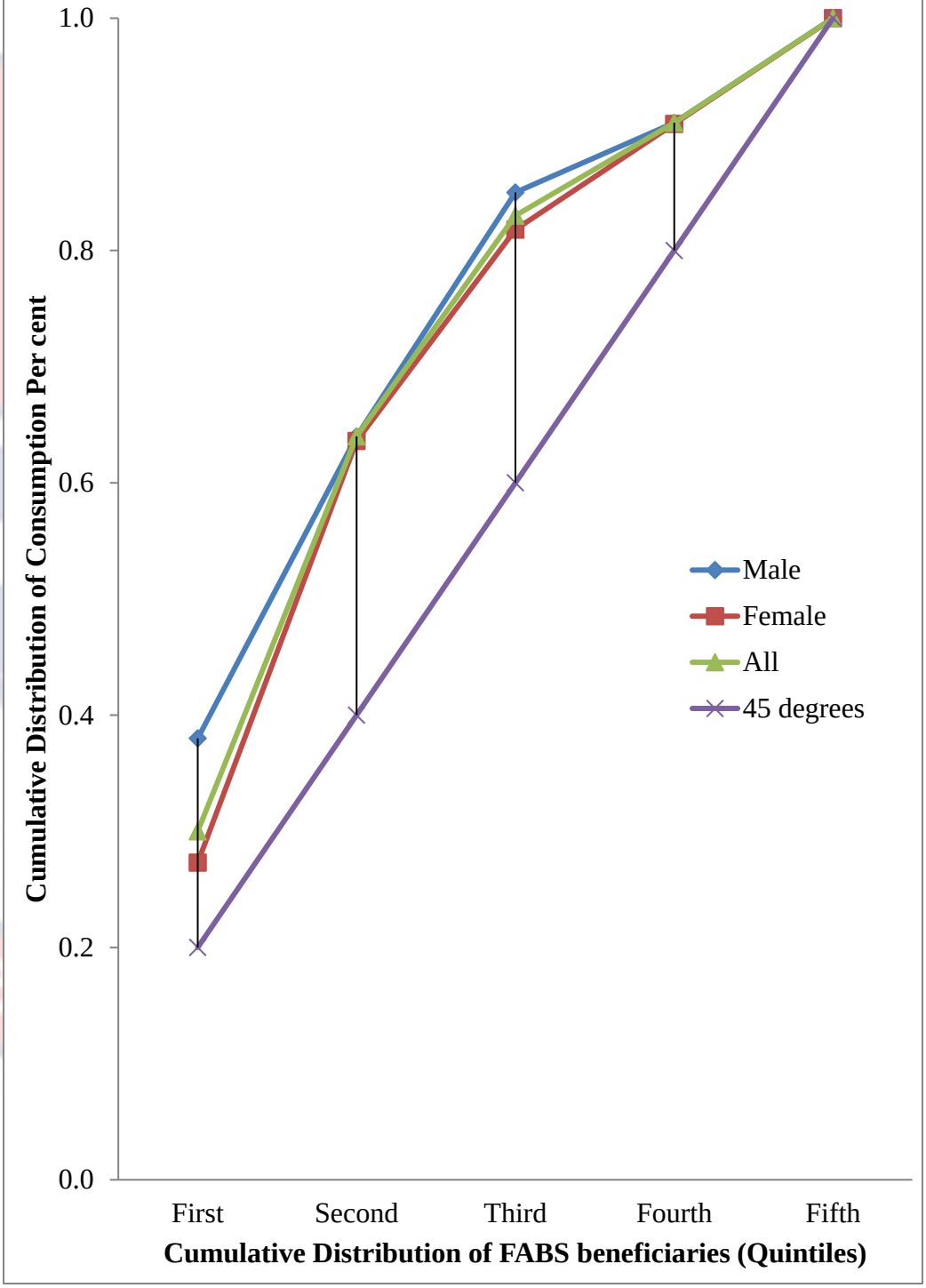


Source: Author's Field Survey, February 2012

Figure 7 reports the concentration curves for education expenditure at primary and JHS as well as the overall education expenditure (primary and JHS aggregated) designated 'All' Levels in Bongo District in 2011. The cumulative distribution of household consumption education expenditure is plotted on the y-axis while the cumulative household population (quintile) ranked by mean annual household income is plotted on the x-axis.

