UNIVERSITY OF CAPE COAST

THE EFFECTS OF MICROFINANCE SERVICES AS POVERTY INTERVENTION STRATEGY ON RURAL HOUSEHOLD LIVELIHOOD OUTCOMES: THE CASE OF PLAN GHANA'S "VSLA MICROFINANCE SCHEME" IN TWO DISTRICTS IN THE CENTRAL REGION, GHANA

EMMANUEL QUAYSON

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BY

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Thesis submitted to the Department of Agricultural Economics and Extension, School of Agriculture, College of Agriculture and Natural Sciences of University of Cape Coast, in partial fulfilment of the requirements for the award of Doctor of Philosophy in NGO Studies and Community Development

MAY 2018

DECLARATION

Candidate's Declaration

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

Candidate's Signature .... Date 08/11/18

Name: Emmanuel Quayson

Supervisors' Declaration

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

Principal Supervisor's Signature.......................... Date 08/11/2018

Prof. Edward Ntifo-Siaw

Co-supervisor's Signature.......................... Date 08/11/2018

Dr. Moses Kwadzo

ABSTRACT

This study aimed at examining the effects of Plan Ghana's VSLA microfinance scheme on beneficiary households' livelihood outcomes in the Ajumako-Enyan-Essiam and Ekumfi districts in the Central Region, Ghana. The study employed cross-sectional evaluation design. Primary data were collected from 300 beneficiaries and 150 non-beneficiaries from 28 rural communities. Statistical Product and Service Solution (SPSS) was used to generate descriptive statistics, t-tests, correlation, and multiple regression results for the discussions. The results from the study generally revealed that the scheme has had positive effects on both monetary and non-monetary livelihood outcomes of the beneficiaries. Independent-samples t-test showed a significant difference in income for beneficiary and non-beneficiary households ($t=8.138$; $p=.000$ at 0.05 alpha level). The t-tests on food security and education for beneficiary and non-beneficiary households also showed significant difference ($t= 6.19$; $p=.000$ and $t=7.94$; $p=.000$ respectively). T-test on housing improvement, however, showed insignificant difference ($t=.805$; $p=.422$). The multiple regression analysis showed that, microfinance scheme participation, sex and the type of enterprise participants engaged in contributed significantly to explaining the level of the overall livelihood outcome of the beneficiary households. The VSLA scheme has proven to have the potential of improving the livelihood outcomes of its beneficiaries. It is, therefore, recommended that the scheme should be encouraged and expanded by the service providers (Plan Ghana) to cover other parts of the region where it has not yet reached.

KEY WORDS

Microfinance

Village banking

Livelihoods

Rural poverty

NGO

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DEDICATION

This work is dedicated to my dear wife, Sabina Effei Quayson and my daughters, Maame Afua Abokuma Quayson and Nana Efua Besima Quayson.

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ADB	-	African Development Bank/ Asian Development Bank
AEED	-	Ajumako-Enyan-Essiam District
AIMS	-	Assessing the Impacts of Microenterprise Services
BoC	-	Banking on Change
BRAC	-	Bangladesh Rural Advancement Committee
BRI	-	Bank Rakyat Indonesia
CBRDP	-	Community-Based Rural Development Programme
CGAP	-	Consultative Group to Assist the Poor
CHIPS	-	Community-based Health Planning Services
CRS	-	Catholic Relief Services
CSOs	-	Civil Society Organizations
DFID	-	Department for International Development
fCUBE	-	Free Compulsory Universal Basic Education
FFH	-	Freedom from Hunger
FINCA	-	Foundation for International Community Assistance
FOCCAS	-	Foundation for Credit and Community Assistance
GB	-	Grameen Bank
GER	-	Gross Enrolment Ratio
GLSS	-	Ghana Living Standard Survey

GNA	-	Ghana News Agency
GoG	-	Government of Ghana
GSGDA	-	Ghana Shared Growth Development Agenda
GSS	-	Ghana Statistical Service
GPRS	-	Ghana Poverty Reduction Strategies
HIV/AIDS	-	Human Immune Virus/Acquired Immune Deficiency Syndrome
IFAD	-	International Fund for Agricultural Development
ILO	-	International Labour Organization
IMF	-	International Monetary Fund
ISSER	-	Institute of Statistical Social and Economic Research
LI	-	Legislative Instrument
LEAP	-	Livelihood Empowerment Against Poverty
MASLOC	-	Microfinance and Small Loans Scheme
MC2	-	Means and the Competences of the Community
MDGs	-	Millennium Development Goals
MFIs	-	Microfinance Institutions
MOFA	-	Ministry of Food and Agriculture
MOAFP	-	Months of adequate food provisioning
MPI	-	Multi-dimensional Poverty Index
MTPD	-	Meal times per day
MWRWH	-	Ministry of Water Resources, Works and Housing
NDPC	-	National Development Planning Commission

NER	-	Net Enrolment Rate
NGOs	-	Non-Governmental Organizations
ODI	-	Overseas Development Institute
OLS	-	Ordinary Least Squares
PAGES	-	Promoting African Grassroots Economic Security
PAMSCAD	-	Programme of Action to Mitigate the Social Cost of Adjustment
PHC	-	Population and Housing Census
ROSCAs	-	Rotating Savings and Credit Associations
SEM	-	Standard Error Mean
SIF	-	Social Investment Fund
SL	-	Sustainable Livelihoods
SCF	-	Save the Children Fund
UN	-	United Nations
UNCDF	-	United Nations Capital Development Fund
UNDP	-	United Nations Development Programme
UNFPA	-	United Nations Population Fund
UNHCR	-	United Nations High Commissioner for Refugees
UNICEF	-	United Nations International Children's Emergency Fund
USAID	-	United States Agency for International Development
USDA	-	United States Department of Agriculture

VP	-	Victory over Poverty
VSLA	-	Village Savings and Loans Association
WCI	-	Welfare Composite Index

CHAPT`ER ONE

INTRODUCTION

This chapter presents the introduction of the study. The chapter, among other things, covers the following areas: background to the study, statement of the problem, objectives of the study, hypotheses, scope of the study, significance of the study, limitations of the study, operational definitions of terms, and finally, the organization of the study.

Background to the Study

The concept of livelihood has gained a lot of publicity in contemporary studies, partly due to its relevance in the development process. It has been widely accepted by theorists, researchers, development practitioners, NGOs and many other institutions as a valuable means of understanding the factors that influence people's lives and well-being, particularly the poor in the developing world and deprived communities (Carney, 1998; Davies, 1996; Rennie & Singh, 1996).

The concept was first used by UNDP and subsequently adopted by the Department for International Development (DFID) as central to its strategy for meeting the goals set out in its 1997 White Paper which was titled 'Eliminating World Poverty' (Soussan, Blaikie, Springate-Baginski & Chadwick, 2009). According to Chambers and Conway (1992), "a livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living".

Scoones (1998) reports that the livelihood of a household or an individual consists of three major components or variables: livelihood resources; livelihood strategies; and livelihood outcomes. Livelihood resources, according to him, consist of the basic material, social, tangible, and intangible assets that people use to construct their livelihoods. Livelihood strategies consist of combinations of activities that individual households do to ensure a certain level of outcomes as means of living. Lastly, he defined livelihood outcomes to include the results obtained from using the livelihood strategies. These outcomes could either be monetary (mostly in terms of household income or expenditure) or non-monetary (basically in terms of food security, education, health, housing, household utilities, etc.). The kind of outcome obtained, either monetary or non-monetary, could as well result to an improved well-being or to a poverty situation of the individual or the household involved.

The kind of livelihood outcome realized by an individual or a household may be influenced by a number of factors: the type and the level of household resources (natural, human, social, economic or financial, and physical resources); the vulnerability to poverty conditions of the household; the capabilities of the members in the household; the kind of livelihood strategies used; and the external factors such as the influence of institutions, organizations, groups, policies, processes, and cultural norms among others. The interplay of these factors in an individual household's livelihood may go to define the level of livelihood outcomes or living conditions of that particular household.

The institutions, organizations, policies, processes and the cultural norms that serve as external forces have the potential of shaping individual livelihoods, both by determining who gains access to which type of asset or intervention (which in most cases, are financially related), and also by defining what range of livelihood strategies are available and attractive to rural households as well as vulnerability and terms of exchange of the household. Thus, policies, institutions or organizations and processes affect significantly how people use their assets in pursuit of different livelihood strategies and their subsequent outcomes (Carney, 1999; Adato & Meinzen-Dick, 2002).

The issue of livelihood and how individual households utilize their limited resources to earn a living has, therefore, continued to remain a pressing issue to many households. One major factor that has for long acted both as a contributor to and a product/outcome of a poor livelihood condition at all levels is poverty. Most rural households as social institutions continue to suffer under the weight of poverty all over the world, making it difficult to meet their basic livelihood needs. In dealing with the issue of rural livelihood, it is important, therefore, to properly understand and vigorously deal with the issue of poverty and its associated problems at both community and household levels.

The 2006 UNDP report indicates that one billion people worldwide lived in extreme poverty at the time. According to the source, these people lived on less than US$1 per day. In addition, 1.5 billion people lived in moderate poverty trying to make ends meet on less than US$2 per day. Shah (2013) reports that from around 2010, over 3 billion people (almost half the world's population) continue to live in moderate poverty surviving on less than $2 a day. Poor people struggle daily for survival. They suffer from various livelihood challenges ranging from nutrition, health, water, sanitation, shelter to other basic needs that are very essential for survival and sustainable development. UNICEF (2010) indicates that 24,000 worldwide die each day due to poverty.

Data from surveys across different sectors confirm the pervasiveness of poverty in Ghana. A living standard survey by the Ghana Statistical Service (GSS) in 2008 indicates that almost 29 per cent of Ghanaian population lived below the poverty line. Ghana Micro simulation Model (cited in Osei, 2011) gave Ghana's poverty situation in 2010 as 38.5 per cent of the entire populates of 24,116,800.

Interestingly, the world's poverty has been identified to be more of a rural issue. Many rural households in their efforts to meet the basic needs go through numerous livelihood challenges some of which are inhumane and pathetic. Many studies have pointed out that most of the world's poorest people live in rural areas, mainly in developing countries (UNDP, 1992; Carney, 1999; GSS, 2000; Narayan, Patel, Shafft, Rademacher, & Koch-Schulte, 2000; Kakwani & Son, 2008). UNDP (1992) reports estimated that about 750 million of the world's poorest people lived in rural areas. Carney (1999) reported that about 70 per cent of the world's poor lived in rural areas. World Bank's reports in 2000 estimated that three quarters of the 1.2 billion people surviving on less than one dollar a day lived and worked in rural areas of developing countries with greater number of these rural households lacking access to safe water supplies.

Reports from GSS (2007) indicate that 86 per cent of the total population living below the poverty line as at 2006 was living in the rural areas of Ghana. Obeng (2011) asserts that the majority of Ghana's poor people live in the rural areas where about 80 per cent of food crops are produced, yet they have insufficient incomes to purchase adequate food for themselves and their households. From the 2005/2006 Ghana Living Standard Survey reports the share of the population living in rural areas was about 62 per cent and had about 39.2 per cent incidence of poverty compared to 38 per cent with only 10.8 per cent poverty incidence for those living in the urban areas. The situation had worsened substantially as at the year 2010 to 65.1 per cent rural population with 47.6 per cent incidence of poverty as against 34.9 per cent urban dwellers with 21.6 per cent poverty incidence (GSS, 2007; Obeng, 2011).

Because poverty remains the biggest problem to most people in the developing world, and for the fact that it poses much threat to rural livelihoods, many efforts have been made across the globe to reduce it. International organizations and institutions such as the United Nations have made it a priority to eradicate extreme poverty and hunger so as to improve livelihoods.

In Ghana, several economic and social policies by different governments have aimed mostly at influencing the rural livelihood in order to improve the living conditions of the rural poor. Consistent with this, the Annual Statements of Economic Policy and Budget of Ghana government has often set poverty reduction and livelihood improvement programmes as the overarching objectives of national economic policy (Obeng, 2011; Sowa, 2002).

Besides efforts by governments, one civil society institution that is perceived to work to influence the rural livelihood and the interest of the rural poor is Non-Governmental Organization (Narayan *et al.*, 2000). Korten (1990) indicates that Non-Governmental Organizations (NGOs) for a long time have been regarded with great interest by development practitioners, in expectation that they may become vanguard of civil society and take a leading role in ensuring more equitable socio-economic development. Since post World War II, NGOs, in discharging their duties, have involved in poverty reduction by engaging in relief, emergency, or long- term development projects. It is frequently argued that compared to governments, NGOs have comparative advantage of serving the poor better (Riddell & Robinson, 1995).They are often seen as the only outside actors perceived to work in the interest of the poor (Narayan *et al.*, 2000).

Some initiatives taken up by NGOs have been considered as having impacts on the rural poor's livelihood. One such pro-poor initiative and methodology that NGOs and other institutions alike have used over the years to influence lives of the rural poor across the globe is microfinance. Otero (1999) defines microfinance as the provision of financial services to low-income poor and very poor self-employed people. These financial services, according to Ledgerwood (1999) generally include savings and credit but can also include other financial services such as insurance and payment services. Schreiner and Colombet (2001) in their work define microfinance as the attempt to improve access to small deposits and small loans for poor households neglected by the traditional banks.

Many studies have reported on the significant role that microfinance schemes have played and continue to play in the life of the rural marginalized. According to Fotabong (2012), the poor need financial products and services to build assets, stabilize consumption and shield themselves against risk.

Obeng (2011) indicates that providing the poor with access to financial services is one of the many ways to help increase their incomes and productivity. Microfinance programmes, thus, are aimed at helping the rural poor become self-employed to enable him or her to escape poverty.

Studies on financial intermediation and poverty reduction have revealed that development of the financial sector contributes to economic growth and thereby to poverty reduction and livelihood improvement (Holden & Prokopenko, 2001). Access to credit enables individuals to start small businesses and other productive activities that are capable of relieving them from their sufferings. When credits are well managed and incorporated properly into the rural livelihood system, they have the potential of ensuring a secured and sustainable livelihood outcomes.

Reports over the years from the Development Banking Community as well as from studies by some international NGOs strongly suggest that lower income families need a wide range of complementary financial services both for everyday life and for asset building purposes that have the potential of ending the poverty incidence and its related problems of the rural poor (Rutherford, 1999; Robinson, 2001; Obeng, 2011).In expanding on the importance of microfinance to rural development, UNCDF (2004) states three key roles that microfinance plays in the development process of the poor. That: it helps poor households meet basic needs and protects them against risks; it is associated with improvements in household economic welfare; and it helps to empower women and the vulnerable by supporting them in their economic participation and therefore promoting gender equity.

Plan Ghana is an international humanitarian non-governmental and non-profit organization (NGO) that focuses mainly on the development of children and the vulnerable at household and community levels. Plan Ghana started operating in Ghana in 1992 and has since been involved in providing support in diverse areas to the vulnerable through the development of their economic and educational systems and improvement in their socio-cultural environment (Boadu, 2014). In providing these supports, Plan Ghana uses Rights-Based Approach. The main focus using this approach is to ensure the right to basic education, provision of relevant skills and ensuring the right to dignified livelihoods for the less privileged through microfinance, educational packages, training and technology transfer and other pro-poor interventions.

In many districts in the Central Region, Plan Ghana has undertaken several livelihood projects and programmes that are geared towards helping the poor create a secured and sustainable livelihood for themselves and their families. One of such programmes is Promoting African Grassroots Economic Security (PAGES). PAGES is a programme that aims at combating household poverty to improve livelihood conditions, mostly, at the rural levels in Africa.

As part of its core mandate of increasing access of the marginalized to cash and other productive assets through the PAGES programme, Plan Ghana uses a microfinance model known as Village Savings and Loan Association (VSLA) Model. The Village Savings and Loan Association (VSLA) is a village banking microfinance model which offers the productive poor the opportunity to purchase shares and on-lend to themselves with agreed interest rate. Village banking programmes are noted to achieve a greater depth of outreach than other microfinance approaches. With Plan Ghana's VSLA microfinance model, the financial products and delivery system are structured and standardized to meet the needs of lower-income, less educated clients living in remote areas. Thus, with the Plan Ghana's VSLA microfinance scheme, the rural poor beneficiaries are provided with financial products and services (mostly in the form of training and education) in order to boost their livelihood activities to enhance their livelihood outcomes. This is in line with a statement made by IFAD (2012) on village banking models. IFAD (2012) asserts that the continuous global demand for microfinance services has necessitated the rapid growth of village banking services that make microfinance services available to meet the needs of lower-income and less educated rural poor worldwide.

The Plan Ghana's VSLA microfinance scheme or intervention is group-based. The members are from various households in rural communities. The group is made up of 10-30 people who save together and take small loans from those savings. The activities of the VSLA run in 'cycles' of about one year, after which the accumulated savings and the loan profits are shared out among the members (otherwise known as 'shared profit') according to the amount they have contributed and saved (BoC, 2010). In the Central Region, Plan Ghana partners Microfin Plus (a local NGO that operates in microfinance services) in running the scheme.

The main role played by Plan Ghana in collaboration with Microfin Plus at the start of the scheme in a community is to raise awareness and the importance of the concept of village banking and also to provide necessary training to the participants for effective and efficient running of the scheme. In some cases, they provide credit or "set-up fund" to the group (VSLA group) to help the scheme get started. Thus, together with Microfin Plus, Plan Ghana initiates the process by providing basic resources (savings or cash box and sometimes initial money in a form of seed fund or set-up fund) that are needed to start the scheme.

With the other component of the scheme, the providers of the scheme engage experts and some technical personnel (Community Volunteers and Field Officers) to provide members with some training and education ("add-on services") on the operations of the scheme and on various activities to ensure that the money received is used in meaningful and productive ways (livelihood strategies) to enhance their livelihood outcomes (BoC, 2010). Members are educated to cultivate the habit of savings mostly through Microfin Rural Bank (a subsidiary of Microfin Plus, the partners of the scheme in the Central Region). This, in return, gives them the opportunity to access some credit or loans from the bank to engage in more livelihood activities or to expand their businesses or to meet other family obligations.

As indicated by Fotabong (2012), when the poor is given access to financial products and services, it helps them to build assets, stabilize consumption and shield themselves against risk. Again, Robinson, in his study involving sixteen different microfinance institutions across the world revealed that poor beneficiaries' access to microfinance services increased their confidence level and helped them diversify their livelihood security strategies which led to increase in their income (Robinson, 2001; Wrenn, 2007; Ferka, 2011). A study by Boateng and associates to ascertain the impact of microfinance on poverty reduction in Ghana which employed both economic and social variables such as income, household growth, access to education, housing and participation in social and religious activities as benchmarks for measuring the impact, found a positive relationship between microfinance and the benchmark variables, indicating that it had helped to improve such conditions of the beneficiaries (Boateng, Boateng & Bampoe, 2015). Again, a study by Owusu (2011) to examine the effects of Centre for Informal Activities and Development's (CIAD) microfinance services on small and medium scale enterprises (SMEs) in the Efutu Municipality in the Central Region of Ghana showed that the CIAD's microfinance scheme impacted positively on the social and economic lives of SMEs operators. The businesses of these operators, according to Owusu (2011), were able to increase their capital, assets, and expanded the MSEs, which reflected in their social lives.

Statement of the Problem

Many institutions and organizations (including NGOs) such as World Vision International, Sinapi Aba Trust, Opportunity International Savings and Loan Company Ltd. and HFC Boafo Microfinance Services Ltd., over the years have engaged in the provision of microfinance services that are mostly aimed at helping to improve the rural livelihoods in order to deal with the issue of poverty. The introduction of microfinance services into the rural livelihood system has been reported to have the potential of influencing the level of livelihood resources and the kind of livelihood strategies that household members employ in their attempt to improve their lives. Based on this theoretical underpinning, microfinance has enjoyed widespread appeal as an antipoverty tool around the world. This move has been very phenomenal in Ghana.

Many concerns, however, have been raised regarding this move and its ability to actually improve rural livelihoods. Responses to these concerns continue to remain inconclusive. Many studies into the impact of microfinance services have presented divergent reports.

Whilst some reports across the world (Hossain, 1988; Remenyi, 1991; Otero & Rhyne, 1996; Holcombe, 1995; Schuler, Hashemi & Riley, 1997; Wright, 2000; Littlefield, Murduch & Hashemi, 2003; Noponen, 2005; Obeng, 2011; Owusu, 2011; Boateng *et al.*, 2015) present microfinance services as having positive effects on the life of their rural poor clients, others (Adams & von Pischke, 1992; Montgomery, 1996; Rogaly, 1996; Buckley, 1997; Navajas, Schreiner, Gonzalez-Vega, & Rodriguez-Meza, 2000; Fotabong, 2011) have reported some negative effects on the beneficiaries of such services. Failure to identify and select the right beneficiaries, poor scheme delivery methodology, high interest rates on credits, little or no training programmes for scheme beneficiaries, departure from core mandate, and many others have been cited as some of the factors contributing to the unintended outcomes of some microfinance services or schemes.

These divergent views and reports from institutions, media, development practitioners and individuals have influenced people's perception on the effectiveness of microfinance in improving rural livelihoods. The perception about the effectiveness of a project plays very important role in its participation, adoption and use. It affects how people respond, adopt and commit to projects and how they incorporate them into their livelihoods (Gibson, 1969; Buadi, 2008).

This study focuses on evaluating the contribution that Plan Ghana's VSLA microfinance scheme is making in the livelihoods of its beneficiaries in Ajumako-Enyan-Essiam and Ekumfi Districts in the Central Region of Ghana. Plan Ghana's VSLA microfinance scheme has been in operation in the Central Region, especially, Ajumako-Enyan-Essiam and Ekumfi districts for over seven years. The scheme aims at increasing access of the marginalized to cash and other productive assets to boost their livelihood activities in order to enhance their livelihood outcomes to improve well-being.

The issue is, all this while, little has been known about the scheme and the extent to which it has impacted and continue to impact on the lives of its beneficiaries in the region. Now, because evaluation is a key aspect of project management and there is always the need to evaluate the outcomes of interventions that are provided by institutions and organizations to see how they are impacting on the lives of their beneficiaries, it became necessary that, this study was carried out, primarily, to evaluate the extent to which the scheme has affected the lives of its beneficiaries and their households in the Ajumako-Enyan-Essiam and Ekumfi districts in the Central Region of Ghana. This was done in order to provide direction for the future of this and other microfinance schemes and their beneficiaries in the study districts and beyond.

Objectives of the Study

The general objective of the study was to examine the effects of Plan Ghana's VSLA microfinance scheme on beneficiary households' livelihood outcomes in the Ajumako-Enyan-Essiam and Ekumfi districts in the Central Region of Ghana.

The specific objectives of the study were to:

1. Find out the perception of the scheme beneficiaries about the mode of The scheme's operations with specific references to the following processes;
    - selection of beneficiaries/membership,
    - training of beneficiaries,
    - accessibility and usage of money from the scheme;
2. Assess the effects of the VSLA scheme on the income level of the beneficiary households;
3. Assess the effects of the VSLA scheme on non-monetary livelihood outcomes (food security, education, health care, housing, and household utilities) of the beneficiary households; and
4. Examine the influence of scheme participation and demographic characteristics (sex, age, educational level, household size, and marital status) on the overall livelihood outcome of the households.

Hypotheses

H_0: Households that participated in the VSLA microfinance scheme did not experience higher income levels than those that did not participate in the scheme;

H_1: Households that participated in the VSLA microfinance scheme experienced higher income levels than those that did not participate in the scheme;

H_0: Households that participated in the VSLA microfinance scheme did not experience improvement in food security more than those that did not participate in the scheme;

H_1: Households that participated in the VSLA microfinance scheme experienced improvement in food security more than those that did not participate in the scheme;

H_0: Households that participated in the VSLA microfinance scheme did not experience improvement in access to education more than those that did not participate in the scheme;

H_1: Households that participated in the VSLA microfinance scheme experienced improvement in access to education more than those that did not participate in the scheme;

H_0: There is no significant relationship between the overall livelihood outcome of the beneficiary households and the sex of the beneficiaries,

H_1: There is significant relationship between the overall livelihood outcome of the beneficiary households and the sex of the beneficiaries,

H_0: There is no significant relationship between the overall livelihood outcome of the beneficiary households and the age of the beneficiaries,

H_1: There is significant relationship between the overall livelihood outcome of the beneficiary households and the age of the beneficiaries,

H_0: There is no significant relationship between the overall livelihood outcome of the beneficiary households and the level of education of the beneficiaries,

H_1: There is significant relationship between the overall livelihood outcome of the beneficiary households and the level of education of the beneficiaries,

H_0: There is no significant relationship between the overall livelihood outcome of the beneficiary households and the size of the households,

H_1: There is significant relationship between the overall livelihood outcome of the beneficiary households and the size of the households,

H_0: There is no significant relationship between the overall livelihood outcome of the beneficiary households and the marital status of the beneficiaries,

H_1: There is significant relationship between the overall livelihood outcome of the beneficiary households and the marital status of the beneficiaries.

Scope of the Study

The study sought to examine the livelihood outcomes of rural households and how these outcomes have been influenced by Plan Ghana's VSLA microfinance scheme in Ajumako-Enyan-Essiam and Ekumfi districts in the Central Region. The effect of the VSLA scheme on household livelihood outcomes was measured using income, food security, education, health, housing, and household utilities of the beneficiary households.

The mode of VSLA scheme operations was examined on four main measures: accessibility, adequacy, appropriateness and efficiency. These measures were examined on three main processes or components of the scheme; the selection of beneficiaries/membership, the training of beneficiaries, and the accessibility and usage of money from the scheme. The effect of the VSLA scheme was analyzed using the "narrow" level of analysis where the effects was considered specifically at the household level.

Significance of the Study

This evaluation study was to examine and document the key outcomes of the VSLA microfinance scheme in the beneficiary households. The study, thus, meant to ascertain what have worked well with the VSLA scheme and factors that contributed to such achievement as well as to document what has not worked well and why.

The study was meant to unveil the true nature of rural livelihood processes and how access to microfinance services provided by MFIs tothe rural poor influence their livelihood strategies, thereby, improving their livelihoods. The study was again meant to contribute to settling the debate that has for long existed among institutions and the actors in the field of development about the actual impact of microfinance interventions on the poor person's livelihood. This will help to shape people's perception about the role of microfinance interventions in reducing poverty and enhancing rural livelihood. The perception about the effectiveness of a project is as important as its success and impact on the target group. Rogers (1983) indicates that people's perception about a programme or project is very important in its adoption and sustainability in the social system and, therefore, the kind of livelihood strategies they may adopt to earn a livelihood.

This microfinance intervention livelihood impact assessment was necessary, not only to demonstrate to donors and service providers (Plan Ghana, Microfin Plus, and other similar organizations or institutions) that their interventions are having a positive impact on their clients, but also to allow for learning within microfinance institutions across the world so that they can improve their services and the impact of their projects in order to gain public confidence and trust (Simanowitz, 2001; Wrenn, 2007).

Evaluating the impact of the Plan Ghana's VSLA microfinance scheme on the beneficiaries was, thus, to help the researcher report to the world of microfinance how effective or otherwise the VSLA schemes are in the lives of the rural poor. This would help to make a recommendation on whether the Plan Ghana's VSLA microfinance scheme should be continued and expanded to other locations, or whether it should be discontinued. The study was as well meant to contribute to the world of academia.

Limitations of the Study

Constraints of time, money, personnel and other logistics did not permit me to reach all the scheme beneficiary and non-beneficiary households in rural communities in the Central Region, even though it would have been prudent to do so. Recording of responses from interviews might have resulted in distortion of information and this may have affected the outcome of the study. The ability to recall based on perception often varies with respondents and may have therefore resulted in a situation where inaccurate responses were given by them.

Operational Definition of Terms

Microfinance: Microfinance basically consists of providing financial services, including savings, microcredit, micro-insurance, micro-leasing and transfers in relatively small transactions designed to be accessible to microenterprises and low income households and very poor self-employed people (Otero, 1999; Wrenn, 2007; Asiama & Osei, 2007; Appiah, 2011). Microfinance service described in this study is, however, a specific scheme (VSL A scheme) that is owned by the members and it is geared towards making accessible some financial and "add on services" (training and education) to the rural poor and their households in the study area.

Poverty intervention: A set of measures or strategies, either economic, social, political or humanitarian that are intended to permanently and sustainably lift the poor out of poverty. In this study, the VSLA microfinance scheme is seen as a specific intervention directed at helping to lift the less privileged and the low-income persons or households in the society out of economic difficulties in order to enhance their livelihoods.

Village Banking: This is a user-owned, user-financed and user-managed microfinance model with members having symmetrical information on each other's credit worthiness.

Village Savings and Loans Association (VSLA): This is made up of a group of people (usually 10-30) who come together, save together, and take small loans from those savings. The group is usually under the initiative and supervision of an institution or organization as in the case of the Plan Ghana's VSLA scheme. The activities of the VSLA run in 'cycles' of about one year, after which the accumulated savings and the loan profits are shared out among the members (otherwise known as 'shared profit') according to the amount they have contributed and saved (BoC, 2010).

Shared profit: The money each member of the VSLA group receives at the end of every one year circle of the scheme. This includes the person's total contribution in the year plus the interest on the contribution (savings).

Livelihood: A livelihood in the study comprises the capabilities, assets and activities required for a means of living. It consists of livelihood resources, livelihood strategies, livelihood outcomes, and institutional or organizational influences or policies and processes.

Livelihood outcomes: Livelihood outcomes, are strictly defined to mean the results or outcomes of livelihood activities through the use of some livelihood resources. Livelihood outcomes in the study are categorized and measured in two main terms; monetary and non-monetary terms. The monetary outcome was measured mainly in terms of household income and the non-monetary outcomes were measured in terms of food security, education, health, housing, and basic household utilities.

Household income: The household income in the study was operationalized in terms of average monthly income and the ability of the households to save from their monthly income. Generally, the income levels were considered along a continuum that extends from adequate or high through average or moderate to inadequate or low. A household was considered to have adequate income when the income was able to provide the members with enough of the basic livelihood needs at all times in the month and be able to save some of the income to meet other needs as well as to guard against shocks and other future occurrences. An average income household was the one whose monthly income is able to provide the members with some level of the basic livelihood needs at most times but unable to make any meaningful savings from its income. A household that has inadequate or low income was the one whose monthly income was unable to provide its members with the basic needs of life at most times, and in most cases, depend solely on the meagre produce from their farming or fishing activities for food, and sometimes, at the mercies of other relations or people for survival.

Food security: Means access by all people at all times to enough food and clean water for an active, healthy life (Bickel, Nord, Price, Hamilton & Cook, 2000). Household food security is therefore defined to mean a state of condition where all the people in the household at all times have access to safe and nutritious food to maintain a healthy and active life that is free of malnutrition and hunger. Food security in the study was, therefore, measured in terms of the number of months the members of a household are provided with enough good food to eat in the year using the household's own resources, and was also considered along a continuum that extends through high, marginal, low and very low food security. A household with high food security is the one that has no problem or anxiety about consistently accessing adequate, safe and nutritious food to maintain a healthy and active life that is free of malnutrition and hunger.

A household that has a marginal food security is the one whose members have access to three square meals of appreciable quality (that is, they do not substantially reduce the quality, variety, and quantity of their food intake) but sometimes have some problems or anxiety about access to adequate food. Low food security in the study is when the household has a somewhat a normal quantity of food intake and eating patterns for its members but reduces the quality, variety, and desirability of their diets. Lastly, a household that has a very low food security will be the one whose members have reduced food intake and disrupted eating patterns of one or more of its members in most times of the year because the household lacks money and other resources for food (USDA, 2006). For the purpose of meaningful reporting, as proposed by Mark Nord, Margaret Andrews and Steven Carlson in the United States Department of Agriculture's (USDA) 2006 report, households with high or marginal food security were described as food secure and those with low or very low food security were termed as food insecure (USDA, 2006).

Household health status: The key measures for the health status of a household in the study were operationalized in terms of access to healthcare, morbidity and mortality rates (infant and maternal mortality) within the last five years.

Household education: This was operationalized using indicators as the number of members (at school going age) in the households that were actually attending school at the time of the study (GSS, 2010; 2013), and the ability of the household to provide for the educational needs of its members.

Household: A household is defined to represent a group of people bound together by marriage, kinship, or joint financial decision; who live together under single roof or compound, eat from the same pot or share the same eating arrangement, and are answerable to one person as the head.

Head or lead of household: A person, either a man or woman, who represents the household and recognised as such by the other household members, in the village or community and who controls the economic and social management of the households. In this study, all the respondents (both beneficiaries and non-beneficiaries) were heads or leads of their households and, therefore, are defined as such.

Household demographic characteristics: Defined in the study to include sex, age, level of education, marital status, household size and others of the households and their respondents (beneficiaries and non-beneficiaries).

Beneficiary household: A household that has a member (usually the head or the lead of the household) in a VSLA group and, therefore, has access to financial products and services from the VSLA microfinance scheme.

Non-beneficiary household: A household that does not have a member in any VSLA group and, therefore, does not have access to any financial products and services from the VSLA microfinance scheme.

Rural household: A household located in a rural area or community.

Rural community: A locality of less than 5000 inhabitants in the study area.

Beneficiary community: A community that has Plan Ghana's VSLA microfinance scheme operating there.

Perception: Perception in the study is used to mean individual households' own feeling and interpretation to issues regarding the VSLA microfinance scheme and microfinance services in general based on the available information, knowledge and understanding of its operation and outcomes.

Organization of the Study

The study was organized into seven main chapters. Chapter One was an introduction to the study comprising of the background to the study, statement of the problem, objectives of the study, research hypotheses, the scope of the study, significance of the study, limitations of the study, operational definition of terms, and organization of the study. Chapters Two, Three and Four present the literature review on relevant areas of the study. Chapter Two reviews literature on poverty and rural livelihoods nexus and Chapter Three reviews literature on microfinance and its role in rural livelihoods improvement. Chapter Four presents literature on livelihood conceptual framework, models of microfinance and the conceptual framework used in the study. Chapter Five presents the methodology that was used for the study. Chapter Six consists of the results and discussions of the data from the study, while the last chapter, Chapter Seven, gives a summary of the findings as well as the conclusions and recommendations made from the study. In addition to these chapters, the study also presents the references and the appendices of the study as the last section.

CHAPTER TWO

LITERATURE REVIEW ON POVERTY AND RURAL LIVELIHOODS NEXUS

Introduction

This chapter reviews literature on poverty and rural livelihoods and how they relate to each other. In Ghana, as in the other parts of the world, the issue of poverty has continued to be a significant characteristic of the population that has undermined many livelihood efforts at all levels. Obeng (2011) reports that in spite of all the efforts by the government of Ghana and other development partners such as International Fund for Agricultural Development (IFAD), and some other NGOs to reduce poverty in the country, small-scale farmers, herders and other rural people in Ghana still remain poor.

This chapter, therefore, seeks to review relevant literature on poverty and its contribution to rural livelihoods. The chapter, among other things, covers this under the following headings: concept of poverty; poverty distribution in Ghana; vulnerability to poverty factors in rural areas; the concept of livelihoods; the main livelihood activities of the people in the study districts; indicators for measuring livelihood outcomes; poverty reduction and rural livelihood improvement efforts in Ghana; and strategies to reduce poverty and improve rural livelihoods.

Concept of Poverty

"The definition of what is meant by poverty, how it might be measured and who constitute the poor are fiercely contested issues. At the heart of the debate about defining poverty stands the question of whether poverty is largely about material needs or whether it is about a much broader set of needs that permit well-being or at least a reduction in ill-being" (Chambers, 1995).

Poverty is a multifaceted concept that has been considered from different angles by various stakeholders. Governments, civil society organizations (CSOs), social groupings, development practitioners, social welfare providers, experts, individuals, and poor themselves over the years have considered and defined poverty differently both in relative and absolute terms. McGee (2000) agrees to the multifaceted nature of poverty and indicates that, poverty is multifaceted comprising of a number of material and non-material things. Narayan *et al.* (2000) look at poverty as the lack of what is necessary for material well-being, most especially food, housing, land, clothing, and other assets. Hunger and food insecurity, according to them, remain the core concerns of the material aspects of poverty.

Suich (2002) indicates that poverty is a contested concept, the particular meaning of which depends on the ideological and political context within which it is used. She, however, asserts that in broadest sense, poverty can generally be understood as the lack of or inability to achieve a socially acceptable standard of living, or the possession of insufficient resources to meet basic needs. This meaning of 'socially acceptable' or 'meeting of basic needs' in itself, needs a careful debate or specification. What is socially acceptable in one society may not be same in another, or what is a basic need to one person may not be same to another. Poverty is thus created and perpetuated by different processes and social relations in different locations, and is experienced and conceived differently according to context (Suich, 2002).

The United Nations Development Report of the year 2000 defines poverty as pronounced deprivation which encompasses a wide range of issues including hunger, lack of shelter and clothing, lack of access to health care and education and inadequate or lack of access to policy making (UNDP, 2001). According to the report, being poor connotes lack of access to resources necessary for achieving a descent standard of living.

Baulch (1996), and Moore and Putzel (1999) state that poverty is about access and consumption of state-provided commodities, or what some researchers and practitioners refer to as 'social wages'. GSS (2007) indicates that poverty has many dimensions, and that; it is characterized by low income, malnutrition, ill-health, illiteracy, and insecurity, as well as a sense of powerlessness and exclusion. These different aspects interact and combine to keep households, and at times the whole community, in persistent poverty. Nilsson (2012) puts poverty as the unavailability of resources for meeting the basic living standard.

Suich (2002) made a distinction between absolute and relative poverty. Absolute poverty, according to her, refers to the inability to meet what are thought to represent the absolute minimum requirements for human survival. The poverty status of any individual or household is considered completely independent of the conditions of other individuals or households. Those considered to be absolutely poor are often identified with reference to poverty lines – those households or individuals that fall below the poverty line. While the $US1.25 per day is perhaps the most well-known poverty line, absolute poverty can also be measured against non-income aspects of deprivation including food insecurity, malnutrition, lack of access to health care and many others (Suich, 2002).

United Nations, in the quest to eradicate "absolute" and reduce "overall" poverty after the 1995 World Summit on Social Development in Copenhagen, defined absolute poverty as "a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to services". In some studies, absolute poverty is used to mean extreme poverty (Obeng, 2011).

Relative poverty, on the other hand, considers the status of each individual or household in relation to the status of other individuals, households in the community, or other social groupings, taking into account the context in which it occurs. Relative poverty typically changes spatially and temporally. Measures of relative poverty are, therefore, not necessarily comparable between locations due to the differing social stratification between communities or over time, but rather, the approach examines poverty in the context of inequality within a society, though they should not be conflated (Suich, 2002).

Another way of looking at poverty according to Suich (2002), is the way it is observed and measured (objective and subjective poverty). Poverty is considered to be objective when observable and measurable indicators which are typically quantitative in nature are used to measure material or non-material dimensions. Subjective measures represent psychological elements and perceptions of poverty, where individuals' judgments are sought about their experience of life and the aspects they value in their lives. To effectively and really measure poverty, it has been proposed that subjective well-being measures must be incorporated to complement assessments that use objective indicators (Suich, 2002).

The United Nations, in the 1995 Summit, defined "overall" poverty as "lack of income and productive resources to ensure sustainable livelihoods; hunger and malnutrition; ill health; limited or lack of access to education and other basic services; increased morbidity and mortality from illness; homelessness and inadequate housing; unsafe environments and social discrimination and exclusion. It is also characterized by lack of participation in decision-making and in civil, social and cultural life. "It occurs in all countries: as mass poverty in many developing countries, pockets of poverty amid wealth in developed countries, loss of livelihoods as a result of economic recession, sudden poverty as a result of disaster or conflict, the poverty of low-wage workers, and the utter destitution of people who fall outside family support systems, social institutions and safety nets".

In Ghana, according to the last Ghana Living Standards Survey (GLSS 6), the extreme and absolute poverty lines stand at 792.05 Ghana cedis and 1,314.00Ghana cedis per equivalent adult per year. In dollar terms, this absolute poverty line is equivalent to about $1.83per day and the extreme poverty line equivalence is $1.10 (GSS, 2014). The report defines the absolute poverty line to be the minimum living standard in Ghana while the extreme poverty line indicates the level at which even if a household spends its entire budget on food, it still would not be able to meet the minimum calorie requirement.

In all of these, whether absolute or extreme, whether objectively or subjectively measured, poverty is practically what one actually experiences and feels about himself or herself and the immediate surroundings that best defines his or her state of well-being and not what others think he or she is. In other words, even though there may be universally accepted conditions and thresholds as poor conditions, poverty is best defined by the poor himself or herself in more subjective and relative manner- he who feels it knows it.

Poverty Distribution in Ghana

Poverty in the world is predominantly a rural phenomenon (Todaro & Smith, 2009). In Ghana, the situation is as well alarming (Table 1). Reports from GSS (2007) indicate that about 86 per cent of the total population living below the poverty line of 2,884,700 old Ghana cedis (equivalent to 288.47 new Ghana cedis) per adult per year as at 2006 was living in the rural areas of Ghana. These people have limited access to basic social services, safe water, motor able roads, and electricity and telephone services, banking services and other health care facilities. Obeng (2011) reports that the majority of Ghana's poor people live in the rural areas where about 80 per cent of food crops are produced, yet, have insufficient incomes to purchase adequate diet for themselves and their households.

Osei (2011) citing from the Ghana Living Standard Survey reports indicated that, around 2005/2006, the share of the population living in rural areas was about 62 per cent and had about 39.2 per cent incidence of poverty compared to 38 per cent with only 10.8 per cent poverty incidence for those living in the urban areas. The situation, according to Osei (2011), had worsened substantially as at the year 2010 to 65.1 per cent rural population with 47.6 per cent incidence of poverty as against 34.9 per cent urban dwellers with 21.6 per cent poverty incidence (Table 1).

Table 1-*2010 Poverty Estimates for Ghana by Location*

Location	Population (2010)	Population Share (%)	Poverty Count	Per cent Poor
Urban	8,410,230	34.9	1,812,459	21.6
Rural	15,706,570	65.1	7,470,902	47.6
Total	24,116,800	100.0	9,283,361	38.5

Source: Ghana Micro simulation Model (cited in Osei, 2011).

Poverty in Ghana, according to Obeng (2011), is deepest among food crop farmers. Poor food crop farmers are mainly traditional small-scale producers with little or no capital for their production activities and have very low incomes. Obeng, in his study reported that, about six out of ten small-scale farmers interviewed were poor, many of who were women. Women and men experience poverty differently in Ghana as in the other part of the world. Women are among the worst affected when it comes to poverty incidence. More than half of women who are heads of households in rural areas of Ghana are among the poorest (Obeng, 2011).

Various reports by the Ghana Statistical Service have indicated that the incidence of poverty is highest in the northern parts of the country. While the overall poverty incidence in Ghana witnesses a substantial decline, the northern parts of the country continue to have increases in poverty incidence. Obeng (2011) reports that the poorest areas of Ghana are the savannah regions of the north, where many rural poor face chronic food insecurity with poverty often taking hold of most rural communities. Most households are more vulnerable in those regions and members of rural communities suffer because of food insecurity for major part of the year. Upper East, Upper West and Northern have been reported in several studies to be the three poorest regions. In the Upper East region almost nine out of ten people live in poverty. More than eight out of ten people in the Upper West region are poor. In the northern region, poverty affects seven out of ten people. Contributing to this disparity is the fact that rural people in the south who are mostly farmers have two growing seasons as against those in the drought-prone northern plains who have only one growing season within the year. This disparity continues to widen the income gap between people in these two places (GSS, 2000; 2010; Obeng, 2011).

Besides the three northern regions, Central Region, even though has the needed natural resources for development, has been characterized heavily by incidence of poverty. Recent reports from Ghana Statistical Service indicate that Central Region is the fourth poorest region. The region, as at the last population and housing census, had a rural population of 1,163,985 (52.9%) and urban population of 1,037,878 (47.1%). People in the region, especially rural people, continue to struggle with poverty and its related issues in spite of the various efforts by NGOs and other agencies in reducing poverty and making lives better for the people (GSS, 2010).

A World Bank report in 2002 indicates that poverty increased in the Central Region but declined in some regions like Western, Greater Accra, Volta, Ashanti and Brong Ahafo. Around 2002, half the 1,580,047 people in the Central Region lived below the poverty line. Almost 20 per cent (19.9 per cent) of the population in the region lied below the national poverty line as at the year 2007 (GSS, 2007). Per the national rural poverty to the urban poverty ratio in the country, more than two thirds of the people that are found in this poverty bracket live in rural households.

Vulnerability to Poverty in Rural Areas

Vulnerability or vulnerability to poverty is defined to include the probability or the risk that a household or an individual, whether currently poor or not, may fall into poverty at least once in the next few years. A household is vulnerable to poverty if it is likely to be poor in the near future. Dercon (2001) defines vulnerability as ex ante poverty. Duflo (2005) defines vulnerability as "a probability: the risk a household will fall into poverty at least once in the next few years". This implies that, unlike poverty, vulnerability is more future-oriented concept that considers possible changes in a household's future welfare.

Maldonado (2002) reports that low productivity of available household resources and the high income and consumption volatility that are experienced by poor households are the main causes of poverty. The low productivity of available household resources leads to inadequate human capital, technology, knowledge, as well as social and physical capital that are needed to develop the household. These gaps come as a result of some barriers in opportunities for households to attain greater income. The high income and consumption volatility of households is described as "inability of households to deal efficiently with shocks that may lead to the loss of productive assets and, thereby, reduce income-generating opportunities" (Maldonado, 2002). Provision of multiple microfinance institutions that provide varied array of financial products and services, has been recommended to help address these crises of vulnerabilities at the household level.

Government of Ghana, in its poverty reduction strategy paper gave the following, among other causes, as the causes of rural poverty in the country: low productivity and poorly functioning markets for agricultural outputs; farmers reliance on rudimentary methods and technology; lack of skills and inputs such as fertilizer and improved seeds; soil erosion; loss of soil fertility and shorter fallow periods; and increasing population pressure leading to continuous loss of cultivable land. These conditions continue to pose a long-term threat to farmers' livelihood security (Obeng (2011).

The Concept of Livelihood

The concept of livelihood was first used by UNDP and subsequently adopted by the Department for International Development (DFID) as central to its strategy for meeting the goals set out in its 1997 White Paper titled 'Eliminating World Poverty' (Soussan, Blaikie, Springate-Baginski & Chadwick, 2009).

Chambers and Conway (1992), also cited in Krantz (2001), gave a composite definition for the concept livelihood. According to Chambers and Conway (1992), "a livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living". Scoones (1998) and Carney (1998) giving a similar definition to livelihood, defined the assets component to include material and social resources. Thus, whilst Chambers and Conway (1992) define the livelihood asset to include stores, resources, claims and access, Scoones (1998) and Carney (1998) define it to include material and social resources.

Scoones (1998), expanding on the concept of livelihood indicated that, the livelihood of a household or an individual consists of three major variables; livelihood resources, livelihood strategies and livelihood outcomes. Livelihood resources consist of the basic material, social, tangible, and intangible assets that people use to construct their livelihoods. These are, otherwise, conceptualized as different types of 'capital' (natural, human, social, economic or financial, and physical). Livelihood strategies, according to Scoones, consist of combinations of activities that individual households do to ensure their livelihood or means of living. This is what he and the other authors call 'livelihood portfolios'. Livelihood outcomes are the results obtained from the use of livelihood strategies, and could be positive or negative depending on a number of factors including the livelihood resources available to the members in the household, their capabilities, the type of livelihood strategies used by the households and some external influences from institutions, organizations, policies, processes and norms.

The Main Livelihood Activities of the People in the Study Districts

Rural people all over the world employ various and diverse activities to earn a living. These activities are usually centered on the local resources available at their disposal. Studies have shown that most rural people engage in combinations of activities to earn their livelihood, most of which are agricultural-related. Todaro and Smith (2009) indicate that over two-thirds of the world's poorest people who are located in rural areas are engaged in subsistence agriculture.

In Ghana, the agricultural sector has for long remained the dominant player in its overall economic growth and development. More than 70 per cent of the country's population is directly or indirectly engaged in agriculture for their livelihood (Akudugu, Garforth & Dorward, 2013). Ghana Statistical Service in 2008 reports that agriculture, mainly involving crop production and livestock keeping, are largely rural comprising 85% of rural households. These kinds of households have always been vulnerable to climatic shocks, market volatility, rising prices of agricultural inputs, post-harvest losses and human risk.

Without doubt, agriculture has been the main occupation of the people of Ajumako-Enyan-Essiam District. About 80-90% of the district's total population depends directly or indirectly on agriculture. Thus, nearly every household in the district is engaged in farming or agricultural related activity. The predominant sub-sector is crop production, even though farm sizes are small. The average farm size ranges between 0.0324-0.0608 ha for most staple crops. The main staple crops cultivated in the district are cassava, maize, plantain, yam and cocoyam. Vegetables are also grown extensively in Enyan-Maim, whilst cowpea and other bean types have just been introduced in the Baa zone. Cash crops, such as cocoa, citrus and oil palm, are also extensively grown in the district (Dei, Ekumah & Ghartey, 1996; Newsletter, AEED, 2004).

Besides the crop production, there is also livestock farming among the people of Ajumako but remains relatively at marginal levels. The major kinds of animals reared in the district include poultry, piggery, grasscutter and some other ruminants. Pigs and the small ruminants (goats and sheep) are raised in almost all the communities, but cattle and poultry production are mainly carried out in the Enyan-Denkyira and Ajumako respectively. Livestock production, even though marginally practiced, is very crucial to the economic and social wellbeing of the people in the district because, whiles some of the stock may be sold to supplement household income; it serves as main source of protein for the rural households thus contributing to the nutritional self-sufficiency (Newsletter, AEED, 2004).

The story is not different in Ekumfi district. Most of the people in the district also depend largely on farming and fishing activities for their livelihood. Pineapple production is the main farming activity in the district. Some vegetable, fruit and field crops are as well produced in the district. Fishing is a major livelihood activity that is carried out by the people, especially along the coastal areas of the district. It engages both men and women in their quest to providing a living to their households. Apart from some men going to the sea to catch fish, some women in the district, especially along the coast are involved in various forms of fish processing as their main livelihood activities (GSS, 2014).

Apart from farming and its related activities, the people of Ajumako-Enyan-Essiam and Ekumfi districts also engage in several activities to earn a livelihood, since farming alone cannot provide for all their needs. There area number of agro-processing activities that provide livelihood for the people of Ajumako-Enyan-Essiam district. The most predominant of these are the processing of oil palm fruits to oil and cassava to 'gari' either in groups or as individuals. Small and micro-scale industrial activities are carried out by the people in the area of weaving, woodcarving, soap making, bread baking, masonry, carpentry and auto-mechanic are as well carried out in the district. In the service sector, economic activities such as hairdressing, barbering, tele-communication services, guest house operation and "chop" bars (Sangmuah, 2002; Newsletter, AEED, 2004).

Salt mining, tele-communication services, hairdressing and barbering, trading, food processing, wage labour and other basic activities are carried out by the people of Ekumfi district. There are large deposits of quality clay for the construction industry found in the district. There are clay factories located at Akwakrom and Otabanadze producing clay products for the housing and ceramic industry. This engages quite a number of people to earn their livelihood (GSS, 2014).

Rao (2006) asserts that farming alone does not provide sufficient income for sustenance among rural dwellers. Ward, Bortey, Whittingham, Braimah, Ashong and Wadzah (2004) indicate that, farming activities in most parts of the developing world are characterized by seasonality implying that most rural households have to rely on different options for their livelihoods in different times of the year. In this direction, most rural households focus on agro-processing as a form of non-agricultural livelihood diversification. Livelihood strategies in the fishing communities in Ghana include pottering, firewood gathering, fishing, wage labour, construction work and food processing (Warren, 2002; Ward *et al.*, 2004).

Indicators for Measuring Household Livelihood Outcomes

Livelihood outcomes are the results obtained from using or engaging in some forms of activities (livelihood strategies). Income and/or other monetary measurements such as household expenditure, have over the years, continued to dominate most studies as the main measures of household livelihood outcomes. Household income has thus been considered as a very good measure for a household's livelihood condition.

Some other studies have, however, indicated that the best way of measuring these outcomes is by employing both conventional (monetary) indicators and well-being (non-monetary) indicators such as food security, health, education, sustainable use of natural resources, strengthened asset base, reduced vulnerability, self-esteem, sense of control as well as maintenance of cultural assets (Scoones, 1998; Chambers, 1995; Brock, 1999; Krantz, 2001; Carney 1998; Adato & Meinzen-Dick, 2002).

Livelihood outcomes may be positive or negative depending on the kind and the level of resources available, and how these resources are combined (livelihood strategies) as well as the prevailing conditions (policies, processes, interest rates etc.) surrounding the accessibility and the use of those resources or interventions. Positive livelihood outcomes are the goals to which households aspire, the results of which livelihood strategies are pursued with all the necessary resources and conditions or assumptions in place. These may be seen in the areas of increased productivity, increased income, reduced vulnerability, increased well-being, improved food security, improved household utilities, improved health and more sustainable use of natural resources. The negative outcomes are the unintended outcomes and may manifest in the form of low productivity, reduced income, low food consumption, absence of basic household facilities, poor health, high illiteracy rate, depleted natural resources and increased vulnerability.

Non-Monetary Measures of Household Livelihood Outcomes

Researchers and policy-makers in both developed and developing countries have devoted a great deal of effort towards a more accurate identification of the poor and his or her livelihood. While income or monetary measurements are still widely used as measures of poverty or livelihood in many countries, criticisms about their limitations in terms of defining and identifying the poor and non-poor have become too apparent (GSS, 2013). Ayadi, El Lahga and Chtioui (2007) conceptualize that using only income or expenditure as an indicator to measure the state of a household covers a limited aspect of living standard and is no longer unanimously accepted as the only poverty analysis framework in view of many conceptual and technical problems. It has been argued that although many household income and expenditure surveys are available for many countries, using these surveys to make inter-temporal comparisons of poverty is problematic (Sahn & Stifel, 2003; Ayadi, *et al.*, 2007; GSS, 2013).

The widely shared view is that the other aspects of living conditions which include access to basic services (such as health, nutrition, education and housing) and the social context of the individual or the household also need to be taken into account when accessing the livelihood conditions of a household. Evidences from the UNDP's non-monetary indices and other researchers indicate that these indices or livelihood measures do provide valuable information about the situations of households, which help in terms of targeted policies and interventions required to overcome the conditions of the poor (GSS, 2013).

Another argument for the use of non-monetary indicators to measure the state of a household's livelihood (to classify it either as poor or average or rich) is that they can help to capture the multi-dimensionality of poverty and social exclusion, hence, defining better the state of livelihood (GSS, 2013). It has long been argued, and has been re-echoed by Nolan and Whelan (2010) that poverty is not just about money, and the widespread adoption of the terminology of social exclusion and inclusion reflects the concern that focusing simply on income misses an important part of the picture. Nolan and Whelan (2010) add that social exclusion may involve not only poverty as low income and financial resources, but also educational disadvantage, poor health and access to health services, inadequate housing, and exclusion from the labor market.

Unlike the monetary indicators (mostly income), Ayadi *et al.* (2007), also cited in GSS (2013), reported that non-monetary livelihood indices use primary indicators which can be classified into three categories; ownership of durable goods, housing conditions and education. Ownership of household durable goods is defined to include radio, television, refrigerator, gas cooker, telephone; housing conditions (water access, toilet facilities, quality of floor and number of people per bedroom) and education or literacy. The basic idea is that these primary indicators which are in most studies summarized into a single composite index called welfare composite index (WCI) reflect the actual living conditions of a household. The WCI is able to classify households as poor and non-poor based on the extent to which they either possess or are deprived of such primary indicators (GSS, 2013).

Food security as a Measure of Household Livelihood Outcome

Household food security is an important measure of well-being. Even though it may not be able to capture all the dimensions of poverty or a livelihood condition, the ability or inability of a household to access enough food for an active and a healthy life is surely an important component of its livelihood. Islam, Alam and Buysse (2012) acknowledging the importance of using food security as a measure of household livelihood indicate that; "devising an appropriate measure of food security is useful in order to identify the food insecurity, assessing the severity of food shortfall, characterizing the nature of their insecurity (for example, seasonal versus chronic), predicting who is most at risk of future hunger, monitoring changes in circumstances, and assessing the impact of interventions" (Islam *et al.*, 2012).

USAID (1992) indicates that food security is attained when all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life. Bickel *et al.* (2000) also define food security as access by all people at all times to enough food for an active, healthy life. Household food security is therefore defined to mean a state of condition where all the people in the household at all times have access to safe and nutritious food to maintain a healthy and an active life that is free of malnutrition and hunger.

United States Department of Agriculture (USDA) provides a continuum along which food security status of a household could be described.

This continuum extends from high food security to very low food security and consists of four main ranges, characterized as: High food security-households that had no problems, or anxiety about consistently accessing adequate food; Marginal food security- households that have problems at times, or anxiety about accessing adequate food, but the quality, variety, and quantity of their food intake are not substantially reduced; Low food security- households that reduce the quality, variety, and desirability of their diets, but the quantity of food intake and normal eating patterns are not substantially disrupted; and Very low food security- households whose members reduce food intake and one or more of them in most times of the year have disrupted eating patterns because the households lack money and other resources for food (USDA, 2006). For reporting purposes, USDA, in most instances, described households with high or marginal food security as food secure and those with low or very low food security as food insecure (USDA, 2006).

Using this definition, about 1.2 million Ghanaians, representing 5 per cent of Ghana's population in 2009, were food insecure, and about 2 million people were found to be vulnerable to become food insecure in the subsequent years (WFP, 2009). Months of inadequate household food provisioning which has been defined by Bilinsky and Swindale (2007) as the time between stock depletion and the next harvest is an important variable when studying the food security patterns of a given population, mostly, a rural population. The problem with this definition, however, is that the definition seems to be more rural and farmer household specific. Non-farmer households who do not directly involve in harvesting of some produce of the sort may not be captured in this definition even though in some cases the periods when salaries or remunerations are received may be termed as harvest times for such groups. The definition is therefore more appropriate when studying rural households which in most cases are farming dependent as in the case of this study. Quaye (2008) reports that most farmer households, especially in the Ghanaian situation, experience significant degree of food insecurity with food insecure periods spanning between 3 and 7 months.

Health Status as a Measure of Household Livelihood Outcome

The health status of people determines their quality of life, level of productivity and longevity, and this is directly linked to the general state of development of a household, community or a country (GSS, 2007). The key determinants of health status of a household as have been employed in many studies and reports are the level of maternal mortality and death of children under five within a certain period of time (mainly in the last 12 months) as a result of their access or non-access to health facility, good nutrition and other conditions. The status of these two vulnerable groups (women and children) of a household gives a good indication of the health status and the general development of members of a household (GSS, 2010; 2013).

The use of the under- 5 mortality as an indicator of health status stems from the idea that most child deaths are prevent able being caused mainly by diseases like diarrhoea, malaria and in some cases by child malnutrition. Most studies that have used multi-dimensional poverty index (MPI) such as the GSS's 2010 Population and Housing Census consider household members to be deprived in terms of healthcare if there has been at least one observed child death (under 5 years) in the household during the past 12 months preceding the research. For the second indicator, a household is considered deprived in terms of healthcare if there is at least one female aged 12-54 years who died pregnant, during delivery or within 6 weeks after the end of a pregnancy or child birth in the past 12 months (GSS, 2010).

The evaluation of under-5 mortality at the household level provides information on the impact of interventions on health and general standard of living of members of a household (GSS, 2013). Access or non-access to good nutrition, health facility and other conditions have also remained important measures to a household's health status. Presence or absence of certain diseases or illness (both short-term and long-term) among household members have as well been used to measure a household's health status.

Education as a Measure of Household Livelihood Outcome

Education has been identified as the most important tool in providing people with the basic knowledge, skills and the competencies to improve their quality of life at all levels of development (GSS 2007; 2013). Reports from several studies have indicated that beyond productivity and income, education impacts positively on household welfare in terms of better health and nutritional status, and improved life expectancy (Psacharopoulos, 1991). Education has the potential of helping one to determine both the level of knowledge about how to combat diseases as well as their mode of transmission. This in turn, helps to produce better health outcomes in terms of preventive measures (Psacharopoulos, 1991; GSS, 2013).

In Ghana Statistical Services' non-monetary poverty study report in 2013 (which was led by Owusu and Mensah) that used GSS's 2010 Population and Housing Census report, household members' educational level were measured using two main indicators that are noted to complement each other. The first one is the number of household members that have completed certain levels (years) of schooling or education and the second one is the number of children in the household that are presently attending school (GSS, 2010; 2013).

The two major existing indicators in Ghana's educational sector; Gross Enrolment Ratio (GER), and the Net Enrolment Rate (NER) have all shown some level of improvement in child school attendance or participation in the education system over the last decade. Gross Enrolment Ratio measures the number of pupils at a given level of education, regardless of age, as a proportion of the number of children in the relevant age group whilst the Net Enrolment Rate measures the number of appropriately aged pupils enrolled in school as a proportion of children in the relevant age group. This level of improvement has been attributed to a number of interventions that were introduced into the educational sector including the Free Compulsory Universal Basic Education (fCUBE) and the School Feeding Programme (GSS, 2007; GoG/NDPC, 2009).

Housing and Household Utilities as Measures of Household Livelihood Outcomes

Decent or good quality housing provides people a home; security for their belongings; safety for their families; a place to strengthen their social relations and networks; a place for local trading and service provision; as well as a means to access basic services. The source adds that decent housing is the first step to a better life. For women, decent housing is significant in terms of poverty, HIV/AIDS, migration and violence. Most of the difficulties that poor households face, to a very large extent, and over a long period, have been identified to be influenced by the quality, location and security of housing (ISSER, 2007; Owusu, 2011).

In many developing countries, including Ghana, decent or quality housing has been in short supply over years. In rural Ghana, for instance, the challenge with housing, according to GoG/MWRWH (2009), which was also cited in GSS (2013), is all about quality. Many housing units in these areas are mostly built with poor local materials such as clay/mud and roofed with thatch which usually have issues with quality.

Many studies by Ghana Statistical Service and other individual researchers have used indicators such as the quality of floor material for the housing, the number of household members per room, the kind of materials used for the housing construction such as the roof, walls and others to measure the condition of a household's livelihood. According to these reports, these indicators provide ample pointers about the standard of living or the living conditions of the occupants of the households. A household is considered deprived in flooring material if it is made of earth, mud or dung (GSS, 2010; 2013).

The study on non-monetary poverty in Ghana by Owusu and Mensah for Ghana Statistical Service in 2013 (GSS, 2013) revealed that 16 per cent of the total households across the country had earth or mud as the material used for the construction of their dwelling. This proportion, according to the study, however, vary across the regions with the three northern regions (Northern, Upper East and Upper West Regions) being the ones with high recordings and Greater Accra Region being the least (GSS, 2013).

The availability of room and the number of persons per room are as important as the materials for the construction of the houses when analyzing the livelihood conditions of a household. The number of rooms can be analyzed against household size to give an indication of overcrowding, which then demonstrates degree of housing inadequacy and the overall socio-economic status or standard of living of the household (GSS, 2010; 2013). A household with three or more people per room is considered to be room deprived, and so are all its members. According to K'Akumu (2007) and GSS (2010), anytime conventional housing is used as a measure, the number of rooms is a sufficient indicator since the rooms are subject to certain minimum size standards. The reports add that in informal settlements this may not be the case as the rooms there are usually not built to any minimum standards, hence, the need for a different measure, that is, floor space (K'Akumu, 2007; GSS, 2010).

Other conditions such as access to clean water, improved sanitation and electricity have as well been used in many reports as indicators for measuring a livelihood condition in a household. A key necessity of life and standard of living is access to clean drinking or potable water. A household has access to clean drinking water if the water source is any of the following types: piped water, public tap, borehole or pump, protected well, protected spring or rainwater. If a household fails to satisfy these conditions, then it is considered deprived in access to water. In other words, a household is deprived in access to water if it obtains its drinking water from the excluded and other unprotected sources (ISSER, 2007; Owusu, 2011; K'Akumu, 2007; GSS, 2010).

A household is considered to have access to improved sanitation if it has some type of flush toilet (WC) or pit latrine, or ventilated improved pit (KVIP) or provided that they are not shared. A household is considered to be deprived if it does not have access or connected to the national electricity grid. If the main source of cooking fuel for the household is wood or charcoal or crop residue, or saw dust or animal waste, the household is considered deprived in cooking fuel (ISSER, 2007; Owusu, 2011; K'Akumu, 2007; GSS, 2010; 2013).

It has been widely argued that improved access to adequate toilet and sanitation would lead to improvement in the health, hygiene, livelihoods, psychological wellbeing and social interaction of household members (UN-Habitat, 2011). According to GoG/NDPC (2010), Ghana's past and present medium-term development policy frameworks, including GPRS I&II (from 2002 to 2009) and GSGDA (from 2009 to 2013), have all emphasized the need to give serious attention to the provision of water and sanitation not only to achieve health goals but also to facilitate sustained poverty reduction and socio-economic growth. With the water and sanitation as measures, some critical issues which have received a lot of attention include: inadequate access to quality and affordable water; poor water resource management; inadequate access to sanitation facilities and poor sanitation service delivery; inaccessible and unfriendly environmental, water and sanitation facilities; poor environmental sanitation; poor hygiene practices and inadequate hygiene education; and inadequate financing of environmental sanitation services

(GoG/NDPC, 2010).

Alkire and Santos (2010) define household utilities or assets to include radio, television, telephone, bicycle, motorbike, car, truck and refrigerator, and indicate that, a household that does not own more than one of such assets is classified as poor.

Poverty Reduction and Rural Livelihood Improvement Efforts in Ghana

Poverty reduction has for some time now become a global agenda. Because poverty remains the biggest problem to most people in the developing world, and possess much threat to livelihood efforts, several local and international organizations and institutions, including the United Nations, have made it a priority to eradicate extreme poverty and hunger.

The poverty eradication campaign in Ghana has been a day to day activity involving various stakeholders. The government of Ghana has over the years undertaken various and different programmes and projects all in an attempt to reducing poverty and improving the livelihood conditions of its citizenry especially those in the rural communities. The move has been a major concern for successive governments in Ghana because poverty eradication is believed to be the universally accepted way of achieving economic growth that results in livelihood improvement. In line with this, the annual statements of Economic Policy and Budget of Ghana government have often set poverty reduction as their prime objective of national economic policy (Obeng, 2011).

To this end several economic policies have been aimed at stabilizing the economy and turning it towards a growth path and with the expectation of enhancing standards of living of the people and improving upon their quality of life (Sowa, 2002). These moves by successive governments have resulted in the pursuit of different economic policy reforms.

In addition to the general economic policies by successive governments of Ghana, which are usually in consonance with the Structural Adjustment Programme of the IMF and the World Bank, there have been other programmes, which were aimed directly at poverty alleviation. Projects such as the Community Water and Sanitation Project, Health and Population Project, Basic Education Sector Project, Agricultural Sector Investment Project, Village Infrastructure Project and many others were all targeted at reducing poverty in Ghana (Sowa, 2002).

Obeng (2011) lists the following projects and programmes as projects and programmes that have been instituted by the successive governments of Ghana with the primary objective of reducing poverty; Agricultural Services Rehabilitation Programme, Global 2000, The Medium Term Agricultural Development Programme, Primary Health Care and Expanded Programme on Immunization, Provision of Potable Water, Programme of Action to Mitigate the Social Cost of Adjustment (PAMSCAD), Free Compulsory Universal Basic Education (fCUBE), Government Capitation Grant; Government School Feeding Programme, Livelihood Empowerment Against Poverty (LEAP), and Ghana Poverty Reduction Strategies I and II (GPRS I&II).

Besides the efforts by governments, NGOs (both international and local) have been involved in various poverty reduction activities and programmes in attempts to improving the livelihood conditions of the rural poor in Ghana. After the World War II, NGOs, in discharging their duties, have involved in various poverty reduction activities through engaging in relief, emergency, or long-term development work which are mostly concentrated in the developing countries. It is frequently argued that compared to governments, NGOs have comparative advantages of their ability to deliver emergency relief or development services at low cost to many people in remote areas. Besides this, NGOs are noted for their rapid, innovative and flexible responses to emerging financial and technical issues at the grass roots level as well as their long-standing familiarity with social sector development and poverty alleviation (Riddell & Robinson, 1995).

NGOs like Plan Ghana, World Vision International, Catholic Relief Services, Techno serve, Professional Network, Adventist Relief Agency, Rural Evangelical Outreach Programme, Action Aid Ghana, USAID, Centre for the Development of people, Action on Disability and Development and many others have engaged in various activities that are geared towards making life better for the less privileged in Ghana. Their interventions of all kinds have been perceived to have helped transform many communities and lives and as such, have been considered to be very beneficial to a lot of rural dwellers' livelihood.

Strategies to Reduce Poverty and Improve Rural Livelihoods

Several studies from various authors and researchers such as Parker (2001); Krugman and Wells (2009); Muwanigwa (2002); Narayan and Stern (2002); Smeeding (2005) and others have revealed and recommended a number of strategies and interventions that are capable of reducing poverty and improving livelihood conditions when applied. The following are some of these strategies that have been reported to have the potential of reducing poverty and improving livelihood.

Employment creation and increase in productivity

Melamed, Hartwig and Grant (2011) assert that economic growth has an indirect potential of alleviating poverty. According to them, simultaneous increase in employment opportunities and increase in labour productivity has a great potential of reducing poverty and improving livelihood. A study by Overseas Development Institute (ODI) about 24 countries that experienced growth in a certain period of time found that, in 18 cases, poverty was alleviated.

The ODI's study together with reports from International Labour Organization (ILO), however, reveal that employment alone is not a guarantee for escaping poverty. ILO estimates that as many as 40 per cent of workers across the globe are poor, not earning enough to keep their families above the $2 a day poverty line. For instance, the report indicates that in India most of the chronically poor are wage earners in formal employment. This is because most of them have jobs that are not secured and are low paid and, therefore, offer no chance to accumulate wealth to avoid risks and uncertainties. This appears to be the result of a negative relationship between employment creation and increased productivity, when a simultaneous positive increase is required to reduce poverty (Melamed *et al.*, 2011).

Most of the world's rural poor engage in agriculture and its related activities for their livelihood. In Ghana, more than 70 per cent of the country's population is directly or indirectly engaged in agriculture for their livelihood

(Akudugu, Garforth & Dorward, 2013). Agriculture provides a safety net for jobs and economic buffer when other sectors are struggling and, therefore, has the potential of reducing rural poverty (Melamed *et al.*, 2011).

Adato and Meinzen-Dick (2002) report that access to cultivable land is the most important natural resource for rural development and it is key in determining the livelihood strategies of the rural poor. Osei (2011) indicates that since most of the poor live in the rural areas and are mostly involved in agricultural activities, efforts made at increasing growth in agriculture is a surest way of reducing poverty.

Creating opportunities for self-sufficiency

In his book, *Out of Poverty,* Paul Polak, a poverty activist, argues that traditional poverty eradication strategies have been misguided and fail to address underlying problems. In the book, Polak (2008) lists three strategies which he calls "Three Great Poverty Eradication Myths". The first, according to him is, poor people can be donated out of poverty; the second is, poverty can be ended through pursuing national economic growth; and the third is, the effective operation of big businesses will end poverty. Polak, however, indicates that pursuing national economic growth and creation of more big businesses on its own, will not necessarily lead to more opportunities for self-sufficiency. Rather, those businesses that are designed with a social goal in mind, such as microfinance banks, savings and loan associations, credit unions and others may be able to make a difference.

Provision of development aid to the needy

Aid is a form of grant, usually monetary, which is periodically made available to some citizens or households in need to provide a form of social security. Livelihood Empowerment Against Poverty (LEAP) programme in Ghana is one such anti-poverty livelihood enhancement programme that seeks to make some money available in the form of aid to the marginalised to help improve their livelihood.

Whilst some school of thoughts posit that aids are necessary and are needed to improve the lives of the poor, others believe that aids could be detrimental to the receiving end especially when 'tied' with a strict requirement from the donor or the organization. Walsh and Warren (1979) indicate that development aids in some cases are believed to be misapplied, hence, fail to meet their intended purpose. Walsh and Warren (1979) further indicate that funding on health for instance, sometimes, tends to be used in a selective manner where the highest ranked health problem is the only illness treated rather than funding the basic health care developmental programmes that are geared towards improving the health status of many needy persons.

Women empowerment

Women and men experience poverty differently and therefore hold dissimilar poverty reduction priorities. Development interventions and poverty reduction strategies also influence these two groups differently and producing different outcomes (Zuckerman, 2002). In response to the socialized phenomenon known as the feminization of poverty, policies aimed at reducing poverty have begun to address poor women separately from poor men. World Bank (2001) suggest that promoting gender equality through poverty interventions that aim at empowering women, is qualitatively a significant poverty reduction strategy.

At the UN's 55th Session General Assembly in the year 2000 United Nations Millennium Declaration, it was agreed that, addressing gender equality and empowering women are necessary steps in overcoming poverty and furthering development. Disparities that exist between men and women in the areas of education, mortality rates, health and other social and economic indicators tend to impose large costs on well-being and health of the deprived women, and these have the potential of decreasing productivity. Zuckerman (2002) indicates that the limited opportunities of women in most societies restrict their aptitude to improve economic conditions and access services to enhance their well-being.

Narayan and Stern (2002) reveal that encouraging more economic and political participation by women increases financial independence from and social investment in the government, both of which are critical to pulling society out of poverty. Women's economic empowerment, or ensuring that women and men have equal opportunities to generate and manage income, is an important step to enhancing their development within the household and in the society (UNICEF, 2007).

Provision of good institutions and policies

Efficient institutions that provide efficient and effective policies that thrive in good enabling environment are needed to ensure effective implementation of various strategies that are geared towards reducing poverty and enhancing livelihood. Efficient and fair governments, institutions and organizations such as NGOs work and implement policies that aim at investing in the long-term interests of the people rather than plunder resources through corruption (Krugman & Wells, 2009).

Reducing family size

One other approach to reducing poverty is the use of both natural and artificial birth control methods to minimize and control the number of children one produces. In so doing, population growth is checked to reduce hardship and pressure on the limited resources at the national, community and household levels. Large family sizes call for high expenditure on various aspects of living especially on food, health and education. This then puts a lot of pressure on the household resources making the household unable to meet its basic needs(Schiller, 2008). Any effort at reducing the family size aims at reducing pressure on the family.

Provision of education, training and skills to the poor

Educating the poor couple, especially women, allows for reduced family size, a factor which is very important in reducing poverty. The portion of education pertaining to the variety of skills needed to build and maintain the infrastructure of a developing society including building trades, plumbing, electrician, well-drilling, farm and transport mechanical skills and others is clearly needed among a large number of individuals if the society is to move out of poverty or subsistence (UN, 2002). Educated and trained persons are better positioned than uneducated and untrained to manage their limited resources well to improve their livelihood system

Capital, infrastructure and technological development

Increases in productive capital have been noted to have significant effects on households' socio-economic growth and development. Human, physical and technological capital play important role in the processes that lead to improving livelihood conditions of the poor. A study by Krugman and Wells (2009) finds that, improving human capital, in terms of education and health, are needed for economic growth. According to them, deworming children costs less per child per year and reduces non-attendance from anaemia, illness and malnutrition. This, therefore, means parents could then save some money otherwise would have been used to take care of such situations for some pressing needs.

Good infrastructure, such as roads and information networks, helps market reforms to work. Cell phone technology such as mobile money transfer for instance brings the market to poor or rural sections. With necessary information, remote farmers will now be able to produce specific crops to sell to the buyers that bring the best price, hence gaining more cash to take care of their families.

Mukherji (2009) posits that improving water management is an effective way to help reduce poverty among farmers. With better water management, Mukherji indicates that farmers can improve productivity and potentially move beyond subsistence-level farming. During the Green Revolution of the 1960s and 1970s, for example, irrigation was found to be a key factor in unlocking Asia's agricultural potential and reducing poverty. Between 1961 and 2002, most irrigated areas around the world almost doubled as a result of governments' efforts to achieving food security, improving public welfare and generating economic growth. Access to irrigation provides families and farming households with opportunities to diversify their livelihood activities that have the potential of increasing their incomes and therefore reducing household poverty (Mukherji, 2009).

Migration

Many households in the rural area slack basic implements for farming and can neither expand the business nor increase production. Labour migration then becomes necessary and beneficial since it assists these poor households with some inputs. Remittances sent home cover expenses made on farming inputs such as land and some farm implements (Adepoju, 1985). Appleyard (1989) argues that, no matter how bad the migration process would be, the out-migrants or the emigrants would not return as the same persons to the same situation that they left. According to him, the money that the migrants remit while in cities or abroad would improve their families' financial situation as well as their positions in the village social order.

World Bank studies, based on household surveys conducted in the 1990s, suggest that international remittance receipts helped lower poverty by nearly 11% in Uganda, 6% in Bangladesh, and 5% in Ghana (Ratha, 2005). Migration can, thus, contribute to the reduction of poverty at the local and national levels, and to a reduction in the economic vulnerability of developing countries and homes (Jean-Philippe, 2004; 2005).

Apart from the remittances, GSS (1995) states that the acquisition of new ideas as well as skills definitely makes for the progress and development not only of the migrant's own family but also his community at large. Some migration theorists also believe that the departure of any household member, mostly the influential ones, forces other household members left behind to work harder since their fate will then be left in their own hands, especially where the migrants fail to send something home.

A study by Quayson and Adu-Bitherman (2015) revealed that, migration helped to improve the socio-economic conditions of rural migrant households in the Central Region of Ghana. The results from the study indicate that migrant households in the study district had had improvement in some areas by certain percentages; good food and dressing (31.1%), housing (23.0%), education (13.1%), household income (11.5%), household business (11.5%), agriculture (8.2%), health (1.6%), vehicle (7.8%), radio set (27.2%), tape recorder (35.9%), television (19.5%), and electricity (6.7%).

Microfinance

The use of microfinance has gained a lot of attention and continues to present to the rural poor as one of the best antipoverty tools to reduce rural poverty in order to improve livelihoods. Reports over the years from the Development Banking Community as well as from studies by some international and local NGOs strongly suggest that lower income families need a wide range of complementary financial services both for everyday life and for asset building purposes that have the potential of ending the poverty incidence and its related problems of the rural poor (Rutherford, 1999; Robinson, 2001; Obeng, 2011).

In all of these, it is important, therefore, to note that making microfinance services accessible to the rural poor presents to them a lot of the other strategies or opportunities such as creating employment and increasing productivity, empowering women, providing the poor with education, training and skills and many others that have the potential of weaning people of poverty. This study, therefore, focuses on the use of microfinance services to fight rural poverty in order to improve rural household livelihoods.

CHAPTER THREE

REVIEW OF LITERATURE ON MICROFINANCE ANDITS ROLE IN RURAL LIVELIHOODS IMPROVEMENT

Introduction

This chapter reviews literature on microfinance and rural livelihood improvement. Thus, the chapter reviews relevant literature on microfinance as a major tool to reducing rural poverty and improving rural household livelihoods. The review is done under the following headings: the concept of microfinance; history of microfinance; typology of microfinance institutions in Ghana; some major activities in the village banking/VSLA scheme; the role of microfinance in rural poverty reduction; effects of microfinance schemes at the individual household level; effects of demographic factors on microfinance and livelihood outcomes; criticisms and challenges to microfinance scheme operations; and the effects of public perception on the success of microfinance schemes.

The Concept of Microfinance

Providing the poor with access to financial services is one of the many ways to help increase their incomes and productivity (Obeng, 2011). Unfortunately, these essential services are missing in most rural communities and to the rural poor making their lives more unbearable.

Schreiner and Colombet (2001) define microfinance as the attempt to improve access to small deposits and small loans for poor households that have been neglected by the traditional banks. The purpose of microfinance programmes is to help the poor become self-employed and thus escape poverty. Otero (1999) defines microfinance as the provision of financial services to low-income poor and very poor self-employed people. These financial services, according to Ledgerwood (1999) generally include savings and credit but can also include other financial services such as insurance and payment services. Adu-Gyamfi and Ampofo (2014) citing Charitonenko and Campion, indicated that microfinance involves the provision of a broad range of financial services such as deposits, loans, payments services, money transfers, and insurance to the poor and low-income households and their farm or non-farm microenterprises.

Asiama and Osei (2007) define microfinance to encompass the provision of financial services and the management of small amount of money through a range of products and a system of intermediary functions that are targeted at low income clients. This, according to him, includes loans, savings, insurance, transfer services and other financial products and services. Microfinance, thus basically consists of providing financial services, including savings, microcredit, micro-insurance, micro-leasing and transfers in relatively small transactions designed to be accessible to microenterprises and low income households (Asiama & Osei, 2007; Appiah, 2011).

Microfinance, according to Wrenn (2007), involves the provision of financial services such as savings, loans and insurance to poor people, living in both urban and rural settings, who are unable to obtain such services from the formal financial sector. It is about making accessible to the poor those basic financial services that are capable of changing their lives and the household through economic growth.

Reports from various theorists and institutions such as Otero and Rhyne (1996); CGAP (2004); Marulanda and Otero (2005); and Valenzuela (2002), have indicated that microfinance services are not provided by only specialized microfinance institutions (MFIs) that belong to the ‘‘new world’’ of microenterprise financing, but also by a diverse group of state sponsored and cooperative institutions, particularly postal banks, who serve many poor clients along with a growing number of ‘downscaling’ commercial financial institutions (Copestake, 2007; Adu-Gyamfi & Ampofo, 2014).

The History of Microfinance Services

Otero (1999), Robinson (2001) and Wrenn (2007) indicate that microfinance has been relatively a new term in the field of development. According to them, the term first came to prominence in the 1970s. Prior to this period (between 1950s and 1970s), the provision of financial services by donors or governments was mainly in the form of subsidized rural credit programmes (Robinson, 2001). In line with this, Bouman (1977) earlier reported that microfinance has a long history that hinges on community groups’ credit functions largely channeled through trust-bonded mechanisms. Robinson (2001) and Wrenn (2007), assert that these old forms of making credit available to people often resulted in high loan defaults, high loses and an inability to reach poor rural households.

The history of microfinance, therefore, had its turning point in the 1980s. Within this period, microfinance institutions (MFIs) such as Grameen Bank and Bank Rakyat Indonesia (BRI) that brought innovation in village banking, began to show that they could provide small loans and savings services profitably on a large scale. These institutions received no continuing subsidies, they were commercially funded and fully sustainable, and could attain wide outreach to clients (Lakwo, 2006; Robinson, 2001; Wrenn, 2007).

IFAD (2001), as also cited in Lakwo (2006), indicates that microfinance actually gained its popularity by challenging the traditional formal banking approach's failure to respond to the multiplicity of unmet financial demands by the poor, a move that represented a turning point in the global microfinance landscape by setting a foundation for pluralistic microfinance services such as micro-credit, micro-saving, micro-insurance, and micro-leasing supported by non-financial services.

In the 1990s, microfinance saw an accelerated growth as the number of microfinance institutions kept increasing and an increased emphasis on reaching scale (Robinson, 2001; Lakwo, 2006). This period, thus, saw the expansion of microfinance as both a replacement of and a complementary service to commercial banking with a typical characteristic of proximity to clients, speed and flexibilities of services, hidden transaction costs, diversity of services and products, and mutual reciprocity (Lakwo, 2006). Dichter (1999) referred to the 1990s as "the microfinance decade". Microfinance at this time, had turned into an industry with high growth in microcredit institutions resulting in change of attention from just the provision of credit to the poor (microcredit), to the provision of other financial services such as savings and pensions. At this time, it became clear that the poor had a great demand for these other services to make his life better (Robinson, 2001).

Wrenn (2007) reports that the importance of microfinance in the field of development was reinforced with the launch of the Microcredit Summit in

1997. The 2005 Microcredit Summit as reported in Wrenn (2007) aimed at reaching 175 million of the world's poorest families, especially the women of those families, with credit for the self-employed and other financial and business services, by the end of 2015. In 2005, the United Nations declared 2005 as the International Year of Microcredit (Wrenn, 2007).

In Ghana, the realization that the traditional banking system was unable to lend to poor rural people who did not have collateral security necessary to access loans from such banks led to the introduction of the concept of rural banking in Ghana in 1976 to enable the rural people have access to financial services (Adu-Gyamfi & Ampofo, 2014). The first rural bank in Ghana was established in 1976 at Agona Nyakrom in the Central Region. There are presently quite a number of rural banks in Ghana with the prime aim of delivering tailored financial services in the form of microfinance to the communities in which they operate. They mobilize small savings from farmers, market women, artisans, mechanics, fishermen and other petty traders and then give them small and, mostly, unsecured loans (Adu-Gyamfi & Ampofo, 2014).