The curves for education intervention at the primary, JHS and at 'All' (both primary and JHS) levels lie above the 45 degrees (Figure 7). This indicates that the share of education intervention at these levels, which represent the proportion of the total household consumption, is more equally distributed than income. The implication is that the poorest household quintile gains more than 20 per cent of the total education expenditure. When the distribution is below the diagonal it signifies that targeting is weak (Demery, 2000), but since the distributions of the expenditures at all the levels lie above the 45 degree diagonal, the intervention is judged to be targeted to the poor and therefore progressive.

Figure 8: Concentration Curves of Benefit Incidence of the Benefits of Food and Agricultural Budgetary Support (FABS) Programme in Bongo District, 2007



Source: Author's Field Survey, February 2012

Figure 8 is a graphical representation of the cumulative distribution of household consumption of the FABS programme expenditure in Bongo District in 2007. The cumulative distribution of the household consumption of FABS expenditure is tracked on the y-axis against the cumulative population quintile on the x-axis.

The concentration curves for FABS expenditure for both male and female lie above the 45 degrees diagonal (Figure 8). The curve for the aggregated male and female beneficiary households (a combination of male and female) also lies above the 45 degrees. This implies that the proportion of FABS spending to the household quintiles is progressive in all the cases since the curves lie above the 45 degrees. The general indication is that the FABS programme is progressive implying that the poorest quintiles receive more than 20 per cent of the net expenditure on the programme.

Alternative Means to Enhance the Benefits of the Poverty Reduction Interventions in Bongo District.

The study was also interested in exploring the views of households on other ways of enhancing the benefits of the interventions in the Bongo District. Agricultural interventions suggested by households as a means of enhancing benefits were almost similar to those that households were receiving (Table 15). Thirty-one per cent suggested that the supply of inputs such as groundnut seeds and compost manure as the agricultural inputs that would enhance benefits, whilst 49 per cent suggested livestock rearing. Ten per cent of the households however preferred farm equipment such as bullock plough and donkey cart. The other 10 per cent were of the view that financial support in the form of a loan

would enhance agriculture benefits on poverty interventions in the Bongo District.

Table 15: Alternative Means to Enhance Agricultural Intervention Benefits

Alternative Means	Per cent
Input (groundnut seeds, manure)	31
Livestock for rearing (goats and sheep)	49
Farm equipment (bullock plough, donkey cart)	10
Financial support (loan facility)	10
Total	**100**

Source: Author's Field Survey, February 2012

The findings of households' views on other ways of enhancing safe water benefits indicated that about a third (34 per cent) believed the construction of boreholes in their respective communities would enhance households' access to safe drinking water (Table 16). Thirty-two per cent of the households indicated a preference for pipe borne water to alternatively enhance their access to safe drinking water. Twenty-two per cent however indicated that the construction of dam would not only support livestock rearing but would enhance dry season farming activities which would support food security for their households. Eleven per cent of the households however suggested well water while the rest of households constituting 1 per cent proposed that the underground water which has high fluorine concentration should be defluorized to enhance safe water benefits in Bongo District.

Table 16: Alternative Means to Enhance Safe Water Intervention Benefits

Alternative Means	Per cent
Borehole in community	34
Pipe	32
Dam	22
Well water	11
Other (defluorize underground water)	1
Total	**100**

Source: Author's Field Survey, February 2012

Eliciting views on alternative means to enhance the benefits of education intervention yielded the following suggestions: school feeding, provision of education materials (such as books, sandals, school bags), removing examination fees for primary and JHS students, building schools near communities and providing money for business that will improve the financial base of poor households. Forty-three per cent of the households supported provision of meals in schools whilst 23 per cent represent households in favour of removing examinations fees at primary and JHS levels (Table 17). It was observed during the survey that some students drop out of school because they cannot pay examination fees and afford other writing materials. This is confirmed by the district and community stakeholders' perception of poverty in the district which asserts that household education deprivation is characterized by inability to afford uniforms and sandals as well as writing materials (BDMTDP, 2006/2009). Eleven per cent of the households however suggested the supply of educational materials. The finding also reveal that 16 per cent of the households believed that providing credit facility to poor households to engage in business will enable

such poor households meet some basic educational costs thereby enhances their wards access to education. It is also clear from the results that 7 per cent of the households consider building schools near the communities. In their view the closeness of schools to their homes would solve the problem of commuting long distances from home to schools in nearby communities and thereby enhance punctuality and regular attendance to school.