Typology of Microfinance Institutions in Ghana

Microfinance institutions around the world have continued to multiply in number and in operations. Various microfinance models and areas of operations have evolved and continue to evolve since the concept was first introduced. In spite of its diversity and multiplicity, microfinance institutions (MFIs) have been classified by some theorists and institutions into three main categories based on how they are regulated. These include formal microfinance institutions that are regulated by financial authorities of the state or its appointed agent; semi-formal microfinance institutions which are under the control of their registering authorities; and informal microfinance institutions that are regulated by customary laws and peer pressure (Bouman & Hospes, 1994; IFAD, 2001; Lakwo, 2006). Currently, however, Bank of Ghana is required to license and regulate all the MFIs in the country.

Adu-Gyamfi and Ampofo (2014) classify formal microfinance institutions to include rural and community banks (usually considered as banks with microfinance activities) and savings and loans companies. The semi-formal microfinance institutions, according to them, include non-governmental organizations (NGOs) that offer financial services to the poor such as credit union institutions. The informal microfinance institutions, on the other hand, are defined to include the "susu" collectors, ROSCAs, ASCAs, church groups, private registered and unregistered money lenders and others (Adu-Gyamfi & Ampofo, 2014).

Staschen (1999), and as also reported in Lakwo (2006), provides a classification to microfinance institutions based on the source of funds of such institutions. These he classifies into three as: NGOs that use other peoples' money (grants and concessionary loans from donors) to fund their social goal-oriented lending business; community savings and credit groups and village banks that use members' money to grant loans to members exclusively; and lastly, government credit institutions that use public money to finance their lending business (Staschen, 1999; Lakwo, 2006). In Ghana, some governmental institutions such as the Microfinance and Small Loans Scheme (MASLOC), Social Investment Fund (SIF), and the Community-Based Rural

Development Programme (CBRDP) offer microfinance services to the poor especially those living in the rural areas (Adu-Gyamfi & Ampofo, 2014).

Some Major Activities in the Village Banking /VSLA Model

This section looks at the main activities that are involved in the operations of village banking model as apply in the case of the Plan Ghana's VSLA scheme. The section, among other things, looks at: the selection of beneficiaries/membership; training of scheme beneficiaries, and accessibility and usage of money from the scheme.

Selection of scheme beneficiaries/membership

Selecting the right persons as beneficiaries of microfinance services increases the probability of such schemes becoming successful and having the right impact on the beneficiaries. It is, therefore, important for any serious microfinance service provider to establish criteria and benchmarks for selecting individuals who actual qualify (usually from low-income families) to be part in order to ensure right impact.

Sex is a very important factor to consider when conducting research into micro financing. Women are noted to be the highly selected gender (Ferka, 2011). In 2006, a Community and Household Survey on Food Security in Ethiopia reported poverty, food insecurity, households with more elderly, disabled, female, or orphaned members, or those who were resettled or affected by drought as the major selection criteria for microfinance interventions (Coll-Black, Gilligan, Hoddinott, Kumar, Taffesse & Wiseman, 2011).

Ghana Poverty Reduction Programme and Social Investment Fund, according to Wrenn (2007) and Bank of Ghana (2007), require that for an individual to have access to loan and other microfinance services, he or she must meet some eligibility criteria. The target beneficiaries must be the productive poor that operate at very low levels of subsistence and productivity and or are under employed; they must be potentially productive poor such as the youth who may have motivation and energy but do not have opportunities and skills; they must be the most vulnerable groups within the poor majority especially women and handicapped persons. The economic activities that are usually targeted at in the selection of microfinance beneficiaries include farming, fishing, agricultural marketing/food security, cottage enterprises, trading and micro-services. The criteria also take into consideration the scale of operation, the size of loans, and the location of the target beneficiaries (Wrenn, 2007; Bank of Ghana, 2007).

The level of education of an individual influences his/her ability to function effectively in a particular sector of the economy. The usefulness, or otherwise of microfinance would depend on the level of education of the individuals involved (Ferka, 2011). Asiama and Osei (2007) report that micro enterprises which usually depend on microfinances are dominated by people with little or no education.

In the case of the VSLA scheme, members of the scheme are in groups of between 10-30 people who have similar thinking, similar socio-economic characteristics and with common needs from a particular community. Members are mostly self-selected membership is usually open to all the people in the community who are willing and have the capacity to commit little of their household resources into savings. The number of persons in each group is, however, limited, ranging between 10 and 30 (BoC, 2010).

Members of the VSLA groups are required to have the following qualities or criteria: 1) Should know each other and be from similar socio-economic background; 2) Should have a reputation for honesty and reliability; 3) Should have a cooperative personality; 4) Should be able to purchase at least one share each week; 5) Should be able to take loan and repay it on time; 6) Should be able to attend meetings and training sessions regularly and on time; and 7) Should obey and follow all rules and regulations of the school (BoC, 2010).

Training of beneficiaries on the scheme

UNHCR (2015) indicates that beneficiaries of microfinance schemes often require preparatory programmes before being able to actively participate in and benefit from such schemes. These preparatory programmes, according to UNHCR (2015), involve assessment, training and capacity building such as basic financial education or business training. Information from the VSLA's Community Volunteer Training Manual (BoC, 2010) indicate that the VSLA beneficiaries are trained by Field Officers who are salaried programme staff of Plan Ghana and Microfin Plus, or by Community Volunteers who are community members and are usually members of the VSLA groups identified to have the skills and the knowledge to train the other group members or VSLA groups (BoC, 2010).

The training activities that are organized for microfinance beneficiaries are in most cases, geared towards building the capacities of the beneficiaries to be able to operate their businesses efficiently and manage their livelihood strategies to the best of their capabilities. In so doing, their livelihood conditions will be improved and, therefore, will be able to pay back the loans or credits collected. According to Karikari (2011), such training activities are sometimes organized also to ensure that the right framework and systems are put in place by both the institution providing the scheme and the beneficiaries to ensure the success of the scheme.

Karikari (2011), with reference to Poudyal, asserted that special complementary services to microfinance beneficiaries such as training, technical backstopping and insurances are required to avert the risks of the beneficiaries if such schemes are to reach the lowest strata of poverty and to improve the poor's livelihood.

Datar, Epstein and Yuthus (2008) note that microfinance institutions must provide far greater services than what the traditional financial institutions do. According to them, microfinance schemes must offer not only financial product and services, but also financial education, management training, value chain support and social services. They as well should track how their clients use their loans and how they allocate their profits.

Findings from a case study by Sievers and Tomlinson (2006) which was also reported in Karikari (2011) on a microfinance institution in Bangladesh (BRAC) that provides microfinance and a wide range of other social and business development services revealed that clients had their livelihood improved from the microfinance activities. Again, the clients could easily pay 100 percent of the money collected on time because of additional profit generated due to additional support given by the institution. This, however, contradicts the argument made by Karlan and Valdivia (2006) in the same year that, apart from losing focus on lending and savings activities, providing detailed business advice may lead to higher default if the borrower or the beneficiary perceives the lender or the institution as partially responsible for any business or livelihood strategy changes that do not succeed.

Accessibility and usage of money from the scheme

Access to microcredit has remained a crucial factor in the life of the rural poor. Studies on financial intermediation and poverty reduction have revealed that development of the financial sector contributes to economic growth and thereby to poverty reduction. Providing the poor with access to credit is, therefore, the first step to ensuring that all the other poverty reduction strategies that aim at improving livelihood work to achieve their intended goal (Holden & Prokopenko, 2001).

By facilitating and promoting access to financial services at affordable rates, microfinance helps protect and build the financial capital of individuals and households, and also helps to expand livelihoods opportunities in order to support socio-economic wellbeing of the people. Access to credit at the village bank is linked to savings. The size of loan obtained and its accessibility to an individual is influenced by the amount of savings mobilized by the village bank from such individual member. In the original village banking model, members were required to save 20 percent of their current loan each cycle. Their next loan can then be as much as their previous loan plus the accumulated savings (Grameen Bank, 2000; Wrenn, 2007).

The rigidity of the lending procedures in micro financing institutions as evident by the high interest rates have been a cause of concern among microfinance practitioners, especially those in the village banking sector. Most MFIs in Ghana charge between 5-6 per cent interest rates per month on loans. Thus, in a year, they charge between 60-72 per cent interest rates on loans to customers, a range that he describes as far above what the traditional financial institutions charge which ranges between 30-40 per cent. Practitioners in the field of microfinance, however, are now seeking ways to develop new products that would introduce more flexibility into lending procedures (Wrenn, 2007).

With village banking, members can deposit their savings in the village banks where it is more convenient and easy to access than many other ways of savings, such as in formal banks. When the village bank is well-managed, the members' savings are kept safe, and they receive interest on them. Savings can usually be deposited at regular intervals (for example, weekly or monthly, depending on the village bank's policies). In most village banks, each member can decide how much he/she wants to deposit, and may save different amounts each month depending on his/her financial situation (Deelen & Majurin, 2008).

Most village banks use the savings as loan funds to issue loans to village bank members. Those who receive these loans pay interest on them, which increases the village bank's income, creating more opportunities for members to access high sums of money or credit (Deelen & Majurin, 2008). Some village banks may choose to put the collective savings in a formal bank where interest will be paid on them, and this will go back into the village bank's fund thereby increasing the members' chances of getting access to reasonable credit and profit. Formal banks are normally used when there is no pressure on the association's funds in terms of demand for loans or credit from the members. The demand for loans or credit may vary according to the season or other factors affecting the members' spending needs (Deelen & Majurin, 2008).

With regards to the VSLA scheme, the scheme members are thought to; save money regularly, take loans from the savings, and share out the savings and profits each year according to each person's contributions. Members save through the purchase of between 1-5 shares every meeting. The share value is decided by the group at the start of each cycle and cannot be varied during the cycle. At each meeting, all members are giving the equal right to purchase between 1-5 shares from which they can access loan and other benefits. Every member has a passbook where share purchases are recorded using a rubber stamp (BoC, 2010).

The loan fund comprises of share money and loan profits (from service charges). The service charge for loans is determined by members at the beginning of the cycle. All members have the right to borrow up to a maximum of three times their share. Loans are taken and repaid once every four weeks. All loans are meant to be repaid within a maximum of twelve weeks during the first cycle. In addition to the loan fund, members can choose to have a Social Fund to use for small grants or interest free loans to members when they are in distress (BoC, 2010)

The Role of Microfinance in Reducing Poverty to Improve Rural Livelihoods

Developing nations all over the world have adopted microfinance programmes as significant poverty reduction strategies to safe their dying poor. Mihyo (1995) indicates that microfinance has grown to become very critical and strategic in poverty reduction strategies because of the recognition worldwide that conventional lending institutions do not provide avenues for the advancement of small and micro financial intermediation for microenterprises and poor non-collateralized rural dwellers.

Microfinance has thus become an important and a potential tool for poverty alleviation and livelihood enhancement across the world. It is widely recognized by development strategists and practitioners that microfinance services enable the poor to leverage their initiative and to accelerate the process of building incomes, assets and economic security for themselves and their households (Adu-Gyamfi & Ampofo, 2014). Microfinance programmes give low-income individuals access to capital, mostly liquid capital, that may be utilized in different income-generating strategies and activities, thereby helping them create businesses and lift their families out of the detriment of limited income. Microfinance thus, creates access to productive capital for the poor and this, together with human, material and social capital strengthens people's dignity and enables them move out of poverty (Otero, 1999; Wrenn, 2007).

In expanding on the importance of microfinance to rural development, UNCDF (2004) states three key roles that microfinance plays in the development process of the poor. That: it helps poor households meet basic needs and protects them against risks; it is associated with improvements in household economic welfare; and it helps to empower women and the vulnerable by supporting them in their economic participation and therefore promoting gender equity.

Microfinance is seen by some experts and institutions as unique among development interventions; in that, it can deliver social benefits on an ongoing, permanent and on a large scale basis (Littlefield *et al.*, 2003; Simanowitz & Brody, 2004; IMF (2005). Citing various case studies on some microfinance projects across the globe (in India, Indonesia, Zimbabwe, Bangladesh and Uganda) as basis, Littlefield *et al.* (2003) indicate that microfinance has played very important role in eradicating poverty, promoting education, improving health and empowering women and the vulnerable in the society. Report on SHARE project, a microfinance project in India, for instance, showed that three-quarters of the beneficiaries realized significant improvements in their economic well-being, making half of the beneficiaries graduating out of poverty (Littlefield *et al.*, 2003).

Mayoux (2001), while admitting that microfinance has much potentials, states that, the main effects of microfinance on poverty have been that: the credit provided make a significant contribution to increase incomes of the better-off poor, including women; and that the microfinance services provided contribute to the smoothing out of peaks and troughs in income and expenditure thereby enabling the poor to cope with unpredictable shocks and emergencies.

Obeng (2011) posits that when microfinance is targeted at women who constitute the majority of the poor in the society, it will help to reduce poverty by creating wealth which leads to an increase in the levels of incomes of the vulnerable. With high levels of income, women are empowered to cater for themselves and children, and to make decisions that affect their household, educate their children and engage in income generating activities.

Many microfinance institutions in Ghana, including Sinapi Aba Trust, Opportunity International Savings and Loans Company Ltd and HFC Boafo Microfinance Services Ltd, according to Obeng (2011), encourage their clients to develop a socio-economic agenda covering matters such as health, nutrition and education of children. Obeng (2011) further indicates that even where this emphasis is not explicit, increased empowerment and higher income for clients as a result of their participation in microfinance programmes will propel them to adopt other socio-economic agenda.

Effects of Microfinance Services at the Household Level

This section reviews literature on studies that have been carried out to assess the impact of microfinance schemes on some primary measures of household welfare. Among other things, the section reviews some empirical studies on the impacts of microfinance schemes on both the monetary (income) and non-monetary (household food security, education, health care, housing, and on other vulnerability conditions) measures of the individual households' livelihoods.

Johnson and Rogaly (1997) state that NGOs aiming at reducing poverty need to assess the impact of their services on the beneficiary's livelihoods. They argue that in addressing the question of the impact of microfinance programmes, NGOs must go beyond analysing quantitative data that capture information such as the number of users and the amount of loans disbursed to understanding how their projects are impacting on beneficiaries' livelihoods. Johnson and Rogaly (1997) further indicate that the provision of microfinance can give poor people the means to protect their livelihoods, especially at the household level, against shocks as well as to build up and diversify their livelihood activities.

Datar *et al.* (2008) allude that for effective determination of the impacts of microfinance interventions, MFIs, development activists and researchers alike should be able to monitor poverty alleviation in relation to access to such interventions using measures of not just income, but also health, nutrition, housing and educational status of the beneficiary households.

Effects of microfinance schemes on household income

Hulme and Mosley (1996) in a comprehensive study on the use of microfinance to combat poverty, argue that well-designed microfinance programmes can improve the incomes of the poor households and can move them out of poverty. They further indicate that the impact of a loan on a borrower's income is related to the level of his or her income. Usually, those with higher incomes have a greater range of investment opportunities, therefore, making credit schemes having the potential of benefiting the "middle and upper poor than at the lower level". Hulme and Mosley (1996), however, indicate that providing credits to very poor households through microfinance projects help them to raise their incomes and assets.

A study involving sixteen different microfinance institutions by Robinson (2001) from all over the world revealed that having access to microfinance services led to an enhancement in the quality of life of clients. The study revealed that access to microfinance services had increased the poor beneficiaries' self-confidence, and had helped them diversify their livelihood security strategies, hence increasing their income (Robinson, 2001; Wrenn, 2007; Ferka, 2011).

In 2002, FINRURAL, a microfinance networking organization in Bolivia, carried out impact assessments on eight of its partner microfinance institutions that focus on economic and social impacts at an individual, household and community level on both clients and non-clients. The result showed many positive impacts on income for the less poor and negative impacts for the poorer clients. This unusual finding was as a result of the fact that poorer clients are more risk adverse and less likely to invest in fixed capital and so are more vulnerable to having to sell productive assets in the event of a shock (Marconi &Mosley, 2004; Wrenn, 2007; Ferka, 2011). Result from a study by ADB (2007) on the impact of microfinance on some primary measures of household welfare in Bangladesh showed positive impact on per capita income. Analysis from the study indicated that the programme increased beneficiary households' income substantially.

Effects of microfinance schemes on non-monetary livelihood outcomes

Ayadi, El Lahga and Chtioui (2007) conceptualize that using only income or expenditure as an indicator to measure the state of a household covers a limited aspect of living standard and is no longer unanimously accepted as the only poverty analysis framework in view of many conceptual and technical problems. The widely shared view now is that other aspects of living conditions and access to basic services (such as health, nutrition, education and housing) and the social context of the individual or household need to be taken into account.

Robinson's study in 2001 involving sixteen different microfinance institutions revealed that health care and education were found to be the two key areas of non-financial impact of the microfinance services at the household level (Wrenn, 2007; Ferka, 2011).Wright (2000), using results from certain studies conducted on the impact of microfinance interventions on health and education, reports that nutritional indicators in the households seem to improve where microfinance institutions are operational.

In a similar submission, Littlefield, *et al.* (2003) report that various studies on the impact of microfinance on health status of the beneficiaries have shown that households of microfinance clients appear to have better nutrition, health practices and health education than their non-client household counterparts. Among the examples Littlefield *et al.* (2003) gave is that of FOCCAS, a Ugandan Microfinance institution. The clients of FOCCAS were given health care instructions on breastfeeding and family planning alongside the credit provided. After the process, these clients were seen to have had much better health care practices than non-clients. Ninety five per cent of the clients engaged in improved health and nutrition practices for their children, as opposed to 72 per cent for non-clients (Littlefield *et al.*, 2003; Wrenn, 2007).

Littlefield *et al.* (2003) and Ferka (2011) indicate that microfinance interventions have been shown to have a positive impact on the education of clients' children because one of the first things that poor people do with new income from micro-enterprise activities are to invest in their children's education. Studies have shown that children of microfinance clients are more likely to go to school and stay longer in school than for the children of their non-client counterparts (Ferka, 2011).Again, in the study involving FOCCAS in Uganda by Littlefield *et al.* (2003), client households were found to be investing more in education than non-client households.

Celino (2014) asserts that access to microfinance services has an impact on family's education. Celino (2014) further indicates that the contribution of microcredit on the formation of human capital through education has been essential on the households that participate in the microfinance services. The ADB (2007) report on the impact of microfinance on some primary measures of household welfare in Bangladesh, however, did not show any significant difference in the education and health variables between the households that had access to microcredit and those that did not. This result is in line with the results reported by Coleman (1999) for education and by Montgomery (2005) for health.

Noponen (2005) reported on a three-year study carried out on 906 clients benefiting under projects from ASA microfinance institution that work with 60,000 rural women in Tamil Nadu, India. According to Noponen (2005), the study found that the project implemented by the ASA microfinance institution had had many positive impacts on the clients' livelihood. It was found to be having a "positive impact on livelihoods, social status, treatment in the home and community, living conditions and consumption standards". Compared with the new members of the project, the long-term members were found to be more likely to live in tile roofed and concrete houses, to have a higher percentage of their children in school, to have lower incidence of child labour, to be the largest income provider or joint provider in the home, and to make decisions on their own as regards major purchases. Clients were also found to have significant increases in ownership of livelihood assets such as livestock, equipment and land (Noponen, 2005; Ferka, 2011).

Chowdhury and Bhuiya in 2004 undertook an impact assessment study to assess the impact of poverty alleviation programme by a microfinance institution in Bangladesh (BRAC) with specific references to "human well-being". The programme, as also reported in Ferka (2011), included the provision of microfinance and training of clients on human and legal rights. The study examined seven dimensions of human well-being and concluded that the programme had led to better child survival rates, higher nutritional status, improvement in the basic level of education, and increased networking in the community. Children of BRAC clients, according to the study, suffered from far less protein-energy malnutrition than children of non-members, and the educational performance of BRAC members' children was also found to be higher than that of children in non-BRAC households (Chowdhury & Bhuiya, 2004; Ferka, 2011).

Again, BRAC member households spent significantly more on consumption of food items than poor non-BRAC members did. Per capita calorie intake was also shown to be significantly higher with the BRAC member households than non-BRAC members. From these results and more, it is concluded that microfinance schemes can, and indeed they are really having very positive and diverse impacts on their beneficiaries.

Effects of Demographic Factors on Microfinance and Livelihood Outcomes

Household demographic characteristics have proven in many studies to have significant impact on microfinance services and household livelihood outcomes. Age, sex and educational level of microfinance beneficiaries have shown to influence livelihood outcomes, hence, its impact on the livelihood conditions of households. Like age and sex, one's interaction with others and access to poverty reduction interventions such as microfinance are functions of marital status of the individual (Appiah, 2011).

Household size is considered by some theorists and researchers to be one of the possible reasons to explain the level of household consumption on food and non-food materials. Schiller (2008) indicates that an increase in family size has an important implication for a family's financial need and security. An increase in family size will require more demand for household goods and services such as an increase in demand for financial resources. Schiller (2008) further indicates that an increase in family size can be associated with an increased in the family poverty level. For instance, report indicates that an increase in the number of children from one to five can triple the family poverty level (Kwadzo, 2010; Schiller, 2008). Households with greater number of members are likely to require higher expenditure for basic needs and per capita household income distribution and, therefore, would have lower willingness to obtain some microfinance services. These households, according to Appiah (2011), would rather prefer to spend their meager income for their daily expenses and needs than to be contingent on microfinance.

On the other hand, Kwadzo (2010) and Schiller (2008) report that total family income is likely to increase with family size (especially families whose members are grown) as more members of the family take up employment in the labour market. Household size, hence, determines the willingness of the household members to participate in microfinance schemes considering their expectations on risks and greater vulnerability to shocks in income and consumption.

Ferka (2011) alludes that the usefulness of microfinance intervention may depend on the level of education of the individual involved. In examining the impact of microfinance intervention on its beneficiaries, therefore, the level of education of those beneficiaries is an important variable that must be considered. Asiama and Osei (2007), also cited in Appiah (2011), report that micro enterprises which, in most cases, are funded through microfinance services are dominated by people with little or no education.

However, this report (Asiama & Osei, 2007), seems to support the general assertion that a great number of people who engage in micro businesses are basically illiterates or have low level of education contradicts the view expressed by Celino in 2014. According to Celino (2014), educated people are more willing and are likely to utilize microfinance services than those who are less educated. Individuals who do not have the privilege to acquire proper education have been found to be afraid in engaging on microfinance services because of their lack of background knowledge in technology where microfinance institutions are in lined with. Services that are provided by microfinance institutions, according to Celino (2014), seem to be too complicated for the less educated persons to handle unlike with people who have proper education.

Gibbs (2008) argues that education has a substantial effect on the willingness of individuals or households to engage in microfinance services. The level of education, therefore, to some extent determines the wiliness of an individual either to participate or not to participate in microfinance activities as well as determining the kind of micro enterprise or livelihood activity that one engages in and its possible likelihood outcomes.

A study by ADB (2007) on the impact of microfinance on some primary measures of household welfare in Bangladesh showed some relationship between the beneficiary households' demographic characteristics and the outcomes of their various livelihood strategies. The study revealed that impact on per capita income, per capita expenditure, and per capita food expenditure declines with increase in age. Another important result is that per capita income, per capita expenditure, savings, and per capita food expenditure was positively affected when the gender of the reference person (or head) of the household was female.

In terms of education, the effect on educated households was found to be significantly different from those without education, especially when the reference persons had college education. Positive impact was found on per capita income and per capita expenditure. The years the person lived in the village did not affect any of the dependent variables significantly. Household size, on the other hand, had a positive impact on per capita income, per capita expenditure, and per capita food expenditure (ADB, 2007).

Employment or occupational status of households have been identified to influence the level of engagement in microfinance services. It has been indicated that, people who are employed tend to be more active on engaging microfinance services, especially micro-savings, which aim at assisting low income families on storing their income on microfinance institutions for future needs. On the other hand, the majority of the poor households who lack salaried employment do not have access to microfinance services (Celino, 2014).

Criticisms and Challenges in Microfinance Services

Wright (2000) states that much of the criticisms about the operations of microfinance institutions stem from arguments that most microfinance projects fail to reach the poorest; or fail to provide additional services desperately needed by the poor; which in most cases, tend to have limited effect on the poor's income. Wright (2000) further indicates that many development practitioners do not only find microfinance inadequate, but often find the few available actually divert funding that are meant for more pressing interventions such as health and education. Navajas *et al.* (2000) assert that there is a danger that microfinance projects may siphon funds from other projects that might help the poor more.

Hulme and Mosley (1996), while acknowledging the role that microfinance can play in helping to reduce poverty, concluded from their studies on microfinance that most contemporary microfinance schemes are less effective than they ought to be. In some cases, the poorest people are made worse-off by microfinance. Rogaly (1996) indicates that microfinance institutions encourage a single-sector approach to the allocation of resources to fight poverty making microcredit sometimes irrelevant to the poorest people.

Ghate (1992) asserts that even though informal lenders play an important role in the lives of many low-income persons who lack collateral and other borrowing requirements; high interest rates charges on such facilities inhibit poor rural households from investing in productive income-increasing activities.

Rahman (2004) indicated that, in order to increase access to microfinance services for poor households, some major constraints on financing microfinance would have to be addressed. Rahman, as also cited in Karikari (2011), goes on to enumerate four major constraints that according to him, militate against microfinance services in their quest to put smiles on the faces of the poor. These, he mentions as; inadequate institutional capacity, an unfavourable environment, inadequate capital for small and emerging MFIs, and inadequate financial infrastructure. Poor road network, poor power and water supply, and inadequate and poor communication facilities in both rural and some urban communities have continued to remain great challenges and have turned to increase the costs of doing business, including the provision of microfinance services to the poor (Karikari, 2011).

Providing financial services to the rural poor population, according to Karikari (2011), has always constituted a challenge to governments and other institutions due to the inherent difficulties associated with providing such services to rural clientele. According to him, this has always been the case because, the rural areas have often been characterized by low population density, isolated markets, seasonality, and highly covariant risk such as widespread regional crop failures and commodity price fluctuations.

Kuroda (as cited in Karikari, 2011), states that one of the biggest challenges facing microfinance all over, is the enabling policy environment. This, includes interest rate ceiling on small loans by some banks where those that are not served and the underserved markets for financial services for the poor still remains a great issue. Some countries have also shown a tendency to introduce interest rate ceilings for microcredit, thus increasing policy risks and making the investment climate less attractive (Karikari, 2011).

One criticism of the operations of microfinance institutions, especially with peer group self-selection models is that most of them prefer working with the moderately poor at the expense of the poorest of the poor that such schemes are actually meant for. IMF (2005), indicates that the very few MFIs that have become self-sustainable tend to be larger and more efficient, and so tend not to target the very poor. To these institutions, targeting the less poor leads to increases in loan size and improved efficiency indicators, as against focusing on the poorest which tend to remain dependent on donor funds (IMF, 2005; Wrenn, 2007).

Simanowitz (2001) highlights a number of factors that may lead to the marginalization of the poorest from reaching microfinance services, which lessen the impact that microfinance schemes have on poverty. These, Simanowitz lists as; self-exclusion, exclusion by other members, exclusion by MFI staff, and exclusion by design or model. Rogaly (1996), also cited in Dichter (1999), argues that most microfinance institutions in their project designs fail to meet the needs of the very poor and destitute, who do have a strong demand for microfinance services, especially for savings. Again, some governments operate highly subsidized microcredit programmes through state-owned financial and non-financial institutions which in most cases fail to adequately deliver financial services to the actual poor. In most cases, these programmes are politically and ethnically influenced and therefore unable to reach the very poor people they are meant for (Karikari, 2011).

Johnson and Rogaly (1997), however, state that some features of some savings and credit schemes make it possible to meet the needs of the very poor. In relation to reaching those living in extreme poverty, Littlefield *et al.* (2003) gave an example of a study consisting of 62 microfinance institutions that have reached full financial self-sufficiency with 18 microfinance institutions that targeted what they defined as "the poorest clients" on average, having better profit than the others. This, according to them, shows that when properly managed, programmes that target the very poor can become financially sustainable. The onus, therefore, is on other microfinance institutions to develop products and services that will meet the needs of the very poorest if the social mission of microfinance is to be achieved.

Again, many poor people do not see microfinance projects as being relevant or beneficial to them. In group-based lending for instance, there can often be an incentive for stronger people in the community to exclude the very poor, especially when group guarantee systems are in place. Loan officers may as well have incentives to exclude the poorest if they see them as problematic, as increasing their workload or impacting on their sustainability targets.

Karikari (2011) identifies transaction costs and loan repayment as critical challenges in microfinance services. Reducing transaction costs will have a positive impact on both the supply and the demand for microfinance services, creating a win-win situation for all the parties involved (Karikari, 2011). Stiglitz and Weiss (1981) identified high interest rates on loans as one of the major reasons responsible for most loan repayment problems in microfinance services. According to them, high interest rates lead to adverse selection of loan seekers and this affects loan repayment greatly. High interest rates on loans from microfinance institutions sometimes put borrowers in a situation where they may want to use the loan collected to settle previous loans rather than financing working capital or investment, hence making the borrowers unable to develop themselves and their families.

Poor monitoring and supervision of services from microfinance schemes have been reported by many studies as serious challenges to microfinance effectiveness. In Ghana, as in other African countries, there have been evidences of poor supervision and monitoring by financial institutions which have immensely affected the effectiveness of microfinance schemes in improving livelihood (Aryeetey *et al.*, 1994; Karikari, 2011).

Loan misapplication and its consequences for loan repayment have as well been identified by several authors and researchers as a challenge to microfinance services. Delay in the release of funds to borrowers is also reported in studies as a major contributing factor to poor loan repayment, thereby limiting the chances of microfinance schemes becoming relevant to both the borrower and the institution (Karikari, 2011).

Effect of Public Perception on the Success of Microfinance Services

Roberts (1996) defines perception as a process through which sensations are interpreted using knowledge and understanding of the world, so that they become meaningful experiences. According to Buadi (2008), perception is a personal inclination to disregard some things, emphasizes others and put meaning together in one's own way. Perception is therefore defined to mean individuals' own feeling and interpretation to issues based on the available information, knowledge and understanding of the issue at hand that position them to either accept or reject it.

People's perception about the effectiveness or otherwise of a project plays very important role in its participation, adoption and use. Hence, the kind of perception people have on the operations of microfinance schemes in their quest to improving the poor persons' livelihood affects how these people would respond, adopt and commit to such schemes and how they would incorporate them into their livelihood systems (Gibson, 1969; Buadi, 2008). Gibson (1969) posits that perception guides the behaviour of persons: what people perceive determines what they will do after that. Appropriate and accurate knowledge about the operations of microfinance schemes will, therefore, help people to modify their behaviour to match their beliefs and feelings about such schemes.

Conclusion

Developing nations all over the world have adopted microfinance programmes as significant livelihood enhancement programmes to reduce poverty in order to safe their dying poor. Mihyo (1995) indicates that microfinance has grown to become very critical and strategic in poverty reduction strategies because of the recognition worldwide that conventional lending institutions do not provide avenues for the advancement of small and micro financial intermediation for micro enterprises and poor non collateralized rural dwellers.

Microfinance has thus become a significant tool for poverty alleviation and livelihoods enhancement across the world. It is widely recognized by development strategists and practitioners that microfinance services enable the poor to leverage their initiative and to accelerate the process of building incomes, assets and economic security for themselves and their households (Adu-Gyamfi & Ampofo, 2014).

In order to maximize the benefits that microfinance services bring to the beneficiaries, several models have been developed and used by the actors in the field. Again, in assessing the impact of microfinance schemes at the national level through to the household and individual levels, several research studies have been conducted. Unfortunately, these studies have produced mist reports leading to multiple and divergent opinions that have created diverse perceptions in the minds of both the beneficiaries of the schemes and the general public. The perceptions out there and the actual impact of microfinance services on rural people's livelihoods need to be tackled with all the seriousness it deserves.

CHAPTER FOUR

SUSTAINABLE LIVELIHOODS CONCEPTUAL FRAMEWORK, MICROFINANCE MODELS AND CONCEPTUAL FRAMEWORK OF THE STUDY

Introduction

This chapter reviews a livelihood framework called 'Sustainable Livelihoods Conceptual Framework' which was originally developed and used by some institutions and agencies such as UK's Department for International Development (DFID) as a technique for assessing and analysing rural livelihoods. The chapter again reviews some models of microfinance services as well as a review on a microfinance framework known as 'Microfinance and the Household Economic Portfolio Framework which was compiled from Zeller (1995); Scoones (1998); and AIMS (2001) by Nghiem in 2004. The last part of the chapter presents the conceptual framework that was developed for this study.

Sustainable Livelihoods Conceptual Framework

Communities and households are complex and, therefore, can respond in diverse ways to interventions from various institutions (Easterly, 2006; Scott, 1998). The challenge to researchers and development activists is how to assess the impacts or the likelihood of the success of interventions provided by institutions to individual communities or households using appropriate techniques that employ all the available measures (Bharwani, 2006). Attempts at measuring the effectiveness and efficiency of projects and interventions have been aided by the development of some specific conventional indicators that strive to capture a particular circumstance, situation or condition.

Evaluating these efforts in recent times, however, has meant looking beyond the use of conventional quantitative indicators to more qualitative ones that do not only use monetary indicators but also employ other qualitative measures that provide a holistic definition of what a livelihood is actually about. One tool that has proven to providing a good measure of rural livelihood and has been used by various investigators in various livelihood studies is the Sustainable Livelihoods (SL) Concept (Carter & Barrett, 2006; Krantz, 2001; Carney, 1999; DFID, 1999; Scoones, 1998).

The concept of sustainable livelihood is an attempt to go beyond the conventional definitions and approaches to poverty eradication. The conventional approaches to eradicating poverty were found to be too narrow since they focus only on certain aspects or manifestations of poverty, such as low income. This does not consider other vital aspects of poverty such as vulnerability and social exclusion. This is what the sustainable livelihood concept does by recognizing and paying more attention to the various factors and processes which either constrain or enhance poor people's ability to make a living in an economically, ecologically, and socially sustainable manner. The sustainable livelihoods concept, thus, offers a more coherent and integrated approach to poverty (Krantz, 2001).

The Sustainable Livelihoods Conceptual Framework is a particular form of livelihoods analysis that has been developed and used by a growing number of research and applied development organizations. Among them are UK's Department for International Development (DFID), the United Nations

Development Programme (UNDP), as well as some non-governmental organizations (NGOs) such as CARE and Oxfam (Carney, 1999; DFID, 1997; 1999; Adato & Meinzen-Dick, 2002).

This framework is an asset-based poverty and vulnerability analytical tool. In its simplest form, the framework views people as operating in a context of vulnerability. Within this context, the people have access to certain assets or poverty-reducing interventions. These assets gain their meaning and value through the prevailing social, institutional, and organizational environment. This environment also influences the livelihood strategies - ways of combining and using assets - that are open to people in pursuit of beneficial livelihood outcomes that meet their own livelihood objectives (DFID, 1999; Carter & Barrett, 2006).

Adato and Meinzen-Dick (2002) indicate that the sustainable livelihoods conceptual framework is primarily a framework for analyzing causes of poverty, peoples' access to resources and their diverse livelihoods activities, and relationship between relevant factors at micro, intermediate, and macro levels. One feature of the sustainable livelihoods framework is that it looks at more aspects of people's lives than only how many people live on a purchasing power of $1.00 a day or how many households consume less than 2,000 calories per person per day. A second key feature of the framework, according to Adato and Meinzen-Dick (2002) is that it recognizes people themselves, whether poor or not, as actors with assets and capabilities who act in pursuit of their own livelihood goals.

Adato and Meinzen-Dick (2002) further indicate that, the framework is as well a framework for assessing and prioritizing interventions of different kinds. The sustainable livelihoods framework has been a beneficial tool for NGOs and researchers alike to conduct ex-post and ex-ante assessments of the impact of NGO interventions on reducing poverty and enhancing good living conditions for the rural poor (Adato & Meinzen-Dick, 2002).

In the sustainable livelihoods conceptual framework, a livelihood is defined to comprise of the capabilities, assets (including natural, financial, social and human resources) and activities required for a means of living (Carney, 1998; Adato & Meinzen-Dick, 2002). The framework considers a livelihood as sustainable when it can cope with and recover from stress and shocks, maintain and enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the community, district, regional and national levels and with reference to both short and long term (Chambers & Conway, 1992; Scoones, 1998; Carney, 1998).

An important part of this framework is thus, the examination of individual households' access to different types of interventions and assets (human, financial, natural, and social) and their ability to put these to productive use through certain strategies to enhance their livelihood conditions. The natural resources in the framework are defined to include land, water, forests, marine resources, air quality, erosion protection, and biodiversity. Physical resources include transportation, roads, shelter or housing, water supply and sanitation, electricity or energy, communication machines, and other household facilities. Savings which include both cash and liquid assets, credit (including formal and informal credit or microfinance), and inflows (involving state transfers and remittances migrant relatives) make up the financial resources.

Human resources in the framework include education, skills, knowledge, health, nutrition, as well as labour power of the household. Lastly, the social resources are made up of any networks that increase trust, ability to work together, access to opportunities, reciprocity; informal safety nets; and membership in organizations. Though most versions of the sustainable livelihoods framework are limited to these five kinds of capital, some add political capital as the sixth type of assets, which are defined to include for example, citizenship, enfranchisement, and membership in political parties involving all assets that can be key in obtaining or operationalizing rights over other assets (Carney, 1998; Scoones, 1998; Chambers & Conway, 1992; Adato & Meinzen-Dick, 2002).

The framework as well offers a way of assessing how organizations, policies, institutions, processes and cultural norms shape livelihoods, both by determining who gains access to which type of asset or intervention, and by defining what range of livelihood strategies are open and attractive to rural households as well as vulnerability and terms of exchange of the household. Thus, policies, institutions or organizations (both formal and informal) and processes affect how people use their assets in pursuit of different livelihood strategies. These, according to the framework, may occur at multiple levels, from the household to community, national, and even global levels (Carney, 1999; Adato & Meinzen-Dick, 2002).

The vulnerability context in the framework as indicated in Figure 1, encompasses 'trends' in population, resources, and economic indicators such as prices, governance, or even technology; 'shocks' such as changes in human or animal health, natural disasters, sudden economic changes, or conflict; and 'seasonality' in prices, production, employment opportunities, resource availability, and health. Adato and Meinzen-Dick (2002) define vulnerability in the framework to mean things that are outside people's control. According to them, these are usually negative things but can also provide positive opportunities. To them, it is not only about the objective "risk" that matters, but also people's subjective or perceived assessments of things that make them vulnerable. These are very important and matter because both perceived and actual vulnerability can influence people's decisions and hence their livelihood strategies (DFID, 1999; Adato & Meinzen-Dick, 2002).

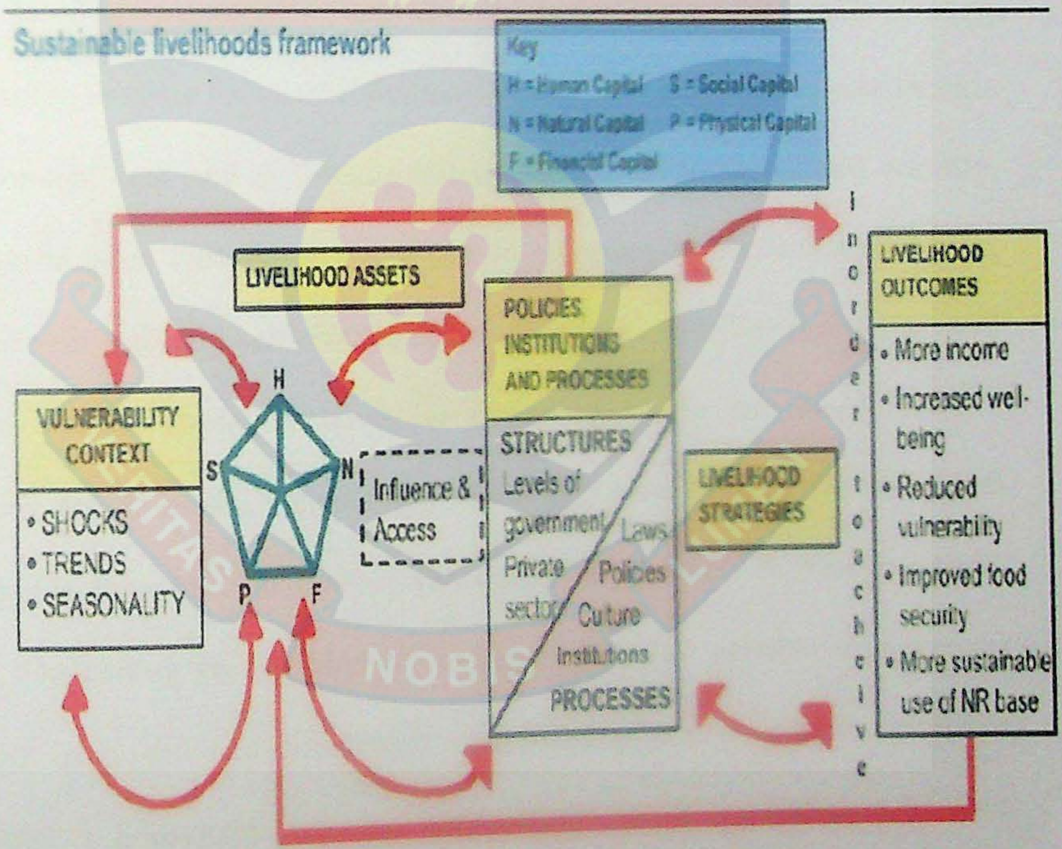

Figure 1: *Sustainable Livelihoods Conceptual Framework*

Source: DFID (1999).

In the framework, livelihood strategies are defined to include the various choices or activities that individual households engage or employ in pursuit of some livelihood outcomes - income, security, well-being, and other productive and reproductive goals. What is important about the livelihood strategies in the framework, therefore, is that it recognizes that households and individuals may pursue multiple strategies, sequentially or simultaneously. The pursuit of multiple activities by households can have important implications for cash and labour availability at different times of the year, and for the relevance of specific development interventions for poverty reduction and livelihood improvement (Scoones, 1998; Adato & Meinzen-Dick, 2002).

Livelihood outcomes captured in the framework are the results of using or engaging in some forms of activities (livelihood strategies) and may include both conventional and well-being indicators such as income, food security, health, education, sustainable use of natural resources, strengthened asset base, reduced vulnerability, self-esteem, sense of control as well as maintenance of cultural assets. These outcomes, as contained in the framework have a feedback effect on the vulnerability status and asset base of the individual households in a cyclical manner (Scoones, 1998; Adato & Meinzen-Dick, 2002). Depending on the kind of outcomes (whether positive or negative) realized from the use (livelihood strategies) of some specific available resources, a household may see improvement in its livelihood conditions (assets base and other measures of livelihood) or, otherwise.

Positive or improved well-being livelihood outcomes are the goals to which households aspire, the results of pursuing their livelihood strategies with all the necessary resources and conditions or assumptions in place. Some of these may include increased productivity, increased income, reduced vulnerability, increased well-being, improved food security, improved household facilities, improved health and more sustainable use of natural resources. Ineffective use of resources together with bad prevailing conditions (policies, processes, interest rates etc.) surrounding the accessibility and use of resources or interventions may, on the other hand, result in negative or poverty outcomes. These unintended outcomes may manifest in the form of low productivity, reduced income, low food consumption, absence of basic household facilities, poor health, high illiteracy rate, depleted natural resources and increased vulnerability. These negative outcomes may go a long way to creating more vulnerability conditions and, therefore, putting a household in perpetual poverty state.

In conclusion, the sustainable livelihood framework is basically designed to facilitate an understanding of the linkages between poor people's livelihood strategies, their asset status, and their way of using the available resources. The approach, therefore, is very useful for understanding both the problem and the scope for promoting sustainable livelihood development at the local and community levels. The framework offers a more appropriate basis for evaluating the socio-economic impact of projects or programmes which have poverty alleviation and livelihood improvement as at least one of their overall objectives. Thus, the framework provides a more realistic way for assessing the direct and indirect effects on people's living conditions, something that the use of conventional approach usually involving one-dimensional criterion such as income or productivity is unable to do (Krantz, 2001).

Models of Microfinance Services

Micro-financial institutions around the world employ variety of models in their quest to providing financial resources to less privileged. In reality, the models are loosely related with each other. Most good and sustainable microfinance institutions employ two or more models in their activities depending on certain factors such as the target group, economic characteristics, location, loan size, mechanism of payment, savings, training, discipline and cost and interest rate in order to reach a wider coverage (Grameen Bank, 2000).

This section reviews seven of such models that are relevant to the study. They include Rotating Savings and Credit Associations (ROSCAs) model, Grameen Bank model, Village Banking model, Community Banking or MC2 model, Associations model, Credit Unions model, and Peer Pressure model. The section as well reviews a microfinance framework known as "Microfinance and the Household Economic Portfolio Framework" which was compiled from Zeller (1995); Scoones (1998); and AIMS (2001) by Nghiem in 2004 as a tool for analyzing the impacts of microfinance interventions on household livelihood conditions.

Rotating Savings and Credit Associations (ROSCAs) Model

Rotating Savings and Credit Associations model is a microfinance model whereby a group of individuals come together and make regular and cyclical contributions to a common fund. The money realized is then given as a lump sum to one member in each cycle (Yunus, 1999; Grameen Bank, 2000; Wrenn, 2007). Thus, each member of the group 'lends' money to other members through his/her regular monthly contributions. Deciding who receives the lump sum at what time is done by consensus, usually by lottery, by bidding or by other agreed methods. The members of ROSCA groups are usually neigh bours and friends (very common with women), and the groups provide opportunities for social interactions (Wrenn, 2007). Yunus (1999) and also Fisher and Sriram (2002) refer to these groups as merry-go rounds or 'Self-Help Groups'.

Grameen Bank Model

According to Fotabong (2011), the Grameen Bank (GB) model is based on the voluntary formation of small groups of five people to provide mutual, morally binding group guarantees in lieu of the collateral required by conventional banks. Thus, GB microfinance model aims at reversing the conventional banking practices by removing collateral requirements and developing a banking system based on mutual trust, accountability, participation and creativity (Fotabong, 2011). This model, according to Berenbach and Guzman (as cited in Wrenn, 2007), is based on group peer pressure whereby loans are made to individuals in groups of four to seven. Group members collectively guarantee loan repayment, and access to subsequent loans is dependent on successful repayment by all group members. Payments to group members are usually made weekly (Ledgerwood, 1999; Wrenn, 2007).

Professor Muhammad Yunus, the founder of the Grameen Bank asserts that credit is seen as a cutting edge tool for affecting those inequalities that confine the poor to a poverty cycle and for releasing the inherent capacities in people. In this way, credit restores some sort of social power which has been denied to the poor because they lack collateral. Professor Yunus in his submission argued that the conventional banking system is anti-poor, anti-women and anti-illiterate and thus, contribute to maintaining the statusquo between the rich and poor. Microcredit issued to small groups is thus, purported to enable the poor the opportunity to purchase equipment and other inputs and engage in micro enterprises of their choice (Yunus, 1999; Fotabong, 2011).

Wrenn (2007), making reference to Berenbach and Guzman, indicated that the Grameen Bank model has proven to be effective in deterring defaults and has as well contributed to broader social benefits because of the mutual trust arrangement at the heart of the group guarantee system. These solidarity groups often become the building block to broader social networks (Yunus, 1999; Wrenn, 2007).

Village Banking Model

Village banks are community-based credit and savings associations of low-income individuals usually in the rural areas who are seeking to improve their lives through self-employment activities by generating their own financial resource through joint contribution. The village banks are semi-formal and member-based. The membership usually ranges between 25 and 50 low-income and rural-based individuals (Wrenn, 2007; Grameen Bank, 2000).

The village banking model was first developed during the 1980s in Bolivia by John Hatch, Rupert Scofield, and Aquiles Lanao. In his quest to expand the model to the rest of the world, especially the Latin America, Hatch in 1984 established the Foundation for International Community Assistance (FINCA). Through his assistance, other organizations later on adopted the same or similar models and by 1995, village banking model was being implemented in at least 28 countries worldwide, including 12 African countries (Nelson *et al*., 1996).

In recent times, the model has been introduced and used in several new countries including Ghana by both international and local implementing agencies, most of which are NGOs such as Plan Ghana (the VSLA scheme), Catholic Relief Services (CRS), World Relief, Freedom from Hunger (FFH), Save the Children Fund (SCF), and FINCA International. Holt (1994), and also captured in Wrenn (2007) defines village banks as community-managed credit and savings associations established by NGOs to provide access to financial services, build community self-help groups, and help members accumulate savings.

Village banking model offers a way of giving poor women and men in rural and often remote areas access to much needed financial services. According to Holt (1994), many village banks target mostly women since the model anticipates that female participation in village banks will enhance social status and intra household bargaining power. Through village banks, members of low-income communities can save or obtain loans to help set up or improve their businesses, invest in long term life needs such as health or education, or to deal with emergencies (Wrenn, 2007).

Unlike some other microfinance models, where the users are only on the receiving end of services provided by outsiders or NGOs, village banks are owned and run by the members. Thus, the members run the bank, elect their own officers, establish their own by-laws, distribute loans to individuals and collect payments and services. Because of this, village banking model, apart from providing the rural poor members with better access to finance, has a management system in terms of membership and participation that empowers the members and gives them more control over their own lives as well as more say in the community. This is especially important for the poorest members of the community, and for others who are often left outside the traditional village power structures, such as women. Even though set up by members themselves, support organizations such as NGOs or microfinance institutions often act as a catalyst helping village banks to emerge (Grameen Bank, 2000; Wrenn, 2007).

To guarantee the sustainability and success of the operations of the village banks, different types of support services such as training and some technical assistance or auditing are provided before, during and after the initial setting up phase. For instance, in Plan Ghana's VSLA scheme, the group members (ranging between 10-30 rural people) save together and take small loans and share some profit from those savings. The activities of the VSLA scheme run in 'cycles' of about one year, after which the accumulated savings and the loan profits are shared out among the members according to the amount they have saved. Now, apart from receiving financial resources, members in Plan Ghana's VSLA microfinance scheme are offered educational and training programmes in diverse areas to broaden their horizon on the efficient and effective use of the limited resources as well as issues relating to improving their livelihood (BoC, 2010).

Community Banking or MC2 Model

Community Banking model or MC2 model is closely related to the village banking model. The MC2 are rural development micro-banks created and managed by a community in keeping to their local values and customs.

The model essentially treats the whole community as one unit, and establishes semi-formal or formal institutions through which microfinance is dispensed. Such institutions are usually formed by extensive help from NGOs and other organizations, who also train the community members in various financial activities of the community bank.

Dr. Paul K. Fokam, the principal promoter of this concept, according to Fotabong (2011), drew inspiration from the Einstein's famous formula: Victory over Poverty (VP) is possible if the Means (M) and the Competences (C) of the Community (C) are combined. Hence the formula VP= M x C x C =MC2. In other words, MC2 is a community based micro banking approach whereby people and mostly the underprivileged endeavour to be self-reliant, create wealth with a view to improving their living conditions in a sustainable manner.

The model has two versions: a rural version, MC2 and an urban version dubbed MUFFA. The second version of the model is exclusively for women because studies and personal research of the founder show that women in urban areas are those most hit by poverty. Through MUFFA, these women have easy access to financial services which help them to start job creation and wealth generating small business activities (Fotabong, 2011).

The main objectives of the MC2 Micro banks are: economic and financial sustainability from the perspective of the micro bank, the individuals and the group members; and the social dimension which involves targeting the poor, micro and small scale activities and consequently restoring dignity to target beneficiaries to see the importance of being masters of their own destiny. These community micro-banks may have savings components and other income-generating projects included in their structure. In many cases, community banks are also part of larger community development programmes which use finance as an inducement for action (Fotabong, 2011).

Peer Pressure Model

Peer pressure model uses moral and other linkages between borrowers and project participants to ensure participation and repayment in microcredit programmes. Peers could be other members in a borrowers group where, unless the initial borrowers in a group repay, the other members do not receive loans. Hence pressure is put on the initial members to repay. They as well could be community leaders (usually identified and trained by external NGOs) or could be the NGOs themselves and their field officers; or banks and their staff. The 'pressure' applied can be in the form of frequent visits to the defaulter, community meetings where they are identified and requested to comply etc. (Grameen Bank, 2000; Wrenn, 2005).

Associations Model

This is a type of microfinance model where the target community forms an 'association' through which various microfinance (and other) activities are initiated. Such activities may include savings. Associations or groups can be composed of youth, women; can be formed around political/religious/cultural issues, or can create support structures for microenterprises and other work-based issues. In some places, the 'association' could be a legal body that has certain advantages such as collection of fees, insurance, tax breaks and other protective measures (Grameen Bank, 2000).

Credit Unions Model

A credit union is a unique member-driven, self-help financial institution. It is organized by and comprised of members of a particular group or organization, who agree to save their money together and to make loans to each other at reasonable rates of interest. It is owned and governed by its members, with members having a vote in the election of directors and committee representatives. The members are people of some common bond: working for the same employer; belonging to the same church, labour union, social fraternity, etc.; or living/working in the same community. A credit union's membership is open to all who belong to the group, regardless of race, religion, colour or creed (Grameen Bank, 2000).

Microfinance and the Household Economic Portfolio Framework

This framework was compiled by Nghiem in 2004 from Zeller (1995); Scoones (1998); and AIMS (2001). Nghiem (2004) designed this framework to serve as a tool for analyzing the impacts of microfinance interventions on the household livelihood conditions. In Microfinance and the Household Economic Portfolio Framework, Nghiem (2004) indicates that, the scope of analysis of the influence of microfinance interventions in the life of the rural poor focuses on individual household conditions with the assumption of pooled resources including income, food consumption, health facilities, housing, basic utilities and many others.

In the framework, the household resources are classified into three groups; human capital, physical capital and financial capital. This resource pool includes the household endowment (internal resources and characteristics) and resources from external sources such as microfinance and social networks. The resources belonging to the households (both from internal and external sources) are used for three sets of activities to ensure livelihood sustainability: for consumption, for production activities, and for investment activities. The consumption activities include activities undertaken to satisfy the needs and wants of the household using items such as food, clothing, health care, education, and entertainment. According to Nghiem (2004), even though consumption activities often do not contribute directly to the accumulation of physical and financial capital of households, it is very important to maintain and increase productivity of human capital by ensuring good education and health status of members of the household.

Production activities of households can be classified into two main groups: income-generating activities (including crop cultivation, animal production, fish farming and fishing, small businesses and wage labour); and activities to generate goods (tangible products) and services (intangible products) that are for consumption within the household (Becker, 1991; Nghiem, 2004).

Investment or asset building activities include activities to build up resources and the asset base of the household for future periods. Products of investment activities may be tangible items such as real properties (e.g. land, houses), physical stores of wealth (e.g. jewellery), financial stocks (e.g. savings account), and productive assets (e.g. machinery). Investment activities may also be available in intangible forms such as social capital (e.g. strengthen social networks) and human capital (e.g. pursuit of further education). The distribution of resources among these three categories of activities depends on the household livelihood strategies which are built based on resources available, environmental conditions, and shocks and stresses that the household is exposed to (Nghiem, 2004).

In all, household resources play both as inputs and as outputs roles of household activities. In order to analyse the effects of microfinance intervention on individuals or households, it is, therefore, important to examine the interactions among household members in their decision-making processes and their various activities. Thus, it is important to note that household activities may be conducted jointly or individually. In the same way, household resources may or may not be shared among individuals in the household (Nghiem, 2004).

For example, farm work is often shared equally between men and women while housework, in most households, is mainly the sole responsibility of women. In addition, members become involved in bargaining during the decision-making process on resource mobilisation, organising and in conducting household activities. These facts, according to the framework, enable detailed and effective investigations of the impacts of microfinance interventions on individual household members (Nghiem, 2004).

Conceptual Framework of the Study

This conceptual framework of the study, called *VSLA Microfinance Services and Rural Household Livelihood Improvement Framework*(Figure 2) has been developed with specific references to three main models: Sustainable Livelihoods Conceptual Framework (DFID, 1999); Microfinance and the Household Economic Portfolio Framework (Nghiem, 2004); and Village Banking Model by FINCA (Wrenn, 2007; Langat, 2009).

The framework primarily seeks to analyse the livelihoods of rural households that have access to VSLA microfinance services as intervention in their livelihood processes. The livelihood of an individual, according to Scoones (1998) and DFID (1999), consists of three main components: livelihood resources, livelihood strategies and livelihood outcomes. The livelihood resources of a household involve some material and non-material resources that the household is endowed with, including the household's demographic characteristics. A household's livelihood hinges on these resources. Members of the household employ these resources to construct their livelihood processes to ensure sustainable living (Scoones, 1998; DFID, 1999; Carter & Barrett, 2006).

The livelihood strategies, on the other hand, consist of combinations of activities that individual members of a household undertake using the available resources at their disposal to enhance their living conditions. Rural household members, in their quest to earn a living, usually employ one or combinations of three main categories of activities: production activities; investment and trading activities; and consumption activities. The main production activities that people in the study communities, including the VSLA scheme beneficiaries, employ include crop farming, animal farming, fishing and fish farming and some processing activities. Some of the investment or asset building activities that they engage in include, investing in building projects, investing in transport business, investing in trading activities including running provision stores, engaging in petty trading and many others. These activities, one way or the other, have the capacity either directly or indirectly to generate returns for the household (Nghiem, 2004).

The consumption activities of the household involve the use of household's financial resources on both food and non-food items such as spending on feeding, water, utilities and utility bills, paying for children's school fees, hospital bills, dressing and other expenditure. These activities, even though in most cases are unable to generate direct returns for the household, they are very important to maintain and increase productivity of human capital by ensuring healthy life for good education and other productive activities (Nghiem, 2004).

The livelihood outcomes which is the third and the last livelihood component consist of the results from using the resources that are available to the household. These outcomes, according to this study, manifest in monetary (income) and non-monetary (food security, education, health, housing and household utilities) forms. The level of these outcomes (whether low or high) depends on the level of resources available to the household as well as the kind of strategies or activities members engage in (Scoones, 1998; DFID, 1999; Carter & Barrett, 2006).

The greatest challenge, according to this framework, however, is that most rural households are deprived of the necessary resources needed to construct a meaningful livelihood and, therefore, may be vulnerable to many negative conditions. In such challenging conditions with very limited opportunities, household members always would have to device a means of coping in order to survive, some of which may include reduction in food consumption, resorting to traditional medication, migration, and many others (DFID, 1999; Carter & Barrett, 2006).

With the introduction of the Plan Ghana's VSLA microfinance scheme as an intervention, however, the deprived households now have access to financial resources and are therefore exposed to diverse livelihood strategies or opportunities from which they can employ to improve their living conditions (Hulme & Mosley, 1996). The scheme offers two major intervention areas: financial resources or products (credit and shared profit) and training ("add-on services").

Access by the beneficiary households to these financial resources (credit and shared profit) and the "add-on services" (training and education), thus, influence the kind of livelihood strategies or activities that members of the households engage in, and this, in turn, influence the level of livelihood outcomes they obtain. As members are taken through appropriate and adequate training activities on the proper and efficient use of the financial resources that they obtain from the VSLA scheme, they acquire knowledge and skills and these influence the efficiency and the effectiveness of their various livelihood activities which help to improve their living conditions. The outcome from the engagement in the individual or combinations of individual livelihood activities, in the end, has some effect on the household resources including the demographic characteristics and the general well-being of the household members.

It is important to note that, the adequacy, appropriateness, efficiency and the effectiveness of the training, and by extension, its effect on the use of the financial resources by the beneficiaries, may be influenced by; the competence and the skill level of the training providers, language spoken or medium of instruction, frequency of meetings, training methodology, availability and the willingness of the beneficiaries to adopt and use the technology transferred to them, among others.

Also, influencing the amount of money (credit and/or shared profit) available to a beneficiary of the scheme at a given time, is the amount of money contributed as a share-purchase by the beneficiary and the consistency with which such contributions are made. Members who contribute higher amount and on regular basis stand the chance of getting access to higher financial resources to enhance their livelihood activities and vice-versa. Since the amount of money that a beneficiary of the scheme could contribute on regular basis was influenced by his/her resource conditions at the household level, the amount of financial resource a household beneficiary could access at a given time is also influenced by the person's household resource level including the demographic characteristics. In a reverse order, the kind of livelihood activities individual households engage in influence the kind of training they receive from the training providers and the amount of credit one can access from the scheme.

Logical and theoretical linkages in the framework

The framework has in its operations, the following logical and theoretical linkages that drive this study:

1. A household found in a rural community with certain resource level and characteristics may have its member(s) considered to be part of the VSLA groups;
2. If members become part of the VSLA groups and members continue to attend to meetings regularly and buy their weekly share-purchases, then they would have access to financial products and services/training;

3. If members receive training from the scheme, then they would gain knowledge and skills on the efficient and effective use of their resources/livelihood activities;

4. If members engage in livelihood activities more efficiently and effectively, then livelihood outcomes would be improved (increased income, improved food security, education, health, housing, and household utilities); and

5. If the individual livelihood outcomes improved, then the general well-being of members of the household would improve.

Finally, it is also important to note that, apart from the aforementioned linkages, some elements in the framework interact through inverse linkages. For example, the kind of livelihood strategies or activities that members of the households engage in may influence the amount of money accessed as credit at a time, as well as the kind of training or education that the scheme providers would give them.

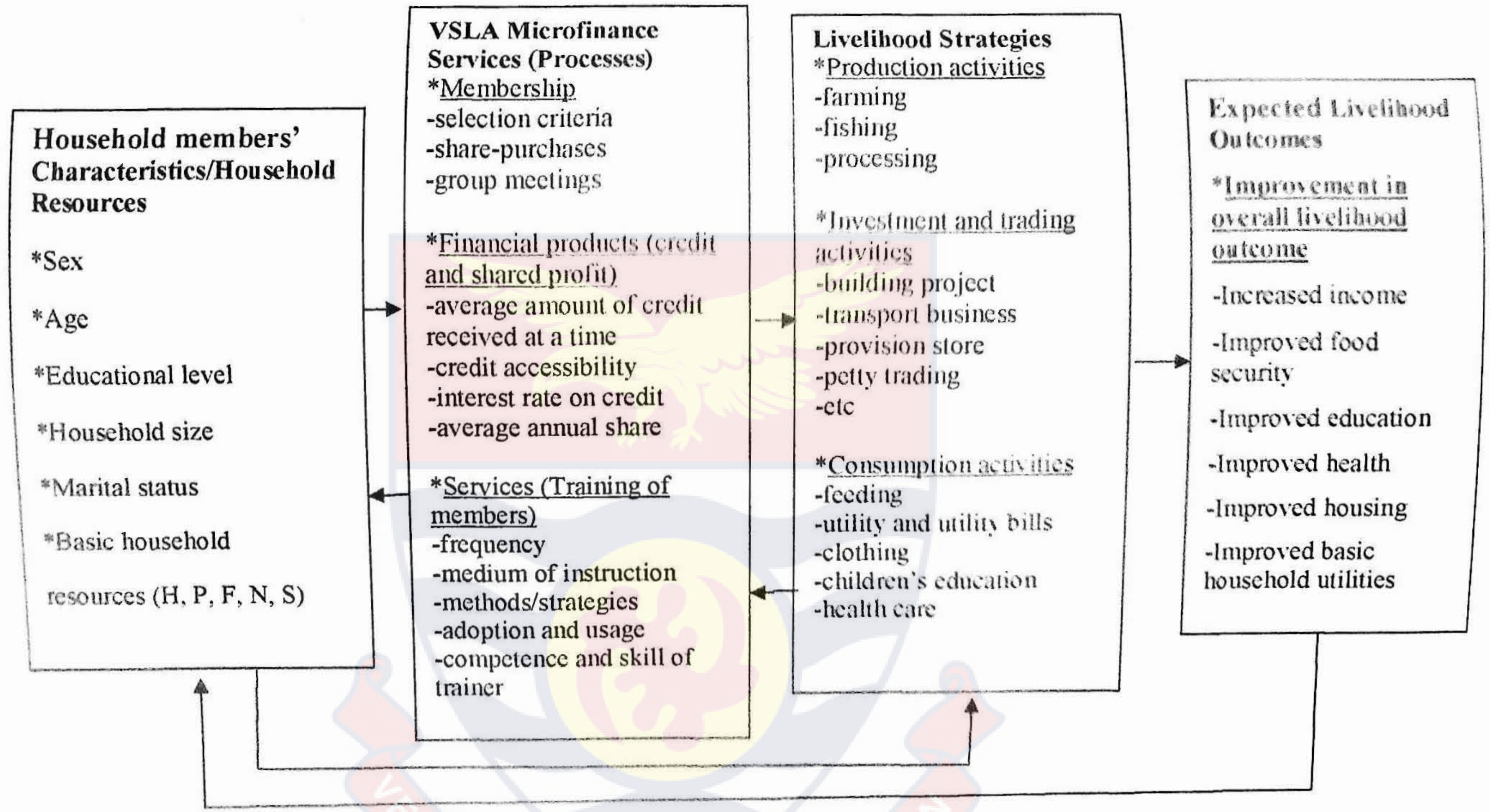

Figure 2: *VSLA Microfinance Services and Rural Household Livelihood Improvement Framework*

Sources: Author's Construct (2016).

CHAPTER FIVE

METHODOLOGY

Introduction

This chapter presents the methodology and procedures that the researcher used in conducting the study. The chapter covers the study design, the study area, study population, sample and sampling procedures, variables of the study, sources of data, data collection instruments, test for validity and reliability, the fieldwork, data processing and analysis, and regression model specification.

Study Design

The study was an evaluation study that used cross-sectional design to collect and analyse data, largely in a form of "with and without" analysis. Smith (2001; 2006) defines programme evaluation as the systematic exploration and judgment of working processes, experiences, and outcomes. Both formative and summative evaluation approaches were used, even though, it was more of a summative study where the focus was directed at evaluating the livelihood outcomes of beneficiary and non-beneficiary households of the VSLA microfinance scheme in a comparative manner in order to establish and measure the extent of effects of the scheme on its beneficiaries.

Thus, with this summative evaluation approach, the study sought to investigate whether the VSLA microfinance scheme had caused a demonstrable effects on some pre-defined livelihood outcomes (income, food security, education, health, housing, and household utilities) of the beneficiary households, and if it had, assess the extent to which it had affected the general well-being of the members of such households (Spauding, 2008). The formative evaluation focused mainly on analyzing the perception of the scheme beneficiaries about the processes involved in the VSLA microfinance scheme's operations in terms of their accessibility, adequacy, appropriateness and efficiency.

The use of the cross-sectional approach allowed the researcher to collect data and assess the changes in the measures of livelihood outcomes of households that had access to the VSLA microfinance scheme and changes in the same livelihood outcomes of households that did not have access to the scheme but had similar characteristics as that of the beneficiary households in a form of quasi-experiment (with and without study). This approach has been recommended by Hulme and Mosley (1996) and Nghiem (2012) for such studies.

The cross-sectional design was used mainly because there was no reliable baseline report available and, therefore, the researcher had to collect the data at a single point in time within the study period. It also allowed the researcher to collect data that would make it possible for the researcher to comp are the livelihood outcomes of the beneficiary households with that of their non-beneficiary household counterparts. The design was as well chosen because of its ability to produce fast results with less resource since there was not going to be any follow-up after the actual fieldwork.

The Study Area

The study was conducted in two districts: Ajumako-Enyan-Essiam District and Ekumfi District, all in the Central Region of Ghana. These two districts were chosen purposely because, they were the two districts in the

Central Region that had the highest concentrations of Plan Ghana's VSLA microfinance scheme activities as at the time of the study. Besides, they were among the few districts in the region where the scheme began its operations first and had since been there for more than five years.

Ajumako-Enyan-Essiam District

Ajumako-Enyan-Essiam District (AEED) has Ajumako as its capital and the seat of the local government administration. The Ajumako-Enyan-Essiam District shares common boundaries with the Asikuma–Odoben–Brakwa District to the north; the Mfantsiman District to the west; the Gomoa District to the south; the Assin District to the north–west; and the Agona District to the north-east. The district lies between latitudes $5^{0}18$ and $5^{0}34$ north and longitudes $0^{0}53$ and $1^{0}08$ west. The district covers a total land area of 541.3 sq km and this is about 5% of that of the Central Region which measures 9,826 sq km (Newsletter, AEED, 2004; Quayson & Adu-Bitherman, 2015).

The district has 163 communities distributed in the nine (9) zones of Abaasa, Ajumako, Baa, Bisease, Breman Essiam, Enyan Denkyira, Enyan Maim, Mando, and Etsii Sunkwa. The total population of the district, according to the 2010 Population and Housing Census, is 138,046 representing 6.3 per cent of the Central Region's total population. Males constitute 46.7 per cent and females represent 53.3 per cent. The population growth rate of the district is 1.2 per cent per annum (GSS, 2000; 2014).

The AEED is basically a rural district (68.1% rural), with only three settlements in the district, qualifying as towns, namely: Bisease, Breman Essiam and Ajumako (GSS, 2000; 2014). The district, in the last Population and Housing Census had 35,106 total households with an average household size of 4.5 persons per household. The average number of households per house is 1.3 (GSS, 2014).

The district has been noted to be one of the deprived districts in the Central Region. As at 2010, there were only about 68 Junior Secondary Schools in the district, 7 of which were privately owned. There were also about 7 Senior High schools (public and private) and one tertiary institution (Ajumako Campus of University of Education, Winneba). The district had a gross primary enrolment rate of 105 per cent and this meant that about 39.5 percent of the total population was then in the primary level of education. There were 54, 536 people attending school as at 2010. The district also has a literacy rate of 76 per cent for both male and female persons of ages 11 years and older (GSS, 2012; 2014).

The district has five health centres, two community clinics and one community-based health planning services (CHIPS). The five health centres are located at Ajumako, Enyan Abaasa, Kwanyako, Nkwantanum and Bisease. The two community clinics are at Enyan Maim and Sunkwa, with the community-based health planning service located at Ekukrom (Dei *et al.*, 1996; Newsletter, AEED, 2004).

The main construction materials for outer walls of dwelling units (houses) in the district are mud/mud bricks or earth (48.3%) and cement/concrete (45.2%). According to the 2010 Population and Housing Census, about 15.2 per cent of the households in the district has 10 or more members occupying single rooms (GSS, 2012; 2014).

Economically, the district depends largely on farming. As high as 77.1 per cent of the district's total population of 138,046 depend directly or indirectly on faming. In the rural localities, a little above eight out of ten households (82.6%) are agricultural households while in the urban localities, 65.8 per cent of households are into agriculture. Crop production is the predominant sub–sector in the agriculture. As high as 96.6 per cent of the total households in the district are involved in crop farming. The farm sizes for these activities are, however, very small (Newsletter, AEED, 2004; GSS, 2014).

Poultry, mainly domestic fowl (chicken), is the dominant animal reared in the district. Livestock farming is practiced marginally in all the zones, even though there has been improvement in the number of sheep, goats, and pigs reared from the year 2000 (Newsletter, AEED, 2004; GSS, 2014). Processing of some agricultural products is done in the district. The defunct factory, West Africa Fruit and Food Processing Factory at Nkwantanum has been a major large-scale processing factory. However, there are a number of small and medium-scale processing activities carried out, especially by the women, in the district.

Ekumfi District

The Ekumfi District has Essarkyir as its district capital. It is one of the twenty administrative districts in the Central Region. The district was formerly called Mfantsiman East. Thus, it was carved out of the erstwhile Mfantsiman Municipality (which then constituted Mfantsiman West and Mfantsiman East). The district was formally established out of Mfantsiman Municipality as Ekumfi District in 2012 Legislative Instrument (L.I.) 2170 (GSS, 2012; 2014).

Ekumfi District is located along the Atlantic Coastline of the Central Region of Ghana. The District is bounded to the West by the Mfantsiman Municipality, to the North by the Ajumako-Enyan–Essiam District, to the East by the Gomoa West District and to the South by the Gulf of Guinea. It occupies a total land area of 276.65 square kilometres or 0.12 percent of Ghana's land area, making it the fifth smallest among the twenty districts in the Central Region (GSS, 2014).

It has eight sub-districts made up of one town council and seven area councils comprising of Otuam, Narkwa, Eyisam, Essarkyir, Ekrawfo, Abiram, Assafa and Srafa. There are a total of 55 communities in the district with Narkwa being the most densely populated (GSS, 2012; 2014). The population of Ekumfi District, according to the 2010 Population and Housing Census, is 52,231 representing 2.4 per cent of the region's total population. Males constitute 46.1 per cent and females represent 53.8 per cent. The annual population growth rate of the district is 2.8 per cent (GSS, 2014).

Ekumfi District is also a typical rural district. About ninety percent (89.4%) of the district is rural. The population of the district is youthful (42.3% youth) depicting a broad base population pyramid which tapers off with a small percentage (8.5%) of elderly persons. The district has a household population of 51,033 with a total number of 12,631 households. The average household size in the district is 4.1 persons per household. About four in ten (42.5%) of the population aged 12 years and older are married, 36.9 percent have never married,2.6 percent are in consensual unions, 9.5 percent are widowed, 6.0 percent are divorced and 2.5 percent are separated. By age 25-29 years, more than half of females (64.7%) are married compared to a little less than half of males (46.0%) (GSS, 2014).

Of the population 11 years and older, 66.0 per cent are literate and 34.0 per cent are non-literate. The proportion of literate males is higher (78.7 %) than that of females (56.0%). About 52.3 per cent of the employed population are engaged as skilled agricultural, forestry and fishery workers, 17.5 per cent in service and sales, 16.6 percent in craft and related trade, and 6.1 percent are engaged as managers, professionals, and technicians (GSS, 2014).As high as 61.4 per cent of households in the district are engaged in agriculture. In the rural localities, six out of ten households (63.6%) are agricultural households while in the urban localities, 39.0 percent of households are into agriculture. Most agriculture households (92.6%) are involved in crop farming. Poultry (chicken) is the dominant animal reared in the District (GSS, 2014).

Fishing is a major livelihood activity that is carried out by the people, especially those along the coastal areas of the district. It engages both men and women in their quest to providing a living to their households. Apart from men going to the sea to catch fish, most women in the district, especially along the coast are involved in various forms of fish processing as their main livelihood activities. Salt mining is done on a small scale at Suprodo and Narkwa. Trading, which is an important economic activity, is carried out virtually in every area in the district with Essuehyia as a major focal point and involves agricultural products and other merchandise. The district has the following facilities: a health centre at Essuehyia and Otuam with Community-based Health Planning Services (CHIPS) compounds at Nanaben, Narkwa, Edumafa, Ekumpoano, Srafa Kokodo, Eyisam and

Immuna. There are two private health facilities: the Bethel Homeopathic Clinic at Essuehyia and the God's Gift Maternity Home. The main construction material for outer walls of dwelling units (houses) in the district is cement block/concrete, accounting for 66.0 per cent with mud brick constituting of 28.9 per cent of the outer walls of the houses in the district. About 21.0 per cent of the households have 10 or more members occupying single rooms (GSS, 2014).

Study Population

The population was made up of all the households whose member (s) benefited from the Plan Ghana's VSLA microfinance scheme and households that had none of their members benefiting from the scheme in 28 rural communities in AEED and Ekumfi District in the Central Region.

Sample and Sampling Procedures

In research, a sample is that part of the population (either a group of persons, objects, or items) that is selected to be studied in order to represent the population in question. Sarantakos (1997) defines sampling as the process of choosing the units of the target population which are to be included in the study. By studying these units (sample), one may therefore be able to fairly generalize the outcome to represent the population from which they were taken.

Due to the nature of the study and the kind of population in question, the researcher used multi-stage sampling technique to arrive at 450 respondents from the two districts as the main sample for the study. According to Israel (2013), a sample size ranging between 200 and 500 is needed for any rigorous analysis and impact evaluations such as multiple regression, analysis of covariance, and log-linear analysis.

The 450 respondents (sample) consisted of 300 VSLA scheme beneficiary household respondents and 150 non-VSLA scheme beneficiary household respondents from the 28 selected communities in the two districts (Tables 2 and 3). More beneficiary household respondents than non-beneficiary household respondents (in the ratio of 2:1) were used because the focus of the study was primarily on the scheme beneficiary households. The non-beneficiary households were employed only to serve as a control group for the purpose of comparison in order to determine the true effect of the scheme on its beneficiaries. Israel (2013) indicates that, an adjustment in the sample size may be necessary to accommodate a comparative analysis of subgroups such as an evaluation of programme participants with non-participants.

The 300 VSLA scheme beneficiary household respondents (174 from AEED and 126 from Ekumfi District) was estimated from a population of 1,208 scheme beneficiaries (VSLA group members) from the 28 selected communities (Tables 2 and 3; Appendices G and H) using the formula: $n = N/1+N(\alpha)^2$ at 95 per cent confidence level. Where n is the sample size, N is the sample frame or population, and α is the confidence level (Yamane, 1967; Israel, 2013). The 150 non-beneficiary household respondents formed half (50%) of the total number (300) of the beneficiary household respondents. Thus, in each community, a certain number of respondents from non-beneficiary households that was equivalent to 50% of the total number of beneficiary household respondents to be selected in that community and had same or similar demographic characteristics as that of the beneficiary household respondents were considered (Table 3).

The multi-stage sampling procedure involved three main stages using purposive, random and convenient sampling techniques. TANGO International Inc. (2002) indicates that livelihoods assessments are best accomplished by using a combination of purposive and random sampling techniques. Purposive sampling was used to ensure that some specific VSLA scheme beneficiaries were selected for the study. Thus, only communities and beneficiaries that had been on the scheme for five years and beyond were considered. The random sampling, on the other hand, was employed to give all the units of the target groups (for instance the target communities) equal chance of being selected for the study (TANGO International Inc., 2002; Sarantakos, 1997; Nabore, 2007; Buadi, 2008). The convenient sampling was used to select respondents (heads or leads) from the non-beneficiary households that were available and were found to be appropriate (mainly in terms of their similarities characteristics with the beneficiary household respondents) to for the study in a form of 'with and without' analysis. The three stages of the sampling included the selection of communities, the selection of VSLA groups and the selection of respondents.

Selection of communities: First, purposive sampling technique was used to select only communities that had been with the scheme for the past five years and beyond to enable effective evaluation of the scheme. This gave a total of 32 and 23AEED and Ekumfi communities respectively. Secondly, random sampling technique was used to select half (50%) the number of these communities from each district (32 and 23 in AEED and Ekumfi respectively).

Thus, in each district, the names of the VSLA scheme beneficiary communities that had been with the scheme for the past five years and beyond were written on pieces of papers, folded and placed in a bowl. After shaken, the communities were picked randomly, one after the other until the total number (50%) of the communities required from such district was obtained. Each name picked was put back in the bowl and reshuffled for the next picking to give all the communities equal chances of being picked. A total of 28 communities were therefore selected consisting of 16 AEED communities and 12 Ekumfi communities. The names of the 16 selected communities from the Ajumako-Enyan-Essiam District were Onyaadze, Eyiakrom, Okokodo, Assempanyin, Kwesi Gyan No.1, Akotogua, Ahaawoho, Nsawadze, Bewura, Nkwanta Kesedo, Nyamebekyere, Nkodwo, Owomase, Anomabokuma, Eduakrom, and Ekwamase. Abaka, Techiman, Abor, Engow, Ekotsi, Obidan, Nanaben, Gyinankuma, Ekrawfo, Eyisam, Bogyano and Suprudo were the 12 communities that were selected from the Ekumfi District (Appendices G and H).

Half the number of the beneficiary communities that had been with the scheme for the past five years and beyond from each district was used because time, money and other resources could not permit for the engagement of all the entire beneficiary communities in each district. Again, it was because the communities were found to be homogenous in terms of their association with the scheme, and also in terms of their livelihood activities.

Selection of VSLA groups from the communities: This was done using purposive sampling technique. Thus, purposive sampling was used to select VSLA groups that had been in existence for five years and beyond from the list of the groups in the communities. This gave a total of 50 VSLA groups, consisting of 29 groups from the 16 selected communities in the Ajumako-Enyan-Essiam district and 21 groups from the 12 selected communities in the Ekumfi district.

Selection of respondents: There were two main respondent categories: beneficiary household respondents and non-beneficiary household respondents. The beneficiary household respondents were selected from the individual VSLA group members. In most cases, the VSLA group members happened to be the heads or the leads of their respective households and had the capacity to make the weekly share-purchases or contributions to the scheme (an important criterion for scheme membership). Thus, in each of the groups, a total of six members who were found to be the heads or the leads of their households and, therefore, were in charge of their households' livelihood activities and well-being were purposely selected and interviewed on behalf of their households. The number "six" (6) was determined by dividing the estimated total sample size (300) of the beneficiary household respondents to be interviewed by the estimated number of VSLA groups (50) to be used in the study (Appendix H). Because of the homogeneity in group and household characteristics at the community levels, this number or sample could well represent the groups. It was again observed that almost all the VSLA groups had the same number of members and, therefore, taking a uniform number from all the groups was in order.

The non-beneficiary household respondents were selected using convenient sampling technique. Before the selection of the non-beneficiary household respondents, preliminary study was conducted and the results showed that the beneficiary households and non-beneficiary households had similar (homogeneity) demographic characteristics. On the basis of this, the non-beneficiary household respondents who also happened to be the heads or the leads of their households and were living in the same locality as the beneficiary households, were selected to enable effective comparison.

Table 2-*Number of communities, the VSLA groups and the number of members selected from the groups*

District	No. of selected communities	No. of groups in the selected communities	No. of members in the groups	No. of members selected from the groups (sample)
AEED	16	29	699	174
Ekumfi	12	21	509	126
Total	28	50	1,208	300

Source: Field survey, Quayson (2016).

Table 3-*The final sample including both beneficiary and non-beneficiary household respondents from the two districts*

District	No. of beneficiary household respondents selected from the groups, $n1$	No. of non-beneficiary household respondents selected, $n2(n2=1/2n1)$	Total, nt $(nt=n1+n2)$
AEED	174	87	261
Ekumfi	126	63	189
Total	300	150	450

$n1$ = Number (sample) of VSLA scheme beneficiary household respondents
$n2$ = Number (sample) of non-VSLA scheme beneficiary household respondents;
nt = Total sample (both beneficiary and non-beneficiary households)

Source: Field survey, Quayson (2016)

Variables of the Study

The main dependent variables of the study were the livelihood outcome variables. These variables were measured in two main terms; monetary and non-monetary terms. The monetary outcome variable was operationalised in terms of household income and the non-monetary outcome variables were operationalised in terms of food security, education, health, housing, and household utilities. The independent variables in the study, on the other hand, were the VSLA scheme participation, the mode of the VSLA scheme processes, and household demographic characteristics.

Dependent Variables

Household income as a dependent variable in the study was operationalised mainly in terms of average monthly income and the ability of the household to save from its income. Thus, the respondents were made to indicate their average monthly income earnings from their livelihood activities in relation to the VSLA scheme as at the time of the study. Again, the respondents were made to indicate whether they were able to save from their monthly income or not. The income level was again measured by asking the household respondents to generally assess their income status using a Likert-like scale of 1 to 5, with 1 being defined as very low income level, 2 as low income level, 3 as average income level, 4 as high income level, and 5 as very high income level. In line with these ratings, and as defined in Chapter One under the operational definition of terms, a household's income status was considered along a continuum that extends from adequate or high, through average or moderate to inadequate or low, where adequate income meant both high and very high income levels on the rating scale, and the inadequate income meant both low and very low income levels.

A household was considered to have adequate monthly income (high and very high income levels) when its income was able to provide its members with enough of the basic livelihood needs at all times in the month and as well be able to save some of the income to meet other needs to guard against shocks and other future occurrences. An average (moderate) income household was the one whose monthly income was able to provide the members with some level of the basic livelihood needs at most times in the month but unable to make any meaningful savings from it. A household whose monthly income was unable to provide its members with the basic needs of life at most times in the months, and in most cases, depended solely on the meagre produce from their farming or fishing activities for food, or sometimes, at the mercies of other relations or people for survival was considered to have inadequate income (low and very low income levels).

Food security has been measured in various terms in various studies. In this study, however, the household food security variable was measured mainly in terms of accessibility and availability of good food. These accessibility and availability measures were operationalised in terms of months of adequate food provisioning (the number of months in the year that household members were provided with enough good food to eat using the household's own resources).In more specific terms, the number of times the household members ate or had access to enough food in a day was as well considered. The number of months in the year that household members were provided with enough food to eat was measured using a rated score of 1 to 6 points, where 0-2 months was scored 1 point and defined as highly insecure, 3-4 months scored 2 points and defined as insecure, 5-6 months scored 3 points and defined as lower average security, 7-8 months scored 4 points and defined as upper average security, 9-10 months scored 5 points and defined as secure, and 11-12 months scored as 6 points and defined as highly secure (Appendix C).