Table 17: Alternative Means to Enhance Education Intervention Benefits

Alternative Means	Per cent
Feeding	43
Waving exam fee at primary and JHS level	23
Other (financial support for business)	16
Education material	11
Building school near community	7
Total	**100**

Source: Author's Field Survey, February 2012

On the part of health, the alternative means offered by households as health benefit enhancing measures were building clinics near communities, issuing instant NHIS to new and old subscribers, reducing NHIS premium, and making NHIS cover all sicknesses. Thirty-three per cent and 26 per cent of the households supported the reduction of NHIS premium and the building of clinics near the communities respectively (Table 18). About 19 per cent of the households however were of the view that NHIS should cover all sicknesses and 18 per cent of them called for instant issuance of NHIS cards for both new and

old subscribers. Four per cent of the households, in contrast to the above views, suggest health education as an alternative means to enhance health benefits.

Table 18: Alternative Means to Enhance Health Intervention Benefits

Alternative Means	Per cent
Reduction of NHIS premium	33
Building clinic near community	26
NHIS to cover all sicknesses	19
Instant Issuing of NHIS cards	18
Other (health education)	4
Total	100

Source: Author's Field Survey, February 2012

The views of half of the households respondents on alternative means of enhancing benefits of skilled development intervention in the District is that government should provide funds to beneficiaries who have graduated from the skills development scheme in dress making under the public-private programme so as to enable them establish their own shops and train others. This for them will help beneficiaries to harness the full benefits of the programme. The other half also thinks that the six weeks intensive training is inadequate for beneficiaries to acquire the necessary skills in dress making. They suggested that the period should be extended to at least a year so that beneficiaries can acquire enough skills that they can train others with.

Interventions in the district covered agriculture and basic services such as education, health and safe water. There was also an intervention skills development in dress making under a public-private partnership programme. In agriculture, rice seeds, fertilizers, bullock plough, wellington boots, donkey carts

and a credit facility were provided to households. In the benefit incidence analysis, the poor household quintiles gained more in relation to the gain made by the richest household quintiles. Hence the intervention was progressive.

Apart from benefiting from free tuition, some households whose children are in primary and junior schools received educational materials such as books and school uniform and in some cases sandals. Some households especially those with children in primary also benefited from school feeding. Most of the households received both free tuition and educational materials. The analysis of the benefit incidence of the education intervention showed that the interventions are targeted to the poor and therefore progressive.

Safe water interventions included construction of boreholes, well and dam, and connection of pipe. More than three-quarters of the households had access to underground water (borehole and well) as their source of safe drinking water. With regards to the health interventions, benefits such as treatment of malaria related sicknesses and diarrhea, food for lactating mothers, and antibiotic administration of vaccination against polio, CSM, tetanus and oral administration of elephantiasis drugs were benefited by the households.

On the whole, households derived different kinds of benefits from the interventions implemented in the Bongo District. And it is obvious from the benefit incidence analysis that the education and agriculture interventions were pro-poor and therefore progressive. Yet it is observed from the suggestions offered by households on the alternative means of enhancing the benefits of these interventions that the benefits they derived although were targeted at the poor,

did not meet the needs of the poor households. It must however be noted that necessities or needs of households cannot be the same. What a particular household may consider as the most important necessity may be treated as the least important for another household. This study therefore concludes that the interventions should focus on expanding the benefits particularly the agriculture, education and public-private partnership programmes to cover as many poor households as possible and should consider the general deprivation needs of households in the district.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This study was focused on interventions implemented in Bongo District during the period 2006 to 2011. The crux of the study was to do a benefit incidence analysis of the interventions. The benefit incidence analysis was employed to establish how the benefits of intervention were distributed across the household income groups so that targeting of the interventions to the poor or the progressivity of the interventions could be determined. The study also identified the various benefits of each of the interventions that the households accessed and examined the alternative means of enhancing the benefits of these interventions in the district. Based on the findings of this work and observations and suggestions from the field, the summaries are given, conclusions are drawn and recommendations are made in this chapter.

Summary

Using 402 household responses the study discovered that different kinds of benefits were derived by the households in agriculture, health, education and safe water. Dress making was the only benefit under a public-private partnership skill development programme that beneficiary households received. The

incidence analysis was however done on education and agriculture interventions due to data constraints. The following are the summaries of the results of the study:

The study established that public institutions particularly, Ghana Education Service (GES), Ministry of Food and Agriculture (MOFA) and Ghana Health Service and Community Water and Sanitation Agency (CWSA) engaged in various interventions to provide basic services to households in Bongo District. Their expenditure outlays were on providing materials and infrastructure in education, and health, and inputs, loan and equipment in agriculture, source of safe water and skill development in dress making. The study discovered that the households benefited one or a combination of two or more of these five broad interventions areas that included Agriculture, safe water, education, health and a Public-Private Partnership skill development in dress making.

The study found various kinds of benefits derived by households under each of the five interventions in the district during the period 2006-2011. Under the education interventions, households benefited one or more from free tuition, educational materials (such as uniforms, books and sandals), and feeding. For health, the benefits were categorized as preventive, curative, and food. Preventive treatment covered all medical services such as the administration of antibiotic drugs or vaccines against tetanus, polio, elephantiasis and CSM. Curative treatment however included medications for the treatment of malaria related sicknesses and others like surgery. Inputs such as seeds and fertilizer, credit facility, and farm tools/equipment such as bullock plough, wellington

boots were the various benefits households receive through the agriculture intervention. Borehole, well, dam and stand pipe drinking water also constituted the kinds of safe drinking water provided to households in the district.

The average incidence analyses on education and FABS spending showed favourable distribution to the poorest and poorer household quintiles. Household in the lower income group benefited higher proportion of the net spending in education at primary and JHS levels. The richest and richer household income groups however received the least cash transfers. The aggregation of the net spending at both levels also showed similar results. While the poorest quintile gained the most, the richest quintile on the contrary received the least proportion of the spending in the education interventions. The average household income group (middle quintile) also gained higher than even the combined share of the richest and richer quintiles in the education intervention at primary and JHS participation levels and at the aggregate level.

The results of the FABS analysis akin to the education benefit incidence outcomes. The benefit incidence of FABS was analyzed based on sex since the programme was provided in that manner. The findings revealed similar trend for both the male and female disaggregated household quintiles and equally similar results for the aggregated household quintiles. The value transfers of FABS spending to the poorest quintiles largely exceeded that of the richest quintile in household quintiles of male and female beneficiaries. In the case of the male beneficiaries however, the poorest household quintiles received higher share of the expenditure than their poorest quintile counterparts on the female side. While

thirty-eight per cent was the gain made by the poorest quintile for the male sex, the poorest quintile on the part of females received twenty per cent of the total value of FABS expenditure. The richest quintile however received nine per cent. When sex was aggregated the poorest quintile also received the most gain while the richest quintile gained the least.

The analyses of both the education and FABS interventions showed more targeting of their benefits to the poorest quintiles and as such were progressive. This implies that the distribution of the net spending of both programmes favoured the poor households more than the rich households. That is, the rich household quintile on average gained the lowest of the value of the benefits than the poor household quintile, while the poorest household quintile benefited the highest.

Various alternative means of enhancing the benefits were also identified for each of the interventions. Financial support, farm equipment, inputs and livestock rearing were the alternatives offered for enhancing agriculture intervention. Livestock rearing had the largest (nearly a half of the households) support followed by inputs such as groundnut seeds and composes manure. Farm equipment and financial support shared one-fifth of the household support.

For safe water intervention, dam construction for the communities, especially in the Beo-Tankoo twin community and provision of well, pipes as well as boreholes near the communities were considered as alternative water benefit enhancing means. Citing Borehole near communities had the highest support and endorsement for pipe came after.

In education, feeding, provision of education material (uniforms, sandals and school bags) and expanding education infrastructure (building schools and furnishing classrooms with school desk) to every community were alternative options the households bought into. Others included removing examination fees at the primary and JHS levels and providing credit facility to poor households for the establishment of micro-business enterprises. Amongst the proposed alternatives to enhance education intervention benefits, the most supported was feeding and the least supported was expansion of education infrastructure to communities. Slightly above one-fifth and one-tenth of the households however opted for the waving of examination fees at the primary and JHS levels and provision of education materials (such as uniforms, school bags and sandals) respectively.