With regard to the number of times the household members ate or had access to food in a day, the respondents were made to indicate their daily eating patterns in a scale also ranging from 1 to 6in references to the USDA's food security continuum, where 1 was defined as 'in some cases we do not eat at all in the day' which was considered as highly insecure; 2 was defined as 'we only eat when food is available' which was considered as insecure; 3 as 'we eat only once a day', also considered as lower average security; 4 as 'we eat two times a day' and was considered as upper average security; 5 as 'we eat three times a day', considered as secure; and 6 as 'we eat all types of food and drinks at any time we want' which was taken as highly secure in terms of food (Appendix D). Comparing this with the USDA's food security continuum, the first two scores (1st and 2nd) were classified under 'very low food security', the 3rd and 4th scores fell under 'low food security', 5th score under 'marginal food security', and the 6th scores considered under 'high food security'. With this, households with high or marginal food security as food secure and those with low or very low food security as food insecure (USDA, 2006)

Educational status of the households as a dependent variable was measured mainly in terms of accessibility and affordability and was operationalized using two main measures, the number of household members of school going age that were in school as at the time of the study (accessibility) and the ability of the household to provide for the educational needs of its members (affordability). The health status of the households as a variable in the study was operationalised in terms of accessibility, morbidity and mortality rates within the last five years.

Housing, as a dependent variable, was operationalised in terms of availability of rooms for the household members and also in terms of the type of housing. With regard to these, the number of persons per standard room size as well as the type of building materials used for the building were considered. Finally, the last dependent variable, which was the household utility was measured mainly in terms of availability of certain pre-defined household utilities. Fifteen household utility items were considered and these included toilet, bathroom, kitchen, pipe-borne water, electricity, television, furniture, radio set/tape recorder, telephone/mobile, refrigerator, video/ VCD/ DVD/Multi TV, computer/laptop, cooker, burner and gas cylinder and blender.

Independent variables

The VSLA scheme participation was operationalized to mean a household whose member(s) have been involved or participated in the scheme for at least five years as at the time of the study. The beneficiaries' perception about the mode of the VSLA scheme operations was measured in terms of accessibility/availability, adequacy, appropriateness and efficiency of the scheme's main processes or components using a five-point Likert-like scale items where respondents were made to rate the item statements on a continuum of very negative through to very positive ratings. The first two negative ratings were generally described as negative process whilst the last two positive ratings were described as positive process. The midpoint rating (3) was considered as average or moderate process. Thus, using a scale of 1 to 5, 1 was defined as very bad situation, 2 as bad situation, 3 as moderate, 4 as good condition, and 5 defined as very good condition. However, in dealing with the individual measures, appropriate terminologies were used. For instance, in terms of adequacy, 1 was defined as highly inadequate (very bad), 2 as inadequate (bad), 3 as moderate or average, 4 as adequate (good) and 5 defined as very adequate (very good). With this, the first two (highly inadequate and inadequate) were described as inadequate (bad) and the last two (adequate and very adequate) were described as adequate (good) whilst the midpoint (moderately adequate) was described as moderate.

The accessibility of the scheme's processes was defined in the study to mean the availability of such processes or activities as and when they were needed by the scheme beneficiaries, or the easiness with which they (beneficiaries) were able to meet or have access to such activities or processes.

The adequacy of the scheme's processes was defined to mean a situation where the beneficiaries of the scheme saw the activities or certain components of the scheme to be sufficient or good enough for a particular purpose or for their own course of action. The appropriateness of the scheme's processes was defined to mean a situation where the beneficiaries of the scheme continued to see such processes or components to be suitable, proper or right in their prevailing circumstances and had the ability to improve their situation. The efficiency of the scheme's processes defines the ability of the individuals that were involved in the processes (scheme providers and the beneficiaries themselves) to do things well and successful without waste or with minimal waste (in terms of materials, money, efforts, energy and time) to achieve good results.

These four measures were considered on three main processes or components of the scheme; selection of beneficiaries/membership, training of beneficiaries, and accessibility and usage of financial resources from the scheme. The selection of beneficiaries/membership was operationalized primarily in terms of the criteria for selecting VSLA scheme beneficiaries. In operationalizing the training processes, questions on training activities such as accessibility to training activities, frequency of training activities, time and cost of training activities, training methodology, medium of instruction, rate of adoption and usage of training outcomes, and the competence and skill level of the training providers were asked and responses obtained for discussion. Again, in operationalising the processes and procedures for accessing and using money from the scheme, questions were asked on the procedure for accessing credit, interest rate on credit, time of receiving credit or money from the scheme, and the way money received from the scheme.

The household demographic factors as independent variables were considered mainly in terms of sex, age, household size, level of education, and marital status.

Sources of Data

The study used mainly primary data. The bulk of the primary data was obtained from the responses to interview items. Field notes were taken from some observations made on the field and from informal interactions with some key personalities and opinion leaders in the study area. This supplemented the information obtained through the interview schedules.

Data Collection Instruments

The study employed multiple data collection tools using both objective and subjective items (including the use of both Likert and Likert-like scale items) for the collection of the data. The researcher used interview schedule as the main instrument for the collection of the primary data. This was because all the communities were rural and for that matter, not all the respondents that could respond to the items by themselves without support.

Two sets of structured interview schedules were developed to collect data from two categories of household respondents. One interview schedule was used to collect data from respondents in the VSLA scheme beneficiary households (the scheme participants) and the other one for those in non-beneficiary households. The interview schedule for the beneficiary household respondents had six main parts; Parts A, B, C, D, E and F. The items contained in Part 'A' were structured to capture information on the beneficiaries' perception about the mode of the VSLA scheme operations. Areas captured under this part included information on: criteria for selecting beneficiaries/ membership; training of beneficiaries; accessibility and usage of money from the scheme;

The 'B' part of the instrument contained items that were structured to collect information on the household livelihood outcomes. Under this part were items to collect information on income, food security, education, health, housing, and basic household utilities. Part 'C' covered items that were meant to collect information on the effects of the VSLA scheme on livelihood outcomes. Items for collecting information on the effects of demographic characteristics on livelihood outcomes formed Part 'D'. Part 'E' contained items for collecting information on the challenges in VSLA scheme operations whilst the final part, Part 'F' contained items that were structured to capture information on the demographic characteristics of the beneficiary respondents and their households.

The interview schedule for the non-beneficiary household respondents, on the other hand, was made up of five main parts; Parts A, B, C, D, and E. The items contained in Part 'A' were structured to collect information on the non-beneficiary households' livelihood outcomes. The items under this part were designed to collect information on income, food security, education, health, housing, and basic household utilities. Part 'B' was structured to capture information on differences in livelihood outcomes of the non-beneficiary households between the time of the study and five years back. Items for capturing information on the effects of demographic characteristics on livelihood outcomes formed Part 'C' of the instrument. Part 'D' captured information on the non-beneficiary households' perception about the VSLA scheme, and the final part, which is Part 'E' contained items that were structured to capture information on the demographic characteristics of the non-beneficiary household respondents.

The researcher, in addition to the data collected through the interview schedules, also had personal interactions with the scheme providers (some workers at Plan Ghana and Microfin Plus) and some opinion leaders in the communities, made personal observations and field notes to collect some preliminary and supplementary data on some important livelihood issues and household characteristics to supplement the data collected through the interview, and also as preliminary investigations on households and household respondents in the study communities before the actual field study.

Test for Validity and Reliability

Good measures were put in place that ensured that the validity and reliability of the instruments were not compromised. The use of internationally accepted research standards was to ensure that the study had external validity that would qualify the outcome to be generalized to other situations. Relevant literature was reviewed on the study topic to make sure that the contents of the data collection instruments covered all that the study intended to measure. Again, my supervisors as well as some other experts were consulted for input to ensure internal validity. Measures were put in place to reduce some threats to internal validity and also to make sure all the possible extraneous variables that could provide alternative explanations to the outcomes were reduced to the barest minimum.

Simple and unambiguous words were used in logically structured manner to ensure the reliability of the instruments. The research instruments were pre-tested (pilot study) on some households in non-selected communities in the region that shared similar characteristics with the selected communities. Cronbach's alpha of reliability coefficient was computed (0.77) from the data that was collected from the pilot study, especially on items that were constructed in interval and ratio scales. This aided in the determination of the internal consistency of the domains in the instruments. The alpha level of 0.70 was used as a criterion to make the determination. Based on that, the 0.77 reliability coefficient computed from the pilot study was considered sufficient to make the instruments reliable. Some weaknesses, inadequacies, ambiguities as well as problems encountered in the sampling techniques and the data collection methods during the pilot study were corrected and proper procedures were taken during the actual field work, especially, to make sure that the non-beneficiary households (which were represented by their heads or the leads of the households) that were selected for the study had, if not the same, similar characteristics as that of the beneficiary household respondents.

The Fieldwork

The actual fieldwork lasted for almost three months. It began on Friday 12th February, 2016 and ended on Saturday 7th May, 2016. In all, six persons were involved in the collection of the data on the field. These included the researcher himself and five other field personnel who were all degree holders and therefore had good knowledge in data collection procedures in research. Two of them were permanent senior high school tutors and the other three were national service persons also teaching at the senior high school level.

The collection of the data was done community after community based on proximity. The fieldwork was designed in such a way that, at any point in time, two persons visited one community. Depending on the number of households (both beneficiary and non-beneficiary) to be interviewed in a community, the team that consisted of two persons, spent a day or two. The visits were made mainly on early mornings and late evenings. This was to ensure that the respondents were in the house before they left for their respective businesses (mostly farms) or had returned from such places. Again, most of the visits were made on the meeting days of the VSLA groups. This helped the team to interact well with group members (both selected and non-selected) and to observe carefully the operations of the scheme to enhance the collection of data that were relevant to the study.

The location and access to the groups and the households were assisted and made possible through Plan Ghana and Microfin Plus' field officers and community volunteers. The work schedules of the six members of the data collection team at their work places could not permit daily visits to the communities and, therefore, accounted for the long duration in the collection of the data. However, all the 450 respondents expected to be interviewed were actually interviewed at the end of the process. This represented a response rate of 100%, even though some of them declined to respond to some of the questions in the interview schedule. All the interviews were conducted in Akan, mostly in Fante language since that is the predominant language in the two districts.

Data Processing and Analysis

The data collected from the field were processed, analyzed and presented in various forms. The data were analyzed based on: the information obtained on individual heads or leads of the beneficiary and non-beneficiary households (eg. sex, age, educational level etc.); the information on households, including beneficiary and non-beneficiary households (eg. household income, household food security, health status of the household, household utilities etc.); as well as information obtained on the VSLA scheme (selection criteria, training, interest rate, procedure for accessing credit etc.)

Both descriptive and inferential statistical tools were employed through the use of computer and manual deductions to enhance the analysis and interpretation of the data. Statistical Product and Service Solution (SPSS) was used to generate frequencies, percentages, means, medians, modes, minimum, maximum, pie-chart, and histogram to describe the variables under study.

Independent samples t-test was used to generate information from some data to determine significant differences or otherwise between some variables that were obtained from the two different groups (beneficiary and non-beneficiary household respondents). Correlation and regression (Ordinary Least Squares) analyses were run to establish relationships and influences between some variables (dependent and independent variables) that were measured in the study.

Some of the data, on the other hand, were reported and presented exactly as they came from the respondents in a qualitative manner. The summary of statistical tools for the analysis and measurement of the specific objectives is shown in Table 4.

Table 4-*The summary of statistical tools for the analysis*

Objective	Variables	Statistical tools
1	Perception about the mode of scheme operations in terms of accessibility, adequacy, appropriateness and efficiency	Frequencies, percentages, means, median, mode, minimum, maximum, pie-chart
2	Effects of VSLA scheme on income	Frequencies, percentages, mean, median, mode, Independent sample t-test.
3	Effects of VSLA scheme on; food security, education, health, housing, household utilities	Frequencies, percentages, mean, median, mode, histogram, Independent sample t-test.
4	Influence of scheme participation and demographic factors(sex, age, household size, education, and marital status) on overall livelihood outcome	Frequencies, percentages, means, mode, Pearson product-moment correlation, Ordinary Least Squares (OLS) regression.

Source: Field survey, Quayson (2016).

Model Specification

The review of the literature showed that demographic factors such as sex, age, household size, educational level, marital status, livelihood activity or the kind of enterprise one is engaged in, among others, do have influence on livelihood outcomes, especially, the livelihood outcomes of microfinance scheme beneficiaries (ADB, 2007; Asiama & Osei, 2007; Gibbs, 2008; Appiah, 2011; Celino, 2014). This study, therefore, tried to find out if the demographic factors of the respondents (who also happened to be the leads or heads of their respective households, as indicated in the methodology) and the scheme participation were actually predictors or determinants of the level of the livelihood outcomes observed in the study. In doing that, the study used Ordinary Least Squares (OLS) to estimate a regression model.

In this model, the independent variables including the VSLA scheme participation (X_1), sex (X_2), age (X_3), educational level (X_4), household size (X_5), marital status (X_6), livelihood activity (X_7) and scheme location or district (X_8) were regressed on the dependent variable, the overall mean livelihood outcome (Y). The influence of the independent variables were estimated just to predict the level of outcome of the dependent variable (the overall mean livelihood outcome, Y) in a linear relationship equation. The OLS model was represented as:

$$Y_{olo} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon$$

Where;

Yolo = predicted value of the dependent variable (the overall mean livelihood outcome).

β_0 = Constant (value of Y when all the independent variables, X_1–X_8, are equal to zero)

β_1 - β_8 = Estimated regression coefficients (β coefficient) of the independent variables

ε= Error or stochastic term which is assumed to be normally distributed with mean, zero and variance, σ (i.e. $\sim N(0, \sigma)$)

X_1 = VSLA scheme participation

X_2 = Sex

X_3 = Age

X_4 = Educational level

X_5 = Household size

X_6 = Marital status

X_7 = Livelihood activity or enterprise/main occupation

X_8 = Location of the scheme/ district.

Some of the independent variables that were not continuous or not in interval scale were recoded, redefined and transformed (dummy) into forms that would allow for the determination of the actual direction of association with and influence on the dependent variable. Details of how this was done can be found in Chapter Six (Results and Discussions) of this write-up.

CHAPTER SIX

RESULTS AND DISCUSSIONS

Introduction

This chapter presents the analyses and discussions of the results from the data obtained from the study. The chapter does so under five main sections which were basically responding to the research objectives. The first section presents the demographic characteristics of the respondents and their households. The second section presents the results and discussions on the assessment of the beneficiaries' perception about the mode of the VSLA scheme operations in the study area. The third section presents the results and discussions on the assessment of the effect of the VSLA scheme participation on the income of the beneficiary households whilst the forth section illustrates the assessment on the effect of the VSLA scheme participation on non-monetary livelihood outcomes of the beneficiary households. Section five, which is the final section, presents the results and discussions on the influence of demographic factors and scheme participation on the overall livelihood outcome of the households.

Demographic Characteristics of the Respondents

This section presents the demographic characteristics of the household respondents, who happened to be the leads or heads of their respective households and who were either members or non-members of the VSLA groups as indicated in the methodology under the sub-topics 'sample and sampling procedures' and 'model specification'. Demographic characteristics have proven in many studies to have some relationship with microfinance participation outcome, and, therefore, had to be considered in the study. The demographic characteristics of both the beneficiary and non-beneficiary respondents and their households were again examined and described in order to see if indeed there was some level of homogeneity in characteristics of the two household categories. This was to allow for appropriate "with and without" analysis in order to ensure proper evaluation and presentation of the actual effect of the VSLA scheme on the livelihood outcomes of its beneficiaries. The implication for this, is that, if indeed the two household respondent categories and their households were homogenous in some basic characteristics, then, any differences that would be identified in their livelihood outcomes could be associated, to some extent(all other things being equal), to the scheme participation and not to any difference(s) in characteristics between the two categories. The areas covered in the study and presented in this section (Tables 5 and 6) included: sex distribution of the respondents; age distribution of the respondents; household sizes of the respondents; educational levels of the respondents; marital status of the respondents; dominant religious denomination; and the main occupation or sources of income.

Sex

The study looked at the sex distribution of the respondents and found that the majority (67.6 %) of all the respondents interviewed were women (Table 5). Both the beneficiary (68.7%) and non-beneficiary (65.3%) household respondents were dominated by women, indicating that, in terms of sex, the two respondent categories were, to a large extent, homogenous and, therefore, could be adequately compared. This women-dominance composition is, however, in line with the actual sex composition of the two districts (GSS, 2014). According to the reports from GSS (2014), females constitute 53.3 per cent and 53.8 per cent of the total population in Ajumako-Enyan-Essiam and Ekumfi districts respectively.

The high women-dominance situation found with the VSLA scheme actually supports reports from microfinance studies that microfinance schemes are mostly geared towards the poor of which women form the majority. Holt (1994) and Wrenn (2007) reported that many village banking models of microfinance usually target women since it is usually anticipated that female participation in such schemes will enhance social status and intra household bargaining power. Obeng (2011) posits that when microfinance scheme is targeted at women who constitute the majority of the poor in the society, it helps reduce poverty by creating wealth which leads to an increase in the levels of incomes of the vulnerable. Women, because of their supposedly low economic position in many societies and their eagerness to improve their living conditions, many times become more active than men in microfinance activities.

Age

With regard to age, persons in the 30-39 age group formed the majority of both the beneficiary (51.7%) and non-beneficiary (55.3%) household respondents, followed by those who were in the 40-49 age group (33.7% and 32.0% respectively). The majority of both the beneficiary (85.4%) and non-beneficiary (87.3%) household respondents, were found to be in the age range between 30-49 years (Table 5). Thus, in all, 86.0 per cent of the total respondents (including both beneficiary and non-beneficiary respondents) were found to be in that age range (30-49 years).

Even though there was not much difference in the age distribution of the two household categories (Table 5) that would disallow any good comparative analysis to be done, the mean ages of 38.76 years (approximately 39 years) and 36.35 years (approximately 36 years) for the beneficiaries and non-beneficiaries respectively, however, give an indication that the beneficiary household respondents had slightly advanced in age (older). This implies that the VSLA microfinance scheme might have not reached more young people in the two districts of the study. Probably, such people (young people) might be so enthusiastic to migrate from the rural areas where the scheme mostly operated and, therefore, might have found it difficult to organize themselves into vibrant VSLA groups to take advantage of the scheme. The concern here is, that, the youth who are mostly the energetic and the active working force capable of mobilizing limited resources and ideas to maximize returns were not much represented in the scheme's operations, and this could be disturbing in terms of maximizing livelihood outcomes. In terms of district, Ajumako-Enyan-Essiam District (AEED) had higher mean age (39.10 years) than Ekumfi District with the mean age of 36.50 years (Table 5).

Household size

Household size is considered by many microfinance practitioners and researchers to be one of the possible reasons to explain an individual or a household's willingness to either participate or not to participate in microfinance activities, as well as a factor that influences the outcomes of such activities.(Schiller, 2008, Kwadzo, 2010; Appiah, 2011). The study, in view of this, sought for information on the household sizes of the respondents and came out with the results as presented in Table 5. As shown in the table

(Table 5), as many as 352 respondents, constituting the majority (78.2%) of the total respondents sampled had household sizes ranging between 3-5 members. This is followed by those who had between 6-8 members (16.7%). Only 4 per cent of the households had a member or two. The mean household sizes for beneficiary and non-beneficiary households were 4.52 and 4.36 respectively (Table 5). This indicates that both the beneficiary and non-beneficiary households in the study area, on the average, had almost the same number of persons in their households.

It is, however, important to note that, the mean household size for the beneficiary households is slightly bigger (4.52, approximately 5 members) than that of the non-beneficiary households (4.36, approximately 4 members). Thus, in simple terms, every beneficiary household had a member more than its non-beneficiary household counterpart. This situation was likely going to place an additional responsibility and burden on the beneficiary households as compared to their non-beneficiary counterparts thereby having the potential of influencing the outcome of the scheme, and by extension, affecting their livelihood outcomes negatively. According to Appiah (2011), households with greater number of members are likely to require higher expenditure for basic needs and per capita household income distribution. Schiller (2008) also indicates that an increase in family size has an important implication for a family's financial need and security- thus high demand for household goods and services. Schiller (2008) further indicates that an increase in family size can be associated with an increase in the family poverty level.

In terms of district, as seen in the additional note provided under Table 5, AEED had higher mean household size (4.68, approximately 5 members) than Ekumfi District which had the mean household size of 4.18 (approximately 4 members). These results are not too different from the one provided by the GSS in their 2014 District Analytical Reports. In that reports, the mean household sizes for AEED and Ekumfi District were 4.5 persons and 4.1 persons per household respectively (GSS, 2014).

Education

Gibbs (2008) argues that educational level has a substantial effect on the willingness of individuals or household members to either engage or not to engage in microfinance services. According to Ferka (2011), the usefulness of microfinance interventions may depend on the level of education of the individuals involved. Ferka (2011), therefore, proposed that in examining the impact of microfinance intervention on its beneficiaries, the level of education of those beneficiaries is an important variable that must be considered. Hence, the results as contained in Table 5.

A look into the educational background of both the beneficiary and non-beneficiary household respondents revealed that the majority (61.1%) of them had had either only primary education (33.1%) or up to JSS/middle school education (28.0%). Almost sixteen and a half per cent (16.4%) had no formal education (possibly illiterates), 13.8 per cent had had up to secondary education, with only 8.7 per cent having tertiary education. Thus, in general, 83.6 per cent of the respondents had had some form of formal education. This result does not depart so much from the literacy rates of the two districts being 76 per cent (persons of ages 11 years and older) in AEED and 66 per cent for the same age bracket in Ekumfi (GSS, 2014).

The results of the study, as shown in Table 5, however, indicate that the percentage of the beneficial household respondents who had had education beyond JSS or middle school level was slightly higher (26.6%) than that of their non-beneficiary counterparts who had up to the same educational level (14.0%). This involves 16.3 per cent and 10.3 per cent beneficiary respondents as against 8.7 per cent and 5.3 per cent non-beneficiary respondents at the secondary school education and tertiary education levels respectively. The results from the table (Table 5) again indicate that, slightly more (19.3%) of the non-beneficiary respondents than their beneficiary counterparts (15.0%) had no formal education. In other words, a lot of the beneficial household respondents, at the time of the study, had had formal education up to certain levels.

This result seems to contradict the assertion and reports from many microfinance studies like the one by Asiama and Osei in 2007. According to those reports, people who engage in microfinance services or businesses are basically illiterates or have low level of education. The result, however, is in line with what Celino reported in 2014. According to Celino (2014), educated people are more willing and are likely to utilize microfinance services than those who are less educated. That, individuals who do not have the privilege to acquire proper education have been found to be afraid in engaging in microfinance services because of their lack of background knowledge in technology where microfinance institutions are in line with. All other things being equal, it could be said that the beneficiaries of the scheme had the requisite education and therefore were better placed to understand and utilize the services that were provided by the scheme on the use of financial resources which had the potential of influencing the outcome of the scheme positively.

Celino (2014) indicated that services that are provided by MFIs may seem too complicated for the less educated persons to handle unlike people who have reasonable level of education.

Marital status

The study considered the marital status of the respondents as one of the demographic variables and the results also presented in Table 5. The results from the table (Table 5) indicate that only 14.4 per cent of the total respondents had never been married before (single). The rest (85.6%) were either still in marriage, separated, divorced, or widowed. With regards to the individual categories, those who were still in marriage as at the time of the study formed the highest percentage (37.3%), followed by those who had divorced at the time (23.1%), those who had separated from their partners (17.0%), those who were single (14.4%) and those who were widowed (8.2%) in that order. These results reveal that divorce is a big issue with the rural people in the two districts. A percentage of 23.1 divorcees is worrying, and even becomes more worrying when those who had separated from their partners (17.0%) are included, making 40.1 per cent. The high divorce and separation rates were found to be across both the beneficiaries (21.7% and 17.7% respectively) and non-beneficiaries (26.0% and 15.3% respectively) (Table 5).

The indication from Table 5 that very few of the respondents, especially the beneficiaries (11.3% as against 20.7%), had never been married before (single) is worth noted. The inference here is that, individual people who had not married before might have had less responsibilities since many of them may not have children and other dependents to cater for, hence, the unwillingness to participate in microfinance activities. Again, comparing the percentage of the married between the two respondent categories, more beneficiary respondents (41.7%) were in marriage at the time of the study than non-beneficiary respondents (28.7%). It could be said from this that the VSLA scheme had helped some participants to maintain their marriages.

This result, however, contradicts the assertion that microfinance programmes that involve mostly women encourage divorce and separation of marriages. It has been reported that microfinance programmes assist their beneficiaries, mainly women, to hold on to their rights to work and, therefore, deliver them from circumstances in life that have the potential of keeping them in poverty. This situation will then be able to wean them off from total control and dependency on their partners. The contradiction could be as a result of the differences in some demographic characteristics, or some external forces or differences in various microfinance services.

Religion

In terms of religion, the results of the study indicate that the majority (82.0%) of the respondents were Christians. The dominance, as presented in Table 5, was found in both the beneficiary (80.0%) and non-beneficiary (85.8%) household respondents. Moslems formed 14.1 per cent of the total number of the respondents. Only 3.9 per cent of them were traditionalists. Interestingly, a reasonable percentage of the beneficiary household respondents (20.0%) were found to be non-Christians (Moslems and traditionalists). This percentage seems significant and, therefore, suggests that Plan Ghana, even though Christian-related, their VSLA microfinance scheme might not be religiously discriminatory but rather, may be appealing to people from all religious background. This is likely to have contributed to the reasons accounting for the wider coverage of the scheme in the study districts.

Table 5-*Demographic characteristics of the respondents*

Characteristic	Respondents		
	Beneficiaries	Non-beneficiaries	Total
Gender			
Male	94 (31.3)	52 (34.7)	146 (32.4)
Female	206 (68.7)	98 (65.3)	304 (67.6)
Total	300 (100.0)	150 (100.0)	450 (100.0)
Age			
20-29	21 (7.0)	18 (12.0)	39 (8.7)
30-39	155 (51.7)	83 (55.3)	238 (52.9)
40-49	101 (33.7)	48 (32.0)	149 (33.1)
50-59	20 (6.6)	1 (0.7)	21 (4.6)
60+	3 (1.0)	-	3 (0.7)
Total	300 (100.0)	150 (100.0)	450 (100.0)
Household size			
Less than 3	11 (3.7)	7 (4.7)	18 (4.0)
3-5	232 (77.3)	120 (80.0)	352 (78.2)
6-8	53 (17.7)	22 (14.4)	75 (16.7)
9-11	4 (1.3)	1 (0.7)	5 (1.1)
Total	300 (100.0)	150 (100.0)	450 (100.0)
Educational level			
No formal education	45 (15.0)	29 (19.3)	74 (16.4)
Primary	85 (28.3)	64 (42.7)	149 (33.1)
JSS/Middle Sch.	90 (30.0)	36 (24.0)	126 (28.0)
SSS/OL/AL/Tec/Voc	49 (16.3)	13 (8.7)	62 (13.8)
Tertiary	31 (10.3)	8 (5.3)	39 (8.7)
Total	300 (100.0)	150 (100.0)	450 (100.0)
Marital status			
Single	34 (11.3)	31 (20.7)	65 (14.4)
Married	125 (41.7)	43 (28.7)	168 (37.3)
Separated	53 (17.7)	23 (15.3)	76 (17.0)

Table 5: (Continued)

Divorced	65 (21.7)	39 (26.0)	104 (23.1)
Widowed	23 (7.7)	14 (9.3)	37 (8.2)
Total	300 (100.0)	150 (100.0)	450 (100.0)
Religion			
Christianity	228 (80.0)	127 (85.8)	355 (82.0)
Islamic	44 (15.4)	17 (11.5)	61 (14.1)
Traditional	13 (4.6)	4 (2.7)	17 (3.9)
Total	300 (100.0)	150 (100.0)	450 (100.0)

*The figures in the brackets are percentages; Mean age of beneficiaries= 38.76 Mean age of non-beneficiaries= 36.35; Mean age in AEED= 39.10; Mean age in Ekumfi= 36.50 *Mean household size of beneficiaries= 4.52; Mean household size of non-beneficiaries = 4.36 *Mean household size in AEED= 4.68; Mean household size in Ekumfi= 4.18

Source: Field survey, Quayson (2016).

Main occupation or sources of income for the respondents

Occupational status or the kind of livelihood activities that individuals engage in have been identified to influence the level of engagement in and the outcome of microfinance services. Persons who are employed or engaged in any income generating activity tend to be more active in engaging in microfinance services, especially micro-savings such as VSLA schemes (Celino, 2014). It is in line with this that the study sought to investigate into the main sources of income or livelihood activities for the respondents' households.

The results from the study as presented in Table 6 show that farming (including crop farming and livestock farming) and trading were the main sources of income for the majority (68.4%) of the respondents in the study area. This dominance was seen in both beneficiary (70.0%) and non-beneficiary respondents (65.3%). It is interesting, however, to note that, whilst non-beneficiary household respondents were having more of their members engaged in farming as their main source of livelihood, the beneficiary household respondents on the other hand, had more of their members engaged in trading activities as the main sources of income. Information from the interactions with the respondents indicated that, as some of them entered the VSLA scheme and had access to some financial resources and business ideas, they moved from farming activities which in most cases were considered to be more tedious, laborious and less rewarding into trading activities which were perceived to be less tedious and seemed to generate regular income as their main sources of livelihoods.

Again, the dominance in farming and trading as the main livelihood strategies was seen across the two districts (67.4% in AEED and 69.9% in Ekumfi) with farming actually forming the highest percentage among the two (Table 6). These results confirm the reports by GSS that most of the people in the two districts depend directly or indirectly on farming. Fishing and its related activities, even though minimal as shown in Table 6, were found to be associated with the people of Ekumfi (7.9%) than with the people of AEED (1.9%). The reason being that some communities of Ekumfi are located along the coast and, therefore, members in such communities may have direct access to the sea and its products, hence, engaging in fishing and fishing-related activities.

Another interesting information from the results as seen in Table 6, is that, slightly higher percentage (5.0%) of the beneficiary household respondents than their non-beneficiary household counterparts (1.3%) were salaried workers. This supports the reports by Celino (2014) that persons who are employed tend to be more active in engaging microfinance services, especially micro-savings. According to those reports, most of the poor households who lack salaried employment do not usually have access to microfinance services. In most cases, microfinance service providers and peer-group savings members would usually want to engage individuals who they think have regular and reliable sources of income so as to enable them to discharge their financial obligations properly. Prompt repayment of loans and other good practices ensure that the scheme grows and produces the needed outcome. Even though this occupational type (salaried) has the potential of having some influence on the livelihood outcome, the percentage involved may not be significant enough to explain any differences that might have occurred in the outcomes of the two household categories.

Table 6-*Main occupation or sources of income for the respondents*

Source/Livelihood Activity	Participation			District		
	Bene.	Non-bene.	Total	AEED	Ekumfi	Total
Crop farming	98 (32.7)	74(49.3)	172 (38.2)	79 (30.3)	93 (49.2)	172 (38.2)
Livestock farming	22 (7.3)	9 (6.0)	31 (6.9)	24 (9.2)	7 (3.7)	31 (6.9)
Fishing related activities	14 (4.7)	6 (4.0)	20 (4.5)	5 (1.9)	15 (7.9)	20 (4.5)
Bread baking	8 (2.7)	2 (1.3)	10 (2.2)	6 (2.3)	4 (2.1)	10 (2.2)
Edible oil extraction	12 (4.0)	12 (8.0)	24 (5.3)	19 (7.3)	5 (2.6)	24 (5.3)
Gari processing	9 (3.0)	11 (7.4)	20 (4.5)	14 (5.4)	6 (3.2)	20 (4.5)
Weaving and carving	14 (4.7)	5 (3.4)	19 (4.2)	16 (6.1)	3 (1.6)	19 (4.2)
Trading	90 (30.0)	15 (10.0)	105 (23.3)	73(27.9)	32(17.0)	105(23.3)
Salaried work	15 (5.0)	2 (1.3)	17 (3.8)	14 (5.4)	3 (1.6)	17 (3.8)
Kenkey making	5 (1.7)	3 (2.0)	8 (1.8)	4 (1.5)	4 (2.1)	8 (1.8)
Soap making	2 (0.6)	3 (2.0)	5 (1.1)	2 (0.8)	3 (1.6)	5 (1.1)

Table 6: (Continued)

Transport business/driving	9 (3.0)	2 (1.3)	11 (2.4)	5 (1.9)	6 (3.2)	11 (2.4)
Others	2 (0.6)	6 (4.0)	8 (1.8)	- (-)	8 (4.2)	8 (1.8)
Total	300	150	450	261	189	450

* The figures in the brackets are percentages *Bene= Beneficiaries *Non-bene= Non-beneficiaries Source: Field survey, Quayson (2016).

Beneficiaries' Perception about the Mode of VSLA scheme operations: Objective One

This section presents the results obtained from the study on the beneficiaries' perception about the mode of the VSLA scheme operations in the study area. Examining and documenting scheme beneficiaries' perception about the mode of the scheme's operations or processes will help its beneficiaries and the general public to form opinion on the scheme's ability to achieve what it sets for itself to achieve. This would be very crucial in terms of its implementation, acceptability and sustainability. Thus, the kind of perception people have about a scheme's operations may influence how they would respond, adopt and commit to its activities.

This section, thus, seeks to respond to the first objective of the study. Among other things, the section covers results and discussions of the data collected on the beneficiaries' perception and assessment of three main processes or activities: criteria for selecting beneficiaries, mode of training scheme beneficiaries, and accessibility and usage of money from the scheme.

Beneficiaries' Perception about the Membership Selection Criteria

Selecting the right persons as beneficiaries of microfinance schemes is one of the most important initial activities that enhances the chances of microfinance schemes becoming successful and sustainable. Therefore, for any serious microfinance scheme to have the right and expected impact on its beneficiaries, it is important to establish selection criteria that would allow for the selection of the right persons. Based on this, an effort was made to investigate if the scheme had some lay-down requirements or criteria that one had to meet before becoming a member. The information available from the interaction I had with the scheme providers and as also contained in the VSLA scheme manual(BoC, 2010), members seeking to be part of the VSLA scheme or groups are required to meet or have the following criteria or qualities:

1. Should know each other and be from similar socio-economic background;
2. Should have a reputation for honesty and reliability;
3. Should have a cooperative personality;
4. Should be able to purchase at least one share each week;
5. Should be able to take loan and repay it on time;
6. Should be able to attend meetings and training sessions regularly and on time; and
7. Should obey and follow all rules and regulations of the group.

The existence of these selection criteria, in itself, showed, to some extent that, the scheme on paper, seemed to be organized in terms of membership criteria. However, in the quest to evaluating these seven membership criteria to see their relevance or otherwise, the beneficiary respondents were asked to give their general assessment on these criteria in terms of their adequacy, appropriateness and efficiency (time).

Adequacy of membership criteria

In terms of adequacy of the criteria, the respondents were made to rate them using a scale of 1 to 5, with 1being defined as very inadequate, 2 defined as inadequate, 3 as moderate, 4 as adequate, and 5defined as very adequate. Thus, the first two (1 and 2) were negative ratings (bad) whilst the last two (4 and 5) were positive ratings (good) with the third (3) one being rated average. The results from the study as indicated in Table 7 show that a little above half (51.4%) of the respondents rated the criteria for membership as positive or adequate. In other words, sufficient or good enough to help their course (including adequate and very adequate ratings). A little above twenty three per cent (23.2%) rated the criteria as negative or inadequate (insufficient) with 25.4 per cent of them rating the criteria as moderately adequate or sufficient.

Appropriateness of membership criteria

In terms of appropriateness or suitability of the criteria to meeting beneficiaries' needs, the respondents rated using a scale of 1 to 5, where 1 was defined as highly inappropriate, 2as inappropriate, 3as moderate, 4 as appropriate, and 5 defined as very appropriate. Again, the first two (1 and 2) were negatively rated (bad) whilst the last two (4 and 5) positively rated (good) with the third (3) one given an average rating. The results again show that the majority (57.3%) of the respondents rated the criteria as suitable or positive (including those who rated it appropriate and those who rated it very appropriate). Only 6.8 per cent (highly inappropriate and inappropriate responses), as shown in Table 7, considered the criteria to be unsuitable or have negative consequences on them.

Efficiency of membership criteria in terms of time

The beneficiaries were again asked to rate the efficiency of the criteria for membership in terms of the time that it took for someone to meet all the criteria in order to become a member of the scheme. This was done again using a scale of 1 to 5, where 1 was defined as very late, 2 as late, 3 defined as neither fast nor late, 4 as fast, and 5 as very fast. Less than half (44.2%) of the beneficiary respondents expressed satisfaction or positive feeling on the time it took for someone to become a member of the scheme. They said that it has always been on time. However, as many as 46.9 per cent (Table 7) indicated that they were neither dissatisfied nor satisfied with the time (average feeling), with 8.9 per cent expressing negative feeling or being dissatisfied with the time (including late and very late ratings).

The overall mean membership criteria rating in terms of adequacy, appropriateness and efficiency (time) was 3.37 (Table 7), indicating that, the beneficiary respondents generally saw the criteria for membership to be average. Thus, they were neither satisfied nor dissatisfied with the way members were admitted on the scheme (they did not see it as good and they did not see it as bad too). This mix feeling might have influenced the quality of membership, utilization of opportunities and sustainability of the scheme. Gibson (1969) and Buadi (2008) indicated that people's perception about the efficiency or effectiveness of a system or project plays very important role in its participation, adoption and use. It affects how people respond, adopt and commit to projects and how they incorporate them into their livelihood processes.

Table 7-*Beneficiaries' ratings of the membership criteria*

Rating criteria	Levels of ratings (%)					Total
	1	2	3	4	5	
Adequacy	6.3	16.9	25.4	41.3	10.1	100.0
Appropriateness	2.1	4.7	35.9	54.2	3.1	100.0
Efficiency (Time)	2.1	6.8	46.9	35.9	8.3	100.0

*Overall mean membership criteria rating= 3.37
Source: Field survey, Quayson (2016).

Beneficiaries' Perception about the Mode of Training for Members

Beneficiaries of microfinance schemes require preparatory programmes and "add-on services" before being able to actively participate in and benefit from such schemes (UNHCR, 2015). In line with this, the VSLA's Community Volunteer Training Manual requires that members of the scheme are provided with training programmes or "add-on services" to equip them for efficient and effective utilization of the financial resources obtained from the scheme.

Table 8 presents the percentage distribution of the scheme beneficiaries in relation to their views on the mode of the scheme's training processes in terms of accessibility, adequacy, appropriateness and efficiency (time, effort and cost). The respondents were made to rate the training activities in relation to these variables using 5-point scale with the first two (1 and 2) being negatively rated (bad), the last two (4 and 5) positively rated (good), and the third (3) rated average. The following specific rating scales were, thus, used:

1. Rating and coding for *accessibility*-1= highly inaccessible,
   2– inaccessible, 3– moderate, 4– accessible, 5– highly accessible

2. Rating and coding for *adequacy*- 1= highly inadequate, 2= inadequate, 3= moderately adequate, 4= adequate, 5=very adequate
3. Rating and coding for *appropriateness*- 1= highly inappropriate, 2= inappropriate, 3= average, 4= appropriate, 5= very appropriate
4. Rating and coding for *efficiency*- 1= very inefficient, 2= inefficient, 3= neither efficient nor inefficient, 4= efficient, 5= very efficient

Accessibility of the training activities

In terms of accessibility, the results, as indicated in Table 8, show that only 16.5 per cent of the respondents said they were able to access the training activities organized by the scheme providers and therefore considered it to be good. The majority (52.9%) of them, on the other hand, said the training activities were not accessible (either inaccessible, 50.4% or highly inaccessible, 2.5%) and, therefore, thought it was bad. According to them, the training activities were not organized regularly enough so they could access it to enhance their capacity in order to meet their expectations.

Adequacy of the training activities

Like accessibility, the majority (56.9%) of the respondents as shown in Table 8 indicated that the number of times and the contents of the training activities given them on the scheme were not enough or were insufficient (inadequate). Probably because, those activities were not organized regularly. Only 14.2 per cent of them claimed the training activities and their contents were adequate or sufficient enough (good) to maximize outcome to improve livelihood conditions.

Appropriateness of the training activities

Interestingly, when it came to the appropriateness or suitability of the training activities organized for them, less than half (40.7%) of the respondents (Table 8) complained that the activities were inappropriate or had no positive influence on their livelihood processes. However, only 19.0 per cent of them categorically indicated that the training activities given them had been timely or appropriate to enhance their livelihood activities. As high as 40.3 per cent of the respondents saw the training activities to be somehow appropriate (moderate) to enhancing their livelihood activities.

Efficiency of the training processes in terms of time, materials, efforts and cost

Regarding the efficiency of the training activities in terms of the time for organizing such activities, cost involved, usage of logistics and materials, and individual efforts, a little above half (50.7%) of the respondents indicated negative satisfaction (inefficient or bad). What some of them said was that the training activities were usually not organized on regular basis, sometimes the activities and processes involved were time consuming or wasteful in terms of materials and money, thereby, making a lot of them unable to realize their intended livelihood outcomes.

The overall mean training rating in terms of accessibility, adequacy, appropriateness and efficiency was 2.63 (Table 8). This means that, the beneficiaries generally saw the training activities and processes in terms of accessibility, adequacy, appropriateness and efficiency to be somehow negative or unsatisfactory. This could have resulted in a situation where members might have taken the training activities less serious or may have failed to adopt and use the outcomes of the training as expected. This, in tend, might have affected the livelihood activities and subsequently, the outcome. The results from the study, thus, fall short of the recommendation made by Dalar *et al.* (2008), and also reported in Karikari (2011) that microfinance schemes must provide far greater services than what the traditional financial institutions do: they must offer not only financial products and services, but also financial education, management training, value chain support and social services on regular basis.

Table 8-*Beneficiaries' ratings on the training activities*

Rating criteria	Levels of ratings (%)					Total
	1	2	3	4	5	
Accessibility	2.5	50.4	30.6	14.4	2.1	100.0
Adequacy	3.9	53.0	29.0	13.8	0.4	100.0
Appropriateness	2.7	38.0	40.3	19.0	-	100.0
Efficiency (time, effort, cost)	6.5	44.2	31.8	17.1	0.3	100.0

*Overall mean training rating= 2.63
Source: Field survey, Quayson (2016).