On the part of health, the households proposed food for lactating mothers, expansion of clinics facilities to the communities, reduction of NHIS premium, and instant release of NHIS cards for both new and old application as the alternative benefits that will enhance health intervention. Also noticed was a concern for health education outreach. Reduction of NHIS premium was largely supported by the households. An appreciable number of households also endorsed increase in the health facilities, whiles almost the same number of households supported the view that NHIS subscription and renewal should be instant and should cover all sicknesses including blood transfusion.

For the apprenticeship training in dress making, prompt financial and material support as well as an extension of the training period from six months to

at least one year was seen as the alternative measure for making the programme more beneficial.

Conclusions

Based on the results from the descriptive statistics and the benefit incidence analyses the following conclusions are drawn:

The households in the district derived different kinds of benefits in various from five interventions implemented in the district by local government agencies. These agencies included, Ministry of Food and Agriculture, Community Water and Sanitation, Ghana Health Service, and Ghana Education Service in Bongo District. The benefits in agriculture took the form of inputs (such as rice seeds and fertilizer), equipment, ploughing of farm land and credit facility. The alternative benefits such as livestock rearing, groundnut cultivation and compost manure suggested by the households indicate that households did not find rice seeds and fertilizer as benefits that can enhance poverty reduction.

Majority of households depend on underground water source (borehole and well) in Bongo central. A few households however, have access to pipe water. Given the high fluorine concentration in the underground water in Bongo District above World Health Organizations (WHO) recommended maximum level of 1.5mg in drinking water (BDMTDP, 2006/2009), there is low access to safe drinking water. The fluorine concentration can give rise to skeletal and non-skeletal or dental fluorosis. A survey in 1995 by the health service showed that 33 per cent of school children suffer from dental fluorosis and 62 per cent of children in Bongo Central suffer from this disease. The prevalence rate of this

disease in adults was also shown to present a bad picture (BDMTDP, 2006/2009).

Most households received free tuition in public schools, education materials (such as books, uniform and sandals) supplementary school feeding in primary schools as the benefit in education intervention.

Households benefited from a combination of preventive (mosquito nets, tetanus, CSM and polio vaccination, and drugs against elephantiasis) and curative (treatment of malaria related sickness, diarrhea, anaemia, and surgeries) services. Apart from households with lactating mothers who also received food such as corn flour, sugar and salt to encourage pregnant women to give birth in the health facilities, households received preventative treatment without cost which is a function of saving and spending were the preventive treatment provided by private commercial agency.

The six months duration for the public-private partnership skills development training in dress making was short. The graduates could not operate as qualified seamstress to earn a living and to train other apprentice. The graduates did not also receive their financial and the material supports promptly from government to enable them establish themselves and train others.

The distribution of the benefits of the education interventions in terms of cash in Bongo District was pro-poor. However, household accessibility rate at the primary level is higher for the poorest quintile than it is at the JHS level. The conclusion for the agriculture intervention is the similar to that of education. The average share of overall expenditure of the Food and Agriculture Budgetary

Support (FABS) programme was largely transferred to the poorest, poorer and average poor quintiles. The richest and richer quintiles gained the least share. The two interventions were therefore pro-poor and progressive.

Some benefits associated households derived from the interventions were not the preferred choices of the households because some of the households suggested alternative options as the poverty enhancing benefits. These included livestock rearing (goats and sheep), supply of groundnut seeds and compost manure instead of rice seeds and fertilizer.

Some households also need dams to support livestock rearing and since their animals compete with them for water from boreholes. The Beo-Tankoo twin community, which has a large stretch of land lying along a steam and without rocks, in particular, prefers the dam to support their livestock and vegetable farming in the dry season.

Examination fees charged at the basic school level affect pupils and students from poor households from writing their term examinations. Therefore, payment of examination fees and lack of feeding are major factors that militate against poor children's access to education in the communities of Bongo District.

From the findings, it is clear that households have derived various benefits from the poverty reduction interventions implemented in Bongo District. The benefits of these interventions were accessed more by the poorest households while the rich received the least. It can thus be inferred that the interventions have, even if in the least, improved the welfare of households in Bongo District. However the findings from the alternatives ways of improving

access to the benefits of the interventions show that the benefits of the interventions did not address the poverty needs of the people of Bongo since the households suggested various alternatives that could enhance the reduction of poverty in the district.