Rating of some training variables or components of the scheme

The beneficiary respondents were made to respond to some six good practice training variable statements to indicate the level with which they either agreed or disagreed to such statements in terms of their implementation in the training activities. These statements or practices included

1. I understand the language used during the training session very well;
2. I always adopt and use the outcome from the training and education sessions;
3. The training activities are organized regularly and I am always

involved in the planning and execution of the activities;

4. The training providers are competent and accommodative in their activities;

5. The training and education sessions have always been time and cost efficient; and

6. The training providers use effective and appropriate methods for the training and education

An agreement rating scale of 1 to 5 was used on these training variables where 1 was defined as strongly disagree, 2defined as disagree, 3 as neither disagree nor agree, 4 as agree, and 5 defined as strongly agree. Generally, the results from the responses showed that, one variable or statement that a lot of members agreed to its practice or existence in the training processes was the use of language that was understood by all or most of the group members. Thus, a lot of the beneficiary household respondents responded positively or agreed to the statement; 'I understand the language used during the training session very well'. This implies that, there were no communication barriers and, therefore, members understood well the language used during training sessions.

The rest of the training variables were partially agreed to by the respondents. Thus, they neither disagreed nor agreed to the statements that indicated the existence and the use of such practices. The overall mean agreement level for the six good training practices or variable statements was 3.2874 and the median and the mode were 3.1667 and 3.00 respectively. All these statistics generally indicate that the VSLA scheme's training activities did not fully employ the good training practices that are required to execute any efficient and effective training programme. This situation again, might have affected the livelihood processes of the beneficiaries.

Beneficiaries' Perception about the Accessibility to and Usage of Money from the Scheme

Providing the poor with access to credit, according to Holden and Prokopenko (2001), is the first step to ensuring that all the other poverty reduction strategies that aim at improving livelihood work to achieve their intended goal. Information from the VSLA scheme methodology requires that all the scheme members save money regularly (through share-purchases), take loans from the savings, and share out the savings and profits obtained each year according to each person's contributions. In the light of this, the study sought to find out from the beneficiaries how in practice these were actually done, and in their opinion, how they saw such processes. Thus, the beneficiaries were made to assess the processes and procedures for accessing and using money from the scheme in terms of accessibility, adequacy, appropriateness and efficiency of such processes and procedures. In doing so, questions were asked and responses obtained on the procedure for accessing credit, interest rate on credit, time of receiving credit or share-profit, and the way the money received from the scheme was used.

Interest rate and conditions that one has to meet in order to secure a loan from any financial institution have always poseda lot of problems to the borrower. Many rural poor are unable to secure capital from financial institutions simply because of high interest rates and stringent conditions they would have to meet before getting the money. In view of this, the study sought opinions from the beneficiaries on how they saw the interest rate and the procedure involved in securing a loan from the scheme.

Beneficiaries' perception about the procedure for accessing credit

In assessing the procedure for accessing credit from the scheme, the respondents were made to rate their perception about the procedure on a scale of 1 to 5, with 1 being defined as very easy, 2 as easy, 3 as neither easy nor difficult,4 as difficult, and 5 defined as very difficult. The results, as shown in Table 9, show that in the majority's (78.4%) mind, the procedure for accessing credit from the scheme was easy (including those who saw it to be easy, 66.7% and those who saw it to be very easy, 11.7%). Only 3.6 per cent of them considered the procedure for accessing credit to be difficult, with 18.0 per cent indicating that the procedure was neither difficult nor easy (average). Both the median and the modal level of opinion expressed by the beneficiaries was 2.0. This generally indicates that, the procedure for accessing credit from the VSLA scheme is easy.

It was, therefore, not surprising when 93.0 per cent of the scheme beneficiaries said that anytime they applied for credit, it was given to them on time. The inference here is that the members of the scheme were able to access credit more efficiently without any difficulty and got it at the time they most needed (accessible). The effect of this on the success of the scheme was that, members could plan their lives and businesses and would therefore be able to take advantage of any opportunity that came their way. Members might have again felt secured knowing that they could fall on the scheme for financial assistance in times of difficulties irrespective of how small it would be.

Table 9-*Beneficiaries' perception about the procedure for accessing credit*

Opinion on the procedure	Frequency	Percentage
Very easy	35	11.7
Easy	200	66.7
Neither difficult nor easy	54	18.0
Difficult	10	3.3
Very difficult	1	0.3
Total	300	100.0

*Median= 2.0 Mode= 2.0 SD= 0.7
Source: Field survey, Quayson (2016)

Perception on interest rate

About the opinion on the interest rate, again, the respondents were made to rate it on a scale of 1 to 5, with 1 being defined as very low, 2 as low, 3 as moderate, 4 as high, and 5 defined as very high. The results, as presented in Table 10, show that the majority (54.0%) of the beneficiaries considered the interest rate on credit as moderate. Only 15.7 per cent indicated that the interest rate was high (14.0% for high interest rate and 1.7% for very high interest rate rating). A reasonable percentage of 30.3, however, said the interest rate was low (24.0% and 6.3% for low and very low ratings respectively). The median rate of perception on interest rate was 3.0, indicating moderate interest rate on credit. This perception on the interest rate, together with the easiness with which one could access credit from the scheme, might have encouraged members and, therefore, may have accounted for the reason why almost all the beneficiaries of the scheme were able to access credit from the scheme. The operation of the scheme in relation to credit accessibility seems to be the one that Wrenn in 2007 advocated for. Wrenn (2007) indicated that practitioners in the field of microfinance should seek ways to develop new products that would introduce more flexibility into lending procedures.

The problem, however, could have been that the low interest rate on credit might not be able to help the scheme to generate more income to grow in order to create more opportunities for members to access high sums of money or credit to initiate or expand their businesses as indicated by Deelen and Majurin (2008).

Table 10- *Beneficiaries' perception about the interest rate*

Perception on interest rate	Frequency	Percentage
Very low	19	6.3
Low	72	24.0
Moderate	162	54.0
High	42	14.0
Very high	5	1.7
Total	300	100.0

Median= 3.0Mode= 3.0 Std. Deviation= 0.823
Source: Field survey, Quayson (2016).

The highest amount of money one received as credit or annual share-profit

The beneficiaries of the scheme were asked to indicate if they had ever accessed credit from the scheme before. And if yes, what was the highest amount of money they ever accessed. All the respondents responded ever accessing credit from the scheme. The mean highest amount of money received as credit by the beneficiaries was GH¢249.28. This means that, on the average, every individual beneficiary received an amount not more than GH¢249.28 anytime he/she applied for a loan from the scheme. However, some of them could access as high as GH¢1,000.00 (maximum) credit at a time. Unfortunately, the highest amount of money some of them too could access at a time was only GH¢100.00 (minimum). The modal amount of money received was GH¢200.00 (Table 11).

Again, stating the highest amount of money they ever received as an annual share-profit, the results, as indicated in Table 11, give the mean highest amount of money received by the beneficiaries (annual share-profit)as GH¢565.98. Thus, every individual beneficiary of any VSLA scheme group, on the average, received an amount of GH¢565.98 as a share-profit from his/her contributions every year. The minimum and the maximum annual share-profit received were GH¢260.00 and GH¢900.00 respectively. The modal amount of annual share-profit received was GH¢560.00. These figures, even though may be inadequate and not too encouraging, when invested in productive and income generating activities, are capable of influencing positively any rural household livelihood.

The amount of money received by an individual either as share profit or as credit may be dependent on that individual's contributions (share-purchases)to the scheme. The small amount of money received as credit by the beneficiaries might have, therefore, been accounted for as a result of the small amount of contributions (less share-purchases) they made on weekly basis. According to Grameen Bank (2000) and Wrenn (2007), access to credit under the village banking model is linked to savings. The amount of money obtained as a loan by an individual is influenced by the amount of savings mobilized by the village bank from such individual member.

Table 11-*Descriptive statistics of the amount of money received from the scheme by the beneficiaries*

Kind of money	Mean	Median	Mode	Min	Max	SD
Credit	249.28	200.00	200.00	100.00	1,000.00	154.07
Annual share-profit	565.98	560.00	560.00	260.00	900.00	111.89

Source: Field survey, Quayson (2016).

How money from the scheme was used by the beneficiaries

In similar development, the study tried to find out from the beneficiaries if they always used the money received from the scheme for the purpose for which they obtained it. Only 3.9 per cent of them said they sometimes used the money to solve some pressing issues rather than using it for the reason for which they obtained it. The rest of the 96.1 per cent said they always made sure they used the money for its intended purposes. This implies that monies received by the beneficiaries from the scheme, even though may not be adequate, were used efficiently and not wasted or misapplied. A further probe into the main livelihood activities that money from the scheme was spent on, however, indicates that, 116 (38.7%) out of the 300 scheme beneficiaries said they spent the money on consumption activities. This, according to them, was as a result of their inability to meet their basic household needs with their own resources and, therefore, had to resort to securing loan from the scheme to sustain the household. This was followed by those who said they invested the money in some projects and businesses

(37.3%) and those who spent it on some production activities (24.0%).

Some of the consumption activities the beneficiary households spent their money on, according to them, included spending on food and water, paying for utility bills, paying for children's school fees, hospital bills, buying cloth and dresses for family members among others. Some specific production activities mentioned included crop farming, animal farming, gari processing, and many others. Examples of the investment activities monies were invested in included, building projects, investing in transport business, engaging in trading activities such as provision stores, petty trading, and saving at the bank.

The results on the usage of money from the VSLA scheme by the beneficiaries as shown in Figure 3 does not portray the one that would be able to promote growth and bring much positive outcomes in terms of improving the living conditions of the beneficiary households. Accessing credit for consumption purposes has the potential of retarding progress since in most cases they are unable to generate direct returns for the household. Nghiem (2004), however, reported that, even though consumption activities often do not contribute directly to the accumulation of physical and financial resources of the households, they are important to maintain and increase productivity of human capital by ensuring healthy life for good education and other productive activities. Nonetheless, beneficiaries of microfinance schemes who, in most cases, are rural poor, are required, if they are to make any meaningful impact, to invest their money in productive activities that have the potential of generating income to improve livelihoods. It was, therefore, not surprising when the majority (62.4%) of the beneficiaries said they were having problems with the loan repayment even though interest on loan was generally low.

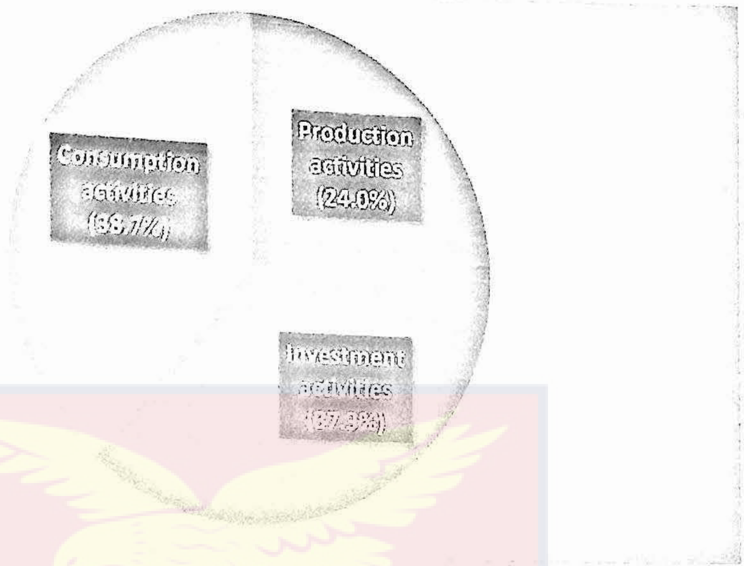

Figure 3: *The main activities that money from the scheme was spent on*

Source: Field survey, Quayson (2016).

Beneficiaries' general assessment of the accessibility and usage of credit

Table 12 presents the percentage distributions of the scheme beneficiaries in relation to their general assessment of the processes and conditions involved in accessing and using credit in terms of how accessible, how adequate, how appropriate and how efficient such processes and conditions were. In each of these measures, the respondents were made to give their overall assessment on the processes and conditions involved in accessing and using credit on 5-point scale with the first two (1 and 2) being negatively rated (bad), the last two (4 and 5) positively rated (good), and the third (3) rated average. Thus, the following ratings and coding were used:

1. Rating and coding for *accessibility*-1= highly inaccessible, 2= inaccessible, 3= moderate, 4= accessible, 5= highly accessible

2. Rating and coding for *adequacy*- 1= very inadequate, 2= inadequate, 3= moderately adequate, 4= adequate, 5=very adequate
3. Rating and coding for *appropriateness*- 1= highly inappropriate, 2= inappropriate, 3= average, 4= appropriate, 5= very appropriate
4. Rating and coding for *efficiency*- 1= very inefficient, 2= inefficient, 3= neither efficient nor inefficient, 4= efficient, 5= very efficient

Credit accessibility

In terms of accessibility, the results (Table 12) indicate that only 5.0 per cent of the beneficiary respondents said that they were having problems with the procedure for accessing credit from the scheme. More than two-thirds (72.4%) of them, however, said they were able to access credit from the scheme without any difficulty. This included those who indicated that the scheme had always made credit accessible to members (51.9%) and those who said credit was very accessible (20.5%) from the scheme. These results support the results obtained in Table 9, which showed that in the minds of the majority (78.4%) of the beneficiaries, the procedure for accessing credit from the VSLA scheme was easy. This could also account for the reason why as high as 93.0 per cent of the scheme beneficiaries said they received credit anytime they applied for one.

Adequacy of the amount of credit received from the scheme

The responses, as shown in Table 12, again indicate that a simple majority (50.5%) of the respondents described the amount of money received from the scheme at any point in time as average. A little above thirty per cent (30.4%) said the money received was adequate or enough whilst only 19.0 per cent said it was inadequate or not enough. This means that even though the highest amount of money one could obtain from the scheme as credit was generally small (GH¢249.28) as indicated in Table 11, yet the beneficiaries of the scheme saw such an amount as somehow adequate enough to affect their livelihoods.

Appropriateness of the conditions for accessing credit

Describing how appropriate or otherwise the terms of conditions for accessing credit (including interest rate, loan requirements, repayment period etc.) were, based on beneficiaries' perception, only 11.8 per cent (including those who said inappropriate and those who indicated highly inappropriate) described it to be inappropriate or unsuitable to their circumstances and, therefore, could affect their livelihoods negatively (Table 12). More than forty seven per cent (47.3%), however, said the conditions for accessing credit were appropriate or good. The rest (40.9%) of them described the conditions to be somehow suitable (moderate).

Efficiency of how credit was accessed and used

When the respondents were made to assess the efficiency in terms of time, materials and efforts involved in obtaining credit, only 10.0 per cent of the respondents said they were not satisfied with the time it took for one to obtain credit and the efforts involved in securing loan from the scheme. As high as 63.1 per cent, however, said that the conditions, in terms of time and efforts needed were efficient.

The overall mean credit accessibility and usage rating in terms of accessibility, adequacy, appropriateness and efficiency was 3.34 (Table 12), indicating that, the respondents generally saw the conditions for accessing credit to be moderate.

Table 12-*Beneficiaries' perceived ratings on credit accessibility and usage*

Rating criteria	Levels of ratings (%)					Total
	1	2	3	4	5	
Accessibility	0.4	4.6	22.6	51.9	20.5	100.0
Adequacy	0.3	18.7	50.5	29.4	1.0	100.0
Appropriateness	0.7	11.1	40.9	44.6	2.7	100.0
Efficiency	1.0	9.0	26.9	62.1	1.0	100.0

*Overall mean credit accessibility and usage rating= 3.34
Source: Field survey, Quayson (2016).

The Effect of the VSLA Scheme on Income: Objective Two

Access to microfinance services is said to have direct relationship with beneficiary's income. Various studies around the globe have reported such link. Some have given positive relationship whilst few others have given the opposite. In order to contribute to this debate, the researcher tried to assess the income levels of the beneficiaries' households and how the VSLA scheme is seen to have influenced these income levels. This was done, to a large extent, by employing 'with and without' approach, where the income levels (mainly average monthly income earnings and the ability to save from the monthly income) of the beneficiary households were compared with that of their non-beneficiary counterparts to determine differences or otherwise. In addition to this, however, the respondents were asked to give an assessment on their general income situation before and after joining the scheme to see if there had been any changes.

Table 13 presents the average monthly income of both beneficiary and non-beneficiary households as at the time of the study. The results from the table (Table 13) indicate that 55.0 per cent of the beneficiary households earned less than GH¢200.00 as its monthly income. This seems not encouraging as it may be very difficult for such households to cater for all their needs with such income levels. This amount, even though small, was seen to be a little better than that of the non-beneficiary households. For instance, whilst 55.0 per cent of the beneficiary households were earning less than GH¢200.00 as monthly income, as high as 86.0 per cent of the non-beneficiary households were earning less than GH¢200.00 a month. Again, whilst the majority (60.0%) of the non-beneficiary households sadly earned less than GH¢100.00 a month as at the time of the study, only 16.7 per cent of the beneficiary households earned less than GH¢100.00. In other words, 83.3 per cent of the beneficiary households as against only 40.0 per cent of the non-beneficiary households earned GH¢100.00 and above as their monthly income.

Table 13-*Monthly income earnings of beneficiary and non-beneficiary households*

Average monthly income (GH¢)	Beneficiaries Freq.	Beneficiaries Percent	Non-beneficiaries Freq.	Non-beneficiaries Percent
Less than 100	50	16.7	90	60.0
100 – 199.90	115	38.3	39	
200 – 299.90	57	19.0	7	26.0
300 – 399.90	29	9.7	4	
400 – 499.90	34	11.3	1	4.7
500 – 599.90	9	3.0	8	2.6
600 – 699.90	5	1.7	1	0.7
Total	300	100.0	150	100.0

Source: Field survey, Quayson (2016).

Again, the mean monthly income for the beneficiary and non-beneficiary households, as shown in Table 14, were GH¢201.92 and GH¢110.83 respectively, giving the mean difference of GH¢91.09.This implies that, on the average, every VSLA scheme beneficiary household earned an amount GH¢91.09 higher than its non-beneficiary counterpart every month. The modal monthly income for the beneficiary and non-beneficiary households were GH¢200.00 and GH¢100.00 respectively. The minimum and the maximum monthly income for the beneficiary households were GH¢20.00 and GH¢700.00 respectively whilst that of the non-beneficiary households were GH¢10.00 and GH¢600.00 respectively (Table 14). All these statistical measures point to one direction, and that is, generally the VSLA scheme beneficiary households were found to have earned higher monthly income than that of their non-beneficiary household counterparts.

The big gap between the maximum and the minimum monthly income of the beneficiary households in a way signifies variations in their commitment and dedication levels to wanting to better their lives. Those who had the right attitude and were committed to improving their lives, invested the financial resources obtained from the scheme in a productive and efficient manner. These could have been those beneficiaries who earned high monthly income, all other things being equal.

Table 14-Descriptive statistics on the average monthly income for the beneficiary and non-beneficiary households

Statistics	Beneficiaries (GH¢)	Non-beneficiaries (GH¢)
Mean	201.92	110.83
Median	150.00	70.00
Mode	200.00	100.00
Std. Deviation	144.61	120.50
Minimum	20.00	10.00
Maximum	700.00	600.00

Source: Field survey, Quayson (2016).

Test for Significance (Independent sample t-test): Hypothesis 1

The results in Table 14 show that the mean average monthly income of the VSLA scheme beneficiary households (GH¢201.92) is relatively greater than the mean average monthly income of the non-beneficiary households (GH¢110.83). In order to establish if indeed the mean difference of GH¢91.09 between the two household categories was statistically significant, the mean difference (GH¢91.09) was subjected to a statistical test. But because the distribution of the monthly income earning was skewed as seen in the difference between the mean and the median values (wide apart) of the two household categories in Table 14 (that is, there were many respondents from both the beneficiary and non-beneficiary households who reported small incomes, but there were also a few respondents who indicated large incomes), a square root (sqrt) transformation of data was used to reduce the skewness of the distribution (Table 15). This was done in order to meet one of the criteria or assumptions (normal distribution of data) required for the performance of the statistical test of significance (t-test).

Table 15-*Transformed data on the average monthly income for beneficiary and non-beneficiary households*

Variable	Beneficiaries				Non-beneficiaries			
	N	Mean	Median	SD	N	Mean	Median	SD
Average monthly income	300	133.18	122.47	49.63	150	95.07	83.67	45.37

Source: Field survey, Quayson (2016).

As shown in Table 15, the mean difference (GH¢38.11) of the average monthly income (which before the transformation was GH¢91.09) with a t-value of 8.138 (equal variance not assumed) tested significant (p=.000) at an alpha level of 0.05 (two-tailed). This implies that, statistically, there was significant difference between the mean monthly income of the beneficiary households and the mean monthly income of non-beneficiary households. Thus, the average monthly income of the beneficiary households as at the time of the study was significantly higher than that of their non-beneficiary counterparts.

In order to determine the magnitude or the percentage of the mean difference (GH¢38.11, formerly GH¢91.09) in the average monthly income of the two household categories that is explained by the participation of the scheme, the effect size (Eta squared) was calculated and the result (0.129) presented in Table 16. Using Cohen's guidelines for interpreting effect size or eta squared values (Cohen, 1988), the magnitude of the mean difference in the average monthly income between beneficiary and non-beneficiary households at 95% confidence level was found to be moderate (moderate effect, i.e. eta squared= 0.129). This means that 12.9% of the variance in the average monthly income between the two household categories was explained by the beneficiaries' participation in the VSLA microfinance scheme.

Table 16 - *Independent sample t-test comparing the differences in mean monthly income between beneficiary and non-beneficiary households*

Indicator variable	Levene's Test for Equality of Variances		Test for Equality of Means			
	F	Sig.	t	Sig (2-tailed)	MD	Eta sq.
Average monthly income	6.176	0.013	8.138	0.000	38.11	0.129

P value= 0.05 (Sig. at 0.05 alpha level); MD= Mean Difference

Source: Field survey, Quayson (2016).

Conclusion on the Test of Hypothesis 1

The result from this study, therefore, does not support the null hypothesis (H_0) of the first hypothesis of the study which states that households that participated in the VSLA microfinance scheme did not experience higher income levels than those that did not participate in the scheme. It rather supports the alternative hypothesis (H_1) and concludes that households that participated in the VSLA microfinance scheme experienced higher income levels than those that did not participate in the scheme.

Ability to save from the monthly income

When the respondents were asked if their households were able to save from their monthly income, more than two-thirds (76.7%) of the beneficiary household respondents, apart from their weekly contributions (share-purchases) to the scheme, said they were able to save some money from their income with an average monthly savings of GH¢56.84. Unfortunately, the majority (52.8%) of the non-beneficiary households said they were unable to save from their monthly income. The average monthly savings for the 47.2 per cent of the non-beneficiary households that were able to save from their monthly income was GH¢38.78.This outcome suggests that the VSLA scheme beneficiaries might have been taken through the importance of savings and, therefore, had developed the culture of savings. This is likely to explain the reason for their ability to save more than their non-beneficiary household counterparts. Other possible reason, however, could have been that, because the beneficiary households were earning higher incomes than non-beneficiary households as indicated in Tables 13 and 14, it only makes sense that a lot of them (beneficiaries) were able to save from their income and at higher amount than their non-beneficiary household counterparts.

Beneficiaries' assessment of their general income status before and after joining the scheme

Now, in order to further appraise the general income status of the beneficiary households and the changes that might have occurred as a result of the scheme, the beneficiary household respondents were asked to assess their general income status before and after joining the scheme using a Likert-like scale of 1 to 5, with 1 being defined as very low income status, 2 defined as low income status, 3 as average income status, 4 as high income status, and 5 as very high income status.

The results, as presented in Table 17 show that the majority (88.7%) of the beneficiary households said their income level before joining the scheme was below average or inadequate (comprising of low and very low income levels). This description was given by beneficiaries because they said their income was unable to provide for their household members with the basic needs of life at most times, and in most cases, depended on relatives or neighbours for food. Only 4.7 per cent said their income was above average or adequate (high level) before joining the scheme because they were able to provide their household members with enough of the basic livelihood needs at all times from their income and as well were able to save some of the income to meet other future needs. A percentage of 6.7 indicated having average or moderate income level before joining the scheme because they were able to provide their household members with some basic livelihood needs at most times with their income but they were unable to make any meaningful savings from such income levels.

At the time of the study (after joining the scheme), however, only 16.3 per cent said their household income was below average (inadequate) with as high as 46.6 per cent saying that their income was adequate or above average (high and very high) because it was able to provide them with enough of the basic livelihood needs at all times, and at the same time, were able to save some of the income to meet other future needs. Again, 37.0 per cent of them at the time of the study described their income to be average (Table 17). The results from the table (Table 17), therefore, indicate that the majority (83.6%) of the beneficiaries, as at the time of the study, saw their income status to be average and beyond.

This means that, a lot of the beneficiaries at the time of the study, earned income that was able to provide their household members with some level of the basic livelihood needs at most times, even though not all of them were able to make any meaningful savings from such income. This percentage (83.6%) was found to be far higher than the percentage before joining the scheme (11.4%). Thus, a very good number of the scheme beneficiaries had been able to move their households from very low and low income status to average income status and more. Some of these changes in the income status before and after joining the scheme, even though might not be substantial, may have brought a great relieve to some households.

Table 17-*Beneficiaries' general assessment of their income status before and after joining the scheme*

Rating	Income status before the scheme		Present income status	
	Freq.	Percent	Freq.	Percent
Very low	81	27.0	6	2.0
Low	185	61.7	43	14.3
Average	20	6.7	111	37.0
High	14	4.7	121	40.3
Very high	-	-	19	6.3
Total	300	100.0	300	100.0

Sources: Field survey, Quayson (2016).

All the results on the effect of the scheme on income, were found to be in line with what some studies have reported. Hulme and Mosley (1996) reported that, providing credits to very poor households through microfinance projects help them to raise their incomes. In a comprehensive study on the use of microfinance to combat poverty, Hulme and Mosley argue that well-designed microfinance programmes can improve the incomes of the poor households and can move them out of poverty. Results from a study by ADB (2007) on the impact of microfinance on some primary measures of household welfare in Bangladesh showed positive impact on per capita income. The analysis from the ADB (2007) study indicated that the income level of the beneficiary households increased substantially as a result of the programme (Hulme & Mosley, 1996; ADB, 2007).

In Robinson's (2001) study involving sixteen different microfinance institutions across the world, the poor beneficiaries' access to microfinance services increased their confidence level and helped them to diversify their livelihood security strategies and this led to an increase in their income. Again, the study by Boateng and associates to ascertain the impact of microfinance on poverty reduction in Ghana resulted in an increase in income of the beneficiaries (Boateng *et al.*, 2015).

The Effects of the Scheme on Non-Monetary Outcomes: Objective Three

Ayadi *et al.* (2007) conceptualized that using only income as an indicator to measure the state of a household covers a limited aspect of living standard. The recent call, therefore, is to include other non-monetary indicators in order to give a complete picture of the situation. This study, in response to this call, sought to assess the effect of the VSLA scheme on the beneficiary households' non-monetary livelihood outcomes in terms of food security, education, health, housing and household utilities. This was done mainly by employing 'with and without' approach where those measures were compared between the scheme beneficiary and non-beneficiary households to determine differences or otherwise as done earlier under the effect of household income assessment. In addition to this, the beneficiary household respondents' own assessment of their non-monetary livelihood outcome conditions before and after joining the scheme were also examined to see if there had been any changes or not

Effect on Food Security

Food security is an important measure of the well-being of any given household. In view of this, the study tried to assess the VSLA scheme beneficiary households' food security condition by comparing it with their non-beneficiary household counterparts. However, in addition to this, the beneficiaries were made to assess the general food security conditions of their households before and after joining the scheme to see if there had been any changes or not. The measure of the food security here was operationalized primarily in terms of: the months of adequate food provisioning (the number of months in the year that household members were provided with enough good food to eat using the household's own resources); and meal times per day (the number of times the household members ate or had access to enough food in a day).

Assessment on months of adequate food provisioning

Table 18 shows the number of months in the year that both the beneficiary and non-beneficiary households were able to provide enough food for the entire members to eat using their own resources or cash. Months of adequate or inadequate food provisioning has been identified as an important variable when studying the food security patterns of a given population. Bilinsky and Swindale (2007) define months of inadequate household food provisioning to be the time between stock depletion and the next harvest of the household. Months of adequate food provisioning, as indicated earlier, may therefore be defined as the period of time or the number of months in the year that household members are provided with enough food to eat using the household's own resources. Thus, the time between harvest and the stock depletion of the household.

In this study where all the households under consideration were rural and were found to be farming dominated, this variable of adequacy or inadequacy in food provisioning in the households was considered relevant. In doing so, the number of months that adequate or enough food was provided was also weighted using 6-points score rating, where 0-2 months was scored 1 point and defined as highly insecure, 3-4 months scored 2 points and defined as insecure, 5-6 months scored 3 points and defined as lower average security, 7-8 months scored 4 points and defined as upper average security, 9-10 months scored 5 points and defined as secure, and 11-12 months scored as 6 points and defined as highly secure.

The results from Table 18 indicate that the majority (74.6%) of the beneficiary households could provide enough food for their members for nine to twelve months within the year. Only 2.4 per cent could provide for only 4 months and below which represented food insecure. Comparing this with that of the non-beneficiary households, the results from Table 18 indicate that whilst the majority (74.6%) of the beneficiary households were able to provide enough food for their members between 9 to 12 months in the year, the majority (65.4%) of the non-beneficiary households were able to provide enough food for their members only between 3-8 months within the year. This represented 'food insecure' to 'upper average food secure' according to the scores. This result goes to confirm the reports by Quaye in 2008. According to Quaye (2008), most farmer households that are not on any programme, as in the case of the non-beneficiaries of the VSLA scheme, may experience some significant degree of food insecurity with food insecure periods spanning between 3 and 7 months.

The mean food security score for months of adequate food provisioning for the beneficiary households was 4.90. This is approximately 5 points on the food security index score representing 9 to 10 months of adequate food provisioning. That of the non-beneficiary households, however, was 4.25, which is 4 points on the food security index score and represents 7 to 8 months of adequate food provisioning (Table 18). This means that, generally whilst the beneficiary households were able to provide their members with enough food to eat using the household's own resources between 9 to 10 months in the year, the non-beneficiary households were able to provide for their members only between 7 to 8 months in the year.

The inference here is that the introduction of the VSLA microfinance scheme might have helped its beneficiaries to close the gap between their stock depletion and their next harvest, thereby, making them a little food secured than their non-beneficiary household counterparts in terms of the number of months in the year that they were able to provide enough food for their members to eat.

Table 18-*Number of months in the year that the households were able to provide enough food for their members*

Number of months	Beneficiaries		Non-beneficiaries	
	Frequency	Percent	Frequency	Percent
0-2	2	0.7	-	-
3-4	5	1.7	7	4.7
5-6	22	7.3	26	17.3
7-8	47	15.7	65	43.4
9-10	141	47.0	26	17.3
11-12	83	27.6	26	17.3
Total	300	100.0	150	100.0

Source: Field survey, Quayson (2016)

Assessment on meal times per day

Apart from the number of months in the year a household could provide enough food for its members, the study again sought to specifically find out from the household respondents the number of times in a day that they were able to provide their members with adequate food to eat using their own resources (meal times per day). A household may be able to provide food to its members for so many months or for a long period of time within the year, but may not necessarily be able to provide enough of the food at all times in the days (three square meals) within the months. Bickel *et al.* (2000) define food security to mean access by all people at all times to enough food for an active healthy life. USDA in 2006, provided a continuum along which food security status of a household could be described. This was given as: very low food security; low food security; marginal food security; and high food security. For reporting purpose, very low food security and low food security were described as food insecure whilst marginal food security and high food security were described as food secure.

In relation to the USDA's food security continuum (where very low and low food security were described as food insecure whilst marginal and high food security situations were described as food secure), the respondents were made to indicate their daily eating patterns in a 6-point Likert-like scale, where 1 was defined as 'in some cases we do not eat at all in the day' which was considered as 'highly insecure'; 2was defined as 'we only eat when food is available' which was considered as 'insecure'; 3as 'we eat only once a day', also considered as 'lower average security', 4as 'we eat two times a day' and was considered as 'upper average security', 5 as 'we eat three times a day', also considered as 'secure'; and 6defined as 'we eat all types of food and drinks at any time we want' which was seen as 'highly secure'. Thus, comparing this with the USDA's food security continuum (USDA, 2006), the first two scores (1st and 2nd) were classified under 'very low food security', the 3rd and the 4th scores were classified under 'low food security', 5th score under 'marginal food security', and the 6th score classified under 'high food security'. In other words, the first four scores (1st, 2nd, 3rd, and 4th) were considered food insecure whilst the last two scores (5th and 6th) were considered as food secure.

The results from Table 19 indicate that a little above two-thirds (67.3%) of the beneficiary households were able to provide three square meals a day for their members. This, according to the weighted index scores used in the study, implies that the majority of them were under marginal food security with 5 points score, representing food secure. But for the non-beneficiary households, less than 30 per cent (29.3%) were able to provide three square meals a day for their members.

The mean food security score for meals times per day for the beneficiary households was 4.61 (Table 19). This is approximated to 5 points on the food security index score representing a situation where the household members ate three times a day and, therefore, could be said to be food secure. That of the non-beneficiary households, on the other hand, was 3.64 (Table 19). This is also approximated to 4 points on the food security index score representing a situation where the household members ate two times a day and, therefore, could be said to be food insecure

This again agrees with the earlier discussions and conclusions made on the results in Table 18 that, the members of the VSLA scheme were found to be able to provide adequate food for their household members on regular basis. The resultant effect could have been a situation where members of the beneficiary households might have had improved health conditions and energy level to engage in activities that had the potential of improving their living conditions.

Table 19- *Number of times members in the households ate in a day*

Eating times in a day	Beneficiaries		Non-beneficiaries	
	Freq.	Percent	Freq.	Percent
In some cases we do not eat at all	3	1.0	4	2.7
We only eat when food is available	8	2.7	43	28.7
We eat only once a day	10	3.3	5	3.3
We eat two times a day	68	22.7	50	33.3
We eat three times a day	202	67.3	44	29.3
We eat all types of food and drinks at any time we want	9	3.0	4	2.7
Total	300	100.0	150	100.0

Source: Field survey, Quayson (2016).

Test for Significance (Independent t-test) - Hypothesis 2

Table 19 shows the descriptive statistics (mean, median, mode and standard deviation) for food security scores on the number of months that enough food was provided (months of adequate food provisioning) and the number of times in a day that enough food was provided (meal times per day) to beneficiary and non-beneficiary household members. The mean and median scores in both instances (beneficiaries and non-beneficiaries) looked almost the same, indicating that the data on the two food security variable scores were normally distributed.

In each of the two instances, the mean score for the VSLA scheme beneficiary households was seen to be slightly higher than that of their non-beneficiary household counterparts. In order to establish if indeed the differences in the mean scores between the two household categories as presented in Table 20 were statistically significant, these mean differences between the beneficiary and non-beneficiary households were subjected to statistical tests.

Table 20-*Descriptive statistics for food security levels of beneficiary and non-beneficiary households*

Indicator variable	Bene. households					Non-bene. households				
	N	Mean	Med	Mode	SD	N	Mean	Med	Mode	SD
Score for MAFP	300	4.90	5.0	5.0	5.0	150	4.25	4.0	4.0	1.08
Score for MTPD	300	4.61	5.0	.91	.80	150	3.64	4.0	4.0	1.29

*MAFP= Months of adequate food provisioning; MTPD= Meal times per day

Source: Field survey, Quayson (2016).

As shown in Table 21, the mean differences in all the two scores between the two household categories tested statistically significant. Thus, the mean difference (0.65) in scores for the number of months enough food was provided (months of adequate food provisioning) with a t-value of 6.19 tested significant (p=.000) at an alpha level of 0.05 (two-tailed). Again, the mean difference (0.98) in score for the number of times in a day that enough food was provided to household members (meal times per day) with a t-value of 8.48 also tested significant (p=.000) at an alpha level of 0.05 (two-tailed). This, therefore, meant that in all, the VSLA scheme beneficiary households, at the time of the study, were a little bit food secure than their non-beneficiary counterparts.

In order to determine the magnitudes or the percentages of the mean differences in scores that were explained by the scheme's participation (0.65 and 0.98 for MAFP and MTPD respectively), effect sizes (Eta squared) were calculated and the results (0.0787 and 0.1383 respectively) presented in Table 21. Using Cohen's guidelines for interpreting eta squared values (effect size), the magnitude of the mean difference in the scores for the number of months that enough food was provided for members between beneficiary and non-beneficiary households (0.65) at 95% confidence level was found to be moderate (moderate effect, i.e. eta squared= 0.0787). This means that 7.9% of the variance in the number of months that enough food was provided for household members to eat between the two household categories was explained by the beneficiaries' participation in the VSLA microfinance scheme. Interestingly, the magnitude of the mean difference in the score for the number of times in a day that enough food was provided to household members between beneficiary and non-beneficiary households (0.98) at 95% confidence level was found to be large (large effect, i.e. eta squared= 0.1383).

This means that 13.8% of the variance in the number of times in a day that enough food was provided to household members to eat between the two household categories was explained by the beneficiaries' participation in the VSLA microfinance scheme.

Table 21-*Independent samples t-test comparing differences in mean levels of beneficiary and non-beneficiary households' food security situation*

Indicator variable	Levene's Test for Equality of Variances		Test for Equality of Means			
	F	Sig.	t	Sig (2-tailed)	MD	Eta sq
Score for MAFP	5.63	.018	6.1	.000	0.65	.0787
Score for MTPD	82.91	.000	98.48	.000	0.98	.1383

P-value= 0.05 (Sig. at 0.05 alpha level)

Source: Field survey, Quayson (2016).

Conclusion on the Test of Hypothesis 2

The result, as indicated in Table 21, does not support the null hypothesis (H_0) of the second hypothesis of the study which states that households that participated in the VSLA microfinance scheme did not experience improvement in food security more than those that did not participate in the scheme. It rather supports the alternative hypothesis (H_1) and concludes that that households that participated in the VSLA microfinance scheme experienced improvement in food security more than those that did not participate in the scheme. The VSLA scheme beneficiary households were, thus, found to have been able to provide enough food and on regular basis than their non-beneficiary household counterparts and, therefore, may not have encountered much sicknesses that are related to nutritional deficiencies. This was likely going to ensure good health that would enhance productivity at the individual and the household levels

Beneficiaries' assessment of their food situation before and after scheme

In order to have a very fair idea about the effect of the scheme on the overall household food security situation of the beneficiary households, the respondents were asked to give their general assessment of the situation before and after joining the scheme. This was done by using a 5-point rating scale, where 1 was defined as highly insecure, 2 as insecure, 3 as average, 4 as secure, and 5 defined as highly secure.

The results, as indicated in Table 22 show that, the majority (68.0%) of the respondents indicated that they were food insecure before joining the scheme with only 1.3 per cent indicating being food secure. At the time of the study, however, as high as 39.0 per cent said they were satisfied with their food security condition, with only 13.3 per cent indicating not being satisfied.

Table 22-*Beneficiaries' general assessment of their food security condition before and after joining the scheme*

Level of assessment	Before joining the scheme		Present situation	
	Freq.	Percentage	Freq.	Percentage
Highly insecure	49	16.3	9	3.0
Insecure	155	51.7	31	10.3
Average	92	30.7	143	47.7
Secure	4	1.3	112	37.3
Highly secure	-	-	5	1.7
Total	300	100.0	300	100.0

Sources: Field survey, Quayson (2016).

Effect on Education

Education has been identified as an important tool for providing people with the basic knowledge, skills and the competencies needed to improve their livelihoods (GSS, 2013). One intervention that has been reported to have positive impact on education of members in rural households is microfinance. The impact of microfinance schemes on education has been measured in diverse ways. In Owusu and Mensah's non-monetary poverty study conducted with and on behalf of Ghana Statistical Service (GSS, 2013), household members' education was measured using two main indicators: the number of household members that have completed certain levels (years) of schooling or education and the number of children in the household that were attending school at the time of the study.

In this study, the evaluation of the scheme on education was also operationalized and measured in two main ways; the households' ability to provide for the educational needs of their members (affordability) and the number of household members of school going age that were in school as at the time of the study (accessibility).

Ability to provide for educational needs of members

As indicated in Table 23, even though a lot of the children were in public basic schools, majority of both the beneficiary (66.0%) and non-beneficiary (81.1%) households who had children of school going age in school said they were unable to provide for all the educational needs of their children and were, therefore, facing some affordability challenges. The problem, according to them, was mostly with the funding of their children's education at the senior high school level and beyond since at the basic school level there is less financial commitment. This had caused a situation where only few members from the two household categories were able to go beyond junior high school level.

The results from the study, as indicated in Table 23, however, revealed that the percentage of the beneficiary households (34.0%) that could afford or were able to provide for all the educational needs of their children was a little higher than that of their non-beneficiary household counterparts (18.9%). This means that, but for the introduction of the VSLA scheme, funding of education in the two districts especially at the senior high and tertiary education level would have been a big problem to most households.

Table 23-*Beneficiary and non-beneficiary households' ability to provide for their children's educational needs*

Response	Beneficiaries		Non-beneficiaries	
	Freq.	Percent	Freq.	Percent
We are able to provide for all the educational needs of our children	98	34.0	28	18.9
We are unable to provide for all the educational needs of our children	190	66.0	120	81.1
Total	288	100.0	148	100.0

Source: Field survey, Quayson (2016).

Number of members of school going age in school

Table 24 shows the number of members of school going age in the two household categories that were actually in school (access to education) as at the time of the study. Twelve (4.0%) of the beneficiary household respondents said they did not have any member or child of school going age in their households. The rest, 288, representing 96.0 per cent had some children or members of school going age in their households. With the non-beneficiary household respondents, only 2 (1.3%) of them did not have children of school going age in their households, with 148 (98.7%) having children of school going age in their households.

From Table 24, a total of 891 members from the 288 beneficiary households that had children of school going age were actually attending school as at the time of the study. With the non-beneficiary households, a total of 354 members were recorded from the 148 households that had children of school going age as at the time of the study. The big difference (537) with regards to the number of children in school at the time of the study between the beneficiary and non-beneficiary households could have been as a result of the difference in sample sizes between the two household categories. However, if 288 beneficiary households had 891 members attending school as at the time of the study, then all other things being equal, 148 non-beneficiary households should have had something around 458 members in school and not the 354 members as recorded. This means that the difference in the number of children in school between the two household categories may be relevant and, therefore, cannot be discredited.

The mean numbers of members in school for the beneficiary and non-beneficiary households were 3.1 and 2.4 respectively, giving a mean difference of 0.701. Thus, on the average, every beneficiary household that had children of school going age, had 3 members or children in school as at the time of the study. But for the non-beneficiary households, each household, on the average, had 2 members in school.

Having 3 members or children of school going age in the beneficiary households attending school was found to be encouraging. It means that almost every household was aware of the importance of education and therefore was willing to send children to school. However, a lot of these households, according to them, had their children in public basic schools where there was less financial commitment. Only about 21.0 per cent of these children or members, according to them, were in senior high school and beyond. Again, only about 9.0 per cent of the entire beneficiary household members had been able to complete tertiary education as at the time of the study.

The reasons could have been that; most of the children were young and had not grown up to the senior high school level, or some of them could not pass their Basic Education Certificate Examination (BECE) well to qualify them to the senior high school and beyond, or their parents could not afford senior high school or tertiary education.

Table 24-*Household members of school going age currently in school*

No. of members in school (n)	Beneficiary households		Non-beneficiary households	
	Freq. (f)	Total (n x f)	Freq. (f)	Total (n x f)
1	7 (2.4)	7	15 (10.1)	15
2	82 (28.5)	164	71 (48.0)	142
3	105 (36.5)	315	52 (35.1)	156
4	73 (25.3)	292	9 (6.1)	36
5	14 (4.9)	70	1 (0.7)	5
6	6 (2.1)	36	-	-
7	1 (0.3)	7	-	-
Total	288 (100.0)	891	148 (100.0)	354

*The figures in the brackets are percentages
*Mean number of members in school for the beneficiary households= 3.1
*Mean number of members in school for the non-beneficiary households= 2.4

Source: Field survey, Quayson (2016).

Test for Significance (Independent sample t-test) - Hypothesis 3

The difference in the means (0.701) of the number of household members or children of school going age that were in school for the beneficiary and non-beneficiary households was subjected to statistical test to determine its significance. As shown in Table 25, the mean difference of 0.701 with a t-value of 7.94 tested significant ($p=.000$) at an alpha level of 0.05 (two-tailed). This means that, statistically, there was a significant difference between the beneficiary and non-beneficiary households in terms of the number of members or children of school going age that were attending school as at the time of the study.

In order to determine the percentage of the mean difference (0.701) that was explained by the scheme participation for the number of household members or children of school going that were in school in the two household categories, the effect size (Eta squared) was calculated and the result (0.1268) presented in Table 25. Using Cohen's guidelines for interpreting eta squared values (effect size), the magnitude of the mean difference in the number of household members or children of school going age that were in school between beneficiary and non-beneficiary households (0.701) at 95% confidence level was found to be moderate (moderate effect, i.e. eta squared= 0.1268). This means that 12.7% of the variance in the number of household members or children of school going age that were in school between the two household categories was explained by the beneficiaries' participation in the VSLA microfinance scheme.

Thus, the beneficiary households as at the time of the study, even though a lot of them said they were unable to provide for all the educational needs of their members (Table 23), were a bit better in terms of access to education and, therefore, had more of their members in school (mostly in the basic school) than their non-beneficiary household counterparts. This again supports the findings that even though there were difficulties in providing for household members' educational needs (especially at the senior high and tertiary education level), but for the introduction of the VSLA scheme, the situation would have been worst in most households.

Table 25-*Independent sample t-test comparing differences in mean levels of beneficiary and non-beneficiary households' access to education to their members*

Indicator variable	Levene's Test for Equality of Variances		Test for Equality of Means			
	F	Sig.	t	Sig (2-tailed)	MD	Eta sq.
Number of household members in school (access to education)	5.12	.024	7.94	.000	.701	0.1268

P-value= 0.05 (Sig. at 0.05 alpha level); MD= Mean Difference
Source: Field survey, Quayson (2016).

Conclusion on the Test of Hypothesis 3

The result from the independent samples t-test (Table 25) does not support the null hypothesis (H_0) of the third hypothesis of the study which states that households that participated in the VSLA microfinance scheme did not experience improvement in education more than those that did not participate in the scheme. It rather supports the alternative hypothesis (H_1) and concludes that, households that participated in the VSLA microfinance scheme experienced improvement in education more than those that did not participate in the scheme. This is in line with what Littlefield *et al.* (2003) and Ferka (2011) reported. According to them, microfinance interventions have shown to have positive impact on the education of clients' children since they are more likely to go to school and stay longer in school than for the children of their non-client counterparts.

Beneficiaries' assessment of their education before and after the scheme

To further assess the effect of the scheme on the beneficiary households' educational situation, the beneficiary respondents were asked to give their general assessment on the educational situation of their household members before and after joining the scheme. This was done using a scale of 1 to 5, with 1 being defined as very bad, 2 defined as bad, 3 as average, 4 as good, and 5 defined as very good.

The majority (81.3%) of the beneficiary respondents described their households' education as below average before they joined the scheme with only 0.3 per cent saying their households' education situation was good. At the time of the study, however, as high as 43.3 per cent of them said their households' education was above average with only 15.7 per cent indicating a level or a situation that was below average (Table 26). This implies that even though the beneficiary households could not provide for all the educational needs of their children that might have resulted in a situation where a lot of them were unable to go beyond junior high school education, the situation was a bit better than when they had not joined the VSLA scheme. The condition, according to them, would have been worst if they had not joined the scheme. This again confirms the reports from the studies by Littlefield *et al.* (2003) and Ferka (2011) that, microfinance interventions had had positive impact on the education of clients' children.

Table 26- *Beneficiaries' general assessment of their households' education before and after joining the scheme*

Assessment	Condition before joining the scheme		Present condition	
	Freq.	Percentage	Freq.	Percentage
Very bad	81	27.0	6	2.0
Bad	163	54.3	41	13.7
Average	55	18.3	123	41.0
Good	1	0.3	108	36.0
Very good	-	-	22	7.3
Total	300	100.0	300	100.0

Sources: Field survey, Quayson (2016).

Effect on Health

Ghana Statistical Service (GSS) in 2007 reported that the health status of members of a household determines their quality of life, level of productivity, longevity, and the general development of the household. For this reason, impact evaluation of most social interventions on beneficiary households have always considered healthcare as a primary measure to determine the overall impact of such interventions. Directly linked to health are nutrition and education of household members. It could therefore be said from the earlier discussions on education and food security situations of the VSLA scheme beneficiary households that, as their level of education somehow improved and household members became a little bit food secured after joining the scheme, their health status might as well have improved, all other things being equal.

The assessment of the effect of the VSLA scheme on beneficiaries' health was done basically in terms of accessibility to healthcare, morbidity and mortality rates and these were compared with that of their non-beneficiary household counterparts. In terms of accessibility to healthcare, the study did not find much difference in the two household categories. The majority of both beneficiary (91.3%) and non-beneficiary (78.7%) household respondents said their household members had access to healthcare services with only 8.7 per cent and 21.3 per cent indicating inaccessibility to healthcare services for the beneficiary and non-beneficiary households respectively (Table 27). A lot of these respondents attributed the high percentages to the existence of the National Health Insurance Scheme (NHIS) as well as the existence of the numerous CHIP compounds in the communities where the VSLA microfinance scheme operates. Even though not much, the percentage difference of 12.6 in favour of the beneficiary households, is worth noted.

Table 27-*Beneficiary and non-beneficiary household members' access to healthcare services*

Responses	Beneficiary households		Non-beneficiary households	
	Freq.	Percent	Freq.	Percent
We have access to healthcare	274	91.3	118	78.7
We do not have access to healthcare	26	8.7	32	21.3
Total	300	100.0	150	100.0

Source: Field survey, Quayson (2016).

Morbidity rates in beneficiary and non-beneficiary households

Responding to the frequency with which members of the household suffered from sicknesses (morbidity), the study revealed that, 46.8 per cent of the beneficiary households said their members often fell sick, 44.0 per cent said the members occasionally fell sick with only 9.2 per cent indicating that their members fell sick very often. With the non-beneficiary households, however, the majority (54.3%) of them said their members often fell sick, 29.3 per cent said members occasionally fell sick with as high as 16.4 per cent indicating that their members fell sick very often. This actually indicated that a lot of the non-beneficiary households (70.7%), in a way, had high morbidity rates (often and very often disease occurrences) compared to the beneficiary households where 56.0 per cent of them had their members frequently (often and very often) experiencing some forms of sicknesses.

Maternal and infant mortality rates in the two household categories

According to GSS (2010) reports, maternal and infant mortality are key determinants of health status and therefore using them as measures give a good indication of the health status and the general development of members of a household. GSS (2013) reported that evaluating under-5 mortality (infant mortality) at the household level provides good information on the impact of interventions on health and general standard of living of members of a household. In view of this, the infant and maternal mortality situations in the two household categories within the last five years were compared and the results presented in Table 28.

The mortality rates (both infant and maternal) were found to be very minimal in both beneficiary and non-beneficiary households. The very low rates in both the infant and maternal mortality across the two household categories could be attributed to the high accessibility and affordability to healthcare services by members mostly as a result of the existence of the

National Health Insurance Scheme (NHIS). Some of them, in a discussion also indicated that, they had had enough education on antenatal care in recent times and therefore visited the hospital regularly anytime they were pregnant till they delivered. According to them, these days women in the study area, as a result of education, deliver in hospitals unlike those days where they would usually do so in the house.

The results, however, revealed that the percentages of infant mortality (19.3%) and maternal mortality (10.0%) in the non-beneficiary households were little higher than that of their beneficiary household counterparts (12.7% and 4.3% for infant mortality and maternal mortality cases respectively). The slight differences in the two household categories might have been so as a result of access to more nutrition, more financial resources and some health education that scheme beneficiaries may have received. A study by Chowdhury and Bhuiya in 2004 to assess the impact of poverty alleviation programme by a microfinance institution in Bangladesh (BRAC) with specific references to seven human well-being indicators concluded that the programme led to better child survival rates and higher nutritional status. The children of BRAC clients, as was also reported in Ferka (2011), suffered from far less protein-energy malnutrition than children of non-members, and the educational performance of BRAC members' children was also found to be higher than that of children in non-BRAC households (Chowdhury & Bhuiya, 2004; Ferka, 2011).

Table 28-*Comparing the mortality situation between beneficiary and non-beneficiary household members within the last 5years*

Response	Beneficiaries		Non-Beneficiaries	
	Infant mortality	Maternal mortality	Infant mortality	Maternal mortality
Experienced it before	38 (12.7)	13 (4.3)	29 (19.3)	15 (10.0)
Not experienced it before	262 (87.3)	287 (95.7)	121 (80.7)	135 (90.0)
Total	300 (100.0)	300 (100.0)	150 (100.0)	150 (100.0)

*The figures in the brackets are percentages

Source: Field survey, Quayson (2016).

Beneficiaries' assessment of their health situation before and after scheme

Lastly, the beneficiary households' health conditions were assessed in relation to the scheme by asking the respondents to give their general opinion on their health status before and after joining the scheme using a 5-point scale, where 1 was defined as very poor, 2 defined as poor, 3 as average, 4 as good, and 5defined as very good.

The results, as shown in Table 29, indicate that 48.0 per cent of them described their general health status before joining the scheme as below average with only 3.0 per cent indicating having good health condition (above average). About half (49.0%) of the respondents described their health status as average. As at the time of the study, those who saw their health status to be in good condition or above average had increased from 3.0 per cent to 17.7 per cent and those with average status had also moved from 49.0 per cent to 63.0 per cent. Those who had their status below average (bad condition), however, decreased from 48.0 per cent to 19.4 per cent.

Generally, the health condition of the beneficiary households, to some extent, seemed to have improved after joining the scheme. This actually confirms the earlier results, and affirms the link between the education and nutrition of people and their health status as reported earlier. It was not surprising to find out from the VSLA scheme beneficiaries that their health status had improved after seeing considerable improvement in their nutrition (food) and a little improvement in the education of their household members. Robinson (2001) in a study involving sixteen different microfinance institutions revealed that health care and education were found to be the two key areas of non-financial impact of the microfinance services at the household level. Robinson's report, as also cited in Wrenn (2007) and Ferka (2011) in no doubt, supports the results from this study that microfinance schemes have some impact on clients' education, food security (nutrition) and health status.

Littlefield, *et al.* (2003) also reported on the impact of microfinance on the beneficiaries' health status, nutrition and education. According to them, various studies on the impact of microfinance on health status and others of the beneficiaries have shown that households of microfinance clients appear to have better nutrition, health practices and health education than their non-client household counterparts. Citing a study by Ugandan microfinance institution called FOCCAS, Littlefield *et al.* (2003) as also reported by Wrenn in 2007 indicated that, 95 per cent of the clients of FOCCAS that were engaged in the study improved health and nutrition practices for their children, as opposed to 72 per cent for non-clients.

Table 29-*Beneficiaries' general assessment of their households' health status before and after the scheme*

Level of assessment	Before joining the scheme		Present condition	
	Frequency	Percentage	Frequency	Percent
Very poor	72	24.0	14	4.7
Poor	72	24.0	44	14.7
Average	147	49.0	189	63.0
Good	8	2.7	47	15.7
Very good	1	0.3	6	2.0
Total	300	100.0	300	100.0

Sources: Field survey, Quayson (2016).

Effects on Housing

The study tried to assess the effect of the VSLA scheme participation on the housing condition of the beneficiary households. The availability of room, the number of persons per room and the type of materials used for the construction of houses, according to GSS (2010; 2013), are very important when analyzing the livelihood conditions of a household. The number of rooms can be analyzed against household size to give an indication of overcrowding, which then demonstrates degree of housing adequacy or inadequacy and the overall socio-economic status or standard of living of the household (GSS, 2013).

Housing condition as a livelihood outcome variable in this study was operationalized mainly in terms of room availability and building materials. With regard to room availability, the number of persons per standard room size was considered, among other things, and this was compared with that of the non-beneficiary households. The beneficiary household respondents were in addition, asked generally to assess their housing conditions before and after joining the scheme.

Room availability in beneficiary and non-beneficiary households

The results from Table 30 indicate that both the beneficiary and non-beneficiary households had room deficit as at the time of the study. The problem was, however, found to be more serious with the non-beneficiary households than the beneficiary households. As high as 82.0 per cent of the non-beneficiary household respondents, unfortunately, said their households did not have enough rooms for their members, with only 18.0 per cent indicating having enough rooms in their households. For the beneficiary households, 28.7 per cent said they had enough rooms for all their members but 71.3 per cent of them indicated not having enough rooms for their members.

Table 30-*Room availability in beneficiary and non-beneficiary households*

Responses	Beneficiaries		Non-beneficiaries	
	Freq.	Percent	Freq.	Percent
We have enough rooms	86	28.7	27	18.0
We do not have enough rooms	214	71.3	123	82.0
Total	300	100.0	150	100.0

Sources: Field survey, Quayson (2016).

When the respondents were asked to indicate the number of persons in a standard room size, again, the majority of both beneficiary (81.0%) and non-beneficiary (76.7%) households, as shown in Table 31, had between 3-5 persons in a room. The mean numbers of members in a room were 4.1933 and

4.3200 for the beneficiary and non-beneficiary households respectively, giving a mean difference of 0.12667. This means that, on the average every household (including beneficiary and non-beneficiary households) had 4 persons in a room.

In the Ghana Statistical Service's 2013 non-monetary studies with Owusu and Mensah which employed the 2010 Ghana Statistical Service report, a household with three or more people per room is considered to be room deprived, and so are all its members. Based on this, it could be concluded from the results that both the beneficiary and non-beneficiary households were still room deprived as at the time of the study. It was therefore not surprising to hear from the majority of the respondents that their households did not have enough rooms for their members. The argument, however, is that when the households are dominated by children or young persons of the lower age, then having four persons in a room might not be a big problem and, therefore, may not necessarily be described as room deprived.

Table 31-*Number of persons in a room in the beneficiary and non-beneficiary households*

Number of persons	Beneficiary households		Non-beneficiary households	
	Freq.	Percent	Freq.	Percent
Less than 3	22	7.3	14	9.3
3-5	243	81.0	115	76.7
6-8	28	9.4	16	10.7
9-11	7	2.3	5	3.3
Total	300	100.0	150	100.0

*Beneficiary households: Mean (4.193). Median (4.00). Modal (4.00)
*Non-beneficiary households: Mean (4.320). Median (4.00). Modal (4.00)

Source: Field survey, Quayson (2016)

Test for Significance (Independent sample t-test)

The mean difference of 0.127 between the mean number of persons in a room for non-beneficiary households (4.320) and the mean number of persons in a room for the beneficiary households (4.193)when subjected to statistical test, tested not significant with t-value of 0.805 and p-value of 0.422 at an alpha level of 0.05 (two-tailed) (Table 32). This means that, statistically there was no significant difference in mean number of persons in a room for non-beneficiary and beneficiary households and, therefore, can be said that VSLA scheme has not been able to improve the room conditions of its beneficiaries. Both household categories, could therefore be described as room deprived.

Table 32-*Independent samples t-test comparing difference in means of the number of persons in a room for beneficiary and non-beneficiary households*

Indicator variable	Levene's Test for Equality of Variances		Test for Equality of Means		
	F	Sig.	t	Sig (2-tailed)	MD
Number of persons in a room	4.003	0.046	0.805	0.422	0.127

P-value= 0.05 (Sig. at 0.05 alpha level) *MD= Mean Difference

Source: Field survey, Quayson (2016).

Housing types for beneficiary and non-beneficiary households

One important factor that is known to influence room availability is the kind of materials used in putting up the building. Usually households that use less expensive building materials are likely to have more rooms as compared to those that use more expensive and superior materials. It is, therefore, important when looking at room availability in households to also consider the type of materials used in constructing such houses. In view of this, the study looked into the housing types in terms of the type of building materials in the two household categories.

The results from the study, again, generally revealed that mud and brick houses were the two dominant housing types in the two household categories (Table 33). According to them, it is far cheaper to construct a mud house since they do not have enough money to put up block houses. It could be inferred from this that people were more concerned with things that affected their lives directly such as food and healthcare than those things that have remote effect. Some even indicated that using blocks is not only expensive but luxurious. They would therefore prefer to live in mud and brick houses and use the rest of the money, if any, to take care of their children in terms of their feeding, healthcare and education. To them, when the children are well taken care of they would help put up good houses when they grow up. Unfortunately, some of them admitted that they occasionally had their buildings collapsed especially during raining seasons which usually go to worsen their conditions of living. In such situations, they usually end up spending more resources than they would have done if they had sacrificed to put up quality or block houses.

The mud house dominance, however, was seen more with the non-beneficiary households (57.3%) than with the beneficiary households (40.6%) whilst the dominance of the brick house was seen more with the beneficiary households (34.7%) than with the non-beneficiary households (22.0%). Houses made of blocks which were found to be the third common housing type across all the two household categories, were also seen to be a little more with the beneficiary households (22.7%) than with the non-beneficiary households (14.7%). It may be deduced from this, that, the beneficiary households had become a little bit conscious in recent times, with the kind of materials they use in putting up their houses and, therefore, might have committed some part of their financial resources obtained from the scheme to building block houses.

Table 33-*Housing types of beneficiary and non-beneficiary households*

Type of housing	Beneficiary households		Non-beneficiary households	
	Freq.	Percent	Freq.	Percent
Thatched house	4	1.3	6	4.0
Mud house	122	40.6	86	57.3
Wooden structure	2	0.7	3	2.0
Brick house	104	34.7	33	22.0
Block house	68	22.7	22	14.7
Total	300	100.0	150	100.0

Source: Field survey, Quayson (2016).

Beneficiaries' assessment of their housing condition before and after scheme

Finally, in assessing the effect of the VSLA scheme on beneficiaries' housing condition, the beneficiary respondents were made to give their general and overall assessment of their housing condition as at the time of the study and the condition before joining the scheme. This, again, was done using a rating scale of 1 to 5, with 1 being defined as very poor, 2 defined as poor, 3 as average, 4 as good, and 5 defined as very good. The results, as shown in

Table 34, indicate that, the majority (79.6%) of the beneficiary households described their housing condition before joining the scheme as poor or bad, with only 2 (0.7%) saying they had good housing condition before joining the scheme.

As at the time of the study, however, those who described their housing condition as good had increased from 0.7 per cent to 23.3 per cent and those with average housing condition had also moved up from 19.7 per cent to 49.3 per cent. Those who said they had bad housing condition or below average condition (poor and very poor), however, decreased from 79.6 per cent to 25.7 per cent. Even though in general terms, there might have been some improvement in the housing conditions of the beneficiary households after joining the scheme, they still saw the condition not to be good enough with inadequate rooms and therefore considered themselves to be room deprived.

Table 34-*Beneficiaries' general assessment of their housing condition before and after joining the scheme*

Level of assessment	Before joining the scheme		Present condition	
	Frequency	Percent	Frequency	Percent
Very poor	91	30.3	17	5.7
Poor	148	49.3	60	20.0
Average	59	19.7	148	49.3
Good	2	0.7	70	23.3
Very good	-	-	5	1.7
Total	300	100.0	300	100.0

Sources: Field survey, Quayson (2016).

Effect on Household Utilities

Alkire and Santos (2010) defined household utilities or assets to include radio, television, telephone, bicycle, motorbike, car, truck and refrigerator, and indicated that, a household that does not own more than one of such assets is classified as poor. This study, in its quest to find out the effect of the VSLA microfinance scheme on the beneficiaries' household utilities, examined fifteen household utility items of the beneficiary households as at the time of the study against the same items at the time before joining the scheme. Again, the level of these utilities in the beneficiary households at the time of the study was compared with that of their non-beneficiary household counterparts. The fifteen items considered included toilet facility, bathroom, kitchen, pipe-borne water, electricity, television, furniture, radio set/tape recorder, telephone/mobile, refrigerator, video/VCD/DVD/Multi TV, computer/laptop, cooker, burner and gas cylinder and blender.

Beneficiary households' utility conditions before and after joining the scheme

The results as shown in Figure 4 indicate that the percentages of beneficiary households that owned any of the aforementioned utilities had increased to an appreciable level after joining the scheme. For instance, the percentages of households that possessed toilet, electricity, pipe-borne water, telephone/mobile, and television had increased from 10.7 per cent to 23.0 per cent, 83.7 per cent to 95.0 per cent, 6.3 per cent to 14.3 per cent, 59.0 per cent to 87.3 per cent, and from 70.3 to 83.3 per cent respectively. The five most common utilities found in the beneficiary households as at the time of the study were electricity (95.0%), radio set/tape recorder (88.3%), telephone/mobile (87.3%), television (83.3%), and kitchen (81.0%). These utilities, in utilities, in recent times, are considered to be the most sought-for utilities found in the average Ghanaian household and was, therefore, not surprising finding them there.

For instance, every average Ghanaian household, all other things being equal, would wish to have electricity. The moment they obtain electricity, they proceed by struggling to obtain other utilities which are mostly electricity dependent and are meant to provide the family with some level of satisfaction. Rice cooker (3.7%), blender (6.7%), computer/laptop (9.0%), burner and gas cylinder (11.3%), and pipe-borne water (14.3%) were found to be the five most uncommon utilities among the beneficiary households. Apart from pipe-borne water, these utilities are not all that basic or paramount and, therefore, may not be too needed by many households, all other things being equal.

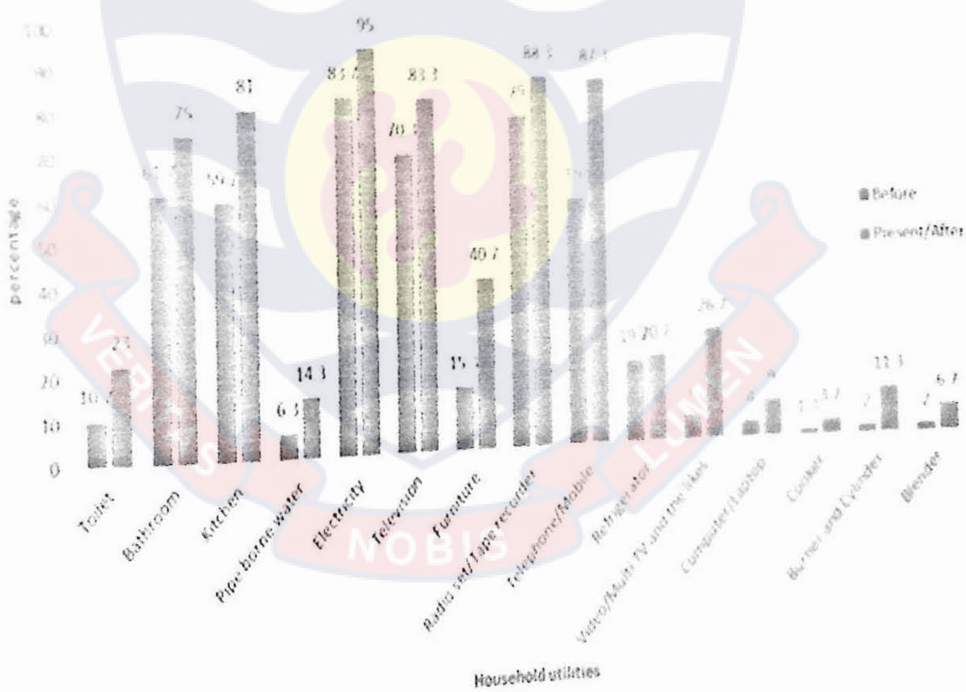

Figure 4: *Beneficiary households' utility conditions before and after joining the scheme*
Source: Field survey, Quayson (2016).

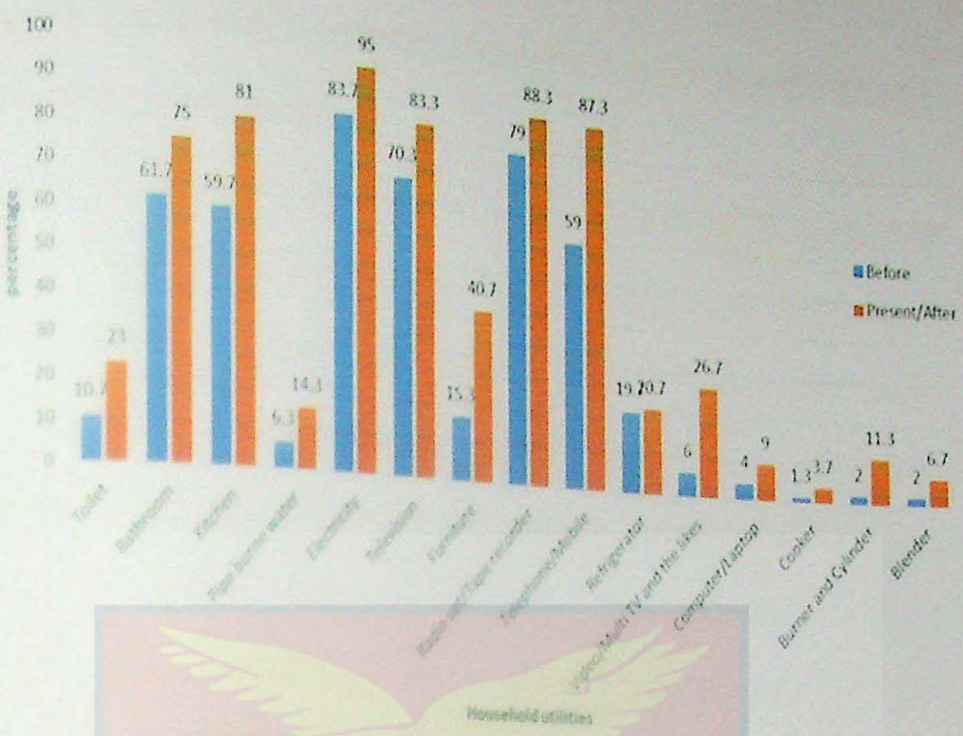

Figure 4: *Beneficiary households' utility conditions before and after joining the scheme* Source: Field survey, Quayson (2016).

Beneficiary and non-beneficiary households' present utility conditions

Comparing the levels of the fifteen household utilities between the beneficiary and non-beneficiary households at the time of the study, the results, as presented in Figure 5, indicate that, in all of the fifteen items compared, the VSLA scheme beneficiary households dominated in their possession. For instance, the dominance in the items by the beneficiary households over the non-beneficiary households were seen in areas such as electricity (95.0% against 62.0%), radio set/tape recorder (88.3% against 70.0%), telephone/mobile (87.3% against 66.0%), television (83.3% against 48.7%), and kitchen (81.0% against 59.3%). This result is not different from the one that was obtained and discussed under Figure 4 which revealed that the VSLA scheme beneficiaries had their household utility condition improved

Comparing the Overall Livelihood Outcomes between Beneficiary and Non-beneficiary Households

Beyond the assessment of the scheme's effect on the individual livelihood outcomes (income, food security, education, health, housing, and household utilities), the study tried to look at the effect of the scheme on the overall livelihood outcome (individual livelihood outcomes combined) of the beneficiary households. In order to do this, an overall mean livelihood outcome was computed from the assessment of the individual livelihood outcomes of the beneficiary households (income, food security, education, health, housing, and household utilities).

Again, in order to be able to compare the beneficiaries' situation with that of their non-beneficiary counterparts, an overall mean livelihood outcome was as well computed from the assessment of the individual livelihood outcomes of the non-beneficiary households. The assessments of all the individual outcomes by the respondents (both beneficiary and non-beneficiary household respondents) were done using a 5-point Likert-like scale, where 1 was defined as very bad or very poor condition, 2 defined as bad or poor condition, 3 as average, 4 as good condition, and 5 defined as very good condition. This made it possible for the computation of the overall means from the individual outcomes for the two household categories.

As indicated in Table 35, the overall mean livelihood outcome for the beneficiary households at the time of the study was 3.1471 (indicating an average livelihood outcome condition) and that of the non-beneficiary households was2.1989 (indicating bad or poor livelihood outcome situation).

Table 35-*Descriptive statistics for the overall livelihood outcomes of the beneficiary and non-beneficiary households*

Variable	Beneficiaries				Non-beneficiaries			
	N	Mean	Median	SD	N	Mean	Median	SD
Overall livelihood outcome	300	3.147	3.167	.5417	150	2.199	2.000	.6819

Source: Field survey, Quayson (2016).

Test for Significance- Independent Samples t-test

In order to establish if indeed the mean difference of 0.95856 between the beneficiary households with overall mean livelihood outcome of 3.1471 and non-beneficiary households with overall mean livelihood outcome of 2.1989 (Table 36) was statistically significant, the mean difference (0.95856) was subjected to a statistical test using independent sample t-test and the results are shown in Table 36. With the mean and the median values almost being the same, the data on the overall livelihood outcomes for both the beneficiary and non-beneficiary households (Table 35), were found to be normally distributed and therefore met the assumption for the performance of the independent sample t-test.

As shown in Table 36, the mean difference (0.95856) with a t-value of 14.43 (Equal variance not assumed) tested significant ($p=.000$) at an alpha level of 0.05 (two-tailed). This implies that, statistically, there was a significant difference between the overall mean livelihood outcome of the non-beneficiary households and the overall mean livelihood outcome of the beneficiary households. Thus, the overall mean livelihood outcome of the beneficiary households as at the time of the study was found to be significantly higher than that of their non-beneficiary household counterparts, hence, having an improved livelihood conditions than them.

Again, in order to determine the magnitude or the percentage of the mean difference (0.95856) in the overall mean livelihood outcomes of the households that is explained by the scheme, an effect size (Eta squared) was calculated and the result (0.3173) presented in Table 36. Using Cohen's guidelines for interpreting eta squared values (effect size), the magnitude of the mean difference in the overall mean livelihood outcome between the beneficiary and non-beneficiary households at 95% confidence level was found to be large (large effect, i.e. eta squared= 0.3173). This means that 31.7% of the variance in the overall mean livelihood outcome between the beneficiary and non-beneficiary households was explained by the beneficiaries' participation in the VSLA microfinance scheme.

Table 36-*Independent samples t-test comparing differences in the overall mean livelihood outcomes of the beneficiary and non-beneficiary households*

Variable	Levene's Test for Equality of Variances		Test for Equality of Means			
	F	Sig.	t	Sig (2-tailed)	MD	Eta sq
Overall mean livelihood outcome	6.15	014	14.43	0.95856	.000	.3173

P-value= 0.05 (Sig. at 0.05 alpha level)

Source: Field survey, Quayson (2016).

The Influence of Demographic Factors and Scheme Participation on the Overall Livelihood Outcome: Objective Four

The study, as indicated in the methodology under the 'model specification', tried to find out if there were any relationship(s) between the overall livelihood outcome as dependent variable and some demographic factors and scheme participation as independent variables. And if there were, also to find out if those factors were predictors or determinants of the level of the overall livelihood outcome observed in the study. This was done using multiple regression (OLS) analysis.

Preliminary Analysis

Dependent variable

In this multiple regression (OLS) analysis, the dependent variable was the overall mean livelihood outcome which was computed from the individual outcomes of both beneficiary and non-beneficiary households(composite mean) using the same rating scale. In multiple regression analysis it is required that the data on the dependent variable is normally distributed. The descriptive statistics shown in Table 37 indicate that the data on the dependent variable, the overall mean livelihood outcome, is normally distributed with the mean, the median and the mode almost being the same (mean= 2.84; median= 3.00; mode= 3.00; skewness= -.378).

Table 37-*Descriptive statistics of the overall livelihood outcome for all the two household categories*

Dependent variable	Mean	Median	Mode	SD	Skewness
Overall livelihood outcome	2.838	3.000	3.000	.788	-.378

Source: Field survey, Quayson (2016).

Independent variables

In the analysis, the independent variables were the VSLA scheme participation, sex, age, educational level, household size, marital status, livelihood activity or enterprise and location of the scheme (district). Some of these independent variables which were not continuous or not in interval scale (as indicated earlier in the model specification under the methodology) were transformed (dummy) to allow for the determination of the actual direction of association and influence on the dependent variable.

For instance, with sex, female was recoded as '1' and male as '0'. The recoding of female as '1' was based on the fact that the results of the study showed female dominance in all the two household categories. This confirmed the reports from literature that females usually dominate microfinance services as well as forming the highest percentage of most rural populates. With marital status, married was recoded as '1' and was defined as 'in marriage' and the single, separated, divorced and widowed were all recoded as '0' and were defined as 'not in marriage'. For education, primary education, JSS/middle school education, SSS/OL/AL/Tec/Voc education and tertiary education were all recoded as '1' and were termed as 'formal education' whilst no formal education was recoded as '0' and termed as 'no formal education'.

The livelihood activities or the kind of enterprise individuals engaged in were recoded as '1' for the farming-related activities and '0' for the non-farming activities. Thus, all the activities of the households that were related to farming or agriculture such as crop farming, livestock farming, fish farming and others were recorded as '1' and defined as 'farming related activities'. On the other hand, all the activities of the households that were not related to farming or agriculture such as trading, soap making, bread baking, salaried work and others were recorded as '0' and defined as 'non-farming activities'. The recoding of farming related activities as '1' and non-farming activities as '0' was based on the fact that farming and its related activities were found to be the dominant activities of the households and also in most rural communities in the country as reported in this and many other studies.

Again, in using location of the scheme (district) as an independent variable in the regression analysis, Ajumako-Enyam-Essiam District (AEED) was recoded as '1' and the Ekumfi District recorded as '0'. The coding of the district was done this way because the AEED had more VSLA microfinance beneficiary communities and households than the Ekumfi District as indicated earlier in the study. The VSLA scheme participation as an independent variable in this analysis was transformed (dummy) by recoding the beneficiary households of the scheme as '1' and referred to it as 'participants' and the non-beneficiary households recorded as '0' and termed as 'non-participants'.

In order to run the multiple regression analysis, again, there ought to be correlation between the dependent variable and the independent variables.

Correlation between the Overall Mean Livelihood Outcome and the Independent Variables: Tests of Hypotheses 4, 5, 6, 7 and 8

Correlation was run between the dependent variable, the overall mean livelihood outcome, and the independent variables, the VSLA scheme participation, sex, age, educational level, household size, marital status, livelihood activity, and location of the scheme or district (Table 38). This was done using Pearson product-moment and Spearman rho correlation coefficients. This correlation test was run more importantly also to test and to draw conclusions on hypotheses 4 to 8 of this study.

The strength of associations between the dependent variable and the independent variables as shown in the correlation results in Table 38 were interpreted using 'Davis Conventional Interpretation' where coefficient of: 1.00 is described as perfect association, 0.70 to 0.99 is described as very strong association; 0.50 to 0.69 is described as substantial association; 0.30 to 0.49 means moderate association; 0.10 to 0.29 means low association; and coefficient of 0.01 to 0.09 is described as negligible association (Davis, 1971).

The results from Table 38 indicate that, there were some associations between the dependent variable, the overall mean livelihood outcome and all the various independent variables tested. Almost all the associations between the dependent variable and the independent variables, with the exception of the association between the dependent variable and sex and the one between the dependent variable and livelihood activity, were found to be positive but of different magnitudes and at different significance levels.

Thus, the overall mean livelihood outcome had a strong or substantially positive (r= .574) and significant relationship (p=.000) at an alpha level of 0.01 (two-tailed) with the VSLA scheme participation. The association between the overall mean livelihood outcome and the marital status was positively low (r= 0.141) and significant (p= 0.003) at an alpha level of 0.01 (two-tailed). The associations between the overall mean livelihood outcome and the age, educational level, household size and the location of the scheme (district) were all positive but surprisingly, negligible (r= 0.097, 0.089, 0.083 and 0.060 respectively) and insignificant (p= 0.054, 0.059, 0.081 and 0.187 respectively) at an alpha level of 0.05 (two-tailed).

The overall mean livelihood outcome, however, had negatively low (r = -.180 and -.230) but significant (p= 0.000 and 0.000) associations at an alpha level of 0.01 (two-tailed) with sex and livelihood activities of the households respectively. All these correlation results which indicated the existence of some forms of associations or relationships at different magnitudes and at different levels of significance between the livelihood outcome and the demographic factors were, in a way, found to be in line with the literature(ADB, 2007; Gibbs, 2008, Appiah, 2011; Ferka, 2011; Celino, 2014).

Table 38-*Correlation results showing the relationships between the overall mean livelihood outcome and some demographic factors (Sig. 2-tailed)*

Independent variables	Direction (Sign)	Strength/ Magnitude	Sig.
VSLA scheme participation	+	.574**	.000
Sex	-	.180**	.000
Age	+	.097	.057
Level of education	+	.089	.059
Household size	+	.083	.081
Marital status	+	.141**	.003
Main occupation/livelihood activity	-	.230**	.000
Scheme location (District)	+	0.062	.187

** Correlation is significant at the 0.01 level/ p less than 0.01 (2-tailed)
* Correlation is significant at the 0.05 level/ p less than 0.05 (2-tailed)
Source: Field survey, Quayson (2016)

Conclusions on the Tests of Hypotheses 4, 5, 6, 7 and 8

Responding to and drawing conclusions on hypotheses 4 to 8 that were set out in the study, the results from the study supported the null hypotheses (H_0) of hypotheses 5, 6, and 7. Thus, in hypothesis 5, it supported the null hypothesis and concluded that "there was no significant relationship between the overall livelihood outcome of the beneficiary households and the age of the beneficiaries". In hypothesis 6, it again supported the null hypothesis and concluded that "there was no significant relationship between the overall livelihood outcome of the beneficiary households and the level of education of the beneficiaries". And finally, in hypothesis 7, it supported the null hypothesis and concluded that" there was no significant relationship between the overall livelihood outcome of the beneficiary households and the size of the households".

The results, however, did not support the null hypotheses (H_0) but rather the alternative hypotheses (H_1) of hypotheses 4 and 8. With regard to hypothesis 4, the results supported the alternative hypothesis (H_1) and concluded that "there was a significant relationship between the overall livelihood outcome of the beneficiary households and the gender of the beneficiaries". Again, it supported the alternative hypothesis (H_1) of hypothesis 8 and concluded that "there was a significant relationship between the overall livelihood outcome beneficiary households and the marital status of the beneficiaries.

Regression Results and Interpretation: The Influence of the Demographic Factors and Scheme participation on the Overall Livelihood Outcome

The results from the multiple regression (OLS) analysis model which show the influence of the independent variables (VSLA scheme participation, sex, age, educational level, household size, marital status, livelihood activity and scheme location or district) on the level of the dependent variable (overall mean livelihood outcome) are presented in Table 39.

The results from the table (Table 39) show that, all the Tolerance and VIF (Variance Inflation Factor) values for the individual independent variables were within the required range and, therefore, might not have problem with multicollinearity, all other things being equal. All the Tolerance values were found to be very high (between 0.975 and 0.862). All the VIF values were also found to be between 1.160 and 1.026 which were far below the maximum cut-off point of 10.0 and above the minimum cut-off point of 0.10 required to perform regression analysis.

The Adjusted R-squared of 0.371 in the model summary result implies that the independent variables in the regression model explained 37.1 per cent of the variation in the level of the overall mean livelihood outcome. The results in Table 39 also shows that, the model was significant (fit) at an alpha level of 0.05 (F-ratio = 30.220; p-value = 0.000). This Adjusted R-square value of 0.371 (37.1%) obtained meant that about 63.0 per cent (62.9%) of the variation in the level of the overall livelihood outcome observed in the study was not explained by the independent variables that were entered into the model. This could be as a result of some other variables that might have not been considered in the study because of the complexity of livelihood issues but may have contributed to the level of the overall livelihood outcome. Thus, because the study was mainly on the assessment of the outcomes of human behaviour and the fact that livelihood issues are complex and influenced by both internal and external factors such as policies, culture, expenditure on social capital, inflation, market dynamics and many others which in most cases, are beyond the individual or household level, it is usually very difficult to capture and predict the outcomes of such studies.

The test of the beta coefficients (β) in the model for the individual independent variables entered shows that, three main variables including the VSLA scheme participation, sex, and the kind of livelihood activity or enterprise were found to be significant in determining the level of the dependent variable, the overall mean livelihood outcome. However, the VSLA scheme participation was found to have made the strongest and most significant contribution to explaining or determining the level of the overall livelihood outcome (β= 0.906; t= 13.103; p-value= 0.000). This was followed by the variables, the kind of livelihood activity or enterprise (β= -0.298; t= -4.422, p-value= 0.000) and sex (β= -0.297; t= -4.122; p-value= 0.000) in that order.