Recommendations

Against the background of the findings and the conclusion drawn from the analyses and suggestions of the household respondents the following are recommended:

Bongo District Assembly together with all other departments or agencies of government and non-governmental organizations involved in the fight against poverty in the district should ensure that the benefits of their respective interventions factor the needs of households in and/or embrace the poverty dynamics of households in the districts so as to address the indicators of poverty in the district.

In view of the erratic rainfall pattern in the study areas and the north as a whole, the study recommends that the Ministry of Food and Agriculture in conjunction with the Bongo District Assembly should construct dams to harvest rain water for dry season vegetable and cereal farming, and livestock rearing. Community Water and Sanitation Agency, assisted by the District Assembly should connect pipes to every housing unit in order to expand access to safe drinking water since fluorine concentration in the district affects the quality of the predominant water source (borehole) in the district.

Community Water and Sanitation Agency should construct more boreholes and wells close to every house. A comprehensive intervention aimed at reducing the fluorine concentration level in these underground sources of water should be implemented. This would help to increase the access of households to potable water.

The District Assembly in collaboration with district education examination directorate should establish well equipped computer laboratories with printers and photocopy machines in the elementary and junior high schools to take care of printing and photocopying of examination questions. In the short to medium term, primary and junior high school levels examinations should be organized by a central body (the district) constituted by circuit supervisors and the district examination officer in the district. The cost of the examination should be borne partly by the assembly and schools using the capitation grant through a 'quota scheme' based on the enrolment strength of the school. The District education directorate could also acquire printing and photocopying machines to provide printing and photocopying of examination papers at the primary and JHS levels at reduced cost. It was observed through the field survey that some poor parents are unable to pay examination typing fees, resulting in their children not writing the term examinations and eventually dropping out of school. This affects the access rate of such households from the education interventions.

The National Health Insurance Authority (NHIA) should ensure that NHIS cards are issued instantly and promptly when they are subscribed or sent for renewal. The delay in issuing NHIS cards affects the accessibility rate of curative

health services by poor households. NHIS premium should therefore be reduced and the penalty fees charged for late renewal of NHIS be removed since they adversely affects poor households in accessing curative treatment. The District Health Service should increase the number of Community Health Planning Service (CHPS) centres to cover all major communities. This will increase access to curative health service by the poor household who cannot afford transportation cost to access such service in the few health centres in the district.

Evident in the benefit incidence analysis is that the distribution of the benefits of the education and agriculture interventions are targeted at the poor. The study therefore recommends that the benefits should be expanded and the interventions implemented more efficiently.

Suggestions for Further Studies

This study used Bongo District as its study area and since Bongo District is predominantly a rural agrarian economy, behavioral approaches (marginal benefit incidence), which is most appropriate in order to provide comprehensive recommendation for policy makers could not be used. The benefit incidence analysis (BIA), which has traditionally focused on examining how expenditure on interventions affects distribution outcomes, particularly how its benefits are distributed to the poor segment of society, was thus used. But explanation of outcomes is a matter of household decision. Therefore, this study could be replicated but extend beyond the use of BIA to consider behavioural approach (marginal incidence analysis) in other places where the different geographic

areas (urban and rural) can be ranked based on variations in access rates across the geographic areas using single cross sectional data.

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APPENDIX A

UNIVERSITY OF CAPE COAST

FACULTY OF SOCIAL STUDIES

INSTITUTE FOR DEVELOPMENT STUDIES

BENEFITS INCIDENCE ANALYSIS OF POVERTY REDUCTION INTERVENTIONS IN THE BONGO DISTRICT OF UPPER EAST REGION OF GHANA

Serial No. ……..

A. Structured Interview for Households

Dear Sir/ Madam,

As part of the requirement for pursuing a Master of Philosophy Degree in Peace and Development Studies, the researcher, Amos K.M., Ayinga, a postgraduate student of the University of Cape Coast, requires data on the topic above to enable him complete his thesis. This is purely an academic exercise and obtaining the appropriate data is essential to the positive outcome of the study. All data shall be treated confidential and anonymity guaranteed. Please, assist by responding to the following questions listed below.

Thank you for your support and cooperation.

Q1. Household size ……

No of Male …….. No of Female .....

A LIST OF HOUSEHOLD PRI BENEFICIARIES

Household members characteristics.

Household beneficiary List		**Sex**	Age	Marital status	Occupation	Attended / attending school	Highest level of schooling	Highest grade completed	Why not schooled/ in school?
No	**Name**								
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

B. Household health characteristics and expenditure

HH Benefi	Suffered poor	Kind of sickness	How sickness	No of times	Cost of treatme	Health facility	Cover ed by	Got support	Value of support

ciary ID	health for the last **1yr**		treated	visited health care centre	nt for each visit	visited, private or public?	NHIS?	to treat sicknes s?	

C. Occupation characteristics and remittance

HH Beneficiary ID	No of months worked in the last one year	Amount paid per month (GH¢)	Kind of other work did within 7 days	Amount earned (GH¢)	Remittance Cash/in-Kind (Qty)

1) Which of the following poverty reduction intervention (PRIs) did your household benefit from? (Tick as many as possible)

I. Productivity improvement in agriculture ( ),

II. Safe Water and environmental health ( )

III. Education ( )

IV. Health ( )

V. Others (Please specify) …….

2) State the kind of benefit derived from each of the PRI you benefited

Programme (code)

I …….

II. ……..

III……

IV……...

V……

3) How much did your household receive as your share of the PRI benefits?

Programme (code)

I …….

II ……

III……

IV……..…….

V……

4) What was the dominant means by which you received the PRI benefits?

Programme (Code)

I …….

II ……

III ……...

IV ……...……...

V…….

5) How much cost did the household incur for benefiting or accessing the PRI?

Programme (Code)

I ……

II ……

III ……...

IV ……...……...

V ……...…….

6) How did the cost of participation affect you in accessing the program?

(Programme Code)

I ……

II ……...……

III ……

IV ……

V ……..……

7) What alternative means do you think the PRI benefits can be enhanced? (**Programme Code)**

I. ……...

II. ……..…….....

III. ……....

IV. ……...

V. ……

8) How will these alternative means you suggest enhance the benefits of the PRIs **(Programme Code)**

I. ……

II. ……

III. ……

IV. ……

V. ……....

D. Expenditure characteristics

Did HH spent on any of these items?		How much spent on item? (GH¢)	Did HH consume food item in the last 12 month?		Value of food item (GH¢)	Was food produced by HH		Total value of food received as gift for the last 12 months (GH¢)
Item	Yes (1) No (2)		Food item	Yes(1) No (2)		Yes(1) No (2)	Market value of food item (GH¢)	
Clothing & foot			Millet,					

twear, Cosmetics			maize					
Tel. com.			Rice					
Personal services eg manicure, h'cut/dressn			Tubers					
Personal detergents & toiletries			Groundnuts					
Lottery ticket								
Tobacco, kola, Cigarette			Beans					
Dishes & utensils			Vegetable					
Transport fares			Oil					
Regular worship			Meat					
News paper & magazine			Energy (firewood, gas & charcoal)					
Accommodation								
Sanitation								
Water								
Education								
Health								
Rented dwelling								
Personal dwelling								
Electricity								
Other (specify)								

E. Ownership of Assets and savings

HH o/ship of assets		Initial value of asset (GH¢)	Current value of asset (GH¢)	Did HH member operate non-agric enterprise in the last 12 months?		How much received from the enterprise (GH¢)	Value of business assets (land, equip't, building, tools, vehicles (GH¢)	How much of business goods & services HH consumed (GH¢)
Asset	Yes(1) No (2)			Business Enterprise	Yes(1) No(2)			

Bicycle			Tailoring				
Motor cycle			Repair work				
Refrigerator			Processing of farm produce				
TV, Electric Iron, Tape player			Artisan				
Video Tape/CV player			Metalworking (Blacksmithing)				
Fan			Quarrying				
Furniture			General trade				
Donkey cart			Transport				
Deposit to saving a/c			Entertainment (Dance)				
Other (specify)			Other (specify)				