Surprisingly, all the other five independent variables including age, educational level, household size, marital status, and scheme location or district made negligible and insignificant contributions in predicting or determining the level of the overall mean livelihood outcome (Table 39). From the table, the estimated regression model equation with the overall mean livelihood outcome as the dependent variable is given as:

$$Y_{olo} = 2.617 + 0.906X_1 - 0.297X_2 - 0.004X_3 + 0.046X_4 + 0.006X_5 + 0.124X_6 - 0.298X_7 + 0.002X_8$$

Where;

Y_{olo} is the predicted or the expected value of the overall mean livelihood outcome for the beneficiary households. From the equation, a unit increase in the VSLA scheme's participation is associated with 0.906 unit increase in the overall mean livelihood outcome, holding sex, age, level of education, household size, marital status, livelihood activity and the location of the scheme constant. This association, as indicated earlier, was found to be statistically significant (p-value= 0.000). Participation of one additional woman (with female being coded as '1'), significantly (p-value= 0.000) reduced the overall mean livelihood outcome by 0.297 unit, holding the VSLA scheme participation, age, level of education, household size, marital status, livelihood activity and the location of the scheme constant. In other words, men, even though smaller in number in terms of the scheme's participation, were found to be doing well on the scheme in terms of outcome than women. Again, an engagement in a farming-related activity (with farming related activities or enterprises coded as '1') was also found to have significantly (p-value= 0.000) decreased the overall mean livelihood outcome of the households by 0.298 unit. What this meant was that an engagement in any non-farming activity such as trading, transport business and salaried work by a beneficiary had the potential of improving the overall livelihood outcome than that of a farming-related activity.

Each additional year in age of a beneficiary respondent (who also happened to be the head or the lead of the household) surprisingly, decreased the overall mean livelihood outcome by only 0.004 unit, holding all the other independent variables or constant. The association or the decrease was, however, insignificant (p-value= 0.449). Again, a unit improvement in a beneficiary respondent's educational level, an increase in the number of persons in a household by one, a beneficiary's continuous stay in marriage, and having a VSLA microfinance group located in the Ajumako-Enyan-Essiam District were all found from the equation to be associated with smaller units increases (0.046, 0.006, 0.124 and 0.002 respectively) in the overall mean livelihood outcome which were all found to be insignificant (p-value= 0.589, 0.808, 0.068 and 0.981 respectively)in determining the level of the overall mean livelihood outcome.

Table 39-*Ordinary Least Squares (OLS) regression with the overall mean livelihood outcome as the dependent variable*

Explanatory variables	Beta	Std error	t-value	Sig (p-value)	Tolerance	VIF
(Constant)	2.617	0.2341	1.177**	0.000		
Scheme participation	0.906	0.069	13.103**	0.000	0.932	1.073
Sex	-0.297	0.072	-4.122**	0.000	0.900	1.111
Age	-0.004	0.005	-0.758	0.449	0.904	1.106
Level of education	0.046	0.085	0.541	0.589	0.975	1.026
Household size	0.006	0.025	0.243	0.808	0.934	1.071
Marital status	0.124	0.068	1.831	0.068	0.946	1.057
Livelihood activity	-0.298	0.067	-4.422**	0.000	0.905	1.105
Scheme location (District)	0.002	0.069	0.024	0.981	0.862	1.160

Model Summary

R Square	Adjusted R Sq.	F	Sig (p-value)
0.384	0.371	30.220	0.000

*: Significant at 0.05 alpha level **: Significant at 0.01 alpha level

Source: Field survey, Quayson (2016)

persons in a household by one, a beneficiary's continuous stay in marriage, and having a VSLA microfinance group located in the Ajumako-Enyan-Essiam District were all found from the equation to be associated with smaller units increases (0.046, 0.006, 0.124 and 0.002 respectively) in the overall mean livelihood outcome which were all found to be insignificant (p-value= 0.589, 0.808, 0.068 and 0.981 respectively)in determining the level of the overall mean livelihood outcome.

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Marital status	0.124	0.068	1.831	0.068	0.946	1.057
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Model Summary

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*: Significant at 0.05 alpha level **: Significant at 0.01 alpha level
Source: Field survey, Quayson (2016).

CHAPTER SEVEN

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter gives a summary of the study and conclusions on the findings from the study. The chapter also presents recommendations based on the findings from the study that may serve as a strong foundation upon which certain developmental policies regarding microfinance operations in the study districts could be formulated to enhance growth and development in the sector.

Summary

Livelihood and poverty interventions or projects need to be assessed and evaluated to see their impacts on the lives of their beneficiaries. It helps to provide direction for the acceptability, implementation and sustainability of such projects. Microfinance as poverty and livelihood intervention when not properly monitored and occasionally evaluated to see how it is impacting on the lives of its beneficiaries, may lead to unexpected outcomes resulting in perpetual poverty and vulnerability conditions. Evaluation, is thus, a very key component of project management, hence, the need for this study.

The study was, thus, undertaken with the prime aim of examining the effects of Plan Ghana's VSLA microfinance scheme on beneficiary households' livelihood outcomes in the Ajumako-Enyan-Essiam and Ekumfi districts in the Central Region of Ghana. Specifically, the study had the following objectives: (1) to find out the perception of the scheme beneficiaries about the mode of the scheme's operations with specific references to the selection of beneficiaries/membership, training of beneficiaries, and accessibility and usage of money from the scheme, (2) to assess the effect of the VSLA scheme on the income levels of the beneficiary households; (3) to assess the effect of the VSLA scheme on non-monetary livelihood outcomes (food security, education, healthcare, housing, and household utilities) of the beneficiary households; and (4) to examine the influence of the scheme participation and the demographic characteristics (sex, age, educational level, household size, and marital status) on the overall livelihood outcome of the households.

The study was an evaluation study that used cross-sectional design. Both formative and summative evaluation approaches were used even though it was more of a summative study. The use of the cross-sectional design was because there was no baseline study on the issue in question. The use of the cross-sectional design, therefore, allowed the researcher to collect data at one point in time. It also allowed for comparison of some outcomes between the beneficiary and non-beneficiary households in a form of 'with and without' analysis.

The study used mainly primary data which were collected from 450 respondents (300 beneficiary and 150 non-beneficiary household respondents) in 28 rural communities in the AEED and Ekumfi District in the Central Region. Interview schedule was the main instrument for the collection of the data. Descriptive statistics, t-tests, correlation, and multiple regression results were generated from the data for discussions using Statistical Product and Service Solution (SPSS).

The main findings from the analysis of the data were as follow:

1. The majority (67.6 %) of the total respondents engaged in the study were women. Both beneficiary and non-beneficiary household respondents were

dominated by women with percentages of 68.7 per cent and 65.3 per cent respectively;

2. The majority of both the beneficiary (85.4%) and non-beneficiary (87.3%) household respondents, were found to be in the age range between 30-49 years. The mean ages for the beneficiaries and non-beneficiaries, however, were 38.76 years and 36.35 years respectively;

3. More than two-thirds (78.2%) of the respondents had household sizes ranging between 3-5 members. Interestingly, the mean household size for the beneficiary households was slightly bigger (approximately 5 members) than that of the non-beneficiary households (approximately 4 members);

4. The overall mean membership criteria rating by the beneficiaries in terms of adequacy, appropriateness and efficiency was 3.37, indicating average or moderate condition on a rating scale of 1 to 5;

5. The overall mean training rating by the beneficiaries in terms of accessibility, adequacy, appropriateness and efficiency was 2.63, indicating somehow unsatisfactory training condition on a rating scale of 1 to 5;

6. In the majority's (78.4%) mind, the procedure for accessing credit from the VSLA scheme was easy, and more than half (54.0%) of them considered the interest rate on credit as moderate. Surprisingly, more than ninety percent (93.0%) of them said that anytime they applied for credit or loan, it was given to them on time;

7. As high as 96.1 per cent of the beneficiaries said they always made sure they used the credit received from the scheme more efficiently and for its intended purpose. However, a lot of them (38.7%), unfortunately spent their money received on consumption activities. This was followed by 37.3 per cent

who spent theirs on investment activities and 24.0 per cent who spent it on production activities;

8. The average monthly incomes for the beneficiary and non-beneficiary households were GH¢201.92 and GH¢110.83 respectively. The average monthly income for the beneficiary households was found to be significantly higher ($t = 8.138$; $p = .000$ at an alpha level of 0.05) than that of their non-beneficiary counterparts with effect size of 0.129 (12.9%);

9. Whilst the majority (74.6%) of the beneficiary households were able to provide enough food for their members between 9 to 12 months in a year, the majority (65.4%) of the non-beneficiary households were able to provide enough food for their members only between 3-8 months within the year;

10. Again, whilst the majority (67.3%) of the beneficiary households were able to provide three square meals a day for their members, only 29.3 per cent of the non-beneficiary households were able to provide three square meals a day for their members;

11. The mean difference (0.65) in the months of adequate food provisioning between the beneficiary and non-beneficiary households tested statistically significant in favour of the beneficiary households ($t = 6.19$, $p = .000$, at an alpha level of 0.05);

12. Unfortunately, the majority of both the beneficiary (66.0%) and non-beneficiary (81.1%) household respondents said their households were unable to provide for all the educational needs of their children. The mean number of children of school going age who were attending school as at the time of the study for the beneficiary and non-beneficiary households were, however, 3.1 (3 children) and 2.4 (2 children) respectively, giving a mean difference of

0.701 which tested significant ($t= 7.94$; $p=.000$; at an alpha level of 0.05);

13. The majority of both the beneficiary (91.3%) and non-beneficiary (78.7%) households indicated having access to healthcare services. Mortality rates (both infant and maternal) were found to be very minimal in both the beneficiary and non-beneficiary households. The morbidity rates for both beneficiary and non-beneficiary households were, however, found to be higher in a lot of the households even though it was more prevalent in the non-beneficiary households (70.7%) than in the beneficiary households (56.0%);

14. Both the beneficiary and non-beneficiary households as at the time of the study were found to be room deprived. The mean numbers of persons in a room were 4.1933 and 4.3200 for the beneficiary and non-beneficiary households respectively, giving a mean difference of 0.12667 which tested insignificant ($t= 0.805$; $p=0.422$ at an alpha level of 0.05);

15. The five most common utilities found in the beneficiary households at the time of the study were electricity (95.0%), radio set/tape recorder (88.3%), telephone/mobile (87.3%), television (83.3%), and kitchen (81.0%). The beneficiary households were found to have dominated in the possession of each of the fifteen household utilities that were considered in the study than their non-beneficiary household counterparts;

16. The correlation results indicated that, the overall mean livelihood outcome had a strong or substantially positive ($r= .574$) and significant relationship ($p=.000$) at an alpha level of 0.01 with the VSLA scheme participation. The association between the overall mean livelihood outcome and the marital status was positively low and significant ($r= 0.141$, $p= 0.003$), the associations between the overall mean livelihood outcome and the age, educational level,

household size and scheme location or district were all positive but surprisingly, negligible and insignificant (r= 0.097, p= 0.057; r= 0.089, p= 0.059; r= 0.083, p=0.081 and r= 0.060, p=0.187 respectively) all at an alpha level of 0.05. The overall mean livelihood outcome, however, had negatively low (r= -0.180 and -0.230) but significant (p= 0.000 and 0.000) associations at an alpha level of 0.01 with sex and livelihood activities respectively; and

17. The OLS regression analysis showed that only three independent variables namely, the VSLA scheme participation, the kind of livelihood activity or enterprise and sex, in that order, were found to be significant in determining the level of the overall mean livelihood outcome (β= 0.906, t= 13.103, p-value= 0.000; β= -0.298, t= -4.422, p-value= 0.000; β= -0.297, t= -4.122, p-value= 0.000 respectively).

Conclusions

Based on the findings from the study, it can be concluded that the VSLA microfinance scheme has generally had some positive effect on both monetary (income) and non-monetary (food security, education, health, housing and household utilities) livelihood outcomes of the beneficiaries and their households, even though some of them, as at the time of the study, were still facing some serious livelihood challenges especially in the areas of education and housing. Almost all the statistical tests that were run on the differences in the measures of these livelihood outcomes (with the exception of the test on housing improvement) between beneficiary and non-beneficiary households tested significant.

In specific terms, the VSLA microfinance scheme's operation in the study area was found to be dominated by women (adults), most of whom had

had some formal education at various levels (from primary to tertiary education), and in most instances, were either in marriage or had ever married before and, therefore, might have had some children and other relation that needed to be taking care of in the household.

The beneficiaries of the scheme were found to have had some concerns with the level and the frequency of the training activities they received from the scheme and were, therefore, dissatisfied. This might likely have affected their livelihood activities and, for that matter, the outcomes of those activities to some extent. They (beneficiaries), however, considered the criteria for membership to be moderate. Access to credit was seen by them to be easy with moderate interest rate. It could therefore be concluded that, the beneficiaries of the VSLA microfinance scheme did not have much concerns with the procedure for accessing credit as well as the interest rate on credit. This seems not to be in line with the general perception and reports (Stiglitz & Weiss, 1981; Ghate, 1992; Karikari, 2011) that microfinance institutions charge high interest rates on their loans to the disadvantage of their clients which usually end up making them worse off.

The moderate interest rate on credit and the easiness with which members could access credit, might have been so as a result of the fact that the VSLA microfinance scheme is operated and managed mainly by the members of the group themselves after it has been set up by the scheme providers (Plan Ghana). As a result of this, the group members then have influence on the setting up of rules and regulations regarding interest rates and the procedure for accessing credit to suit their own prevailing conditions.

It could also be said that because a lot of the beneficiaries spent more of their money received from the scheme on consumption activities instead of spending it on productive and income generating activities that have the capacity of improving well-being of members, they (beneficiaries) might have had less outcome from their livelihood activities than they expected, especially in the areas of housing and education provision.

Statistically, there were some associations between the overall livelihood outcome and some individual demographic factors but some of them were weak and insignificant to influence the level of the overall livelihood outcome of the households. The multiple regression analysis that was run showed that, only three independent variables, including the VSLA scheme participation, sex, and the kind of livelihood activity or enterprise that the members engaged in were found to be significant in determining the level of the overall mean livelihood outcome of the beneficiary households. However, the VSLA scheme participation was found to have made the strongest and most significant contribution to explaining or determining the level of the overall livelihood outcome of the households. Hence, the differences in the individual livelihood outcomes observed between the scheme beneficiary and non-beneficiary households in the study, could, to a reasonable extent, be attributed to the Plan Ghana's VSLA microfinance scheme.

Recommendations

Based on the conclusions from the findings of the study the following recommendations are made:

1. The VSLA scheme has proven to have the potential of improving the

livelihood outcomes of its beneficiaries and, therefore, needs to be encouraged and expanded by the service providers (Plan Ghana) to cover other parts of the districts where the scheme has not reached;

2. It is recommended that, microfinance institutions and other organizations that aim at improving rural livelihoods should adopt and modify the Plan Ghana's VSLA microfinance model as a tool in their activities to see how it would work;

3. The VSLA scheme beneficiaries were not satisfied with the level and the frequency with which they received training on the scheme. This might have affected their livelihood activities and the outcomes. It is, therefore, recommended that the scheme providers and the leaders of the groups must do well to organize training activities on regular basis and in more efficient and effective manner to help equip beneficiaries with the kind of knowledge and skills needed to utilize the resources obtained from the scheme; and

4. Since over one-third of the beneficiaries were found to have used their seed money obtained from the scheme to meet consumption needs of the households, which might have affected their ability to repay as well as the overall outcome of their livelihood activities, it is suggested that the scheme providers should encourage and educate beneficiaries of the scheme to cut down expenditure on consumption activities so as to be able to invest more in production and income generating activities which have the potential of generating sustainable income to take care of the members of their households. It is also suggested that the next microfinance intervention programme or scheme should consider incorporating in its operations the possibility of granting the beneficiaries some form of additional money or credit to take care

of some basic needs of the household in order to avoid using the actual seed money to meet such needs.

Suggestions for Further Studies

1. Further study that would seek to measure the effects of VSLA schemes on other livelihood outcome variables that this study could not consider such as household expenditure, social and religious participation of the beneficiaries, is recommended; and

2. Further study is again recommended to investigate the inability of the scheme to improve the beneficiaries' housing conditions.

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APPENDICES

Appendix A

Interview schedule for VSLA scheme beneficiary households

The researcher is conducting a study to examine the effects of microfinance interventions on rural household livelihoods in the Ajumako-Enyan-Essiam and Ekumfi Districts in the Central Region as part of PhD programme in NGO Studies and Community Development at the University of Cape Coast.

You have been selected as a member of Plan Ghana's VSLA Microfinance scheme and the head/lead of your household for the gathering of information from your community. Your services will, therefore, be needed in that direction. Any information given will be used strictly for academic purposes. Please be assured of the confidential treatment of your responses. Thank you for your co-operation.

District ....

Name of the community .... House number ....

Group/Association name ....

Name of the interviewer .... Date of interview ....

Part A: Perception about the Mode of VSLA Scheme Operations

Membership/ Selection of beneficiaries

A.1. How did you become a member of this scheme or group? i I applied for it [ ] ii. Somebody recommended me [ ] iii. I was selected by the providers themselves [ ] iv. Others, specify ....

A.2. Did you have to meet the group's criteria for membership before becoming a member? i. Yes [ ] ii. No [ ]

A.3. If no to A2 above, why? ....

A.4. How do you rate the scheme or the group's criteria for membership in terms of their adequacy, appropriateness or suitability, and efficiency? Use the following rating scales. Please cycle the number corresponding to the best option in your opinion:

Adequacy: 1= very inadequate, 2= inadequate, 3= average, 4= adequate, 5= very adequate

Appropriateness: 1= very inappropriate, 2= inappropriate, 3= average, 4= appropriate, 5= very appropriate

Efficiency: 1= very inefficient, 2= inefficient, 3= average, 4= efficient, 5= very efficient

A.5. How much money do you contribute as a member of the group every month? ……………..

Training of group members

A.6. Do you receive training on how to use resources from the scheme and how to maximize outcome? i. Yes [ ] ii. No [ ]

A.7. If yes to question A6, how often do you have such training activities?
i. Very often [ ] ii. Often [ ] iii. Occasionally [ ] iv. On request [ ]

A.8. For each of the statement indicated in the table below, kindly use the rating scale below to indicate the extent to which you either agree or disagree to it by cycling the appropriate option:

1= Strongly disagree, 2= Disagree, 3= Neither disagree nor agree, 4= Agree, 5= Strongly agree

Statement	**Degree of agreement**				
I understand the language used during the training session very well	1	2	3	4	5
I am always involved in the planning and execution of the training activities	1	2	3	4	5
The training providers are competent and accommodative in their activities	1	2	3	4	5

The training providers use appropriate methods for the training and education	1	2	3	4	5
I always adopt and use the outcome from the training and education sessions	1	2	3	4	5
The training and education sessions have always been effective	1	2	3	4	5

A.9. How do you rate the mode of training activities organized for you in terms of their accessibility, adequacy, appropriateness or suitability, and efficiency (time, material, effort, cost etc)? Use the following rating scales. Please cycle the number corresponding to the best option in your opinion:

Accessibility: 1= highly inaccessible, 2= inaccessible, 3= moderate, 4= accessible, 5= very accessible

Adequacy: 1= very inadequate, 2= inadequate, 3= average, 4= adequate, 5= very adequate

Appropriateness: 1= very inappropriate, 2= inappropriate, 3= average, 4= appropriate, 5= very appropriate

Efficiency: 1= very inefficient, 2= inefficient, 3= average, 4= efficient, 5= very efficient

Accessibility and usage of money from the scheme

A.10. What is your average annual share-profit (amount) from the group contribution? ....

A.11. How often do you receive credit from the scheme or the group? i. Every six months [ ] ii. Every year [ ] iii. On request [ ] iv. Others, specify ....

A.12. What is the average amount of credit you receive at a time? ....

A.13. Give your opinion on the procedure for accessing the credit: i. Very easy [ ] ii. Easy [ ] iii. Slightly difficult [ ] iv. Difficult [ ] v. Very difficult [ ]

A.14. How do you see the interest rate on the credit if any? i. Very low [ ] ii. Low [ ] iii. Moderate [ ] iv. High [ ] v. Very high [ ]

A.15. State the interest rate charged in percentage on the credit facility if known..

A.16. Is the money provided on time? i. Yes [ ] ii. No [ ]

A.17. Do you use the money given to you for its intended purpose?

i. Yes [ ] ii. No [ ]

A.18. If no to A14, give reason(s) ……………………………………………………

A.19. Which of the following activities do you normally spend the money on?

i. Production activities [ ] ii. Investment activities [ ] iii. Consumption activities [ ] iv. Others, specify ……………………………………………

A.20. Please state the specific activity(ies) ……………………………………

A.21. Do you normally have problem(s) with repaying the loan?

i. Yes [ ] ii. No [ ]

A.22. How do you see the repayment conditions? i. Very rigid [ ] ii. Rigid [ ] iii. Neither rigid nor flexible [ ] iv. Flexible [ ] v. Very flexible [ ]

A.23. How do you rate the processes and procedures involved in accessing and using money from the scheme in terms of their accessibility, adequacy, appropriateness or suitability, and efficiency (time, conditions, material, effort, cost etc)? Use the following rating scales. Please cycle the number corresponding to the best option in your opinion:

Accessibility: 1= highly inaccessible, 2= inaccessible, 3= moderate,
4= accessible, 5= very accessible

Adequacy: 1= very inadequate, 2= inadequate, 3= average, 4= adequate,
5= very adequate

Appropriateness: 1= very inappropriate, 2= inappropriate, 3= average,
4= appropriate, 5= very appropriate

Efficiency: 1= very inefficient, 2= inefficient, 3= average, 4= efficient,
5= very efficient

Part B: Household Livelihood Outcomes

Income

B.1. What is your household's average monthly income from your livelihood activities? ……………………………………………………

B.2. Are you able to save from your income? i. Yes [ ] ii. No [ ]

B.3. If yes to B2, what is the average savings per month? ……………………

B.4. Do you sometimes have to use your savings to meet household expenses?

i. Yes [ ] ii. No [ ]

B.5. Do you sometimes have to sell some assets to meet household expenses?

i. Yes [ ] ii. No [ ]

Food security

B.6. Where is the main source of food for the household? i. Buy from market [ ] ii. From own farm/garden [ ] iii. From relatives [ ] iv. From neighbours [ ] vi. Food aid from organizations [ ] vii. Others, specify ....

B.7. What is/are the main staple food(s) for the household members?

....

B.8. What is the main source of drinking water for the household? i. Well [ ]

ii. Bore hole [ ] iii. River [ ] iv. Pipe borne water [ ] v. Rain water [ ]

vi. Others, specify ....

B.9. How many months of the year can you provide enough food for the entire household to eat, using the household's own resources or cash? ....

B.10. What proportion in percentage (if known) of household income is spent on food every month?..

B.11. Do you have a place to store surplus food and water in the household?

i. Yes [ ] ii. No [ ]

B.12. Please indicate by ticking the statement that best describes the state of your household members in terms of food consumption: i. We only eat when food is available/sometimes we do not eat all [ ] ii. We eat only once a day [ ] iii. We eat two times a day [ ] iv. We eat three times a day [ ]

iv. We eat all types of food and drinks at anytime we want [ ]

B.13. What do you normally do when you cannot meet your household's food needs? i. Fast/starve [ ] ii. Cut down food consumption [ ] iii. Seek for assistance [ ] iv. Borrow [ ] v. Others, specify ....

Education

B.14. How many of your household members have attained the following levels of education? i. No formal education .... ii. Primary......

iii. JSS/Middle school ...... iv. SS/Tec/Voc/OL/AL..... iv. Tertiary......

v. Others, specify ....

B.15. How many of your household members who are of school going age are currently in school? ....

B.16. Are you able to provide for all the educational needs of the members in the household? i. Yes [ ] ii. No [ ]

B.17 What proportion in percentage (if known) of household income is spent on education every academic year? ....

Health

B.18. Is anyone in this household suffering from long-term illness (more than three months)? i. Yes [ ] ii. No [ ]

B.19. If yes to B18, state (if possible) the kind of illness: ....

B.20a. Do your household members suffer from short-term illness (less than three months)? i. Yes [ ] ii.No [ ]

B. 20b. If yes to B20a, how frequent? i. Very Often [ ] ii. Often [ ]
iii. Occasionally [ ]

B. 21a. Has your household experienced any death of a child of age 5years and below within the last 5years? i. Yes [ ] ii. No [ ]

B. 21b. If yes to B21a, how many cases?................ and when did the last death(s) occur? ....

B.22a. Has your household experienced any maternal mortality within the last 5years? i. Yes [ ] ii. No [ ]

B. 22b. If yes to B22a, how many cases?................ and when did the last death(s) occur? ....

B.23. Do the household members have access to health care? i.Yes [ ] ii. No [ ]

B.24. What proportion in percentage (if known) of household income is spent on health every month?...

Housing

B.25. Do you have enough rooms for all the household members?
i. Yes [ ] ii. No [ ]

B.26. What is the average number of persons in a room? ....

B.27. What category of housing do you have as a household? i. Mud house [ ]
ii. Wooden structure [ ] iii. Brick house [ ] iv. Block house [ ]
v. Glass house [ ] vi. Others, specify...

B.28. Is the house painted? i. Yes [ ] ii. No [ ]

B.29. If yes to B28, when was the last painting done? ....

B.30. Do you intend building more houses or rooms in the next two years?

i. Yes [ ] ii. No [ ]

Basic household utilities

B.31. How do you consider the availability of the following utilities in the household before the scheme and now? Please tick, if present:

Facility	Before the scheme	After scheme/now
Toilet		
Bathroom		
Kitchen		
Pipe borne water		
Electricity		
Television set		
Furniture		
Radio set tape recorder		
Telephone mobile phone		
Refrigerator		
Video VCD/DVD/Multi TV		
Computer/laptop		
Cooker		
Burner and cylinder		
Blender		

Part C: Effects of the VSLA Scheme on Livelihood Outcomes

C.1. Is your present household income better than your income before joining the scheme? i. Yes [ ] ii. No [ ]

C.2. If your present income is better than your income before joining the scheme, would you say you can now afford to:

a. Pay for your children's educational needs than before?

i. Strongly disagree [ ] ii. Disagree [ ] iii. Neither disagree nor agree [ ]

iv. Agree [ ] vi. Strongly agree [ ]

b. Pay for your households' health needs than before? i. Strongly disagree [ ]
ii. Disagree [ ] iii. Neither disagree nor agree [ ] iv. Agree [ ]
vi. Strongly agree [ ]

c. Provide decent house for the household than before? i. Strongly disagree [ ]
ii. Disagree [ ] iii. Neither disagree nor agree [ ] v. Agree [ ]
vi Strongly agree [ ]

d Provide good clothing for the household than before? i. Strongly disagree
[ ] ii. Disagree [ ] iii. Neither disagree nor agree [ ] v. Agree [ ]
vi. Strongly agree [ ]

e. Provide your household with more and quality food than before?
i. Strongly disagree [ ] ii. Disagree [ ] iii. Neither disagree nor agree [ ]
v. Agree [ ] vi. Strongly agree [ ]

f. Purchase inputs for farming, fishing and other activities than before?
i. Strongly disagree [ ] ii. Disagree [ ] iii. Neither disagree nor agree [ ]
v. Agree [ ] vi. Strongly agree [ ]

C.3. If there have been changes in income and other conditions in the household, can we say access to the scheme has accounted for the differences? i. Strongly disagree [ ] ii. Disagree [ ]
iii. Neither disagree nor agree [ ] v. Agree [ ] vi. Strongly agree [ ]

C.4. In the table below, please circle the number (rating) that in your opinion, best describes the level of your household's livelihood outcomes now and before joining the scheme.

Use the following rating scales; *1= Very poor, 2= Poor, 3= Average, 4= Good, 5= Very good.*

Livelihood outcome	**Rating (before the scheme)**					**Rating (after the scheme/now)**				
Income	1	2	3	4	5	1	2	3	4	5
Food security	1	2	3	4	5	1	2	3	4	5
Education	1	2	3	4	5	1	2	3	4	5
Housing	1	2	3	4	5	1	2	3	4	5
Health care	1	2	3	4	5	1	2	3	4	5
Household utilities	1	2	3	4	5	1	2	3	4	5

C.5. Please indicate, by ticking, the level with which you think the following factors influence the effectiveness of the VSLA scheme in improving your livelihood/ scheme outcomes. Kindly use the following rating scales:

1= No effect, 2= Very weak effect, 3= Weak effect, 4= Fairly strong effect, 5= Strong effect, 6= Very strong effect.

Factors	1	2	3	4	5	6
Method of selecting beneficiaries/membership						
Training of beneficiaries						
Amount of money/credit received from the scheme						
The time and procedure for accessing credit/profit						
The type of livelihood strategies						
Household demographic characteristics						

Part D: Effect of Demographic Characteristics on Livelihood Outcomes

D.1. Please indicate, by ticking, the level with which you think the following demographic characteristics influence the effectiveness of the scheme in improving livelihood outcomes. Kindly use the following rating scales:

1= No effect, 2= Very weak effect, 3= Weak effect, 4= Fairly strong effect, 5= Strong effect, 6= Very strong effect.

Characteristics	1	2	3	4	5	6
Sex						
Age						
Household size						
Educational level						
Marital status						

Part E: Challenges to VSLA Scheme Effectiveness

E.1. Please indicate, by ticking, the level with which you think the following constraints limit the effective operation of the scheme. Kindly use the following rating scales:

1 = Minor constraint, 2 = Moderate constraint,

3 = Major constraint, 4 = Not a constraint.

Constraint	1	2	3	4
Financial constraints				
Logistical constraints				
Poor road network				
Inadequate training				
Poor quality training				
Inability of the field workers to speak our local language				
Bad human relation by the service providers				
Constraints from the society: norms, culture and beliefs				
Difficulty in selecting beneficiaries				
Lack of community participation				
Poor monitoring and evaluation practices				
Bad policies within which the scheme operates				
High interest rate on credit				
Failure of some beneficiaries to pay back money collected				
High illiteracy rate on the part of the beneficiaries				

Part F- Demographic Characteristics of the Respondents

F.1. Sex of the respondent (Head of household): i. Male [ ] ii. Female [ ]

F.2. Age of the respondent(Head of household) ....

F.3. Marital status: i. Single [ ] ii Separated [ ] iii. Widowed [ ]

iv. Married [ ]

F.4 a. Number of members in the household ……. i. Number of males ……..

ii. Number of Females…….

b. How many of them are children below 18years? …………

F.5. What is the dominant religion of the members of the household?

i. Christianity [ ] ii. Islamic [ ] iii. Traditional [ ] iv. Others, specify ……

F.6. What is the main occupation/ source of income for the household?

i. Crop farming [ ] ii. Livestock farming [ ] iii. Fish farming [ ] iv. Fishing [ ] v. Soap making [ ] vi. Bread baking [ ] vii. Edible oil extraction [ ] viii. Gari processing [ ] ix. Weaving and carving [ ] x. Fish monging [ ] xi. Trading [ ] xii. Formal employment [ ] xiii. Remittances from migrant relatives [ ] xiv. Kenkey making [ ] xv. Others, specify ………………

Appendix B

Interview schedule for non-VSLA scheme beneficiary households

The researcher is conducting a study to examine the effects of microfinance interventions on rural household livelihoods in the Ajumako-Enyan-Essiam and Ekumfi Districts in the Central Region as part of PhD programme in NGO Studies and Community Development at the University of Cape Coast.

You have been selected as the head of your household for the gathering of information in your community. Your services will, therefore, be needed in that direction. Any information given will be used strictly for academic purposes. Please be assured of the confidential treatment of your responses. Thank you for your co-operation.

District ....

Name of the community .... House number ....

Name of the interviewer ....Date of interview ....

Part A: Household Livelihood Outcomes

Income

A.1. What is your household's average monthly income from your livelihood activities? ....

A.2. Are you able to save from your income? i. Yes [ ] ii. No [ ]

A.3. If yes to A2, what is the average savings per month? ....

A.4. Do you sometimes have to use your savings to meet household expenses?

i. Yes [ ] ii. No [ ]

A.5. Do you sometimes have to sell some assets to meet household expenses?

i. Yes [ ] ii. No [ ]

Food security

A.6. Where is the main source of food for the household? i. Buy from market [ ] ii. From own farm/garden [ ] iii. From relatives [ ] iv. From neighbours [ ] vi. Food aid from organizations [ ] vii. Others, specify ....

A.7. What is/are the main staple food(s) for the household members?

....

A.8. What is the main source of drinking water for the household? i. Well [ ] ii. Bore hole [ ] iii. River [ ] iv. Pipe borne water [ ] v. Rain water [ ]

A.20b. If yes to B20a, how frequent? i. Very Often [ ] ii. Often [ ]
iii. Occasionally [ ]

A.21a. Has your household experienced any death of a child of age 5years and below within the last 5years? i. Yes [ ] ii. No [ ]

A 21b. If yes to B21a, how many cases?................ and when did the last death(s) occur? ....

A 22a. Has your household experienced any maternal mortality within the last 5years? i. Yes [ ] ii. No [ ]

A 22b. If yes to A22a, how many cases?................ and when did the last death(s) occur? ....

A.23. Do the household members have access to health care? i.Yes [ ] ii. No []

A.24. What proportion in percentage (if known) of household income is spent on health every month?.......................................

Housing

A.25. Do you have enough rooms for all the household members?
i. Yes [ ] ii. No [ ]

A.26. What is the average number of persons in a room? ....

A.27. What category of housing do you have as a household? i. Mud house [ ]
ii. Wooden structure [ ] iii. Brick house [ ] iv. Block house [ ]
v. Glass house [ ] vi. Others, specify.......................................

A.28. Is the house painted? i. Yes [ ] ii. No [ ]

A.29. If yes to B28, when was the last painting done? ....

A.30. Do you intend building more houses or rooms in the next two years?
i. Yes [ ] ii. No [ ]

Basic household utilities

A.31. How do you consider the availability of the following utilities in the household between now and five years back? Please tick, if present:

Facility	Five years back	Now
Toilet		
Bathroom		
Kitchen		

Pipe borne water		
Electricity		
Television set		
Furniture		
Radio set/ tape recorder		
Telephone/mobile phone		
Refrigerator		
Video/VCD/DVD/Multi TV		
Computer/laptop		
Cooker		
Burner and cylinder		
Blender		

Part B: Household Livelihood Outcomes Now And Five Years Back

B.1. Is your present income better than your income five years back?

i. Yes [ ] ii. No [ ]

B.2. If your present income is better than your income in five years back, would you say you can now afford to:

a. Pay for your children's educational needs than five years back?

i. Strongly disagree [ ] ii. Disagree [ ] iii. Neither disagree nor agree [ ]

v. Agree [ ] vi. Strongly agree [ ]

b. Pay for your households' health needs than five years back ?

i. Strongly disagree [ ] ii. Disagree [ ] iii. Neither disagree nor agree [ ]

v. Agree [ ] vi. Strongly agree [ ]

c. Provide decent house for the household than five years back?

i. Strongly disagree [ ] ii. Disagree [ ] iii. Neither disagree nor agree [ ]

v. Agree [ ] vi. Strongly agree [ ]

d. Provide good clothing for the household than five years back?

i. Strongly disagree [ ] ii. Disagree [ ] iii. Neither disagree nor agree [ ]

v. Agree [ ] vi. Strongly agree [ ]

e. Provide your household with more and quality food than five years back?

i. Strongly disagree [ ] ii. Disagree [ ] iii. Neither disagree nor agree [ ]

v. Agree [ ] vi. Strongly agree [ ]

f. Purchase inputs for farming, fishing and other processing activities than five years back? i. Strongly disagree [ ] ii. Disagree [ ] iii. Neither disagree nor agree [ ] v. Agree [ ] vi. Strongly agree [ ]

B.3. In the table below, please circle the number (rating) that in your opinion, best describes the level of your household's livelihood outcomes/conditions now and five years back.

Use the following rating scales; *1= Very poor, 2= Poor, 3= Average, 4= Good, 5= Very good.*

Livelihood outcome	Five years back					Now				
Income level	1	2	3	4	5	1	2	3	4	5
Food security	1	2	3	4	5	1	2	3	4	5
Education	1	2	3	4	5	1	2	3	4	5
Housing	1	2	3	4	5	1	2	3	4	5
Health care	1	2	3	4	5	1	2	3	4	5
Household utilities	1	2	3	4	5	1	2	3	4	5

Part C: Effect of Demographic Characteristics on Livelihood Outcomes

D.1. Please indicate, by ticking, the level with which you think the following demographic characteristics have influenced your household livelihood outcomes. Kindly use the following rating scales: *1= No effect, 2= Very weak effect, 3= Weak effect, 4= Fairly strong effect, 5= Strong effect, 6= Very strong effect*

Characteristics	1	2	3	4	5	6
Sex						
Age						
Household size						
Educational level						
Marital status						

Part D: Perception about the VSLA Scheme

D.1. Are you aware of the VSLA scheme in this community?

i. Yes [ ] ii. No [ ]

D.2. If yes to D1, how do you rate its operations in relation to improving the livelihood of people? i. Very poor [ ] ii. Poor [ ] iii. Average [ ]

iv. Good [ ] v. Very good [ ]

D.3. How do you compare the conditions of your household with those that are benefiting from the scheme? i. Better than ours [ ]

ii. The same as ours [ ] iii. Worst than ours [ ] iv. Don't know [ ]

Part E- Demographic Characteristics of the Respondents

F.1. Sex of the respondent(Head of household): i. Male [ ] ii. Female [ ]

F.2. Age of the respondent (Head of household)………………

F.3. Marital status: i. Single [ ] ii. Separated [ ] iii. Widowed [ ]

iv. Married [ ]

F.4 a. Number of members in the household ……. i. Number of males ……..

ii. Number of females…….

b. How many of them are children below 18years? …………

F.5. What is the dominant religion of the members of the household?

i. Christianity [ ] ii. Islamic [ ] iii. Traditional [ ] iv. Others, specify ……

F.6. What is the main occupation/ source of income for the household?

i. Crop farming [ ] ii. Livestock farming [ ] iii. Fish farming [ ] iv. Fishing [ ] v. Soap making [ ] vi. Bread baking [ ] vii. Edible oil extraction [ ] viii. Gari processing [ ] ix. Weaving and carving [ ] x. Fish monging [ ] xi. Trading [ ] xii. Formal employment [ ] xiii. Remittances from migrant relatives [ ] xiv. Kenkey making [] xv. Others, specify ………………

Appendix C

Davis Convention for describing magnitude of correlation coefficients

Pearson Product Moment Correlation (r)	Adjectives/Description
1.0	Perfect
0.70 – 0.99	Very high
0.50 – 0.69	Substantial
0.30 – 0.49	Moderate
0.10 – 0.29	Low
0.01 – 0.09	Negligible

Source: Davis (1971).

Appendix D

Cohen's guidelines for interpreting Eta squared values (effect size)

Eta squared value	Description
0.01	Small effect
0.06	Moderate effect
0.14	Large effect

Source: Cohen (1988).

Appendix E

Weighted scores for the number of months enough food was provided for the household members

Number of months	Weight/Score/Point	Description
0-2 months	1 point	Highly insecure
3-4 months	2 points	Insecure
5-6 months	3 points	Lower average security
7-8 months	4 points	Upper average security
9-10 months	5 points	Secure
11-12 months	6 points	Highly secure

Source: Author's own construct (2016).

Appendix F

Weighted scores for household members' daily eating pattern

Daily eating pattern	**Weight/Score**	**Description**
In some cases we do not eat at all	1	Highly insecure
We only eat when food is available	2	Insecure
We eat only once a day	3	Lower average security
We eat two times a day	4	Upper average security
We eat three times a day	5	Secure
We eat all types of food and drink at any time we want	6	Highly secure

Source: Author's own construct (2016).

Appendix G

Selected communities and the total number of VSLA groups and beneficiaries

District	Communities	No. of groups in a community	No. of groups that are 5years and above	Average no. of beneficiaries in a group	Total no. of beneficiaries in groups that are 5years and above
AEED	Onyaadze	3	2	24	48
	Eyiakrom	3	1	25	25
	Okokodo	3	2	24	48
	Assempanyin	4	2	24	48
	Kwesi Gyan 1	3	2	24	48
	Akotogua	5	2	24	48
	Ahaawoho	2	2	25	50
	Nsawadze	3	1	25	25
	Bewura	9	4	23	92
	Nkwanta Kesedo	5	1	25	25
	Nyamebekyere	4	2	25	50
	Nkodwo	4	2	24	48
	Owomase	2	1	25	25

Ekumfi	Anomabokuma	3	1	23	23
	Eduakrom	4	1	24	24
	Ekwamase	7	3	24	72
	Abaka	3	1	25	25
	Techiman	3	1	26	26
	Abor	3	2	24	48
	Engow	3	1	24	24
	Ekotsi	9	3	23	69
	Obidan	7	3	24	72
	Nanaben	9	4	24	96
	Gyinankuma	3	1	26	26
	Ekrawfo	2	1	27	27
	Eyisam	2	2	23	46
	Bogyano	1	1	25	25
	Suprudo	3	1	25	25
Total	28	112	50	-	**1,208**

Source: Field survey, Quayson (2016).

Appendix H

Selected communities and the number of selected VSLA groups and beneficiaries

Communities	No. of groups (5 years and above) selected from each community	No. of beneficiaries selected from each group	Total no. of beneficiaries selected from each community
Onyaadze	2	6	12
Eyiakrom	1	6	6
Okokodo	2	6	12
Assempanyin	2	6	12
Kwesi Gyan I	2	6	12
Akotogua	2	6	12
Ahaawoho	2	6	12
Nsawadze	1	6	6
Bewura	4	6	24
NkwantaKesebo	1	6	6
Nyamebekyere	2	6	12
Nkodwo	2	6	12
Owomase	1	6	6
Anomabokuma	1	6	6
Eduakrom	1	6	6
Ekwamase	3	6	18
Abaka	1	6	6
Techiman	1	6	6
Abor	2	6	12
Engow	1	6	6
Ekotsi	3	6	18
Obidan	3	6	18
Nanaben	4	6	24
Gyinankuma	1	6	6
Ekrawfo	1	6	6
Eyisam	2	6	12
Bogyano	1	6	6
Suprudo	1	6	6
Total	50		300

Source: Field survey, Quayson (2016).