F. Agriculture produce and other assets

HH livestock produce & assets	Quantity (bags, plots etc)	Market value of assets	HH farm produce (cereals, vegetables & others	Quantity	Market value of produce
Landholding			Millet,		
Cattle			Rice		
Goats			Tubers		
Sheep			Groundnuts		
Birds(Fowls, Guinea fowls			Maize		
Donkeys			Beans		
Turkeys			Barbara beans		
Ducks			Shea nuts		
Rabbits			vegetable		
Pigs			Oil		
Other (specify)			Other (specify)		

APPENDIX B

UNIVERSITY OF CAPE COAST

FACULTY OF SOCIAL STUDIES

INSTITUTE FOR DEVELOPMENT STUDIES

BENEFIT INCIDENCE ANALYSIS OF POVERTY REDUCTION INTERVENTIONS IN THE BONGO DISTRICT OF UPPER EAST REGION OF GHANA

Serial No. …….

B. Questionnaire for Poverty Reduction Intervention Implementing Agencies

Dear Sir/ Madam,

As part of the requirement for pursuing a Master of Philosophy Degree in Peace and Development Studies, the researcher, Amos K.M., Ayinga, a postgraduate student of the University of Cape Coast, requires data on the topic above to enable him complete his thesis. This is purely an academic exercise and obtaining the appropriate data is essential to the positive outcome of the study. All data shall be treated confidential and anonymity guaranteed. Please, assist by responding to the following questions listed below.

Thank you for your support and cooperation.

Name of Institution ……Name of officer (Respondent) ……
Schedule of Respondent ……Date of interview …….

1. Which of the following PRI programmes did you implement? (Tick as many as possible)

   I. Productivity improvement in agriculture ( )

   II. Safe Water and environmental health ( )

   III. Education ( )

   IV. Health ( )

   V. Others (Please specify) ……

2. What was the value or total cost of providing the programme?

   Programme (code)

   I…….

   II……...

   III……..

   IV……..

   V……

3. What was the unit share of your PRI programme to the beneficiaries?

   Programme (code)

   I…….

   II……...

   III……..

   IV……..

   V……

4. Who were the beneficiaries of your programme?

   Programme (Code)

   I ……

II ……

III

……...

IV ……...

V …….

5. What was the total number of beneficiaries of your PRI programme?

Programme (Code)

I …….

II……

III……...

IV……...

V …….

6. How were the beneficiaries selected (criteria for selection)?

Programme (Code)

I …….

II ……

III ……...

IV ……...

V …….

7. How much cost did beneficiaries incur to access the programmes if any?

Programme (Code)

I…….

II……

III……..

IV……..

V……

8. How did cost of participation affect beneficiaries' access to the programme?

Programme (Code)

I……

II……

III……

IV……..

V……..

9. What were the general objectives of the programs?

Programme (Code)

I ……

II ……

III ……

IV ……

V ……..

10. What were kinds of benefits of the PRI programme(s) implemented?

Programme (Code)

I……

II ……..

III……

IV……..

V ……

11. By what means did you transfer the benefits of the program to beneficiaries?

Programme (Code)

I……

II. …….

III. ……....

IV. ……

V. ……..

12. What alternative means can be used to enhance the PRI benefits to beneficiaries?

a …….

b ……..

c ……..

d……

e……

.

APPENDIX C

Summary of Data from Field Survey

Description	Value
Number of households responded	402
Expenditure of GES (BD) on education intervention	GH¢ 337,549.98
Expenditure at primary level	GH¢ 249,002.82
Expenditure at JHS level	GH¢ 88,547.16
Proportion of education expenditure to sampled population	GH¢ 11,116.62
Total district enrolment at Primary level (2011/2012)	20,647
Total district enrolment at JHS level (2011/2012)	7,324
Sampled population with enrolment at Primary level	203
Sampled population with enrolment at JHS level	104
Sampled population enrolment at primary level	609
Sampled population enrolment at JHS level	312
Proportion of education expenditure to sampled population at Primary level (2011/2012)	GH¢ 7,344.54
Proportion of education expenditure to sampled population at JHS level (2011/2012)	GH¢ 3,772.08
Total beneficiaries of FABS intervention	433
Number of FABS female beneficiaries	330
Number of FABS male beneficiaries	103
Total of sampled population of FABS beneficiaries	45
Total expenditure on FABS intervention	GH¢ 21,360

Source: Data from field survey, February 2012